

Caries Management Competency:

*How to Implement this new
CODA Requirement?*



Ideas from US Dental Schools



Sponsored by the ADEA Cariology Section



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Webinar Overview:

Consensus Cariology Teaching Points



Competency Mechanisms from:

Georgia



Michigan

Tufts

Florida



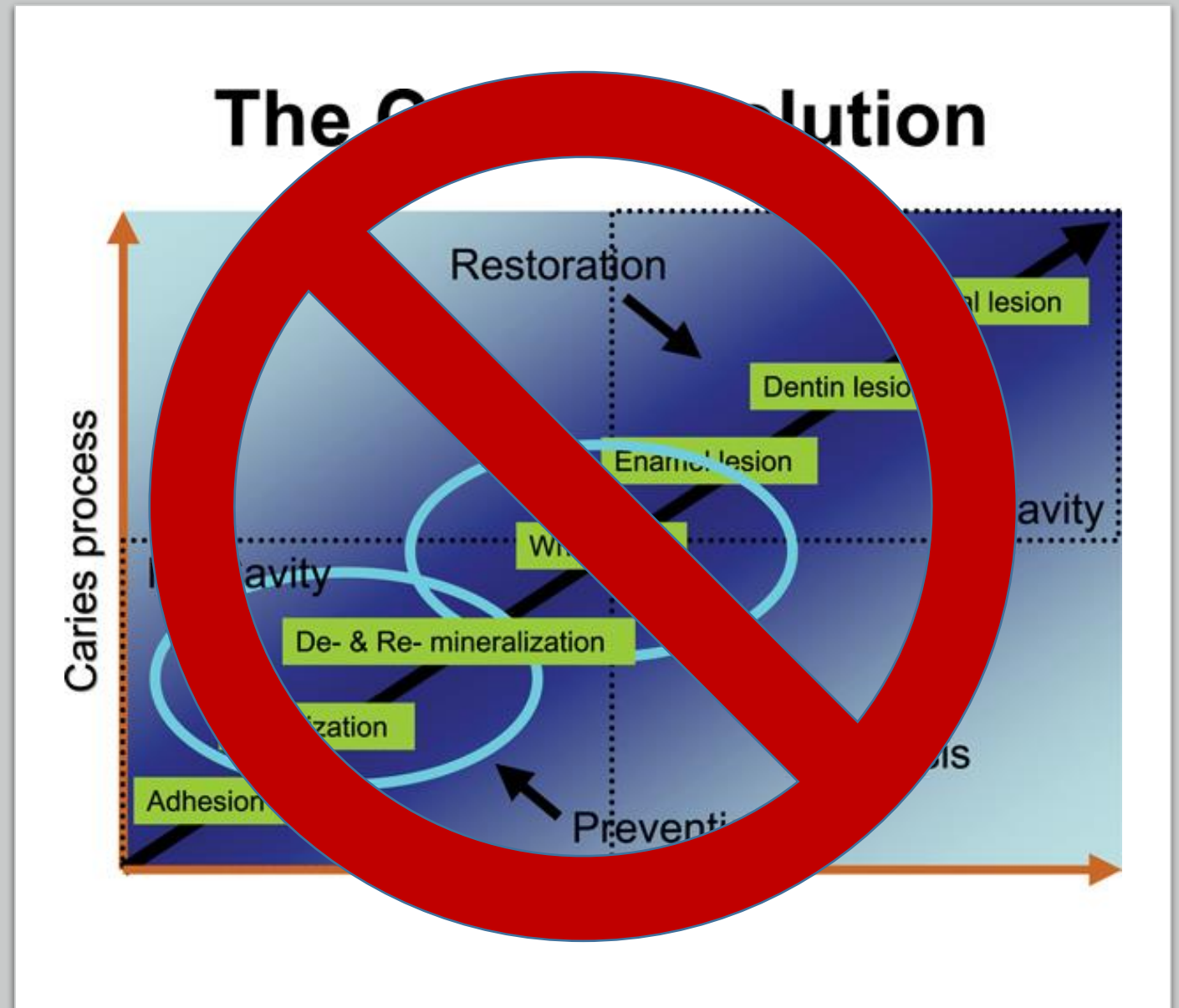
Question and Answer Session by Panelists

Why a Competency in Caries Management?

Dental caries is **the most common dental disease.**

BUT previous CODA requirements *focused only on the surgical treatment to excise caries and restore tooth structure*

Caries education has changed from “just repair” to management!



Implementation of New Caries Evidence

Dr. Max Anderson summarized current evidence, proposing the **Medical Model of Caries** in JADA, 1994.



The Journal of the American Dental Association

Volume 124, Issue 6, June 1993, Pages 36-44



Worldwide curricular changes created support in the US for the **2015 Boston Caries Workshop** to develop a **Core Curriculum** framework, published in 2016 by JDE

Modern Management of Dental Caries: The Cutting Edge is not the Dental Bur

Maxwell H. Anderson D.D.S., M.S., M.Ed., David J. Bales D.D.S., M.S.D., Karl-Ake Omnell D.D.S., Odont. D.

Development of a Core Curriculum Framework in Cariology for U.S. Dental Schools

Margherita Fontana, Sandra Guzmán-Armstrong, Andrew B. Schenkel, Kenneth L. Allen, John Featherstone, Susie Goolsby, Preetha Kanjirath, Justine Kolker, Stefania Martignon, Nigel Pitts, Andreas Schulte, Rebecca L. Slayton, Douglas Young and Mark Wolff

Journal of Dental Education June 2016, 80 (6) 705-720;

Caries Curriculum Workshop 2015 recommended this competency statement on caries management:

“Upon graduation a dentist must be competent in:

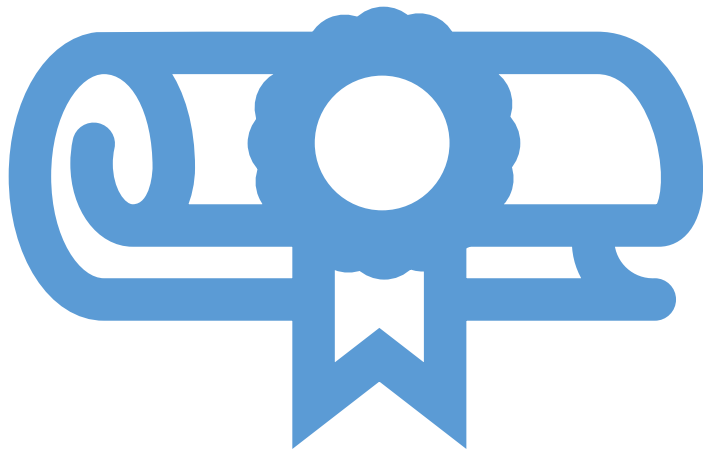
- **Evidence- based detection and diagnosis of caries** (radiographs, clinical)
- **risk assessment** (many CRA forms)
- **Prevention** of future caries- (OHI, Nutrition, Behavior Mod, Fluorides)
- non-surgical and surgical management* of caries at individual and community levels and
- Ability to **reassess outcomes over time.**”

*minimally invasive

Final CODA statement:


CODA only added language to Standard 2-24d that states:

“graduates must be competent in health promotion and disease prevention, **including caries management**”



Standard 2-24:

At a minimum, graduates must be competent in providing oral health care within the scope of general dentistry, as defined by the school, including:

- a. Patient assessment, diagnosis, comprehensive treatment planning, prognosis, and informed consent
- b. Screening and risk assessment for head and neck cancer
- c. Recognizing the complexity of patient treatment and identifying when referral is indicated
- d. Health promotion and disease prevention, **including caries management**
- e. Local anesthesia, and pain and anxiety control, including consideration of the impact of prescribing practices and substance use disorder
- f. **Restoration of teeth** 
- g. Communicating and managing dental laboratory procedures in support of patient care
- h. Replacement of teeth including fixed, removable and dental implant prosthodontic therapies
- i. Periodontal therapy
- j. Pulpal therapy
- k. Oral mucosal, temporomandibular, and osseous disorders
- l. Hard and soft tissue surgery
- m. Dental emergencies
- n. Malocclusion and space management
- o. Evaluation of the outcomes of treatment, recall strategies, and prognosis

Competency Statement -> Mechanism to **assess competence**

New graduates must **demonstrate competence** to begin independent, unsupervised dental practice

- Each dental school **must create a mechanism (*competency*) that demonstrates student skill.**
- CODA lets each school develop their own competency method.



Knowledge Base

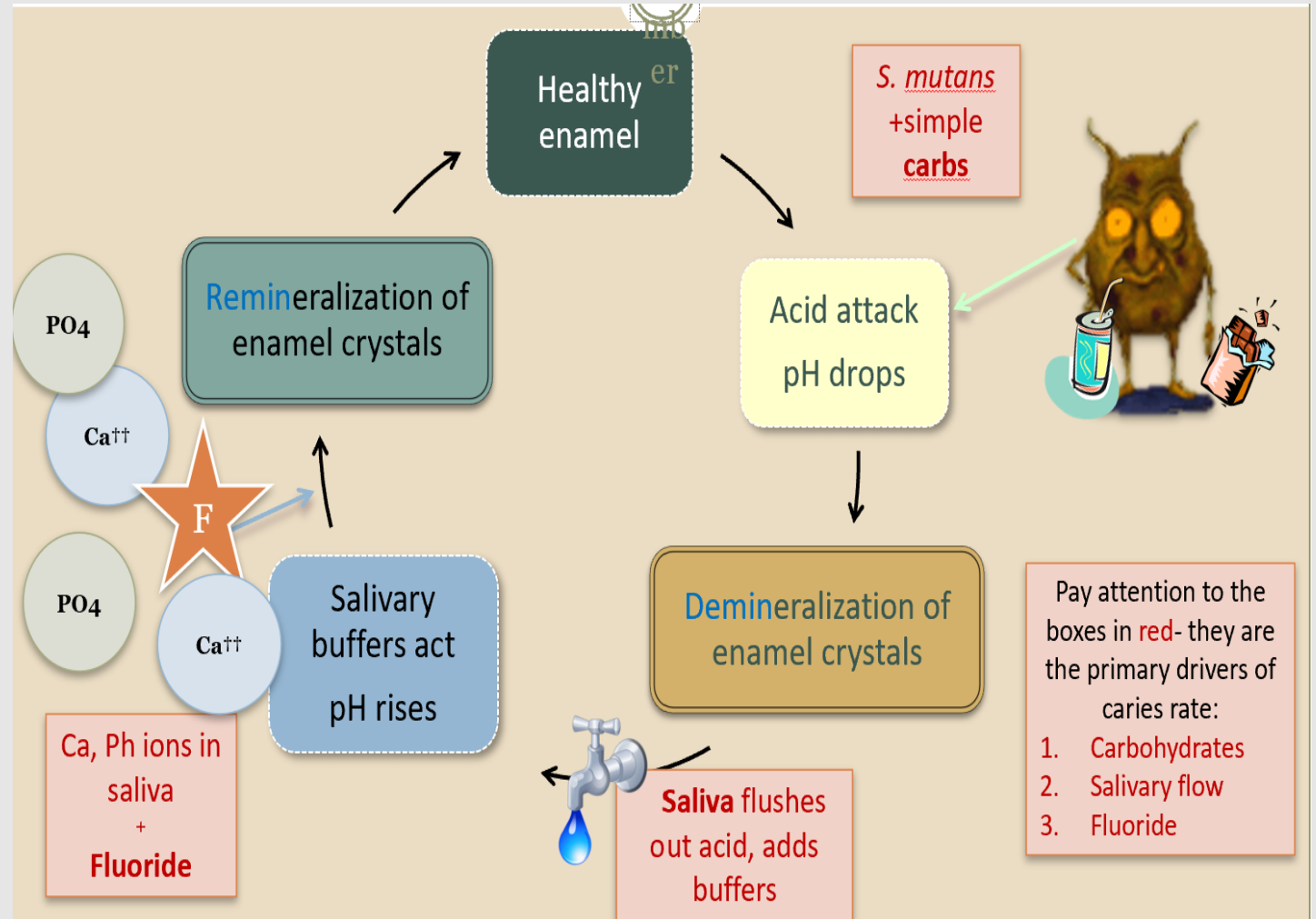
Risk Assessment

Core Caries Concepts for Curriculum

Preventive
treatment plan

Evidence Base

Caries as a Disease: “Demin- Remin Cycle”

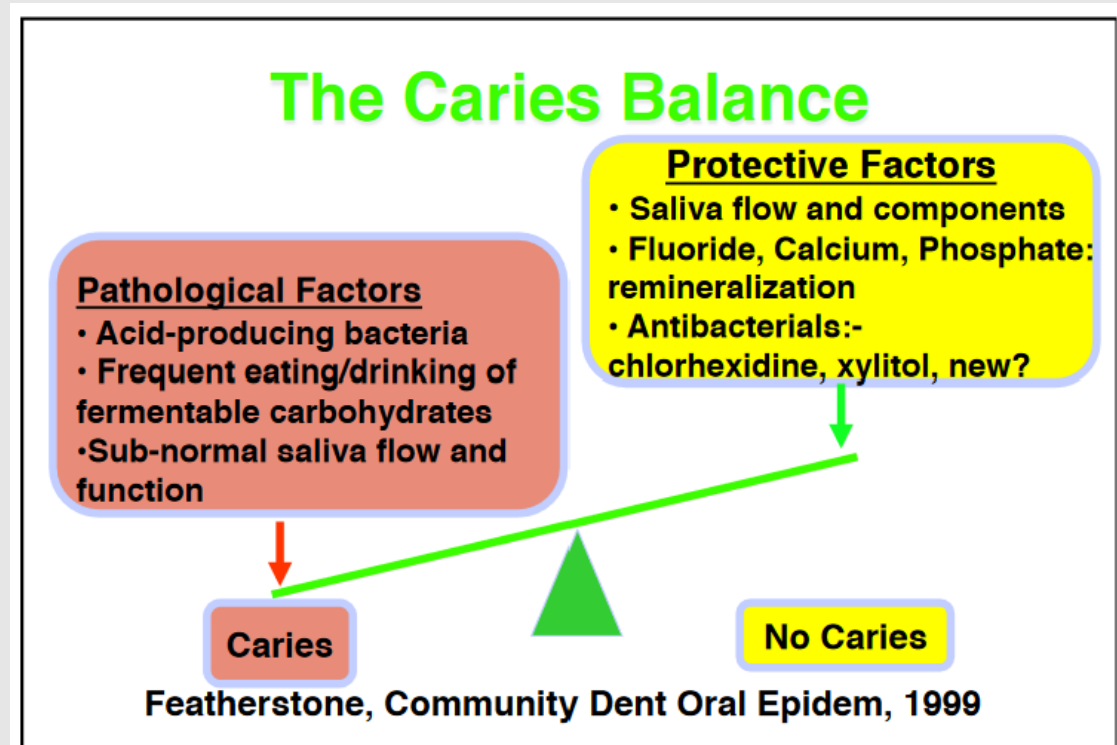


Caries as a Disease:

CAMBRA: Caries Management By Risk Assessment

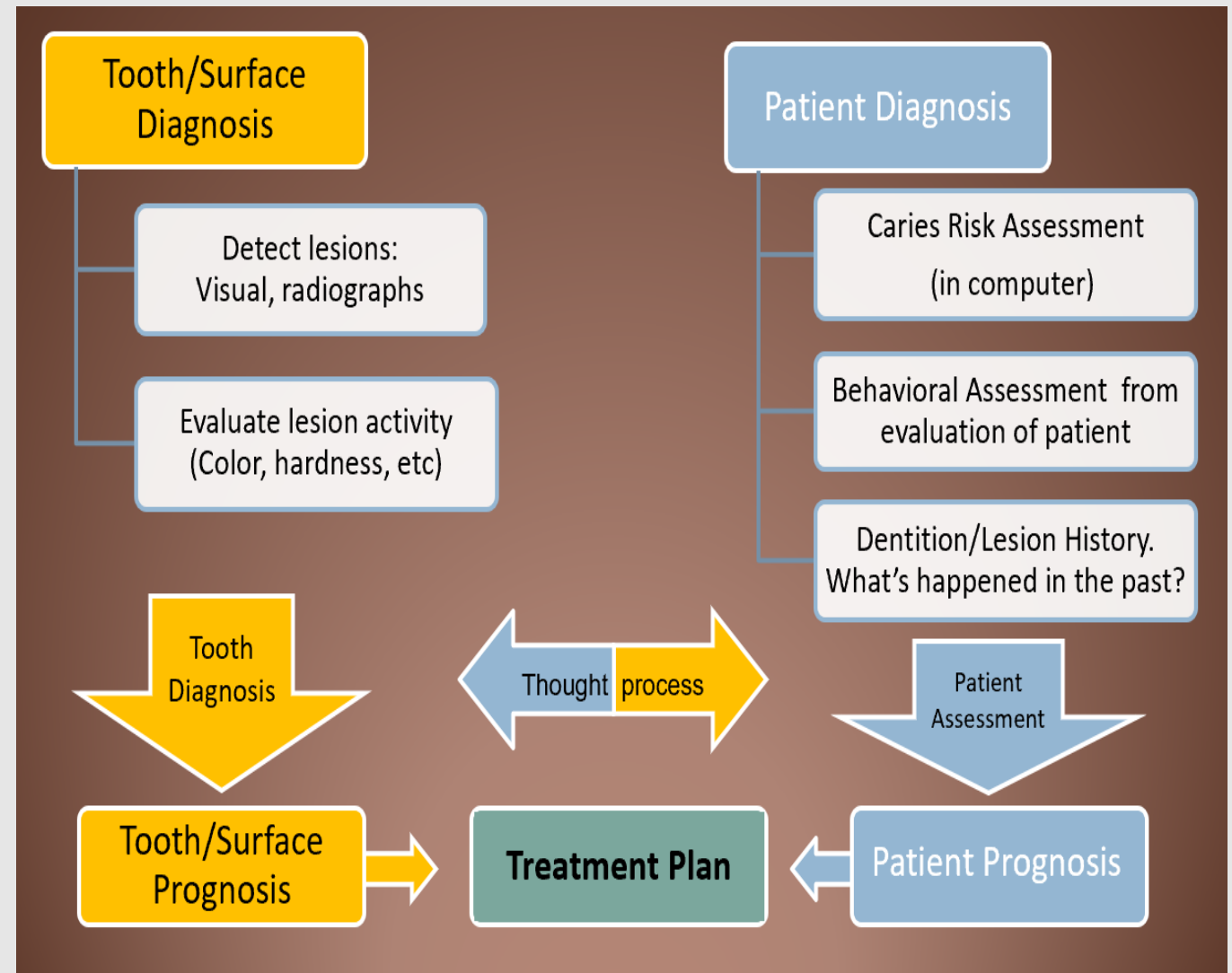
Evidence shows:

- Caries is a **multi-factorial disease**
- Management of caries requires:
 - **Individual risk assessment for each patient**
 - Treatment plan **based on risk assessment**



Diagnosis and Treatment Planning:

How CAMBRA works



Smooth Surface Diagnosis

- Assessment of cavitation is **critical**:
 - Until cavitated, lesions are generally not invaded by bacteria
 - Demineralized enamel and dentin surfaces can re-mineralize *if oral environment changes*
-

Tooth/Surface
Diagnosis



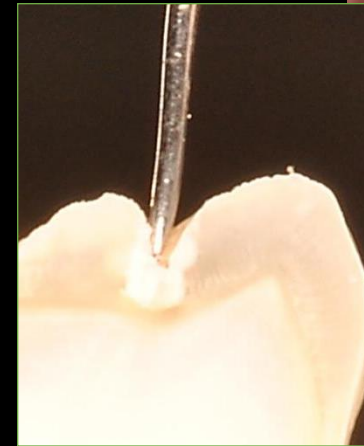
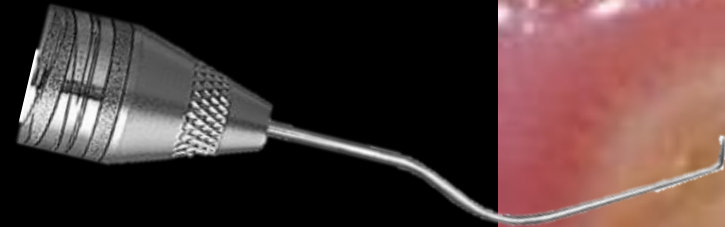
Clinical Diagnosis and Use of the Explorer

Tooth/Surface Diagnosis

Diagnostic tools for early caries detection

Andréa Ferreira Zandoná, DDS, MSD, PhD ¹ • Domenick T. Zero, DDS, MS

DOI: <https://doi.org/10.14219/jada.archive.2006.0113>










Visual cues!

Explorer used only to feel for cavitated areas

Tooth/Surface Diagnosis

Smooth Surface Caries: Diagnosing Clinically

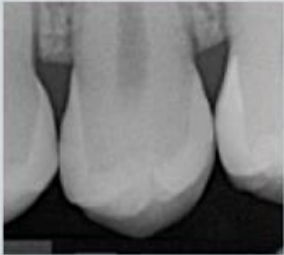




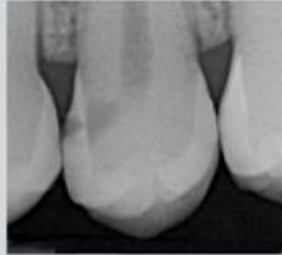
American Dental Association Caries Classification System.

	AMERICAN DENTAL ASSOCIATION CARIES CLASSIFICATION SYSTEM			
	Sound	Initial	Moderate	Advanced
Clinical Presentation	No clinically detectable lesion. Dental hard tissue appears normal in color, translucency, and gloss.	Earliest clinically detectable lesion compatible with mild demineralization. Lesion limited to enamel or to shallow demineralization of cementum/dentin. Mildest forms are detectable only after drying. When established and active, lesions may be white or brown and enamel has lost its normal gloss.	Visible signs of enamel breakdown or signs the dentin is moderately demineralized.	Enamel is fully cavitated and dentin is exposed. Dentin lesion is deeply/severely demineralized.
Other Labels	No surface change or adequately restored	Visually noncavitated	Established, early cavitated, shallow cavitation, microcavitation	Spread/disseminated, late cavitated, deep cavitation
Infected Dentin	None	Unlikely	Possible	Present
Accessible Smooth Surfaces, Including Cervical and Root†		 	 	 

Tooth/Surface Diagnosis








Smooth Surface Approximal Caries: Diagnosing Radiographically

American Dental Association Caries Classification System.

	AMERICAN DENTAL ASSOCIATION CARIES CLASSIFICATION SYSTEM			
	Sound	Initial	Moderate	Advanced
Clinical Presentation	No clinically detectable lesion. Dental hard tissue appears normal in color, translucency, and gloss.	Earliest clinically detectable lesion compatible with mild demineralization. Lesion limited to enamel or to shallow demineralization of cementum/dentin. Mildest forms are detectable only after drying. When established and active, lesions may be white or brown and enamel has lost its normal gloss.	Visible signs of enamel breakdown or signs the dentin is moderately demineralized.	Enamel is fully cavitated and dentin is exposed. Dentin lesion is deeply/severely demineralized.
Other Labels	No surface change or adequately restored	Visually noncavitated	Established, early cavitated, shallow cavitation, microcavitation	Spread/disseminated, late cavitated, deep cavitation
Infected Dentin	None	Unlikely	Possible	Present
Radiographic Presentation of the Approximal Surface[‡]	 <p>E0[§] No radiolucency</p>	   <p>E1[§] E2[§] D1[§] Radiolucency may extend to the dentinoenamel junction or outer one-third of the dentin. Note: radiographs are not reliable for mild occlusal lesions.</p>	 <p>D2[§] Radiolucency extends into the middle one-third of the dentin</p>	 <p>D3[§] Radiolucency extends into the inner one-third of the dentin</p>

Diagnosing Pit and Fissure Caries

American Dental Association Caries Classification System.

	AMERICAN DENTAL ASSOCIATION CARIES CLASSIFICATION SYSTEM			
	Sound	Initial	Moderate	Advanced
Clinical Presentation	No clinically detectable lesion. Dental hard tissue appears normal in color, translucency, and gloss.	Earliest clinically detectable lesion compatible with mild demineralization. Lesion limited to enamel or to shallow demineralization of cementum/dentin. Mildest forms are detectable only after drying. When established and active, lesions may be white or brown and enamel has lost its normal gloss.	Visible signs of enamel breakdown or signs the dentin is moderately demineralized.	Enamel is fully cavitated and dentin is exposed. Dentin lesion is deeply/severely demineralized.
Other Labels	No surface change or adequately restored	Visually noncavitated	Established, early cavitated, shallow cavitation, microcavitation	Spread/disseminated, late cavitated, deep cavitation
Infected Dentin	None	Unlikely	Possible	Present
Appearance of Occlusal Surfaces (Pit and Fissure)*		 	 	 

Caries Risk Assessment

- Many different mechanisms available
- Generally, all consider patient's:
 - Exposure to simple carbohydrates
 - Salivary flow rate
 - Current and past caries experience
 - OH and Fluoride exposure
- Behavioral factors, ie patient concerns

ADA American Dental Association®
America's leading advocate for oral health

Caries Risk Assessment Form (Age >6)

Patient Name: _____

Birth Date: _____ Date: _____

Age: _____ Initials: _____

		Low Risk	Moderate Risk	High Risk
Contributing Conditions		Check or Circle the conditions that apply		
I.	Fluoride Exposure (through drinking water, supplements, professional applications, toothpaste)	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
II.	Sugary Foods or Drinks (including juice, carbonated or non-carbonated soft drinks, energy drinks, medicinal syrups)	Primarily at mealtimes <input type="checkbox"/>		Frequent or prolonged between meal exposures/day <input type="checkbox"/>
III.	Caries Experience of Mother, Caregiver and/or other Siblings (for patients ages 6-14)	No carious lesions in last 24 months <input type="checkbox"/>	Carious lesions in last 7-23 months <input type="checkbox"/>	Carious lesions in last 6 months <input type="checkbox"/>
IV.	Dental Home: established patient of record, receiving regular dental care in a dental office	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
General Health Conditions		Check or Circle the conditions that apply		
I.	Special Health Care Needs (developmental, physical, medical or mental disabilities that prevent or limit performance of adequate oral health care by themselves or caregivers)	<input type="checkbox"/> No	Yes (over age 14) <input type="checkbox"/>	Yes (ages 6-14) <input type="checkbox"/>
II.	Chemo/Radiation Therapy	<input type="checkbox"/> No		<input type="checkbox"/> Yes
III.	Eating Disorders	<input type="checkbox"/> No	<input type="checkbox"/> Yes	
IV.	Medications that Reduce Salivary Flow	<input type="checkbox"/> No	<input type="checkbox"/> Yes	
V.	Drug/Alcohol Abuse	<input type="checkbox"/> No	<input type="checkbox"/> Yes	
Clinical Conditions		Check or Circle the conditions that apply		
I.	Cavitated or Non-Cavitated (incipient) Carious Lesions or Restorations (visually or radiographically evident)	No new carious lesions or restorations in last 36 months <input type="checkbox"/>	1 or 2 new carious lesions or restorations in last 36 months <input type="checkbox"/>	3 or more carious lesions or restorations in last 36 months <input type="checkbox"/>
II.	Tooth Missing Due to Caries in past 36 months	<input type="checkbox"/> No		<input type="checkbox"/> Yes
III.	Visible Plaque	<input type="checkbox"/> No	<input type="checkbox"/> Yes	
IV.	Unusual Tooth Morphology that compromises oral hygiene	<input type="checkbox"/> No	<input type="checkbox"/> Yes	
V.	Interproximal Restorations - 1 or more	<input type="checkbox"/> No	<input type="checkbox"/> Yes	
VI.	Exposed Root Surfaces Present	<input type="checkbox"/> No	<input type="checkbox"/> Yes	
VII.	Restorations with Overhangs and/or Open Margins: Open Contacts with Food Impaction	<input type="checkbox"/> No	<input type="checkbox"/> Yes	
VIII.	Dental/Orthodontic Appliances (fixed or removable)	<input type="checkbox"/> No	<input type="checkbox"/> Yes	
IX.	Severe Dry Mouth (Xerostomia)	<input type="checkbox"/> No		<input type="checkbox"/> Yes
Overall assessment of dental caries risk:		<input type="checkbox"/> Low	<input type="checkbox"/> Moderate	<input type="checkbox"/> High

Caries as a Disease: Management “over time”

Because the lesions of caries form slowly, **reassessment of caries risk** must be also performed **over time**.

Key Goals:

- Assess patient attitudes and challenges
- Reinforce and encourage needed behavioral changes

Competency in Caries Management

- Unlike single event competency evaluations, demonstrating these skills requires different strategies
 - Must evaluate student's ability **to develop and perform complex critical thinking skills**
-



Learning Objectives of this Webinar

- 1) Describe the **elements of a caries management competency** that evaluates the student's ability to
 - a. assess **individual patient risk**
 - b. develop a **personalized treatment plan**
 - c. **reassess over time** the patient's caries risk and management plan
- 2) **Guide development** of a caries management competency using best practices from other institutions

This webinar will provide examples of how other dental schools meet this *new* CODA requirement in slightly different creative ways.



Caries Management Competency

The Dental College of Georgia System

Jan Mitchell, DDS, MEd (Ret)

Clinical Practice

- **D2- Clinic-** small panel- 3-4 patient for recall exam including a CRA*, prophylaxis and simple operative as needed.
- **D3, D4- Clinic-** All patients get a CRA* as part of initial and annual exams. Factored into all treatment planning.

CRA- Caries Risk Assessment. Included in grading rubric for correct diagnosis and assessment of patient factors.

How DCG competency works

Part 1. Diagnosis and Caries Risk Assessment

- **Student adds the ADA CDT D0603 Code** to all high-risk patients examined. Only one will be the competency patients, but attrition (and good care!) makes it necessary to add to all high risk patient charts.

When student has done enough cases to feel confident:

- **Student declares the competency**, presents paperwork for patient exam

Rubric for Caries Competency Part 1

- Diagnosis of lesions
- Caries Risk Assessment
- Treatment planning

Standard	Pass	No Pass : >2 errors or any critical errors
Documentation	Paperwork correctly prepared in advance	No paperwork
Diagnosing caries	Correctly detect carious lesions present Lesions not present not charted (incipient or questionable lesions at faculty discretion)	> 1-2 minor discrepancies. Incipient lesions at faculty discretion. * Critical error- cavitated lesion > 1 mm large not detected/charted
CRA Assessment	Caries Risk Assessment completed with accurate information, especially diet and salivary factors	CRA has inaccurate information or evaluation * Critical error- Inaccurate evaluation of contributing diet or salivary concerns
Caries Risk Tx Plan	Patient recommendations appropriate for individual's risk assessment (ie, salivary reduction > particular product choices) per current caries guidance	Patient recommendations not appropriate for individual's risk (up to 1 error) * Critical error- CRA Form not completed.
Restorative Treatment planning	Restorative plan appropriate for patient's risk: <ul style="list-style-type: none"> • Appropriate F <u>varn</u> entries • Appropriate material choice • All primary caries planned for restoration • Questionable pits and fissures planned for PRRs 	Restorative plan missed more than one of the following: <ul style="list-style-type: none"> • F <u>varn</u> not treatment planned appropriately • Surfaces planned correctly for lesion • Material choice inappropriate, or student not able to articulate rationale for choice • Identified caries not planned for appropriate restorative care.
Final Assessment	Pass	Fail More than 2 errors or any critical errors

Treat patient's caries-

Documentation of treatment

- Student treats the patient surgically and non-surgically for at least 6 months.
- Student adds caries treatment notes to D0603 code on all **patients treated**. Counselling notes, F varn, dry mouth issues, etc. by copy/paste from chart note, adding to D0603.

*Emphasizes importance of documentation
in management of high-risk caries patients!*

Recommended documentation:

Item	Initial documentation	Follow up documentation
Diet concerns	In CRA, list specific simple carb items that may contribute to caries	Treatment chart notes include comments on dietary status- improving or no. These are copy/pasted into notes attached to D0603.
OHI	In CRA treatment planning section	Treatment chart notes on teaching efforts and products/tools recommended. These are copy/pasted into notes attached to D0603.
F varnish	Frequency in Phase 1,2 Treatment Plan	Do F varnish at recommended intervals. Attach note to D0603 when procedure performed.
F Toothpaste	Rx in Medication Form	Check “Transactions” icon to see that patient has purchased the toothpaste. Ideally, will be purchased every 3-4 months if patient is using it.
Add'l Product suggestions	In CRA treatment planning section or chart note. Ex: arginine chews, xylitol or sugarless gum.	Ask patient to bring product to appointment “to make sure you’ve got the items that will work for you” and document in chart note. Copy/paste into notes attached to D0603.

Treat patient's caries- documentation sample

Med Hx review: No changes Pt presents for restoration #4, 5. **Anes:** Administered lidocaine 2% 34 mg, 0.017 mg epi. **Shade selected:** A3

Isolation: Rubber dam placed

Procedure: Prepared #4 MO, #5 DO for composite. Removed caries. Acid etch with 37% phosphoric acid, Optibond FL placed. Sectional Matrix and wedge placed. Restored with Harmonize shade placed in increments. Isolation removed. Occlusion and interproximal contacts checked and modified. Finish and polish. Pt. satisfied with color and contour.

Non-surgical caries tx: Patient has switched to diet soda, using Rx 5000 ppm F at bedtime daily. Will need refill next appt.

Pt dismissed doing well.

Treat patient's caries- documentation sample

Med Hx review: No changes P
2% 34 mg, 0.017 mg epi. **Shad**
Isolation: Rubber dam placed

Procedure: Prepared #4 MO, #
phosphoric acid, Optibond FL p
Harmonize shade placed in increments. Isolation removed
contacts checked and modified. Finish and polish. Pt. se
sion and interproximal
color and contour.

Non-surgical caries tx: Patient has switched to diet soda, using Rx 5000
ppm F at bedtime daily. Will need refill next appt.

Pt dismissed doing well.

Student copies non-surgical caries notes, pastes
into new note attached to the **D0603 code:** ADA
CDT code for High Caries Risk Patient
Faculty swipes both codes to complete

Sample chart entries:









In Progress	Tx History	Tx Plans	Forms	Attachments	Perio	Labs	Medications	Chart Add			
Date	Prov./User	Code	Site	Surf.	Stat	Phase	Location	Discipline	Diagnoses	Appr. User	Description
11/15/16	J. Mitchel	D0603			I	0	MCGC14	DIAG		J. Mitchel	 Caries risk asses
12/08/16	J. Mitchel	Note				0	MCGC14			J. Mitchel	 Last Modified: 01
First F vam applied. Pt still sipping on coffee with sugar. Emphasized role of sugar in caries.											
01/25/17	J. Mitchel	Note				0	MCGC14			J. Mitchel	 Last Modified: 01
Diet follow up- Pt states he has switched to sweetener in coffee.											
02/07/17	J. Mitchel	Note				0	MCGC14			J. Mitchel	 Last Modified: 01
Pt working on decreasing simple carb snacks- pretzels, chips- and substituting fresh vegetables. Discussed with patient's wife, who is enthusiastic about improving patient's diet. She											
03/01/17	J. Mitchel	Note				0	MCGC14			J. Mitchel	 Last Modified: 01
Pt now aware of dry mouth at night. Recommended use of Xyli-Melts at bedtime after brushing with 5000 ppm F toothpaste.											
04/21/17	J. Mitchel	Note				0	MCGC14			J. Mitchel	 Last Modified: 01
Second F vam applied.											
05/02/17	J. Mitchel	Note				0	MCGC14			J. Mitchel	 Last Modified: 01
Pt asked about sports drinks. Advised that they do not help performance in routine sports, suggested tap water, flavored if preferred.											
06/05/17	J. Mitchel	Note				0	MCGC14			J. Mitchel	 Last Modified: 01
Pt states he has d/c'd morning orange juice. Drinking tap water when exercising.											

Chart notes also attached to the D0603. Not long but personalized and effective!

How competency works

Part 2. Completing the competency- Chart Review

- **Student chooses a patient** with documented management of caries. Does not have to be same patient as used in Part 1.
- **Student sends email to faculty:**
 - Chart number and patient initials of chosen case
 - Student attaches a **one-page reflective essay** per structured prompt
- **Faculty reviews chart, essay** against the rubric.

How competency works

Part 2. Completing the competency

Essay Prompt: Write a few pithy, self-reflective paragraphs on what you learned from doing this competency:

1. Why was it important to do this competency *over time*?
2. What elements were easy to remember, and which were the most challenging for you to complete? Any insight into your thoughts?
3. How did your patient react to your advice, and how did you manage your own reaction to that, and theirs?
4. Did you try Motivational Interviewing techniques, and did they help?

Competency Part 2 Checklist:

- ❑ **Attached to the D0603 code**, notes documenting:
 - ❑ All recommended **F varnish** done at the correct intervals?
 - ❑ Documented history of **patient counselling** on diet and oral hygiene?
 - ❑ **Product recommendations** for additional items like arginine chews, green tea products, adhesive xylitol melts for overnight use documented in chart.
 - ❑ If indicated, patient **evaluated for new caries** after 6-9 months?
- ❑ **Prescription** for 5000 ppm F toothpaste in place?
- ❑ All **minimally invasive treatment completed (as time permits)?**

Rubric for Caries Competency Part 2

- Documentation of patient counseling, CRA
- Prescribed F varn completed
- Thoughtful self-reflection

Standard		Pass	No Pass : >2 errors or any *critical errors
Documentation		Paperwork correctly prepared in advance: Competency form prepared correctly. Self-eval submitted per instructions	<input type="checkbox"/> *Competency paperwork not completed in advance
Chart documentation		Show documentation attached to D0603 of caries related items during active treatment: Dietary counselling (ideally 1/mo), comments on patient attitudes to changes (ideally 1/mo), F varn applications at prescribed intervals. OHI an adjunct, but not the only type of preventive instructions. Smoking cessation, while admirable for perio/oral cancer, NOT related to caries experience.	<input type="checkbox"/> Evidence in chart but not attached to D0603. Student must provide a list of items by date to facilitate chart review. * Critical errors: <input type="checkbox"/> *Planned F varn not done in timely manner. <input type="checkbox"/> *Documentation of patient counselling and progress not documented every 1-3 months, or does not address patient's caries risk factors.
CRA Re-Evaluation if > 6 mo	CRA Assessment	Caries Risk Assessment completed with accurate updated information, especially diet and salivary factors.	*Critical Errors: <input type="checkbox"/> *CRA out of date (>12 months) <input type="checkbox"/> *CRA re-eval significantly incorrect (Ex- pt put in low risk because oper completed. If >3 lesions, pt stays in High Risk for 3 yr)
	Maintenance Tx Plan	Patient recommendations appropriate for individual's risk assessment (ie, salivary reduction > particular product choices) per current caries guidance	<input type="checkbox"/> Patient recommendations not appropriate for individual's risk (up to 1 error) <input type="checkbox"/> *Critical error- Preventive plan not completed/updated within 12 months
Self-evaluation		Self-evaluation submitted per instructions that includes reflection on lessons learned, items student would do differently, skills in patient management and motivational interviewing learned	*Critical Errors: <input type="checkbox"/> *No self-eval submitted <input type="checkbox"/> *Superficial reflection that does not show evidence of significant learning.
Final Assessment		Pass	Fail More than 2 errors or any *critical errors

Overview of Competency Process

Exam- Start at least 3-5 patients, follow for minimum 6 months

PART 1

Initiate competency by demonstrating skills:

- Diagnose caries
- Caries risk assessment and preventive tx planning, ie F varnish if appropriate
- Restorative care treatment planning

Enter D0603 "In Process"

Manage patient's caries

Treat lesions, including sealants and PRRs

Prescribe high dose F toothpaste if appropriate

Document monthly appropriate follow up:

- **Dietary counselling** with specific recommendations based on CRA findings.
- **F varnish** per schedule
- **OHI**, products as needed
- Dry mouth products

by **linking copy of chart notes to D0603**

Complete competency

PART 2

After at least 6 months, email a request for chart review of documentation of appropriate counselling and treatment.

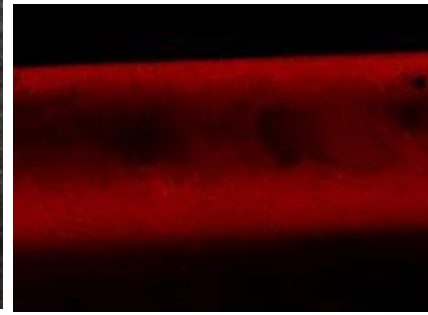
Include a **reflective self-evaluation** on management of the case. See prompt questions.

Course director **completes competency**. **Move D0603 to Complete**

Summer

Fall

Spring



**Caries Management Competency: Implementation of this new
CODA requirement**

University of Michigan Cariology Curriculum and Assessment

Margherita Fontana, DDS, PhD

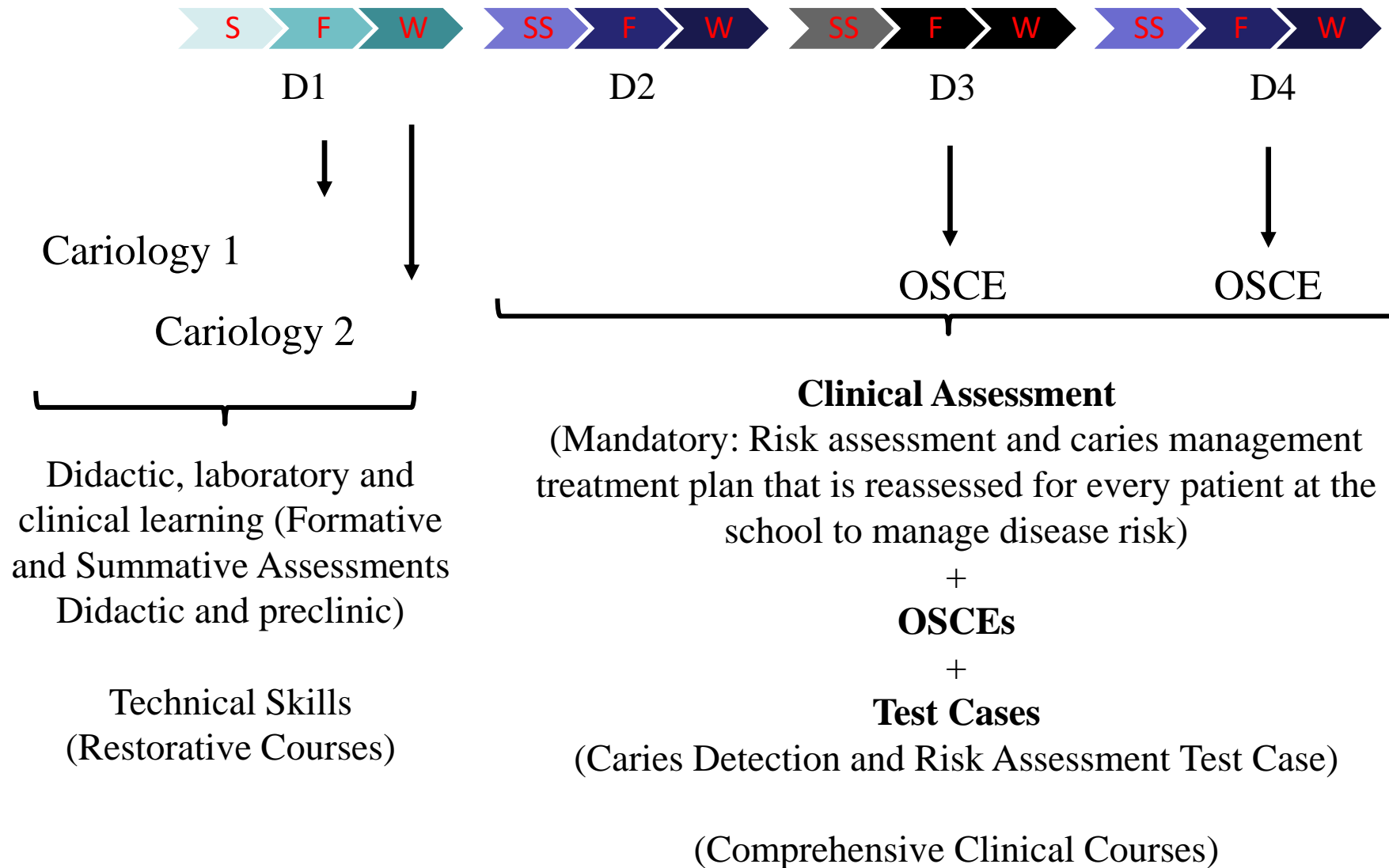
Clifford Nelson Endowed Professor of Dentistry

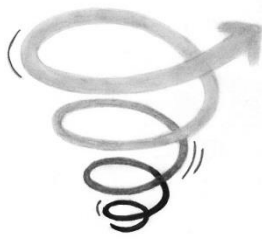
University of Michigan School of Dentistry

Department of Cariology, Restorative Sciences and Endodontics

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4-Year Curriculum Map





Case-based clinical decision making and assessment



- Assessment of student's ability to **ANALYZE AND EVALUATE...**

Critical thinking and clinical decision making based on evidence in caries detection, risk and management

For every patient **in clinic** complete and reevaluate periodically:

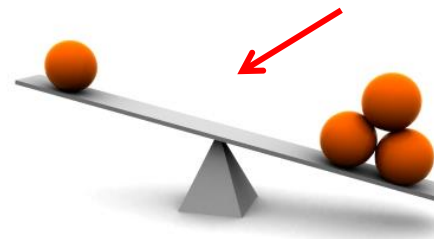
In Progress Tx History Perio Forms Attachments Labs Medications	
Change Date 01/27/2016	
Caries Risk Caries Management	
Form Question	Answer
<input checked="" type="checkbox"/> Does the patient have any signs of caries experience? (clinical + radiographically)	Y
Active non-cavitated caries lesions	Y
<input checked="" type="checkbox"/> Are factors present related to recent caries experience or increased risk?	Y
<input checked="" type="checkbox"/> 2.1 (Stagnant) plaque in caries susceptible sites	Y
Deep pits/fissures	Y
<input checked="" type="checkbox"/> 2.2 Saliva	Y
<input type="checkbox"/> Salivary Flow Tested (Additional Assessment for at Risk Patients)	Y
Unstimulated flow test	Schimer < 10ml / 3min
Stimulated flow test	Less than 0.7ml/min
<input type="checkbox"/> 2.3 Diet	Y
Frequency of fermentable carbohydrates snacks between meals, including candies or lozenges with sugar	More than 3x/day
<input type="checkbox"/> 2.4. Inadequate Protective Modifying Factors	Y
Frequency of brushing	Less than 1x/day
Frequency of flossing	Never
<input checked="" type="checkbox"/> 2.5 Conditions that affect compliance	Y
Physical (motor coordination/pain)	Y
<input type="checkbox"/> Is this a re-assessment?	N
Caries Risk	High

In Progress Tx History Perio Forms Attachments Labs Medications	
Change Date 01/27/2016	
Caries Risk Caries Management	
Form Question	Answer
Based on the identified patient's problems, please provide a treatment plan that will address problems listed and increase protective factors.	
<input checked="" type="checkbox"/> 1. Fluorides (If patient is Moderate to High risk, Additional Fluoride MUST be added.)	
<input type="checkbox"/> Prescription high concentration F 5,000 ppm (e.g., Prevident, ClinPro)	Y
Directions for use	Use in place of regular toothpaste
<input checked="" type="checkbox"/> 2. Daily Oral Hygiene	
Brush at least twice daily (with fluoride toothpaste)	Y
<input checked="" type="checkbox"/> 3. Diet	
Reduce frequency of sweetened beverages	Y
<input checked="" type="checkbox"/> 4. Sugar-free gum	
<input checked="" type="checkbox"/> 5. Antibacterial products	
<input checked="" type="checkbox"/> 6. Additional management	
Restorative treatment	Y
Prescription salivary stimulants	Y



Low Risk

Moderate Risk



High Risk

Predictive Validity of a Caries Risk Assessment Model at a Dental School

Emily Brons-Piche, George J. Eckert, Margherita Fontana

J Dent Educ 2019

Table 1. Number of patients in each risk category and their characteristics

Variable	All	Low	Moderate	High
Patients	447	93 (21%)	112 (25%)	242 (54%)
Female, N (%)	236 (53%)	58 (62%)	65 (58%)	113 (47%)
Age: Mean (SD)	56.6 (18.5)	60.4 (17.0)	60.5 (18.9)	53.4 (18.3)
Follow-up time in years: Mean (SD)	2.2 (0.8)	2.3 (0.8)	2.3 (0.8)	2.1 (0.8)
Number of new lesions: Mean (SD)	2.6 (3.4)	1.4 (1.7)	1.9 (2.3)	3.3 (4.1)

Table 2. Percentage of patients in each caries risk category based on number of caries lesions developed during follow-up period

Number of New Lesions	High Caries Risk	Moderate Caries Risk	Low Caries Risk
≥1 new lesion	65%	46%	41%
≥2 new lesions	45%	23%	20%
≥3 new lesions	32%	15%	10%

Note: Relative rates were adjusted for different follow-up times. Number of new lesions were categorized as yes/no: ≥1 or ≥2 or ≥3

Model (AUC: 0.82); Significant ($p < 0.001$) factors:

Past/current caries experience (OR 23.7)

Dietary risk factors (OR 3.2)

Visible plaque (OR 2.6)

Salivary risk factors (OR 2.6)

Conditions that affect compliance (OR 2.4)

Lack of adequate protective factors (OR 2.1)



Cariology:

Pass Cariology courses and Assessments:
Midterm, Final, Practical exam, and Clinical
Test Cases (D1)

+

Pass D3 and D4 OSCEs

+

Pass Caries Risk Assessment and Management
Test Cases in Clinic (D3 and D4)
(currently under change, and considering audit
of patient cases to further demonstrate
competency)



Assessment (initial and at re-assessment) of:

Caries diagnosis (clinical and radiographic)
Risk Assessment and justification
Disease Management and Prevention

(Note: Assessment of Restorative skills is separate)

Example rubric

- Patient must at least 1 active caries lesion and be a new patient at the school at start
- A grade below 68 or and/or evaluation with 1 V or >2 T's will result in a failure and a need for a passing performance on a retake. A successful retake will have a score of 75 used to as the final grade for that test case.

Caries Risk Assessment	R (25) Clinically Ideal	S (17) Clinically Acceptable	T (0) Clinically Acceptable, Modifications Preferred.	V (0) Clinical Procedure Repeat or Major Modifications Necessary.
Diagnosis: Clinical and radiographic caries	<ul style="list-style-type: none"> • All cavitated, non-cavitated (active), and/or carious root surface lesions detected and diagnosed correctly 	<ul style="list-style-type: none"> • 1 - 2 (if they have 4 or more lesions) cavitated, or non-cavitated (active), or carious root surface lesions missed 	<ul style="list-style-type: none"> • Half of cavitated, or non-cavitated, or carious root surface lesions missed 	<ul style="list-style-type: none"> • More than half of existing cavitated, or non-cavitated, or carious root surface lesions missed
Risk Assessment	<ul style="list-style-type: none"> • Assessment is accurate and complete • Risk category accurate 	<ul style="list-style-type: none"> • Assessment is accurate and complete • Risk category inaccurate 	<ul style="list-style-type: none"> • Assessment is inaccurate or incomplete • Risk category accurate 	<ul style="list-style-type: none"> • Assessment is inaccurate or incomplete • Risk category inaccurate
Disease Prevention and Management	<ul style="list-style-type: none"> • Management plan is comprehensive, appropriate and personalized to patient's needs 	<ul style="list-style-type: none"> • Management plan has 1 or 2 missing areas 	<ul style="list-style-type: none"> • Management plan has 3 missing areas 	<ul style="list-style-type: none"> • Management plan has 4 or more missing areas or is grossly inadequate • Or plan does not include fluoride (at home and in office) and it is not justified
Reassessment	<ul style="list-style-type: none"> • Treatment plan was completed • A reassessment of risk and treatment plan at appropriate interval 	<ul style="list-style-type: none"> • Treatment plan was completed • A reassessment of risk and treatment plan was done at inappropriate interval 	<ul style="list-style-type: none"> • Treatment plan was completed • No reassessment of risk and treatment plan at appropriate interval 	<ul style="list-style-type: none"> • Treatment plan was not implemented • No reassessment of risk and treatment plan at appropriate interval

Implementation Factors (Internal and External) To Consider To Facilitate Success



The Cariology Curriculum at Tufts School of Dental Medicine

Andrea Ferreira Zandona, DDS, MSD, PhD

Professor and Chair

Department of Comprehensive Care



SCHOOL OF DENTAL MEDICINE

**Department of
Comprehensive Care**

TUSDM Competencies Statements related to Caries Management

PATIENT-CENTERED CARE:

Graduates must be competent to provide comprehensive patient-centered care across all age groups, that includes individual health needs, financial perspectives, and psychosocial background in oral health assessment and management.

DIAGNOSIS:

Graduates must be competent to formulate differential or definitive diagnoses by collecting and interpreting findings from medical and psychosocial histories, clinical and radiographic examinations, and other diagnostic tests.

TREATMENT PLANNING:

a. Graduates must be competent to develop comprehensive, evidence-based, properly sequenced treatment plans based on diagnosis and risk assessment as well as financial considerations.

b. Graduates must be competent in effective communication with the patient or parent/guardian the risks and benefits of the proposed treatment plans.

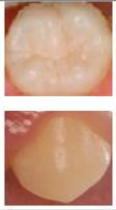






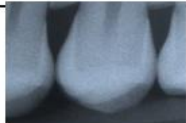
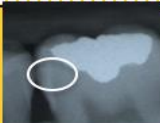





ORAL HEALTH PROMOTION:

- a. Graduates must be competent to promote optimal oral health to diverse patient populations through individualized interventions, behavior change counseling, and plain language education.
- b. Graduates must be competent to communicate and collaborate with dental team members and other health care professionals to prevent disease and promote oral and oral-systemic health.


Caries Management:

Graduates must be competent to assess patient caries risk and design an appropriate evidence-based preventive and management plan

CLASSIFICATION SYSTEM USED AT TUSDM

ADA CCS	Sound	Initial		Moderate		Advanced	
ICDAS	0	1	2	3	4	5	6
Clinical Appearance							
Clinical Presentation	No evidence of visible caries (no or questionable change in enamel translucency)	A carious opacity or visible discoloration (white spot lesion and/or brown carious discoloration) not consistent with clinical appearance of sound enamel and which show no evidence of surface breakdown or underlying dentin shadowing		A white or brown spot lesion with localized enamel breakdown , without visible dentin exposure, or an underlying dentin shadow , which obviously originated on the surface being evaluated		A distinct cavity with visible dentin exposure	
Activity		Active: Opaque, whitish or brownish, rough, in plaque stagnation area				Dentin is soft or leathery on probing	
		Inactive: Translucent, smooth, shiny, not in plaque stagnation area				Dentin is shiny and hard on probing	
Radiographic Appearance							
Radiographic Presentation	No radiolucency	Radiolucency may extend to the DEJ or outer 1/3 of dentin		Radiolucency extends into the middle 1/3 of dentin		Radiolucency extends into the inner 1/3 of dentin	

Tooth Conditions

+
×


Tooth Conditions
Tooth
15

C0000, Caries

C0001, Initial: Active (primary caries)

C0002, Moderate: Active (primary caries)

C0003, Advanced: Active (primary caries)

C0004, Initial: Active (caries associated with a restoration)

C0005, Moderate: Active (caries associated with a restoration)

C0006, Advanced: Active (caries associated with a restoration)

C0007, Initial: Active Root Caries

C0008, Advanced: Active Root Caries

C0010, Initial: Arrested (primary caries)

C0011, Moderate: Arrested (primary caries)

C0012, Advanced: Arrested (primary caries)

C0013, Initial: Arrested (caries associated with a restoration)

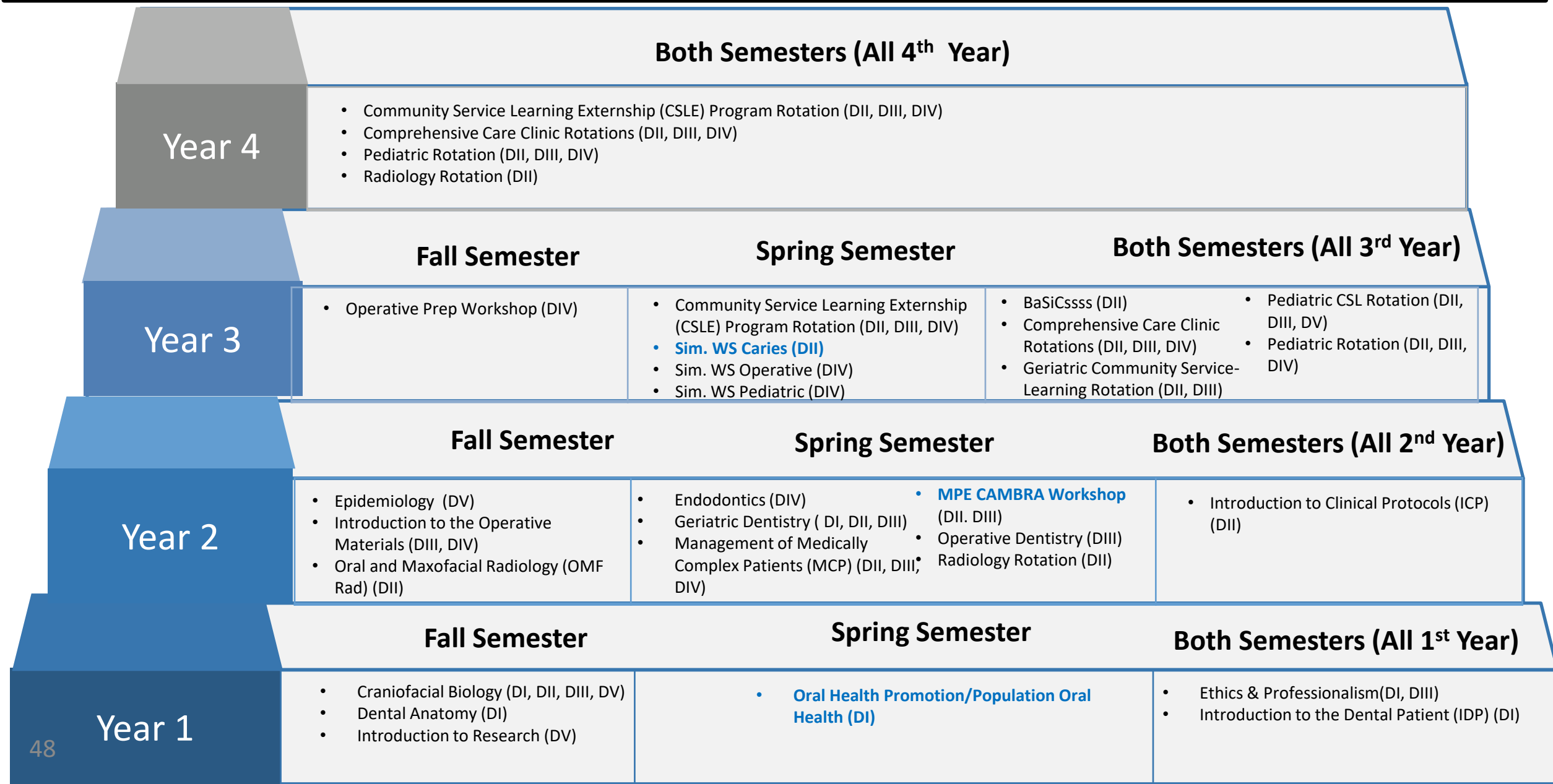
C0014, Moderate: Arrested (caries associated with a restoration)

C0015, Advanced: Arrested (caries associated with a restoration)

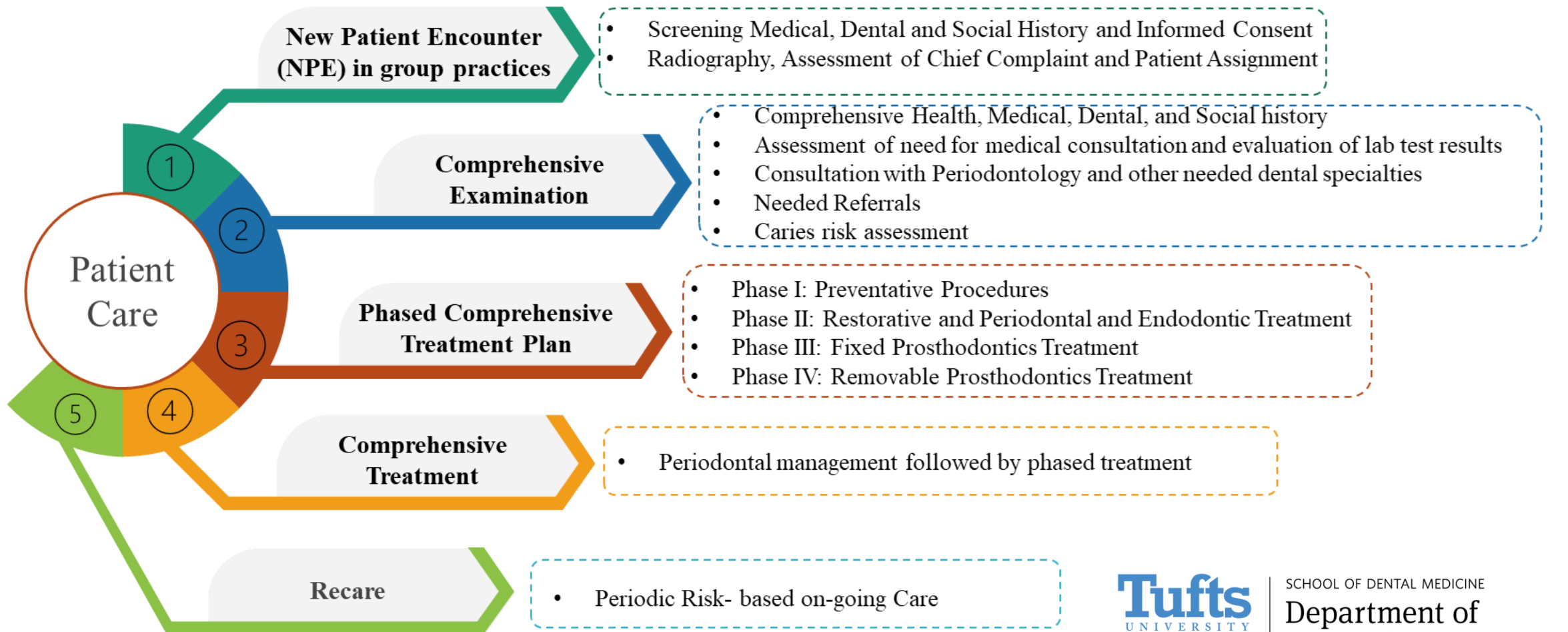
C0016, Initial: Arrested Root Caries

C0017, Advanced: Arrested Root Caries

<u>Domains:</u>	Domain I. The Knowledge Base (DI)	Domain II. Diagnosis, Risk Assessment, & Synthesis (DII)	Domain III. Preventive Therapy, Nonsurgical Therapy, & Clinical Decision Making (DIII)	Domain IV. Surgical Therapy & Clinical Decision Making (DIV)	Domain V. Evidence-Based Cariology in Clinical & Public Health Practice (DV)
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Student's Patient Care Sequence in Comprehensive Care Clinic



Clinical Experiences in Caries Management

Year	Clinical Experience
2/3/4	Comprehensive Care Clinics
3	Diagnostic Sciences Rotation: Maxillofacial Pathology/ Oral and Maxillofacial Radiology/Oral Medicine/Craniofacial Pain
3	Geriatrics Dentistry Community Service-Learning Rotation
3	Medically Complex Patients Rotation
3	Pediatric Community Service-Learning Rotation

Comprehensive Care Clinical Experience Assessment



Comprehensive Care Clinical Requirement Completion Roster

Reset Filters

Medical Consultation (2)
(All)

Dia & Tx Planning (5)
(All)

Post Treatment Exams (5)
Incomplete

Bleaching (2)
(All)

Occlusal Guard (2)
(All)

Caries Risk Assessment (1)
(All)

Preventive Caries (6)
Complete

Risk Management (80% of D0603)
(All)

Restorations (40)
(All)

Provider ID
(All)

GPATL	1	U0000	Incomplete	Incomplete	Incomplete	Incomplete	Incomplete	Incomplete	Complete	Incomplete	Incomplete
	GPBAC	1	U0000	Complete	Complete	Incomplete	Complete	Complete	Complete	Complete	Incomplete
	2	U0000	Incomplete	Complete	Incomplete	Complete	Incomplete	Complete	Incomplete	Incomplete	Incomplete
GPCHA	1	U0000	Complete	Complete	Incomplete	Complete	Incomplete	Complete	Complete	Incomplete	Incomplete
	2	U0000	Incomplete	Complete	Incomplete	Incomplete	Incomplete	Complete	Complete	Complete	Complete
	3	U0000	Incomplete	Incomplete	Incomplete	Incomplete	Incomplete	Complete	Complete	Complete	Incomplete
GPDOR	1	U0000	Incomplete	Incomplete	Incomplete	Incomplete	Incomplete	Complete	Complete	Incomplete	Incomplete
	2	U0000	Incomplete	Complete	Incomplete	Complete	Complete	Complete	Complete	Complete	Incomplete
	3	U0000	Incomplete	Complete	Incomplete	Complete	Complete	Complete	Complete	Complete	Incomplete
GPDEXE	4	U0000	Complete	Incomplete	Incomplete	Incomplete	Incomplete	Complete	Complete	Complete	Incomplete
	5	U0000	Incomplete	Incomplete	Incomplete	Complete	Complete	Complete	Complete	Complete	Incomplete
	1	U0000	Incomplete	Complete	Incomplete	Incomplete	Incomplete	Complete	Complete	Complete	Incomplete
GPFAI	2	U0000	Incomplete	Complete	Incomplete	Incomplete	Complete	Complete	Complete	Complete	Incomplete
	3	U0000	Incomplete	Incomplete	Incomplete	Incomplete	Incomplete	Complete	Complete	Complete	Incomplete
	4	U0000	Incomplete	Complete	Incomplete	Complete	Incomplete	Complete	Complete	Complete	Incomplete
GPFAI	5	U0000	Incomplete	Incomplete	Incomplete	Incomplete	Incomplete	Complete	Complete	Complete	Incomplete
	6	U0000	Incomplete	Complete	Incomplete	Complete	Complete	Complete	Complete	Complete	Incomplete
	7	U0000	Incomplete	Incomplete	Incomplete	Incomplete	Incomplete	Complete	Complete	Complete	Incomplete
GPFAI	8	U0000	Incomplete	Complete	Incomplete	Complete	Incomplete	Complete	Complete	Complete	Incomplete
	9	U0000	Incomplete	Incomplete	Incomplete	Complete	Complete	Complete	Complete	Complete	Incomplete
	10	U0000	Incomplete	Incomplete	Incomplete	Incomplete	Incomplete	Complete	Complete	Complete	Incomplete
GPFAI	11	U0000	Incomplete	Incomplete	Incomplete	Incomplete	Incomplete	Complete	Complete	Complete	Incomplete
	12	U0000	Incomplete	Complete	Incomplete	Incomplete	Incomplete	Complete	Complete	Incomplete	Incomplete
	13	U0000	Incomplete	Incomplete	Incomplete	Incomplete	Incomplete	Complete	Complete	Complete	Incomplete
GPFAI	14	U0000	Incomplete	Complete	Incomplete	Incomplete	Incomplete	Complete	Complete	Complete	Incomplete
	1	U0000	Incomplete	Incomplete	Incomplete	Incomplete	Incomplete	Complete	Complete	Complete	Incomplete
	2	U0000	Incomplete	Incomplete	Incomplete	Complete	Complete	Complete	Complete	Complete	Incomplete
GPFAI	3	U0000	Incomplete	Incomplete	Incomplete	Complete	Complete	Complete	Complete	Incomplete	Incomplete
	4	U0000	Complete	Incomplete	Incomplete	Incomplete	Incomplete	Complete	Complete	Complete	Incomplete
	5	U0000	Incomplete	Complete	Incomplete	Complete	Complete	Complete	Complete	Complete	Incomplete
GPFAI	6	U0000	Incomplete	Incomplete	Incomplete	Complete	Complete	Complete	Complete	Complete	Incomplete
	7	U0000	Incomplete	Complete	Incomplete	Complete	Complete	Complete	Incomplete	Incomplete	Incomplete

Medical Consultation			Dia & Tx Planning		Post Tx Exams		Bleaching		Occlusal Guard		Caries Risk Assessment		Preventive Caries		Risk Management		Restorations	
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Department of Comprehensive Care

Comprehensive Care Clinical Experience Assessments

Comprehensive Care Clinical P... | Comprehensive Care Clinical P... | Comprehensive Class Report | Detailed DCA Report

Tufts

School of Dental Medicine

Comp Care Clinical Procedure Requirements

Provider ID

U3322

John Doe, UXXXX, GPXX

<div>Diagnosis & Treatment Planning</div> <div>D0150</div> <div>Required: 5</div> <div>Completed: 9</div>	<div>Post Treatment Exams</div> <div>D0104</div> <div>Required: 5</div> <div>Completed: 0</div>	<div>Bleaching</div> <div>D9975</div> <div>Required: 2</div> <div>Completed: 0</div>	<div>Occlusal Guard</div> <div>D9940 + D9940T + D9944 + D9945 + D9946</div> <div>Required: 2</div> <div>Completed: 7</div>	<div>Medicine Consultation</div> <div>MCMED4</div> <div>Required: 2</div> <div>Completed: 4</div>
<div>Caries Risk Assessment</div> <div>D0601 + D0602 + D0603</div> <div>Required: 80% of (D0120 + D0150: 28)</div> <div>Completed: 1</div>	<div>Preventive Caries</div> <div>D1206 + D1351 + D1354 + D1355</div> <div>Required: 6</div> <div>Completed: 9</div>	<div>Caries Risk Management</div> <div>D1206 + D5986 + D1354 + D1355</div> <div>Required: 80% of (D0603: 0)</div> <div>Completed: 9</div>	<div>Restorations</div> <div>D2140 + D2150 + D2160 + D2161 + D2330 + D2331 + D2332 + D2335 + D2391 + D2392 + D2393 + D2394</div> <div>Required: 40</div> <div>Completed: 31</div> <div>Externship (Max. 10): 0</div>	

Caries Management Clinical and Simulated Competencies

Year	Clinical Competency Examinations (CCE)
3/4	Diagnosis and Treatment Planning Competency (1)
3/4	Diagnosis and Treatment Planning Competency (2)
3/4	Diagnosis and Treatment Planning Competency (3)
3	CAMBRA Assessment
4	CAMBRA Management
4	Pediatric Dentistry Diagnosis and Treatment Planning
4	Pediatric Prevention and Oral Health Promotion
4	Pediatric Pit and Fissure Sealants
4	Caries Detection Simulated Practical Competency Examination

Rubric

TOP	Competency Feedback (General Question Header)		3	2	1
			Expectations:		
			Exceeds	Meets	Below /Critical Error
	1. Ethics (General Question)				
BOTTOM	2. Technical/Clinical (Tx Specific Header)	Comprehensive Caries Management Plan			
		Interpretation health history			
	3. Knowledge (Tx Specific Header)	Patient Caries Risk Assessment			
		Description of Recommended Tx			
		Major Factors/Barriers/Challenges			
		Prognosis			
		Self-Assessment			
	4. Organization	Teledentistry Guidelines			
		Time management			
	5. Professionalism/ Practice Management	Attentive to Patient needs			
		Adherence to TUSDM Policies			
	6. Patient-Centered Communication	Establishes shared Agenda			
		Open Ended Questions			
		Asks about Barriers to OH Care			
		Plain Language			
		Behavior-change strategies			
		Prompts teach back			

	3	2	1
Criteria	Exceeds expectations ALL Meets Expectations + below item(s)	Meets Expectations	Below Expectations/ Critical Errors
Technical/Clinical Skills	Exceptional skill presenting an individualized preventive treatment plan; all CAMBRA best practices incorporated	Independently presents a comprehensive preventive treatment plan, based on the patient's individual risk factors and aligned with CAMBRA best practices, with minimal errors/omissions Interprets relevant dental, medical and nutritional history prior to the telehealth visit with minimal errors/omissions	Unable to effectively complete the telehealth visit without assistance or intervention from faculty
Knowledge	No errors or omissions in caries risk level analysis or comprehensive prevention plan Demonstrates exceptional knowledge of CRA and prevention planning	Accurately analyzes patient's caries risk level and applies correctly to develop a prevention treatment plan Accurately describes recommended treatments (OTC, prescription, and/or in-office treatment) including mechanism of action/ benefits/use of preventive materials) to the patient Accurately self-assesses minor errors or omissions in CRA or prevention plan	When prompted, unable to retrieve key knowledge such as the CRA and its role in preventive dentistry or rationale for recommended interventions Does not provide accurate patient education regarding the individual risk factors, the caries process, and/or recommended interventions Incomplete knowledge of relevant elements of patient medical/dental/nutrition history
Organization	Exceptional management of all aspects of the telehealth visit, including organization and time management	Independently conducts telehealth visit and follows tele dentistry guidelines* Manages time and technology (zoom meeting and screen sharing) well with minimal assistance	Does not follow telehealth guidelines Unprepared and/or manages time poorly
Professionalism/Practice management	Maintains composure under challenging stressors Exceptional attention to patient needs in a complex situation Respectful of patients, staff, faculty, and fellow students during a challenging situation	Attentive to patient needs Accepts constructive feedback Adheres to TUSDM guidelines and policies, including but not limited to informed consent and HIPAA	Student does not ensure patient's personal health information is HIPPA protected Disrespectful behavior toward the patient and/or faculty Tardy to appointment Prioritizes self-interest over patient needs Provides unauthorized patient care Fails to follow specific faculty instruction Resistant to constructive faculty feedback
Patient-Centered Communication	In addition to verbal education, provides patient with written plain language instructions or patient education materials Demonstrates exemplary skills for effective behavior change counseling Demonstrates exemplary communication skills using plain language and effective use of teach back	Asks the patient/caregiver about their concerns and expectations/agenda Uses conversation and open-ended questions to gather health information and to prompt patient's/caregiver's questions Directly asks patient/caregiver about psychosocial factors/barriers relevant to their oral health and health care Provides plain language explanations of diagnosis/care plan Student applies individualized strategies to encourage the patient to change behaviors to improve their oral health Student prompts teach back to ensure patient's understanding of key information	Student does not explore the patient's concerns and expectations. Primarily uses jargon in patient conversations Student does not address any patient-specific behavior changes for oral disease prevention Student does not prompt teach back correctly to ensure patient understanding of key concepts/information

Faculty Calibration

Department of Comprehensive Care

[CLINICAL PROTOCOLS](#)[SCHOLARLY ACTIVITIES](#)[LECTURES](#)[SCHEDULES](#)[FACULTY – ONLY](#)[NEWSLETTERS](#)[CONTACT INFORMATION](#)

Clinical Protocols

The clinical protocols created by the Ad-Hoc Operative Calibration Committee for the Department of Comprehensive Care include:

[Operative Procedures: Guide for Faculty and Students for Initiation of Restorative Phase of the Treatment Plan](#)

[Use of Silver Diamine Fluoride in Predoctoral Clinics – Department of Comprehensive Care – Approved August 2019](#)

[Caries Excavation Guidelines – Approved April 24, 2020](#)

[Threshold of Surgical Intervention for Caries Management of Primary Lesions Guidelines – Approved May 1, 2020](#)

[Indications for repairing versus replacing restorations – Department of Comprehensive Care – Approved May 6, 2020](#)

[Indications for direct versus indirect restorations – Department of Comprehensive Care – Approved August 8, 2020](#)

[Caries Detection and Assessment – Approved March 11, 2021](#)

[Non-Surgical Management of Dental Caries – Approved April 1, 2021](#)

Caries Management Competency

Marcelle M. Nascimento, DDS, MS, PhD

Ana Paula Ribeiro, DDS, MS, PhD

Rebecca M. Sikand, DDS

Deborah A. Dilbone, DMD



Training



Assessments



Didactic and Clinical Training

Student experiences related to health promotion and disease prevention, including caries management:

Preclinical Courses



1st year: Cariology and Preventive Dentistry

2nd year: Introduction to Clinical Diagnosis and Treatment Planning

Clinical Courses



3rd year: Clinical Operative Dentistry 1-3

4th year: Clinical Operative Dentistry 4-6

Competency Assessments

How overall competency is assessed to determine the graduate's readiness:

Preclinical Assessments



1st year: Cariology and Preventive Dentistry

2nd year: Introduction to Clinical Diagnosis and Treatment Planning



Clinical Assessments

3rd year & 4th year: Caries Management Skills Assessments



Clinical Assessments

How overall competency is assessed to determine the graduate's readiness:

Clinical Courses

3rd year: Clinical Operative Dentistry 1-3

→ **Caries Risk Assessment and Management**
Skills Assessment

4th year: Clinical Operative Dentistry 4-6

→ **Caries Management Case**
Completion Skills Assessment

Caries Risk Assessment and Management

3rd year Skills Assessment



Comprehensive Oral
Examination

Caries Diagnosis*



Axium Electronic Forms:

- Caries Risk Assessment
- Caries Management

Risk Factors*

Caries Risk Assessment and Management

C-Risk Assessment	
Low Caries Risk	Moderate Caries Risk
High Caries Risk	Extreme Caries Risk
Form Question	
Appointment Type (click the answer space for drop down menu)	
Location	
DMD clinic	
Disease Indicators	
<input checked="" type="checkbox"/> White spot, active enamel carious lesions	
<input checked="" type="checkbox"/> High - Greater than 2 noncavitated lesions	
Specify tooth number(s), surface, and lesion depth; e.g.: #29 M (E1)	
6-11	
<input checked="" type="checkbox"/> Radiographic proximal enamel lesions (not in dentin)	
<input checked="" type="checkbox"/> High - More than two E1 or E2 lesions	
Specify tooth number(s), surface, and lesion depth; e.g.: #29 M (E1)	
4,5,19,20,29,30	
<input checked="" type="checkbox"/> Radiographic lesions into dentin	
Specify tooth number, surface, and lesion depth; e.g.: #29 M (D1)	
14,31	
<input checked="" type="checkbox"/> Radiographic progression of lesions over time	
N	
<input checked="" type="checkbox"/> Cavitated, active lesions	
Tooth Numbers(s)	
2,3,21,28	
<input checked="" type="checkbox"/> Secondary, active carious lesions	
N	
<input checked="" type="checkbox"/> Root, active carious lesions	
N	
<input checked="" type="checkbox"/> Restorations placed due to caries in the last 3 years	
<input checked="" type="checkbox"/> High - 3 or more new restorations in past 3 years	
Tooth Number(s)	
7,10	
DMFT score: total number of teeth with decay (D), missing due to caries (M), and restored due to caries (F)	
9	
Risk Factors - Contributing Conditions	
<input checked="" type="checkbox"/> Presence of dental plaque	
High - visible, heavy plaque	
Y	
<input checked="" type="checkbox"/> Brushing	
N	
<input checked="" type="checkbox"/> Flossing	
N	

C-Risk Assessment	
Low Caries Risk	Moderate Caries Risk
High Caries Risk	Extreme Caries Risk
Form Question	
<input checked="" type="checkbox"/> Our assessment reveals you are at a high risk of having new dental decay in the near future. We want to help you to move to a safer situation to avoid new cavities. We strongly recommend the following:	
Review your dietary habits with us and receive dietary counseling.	
Y	
Switch to sugar-free beverages.	
Y	
Reduce the frequency of sugared snacking.	
Y	
Brush your teeth well and at least twice a day with a fluoride toothpaste for 2 minutes.	
Y	
Brush at least twice daily with a prescription 5,000 ppm fluoride toothpaste.	
Y	
Don't skip the brushing just before bedtime; it is the most important one!	
Y	
Floss between your teeth at least 1x/day before brushing, especially before bedtime	
Y	
Receive the restorative work needed such as fillings and crowns.	
Y	
Get a thorough professional dental cleaning every 3 to 6 months.	
Y	
Get in-office fluoride application after dental cleanings.	
Y	
Return for a recall exam every 3 or 6 months to re-evaluate your current caries risk.	
Y	
Have new bitewing x-rays taken every 6 to 18 months to check for new cavities.	
Y	

Caries Risk Assessment and

Management

3rd year Skills Assessment



Assessment Criteria

1. *Should* be completed prior to any other skills assessment and **MUST** be completed during 3DN Junior year in clinic.
2. Must call operative faculty for evaluation at least **30 minutes** before patient dismissal time and patient must be present in the chair.
3. Must be completed on one of your own assigned COE patients. This skills assessment cannot be completed on another student's patient.
4. Must be done on a patient with **High Caries Risk**.
5. Patient needs to have **12+ teeth** remaining that are not planned for immediate extractions.
6. Codes and Forms that need to be completed independently:
 - a. Hard Tissue Code (D00085) and Physical Form
 - b. Caries Risk Assessment Code (D2070) and axiUm Form
7. Radiographic interpretation must be completed and then reviewed by faculty as part of the hard tissue examination.
8. Caries Risk Assessment axiUm Form: must recognize and diagnose patient's needs from hard tissue exam and translate the risks and protective factors into a correct caries risk diagnosis.
9. Must develop a caries management plan for patient to reduce risks and increase protective factors.

Assessment Rubric



3rd year

Question	Grade	Grade	Description
GRADE: Professionalism	P		
Case Selection	P		
Evidence-based judgment	P		
Compliance with infection control stds	P		
Interpersonal Skills	P		
Time Management	P		

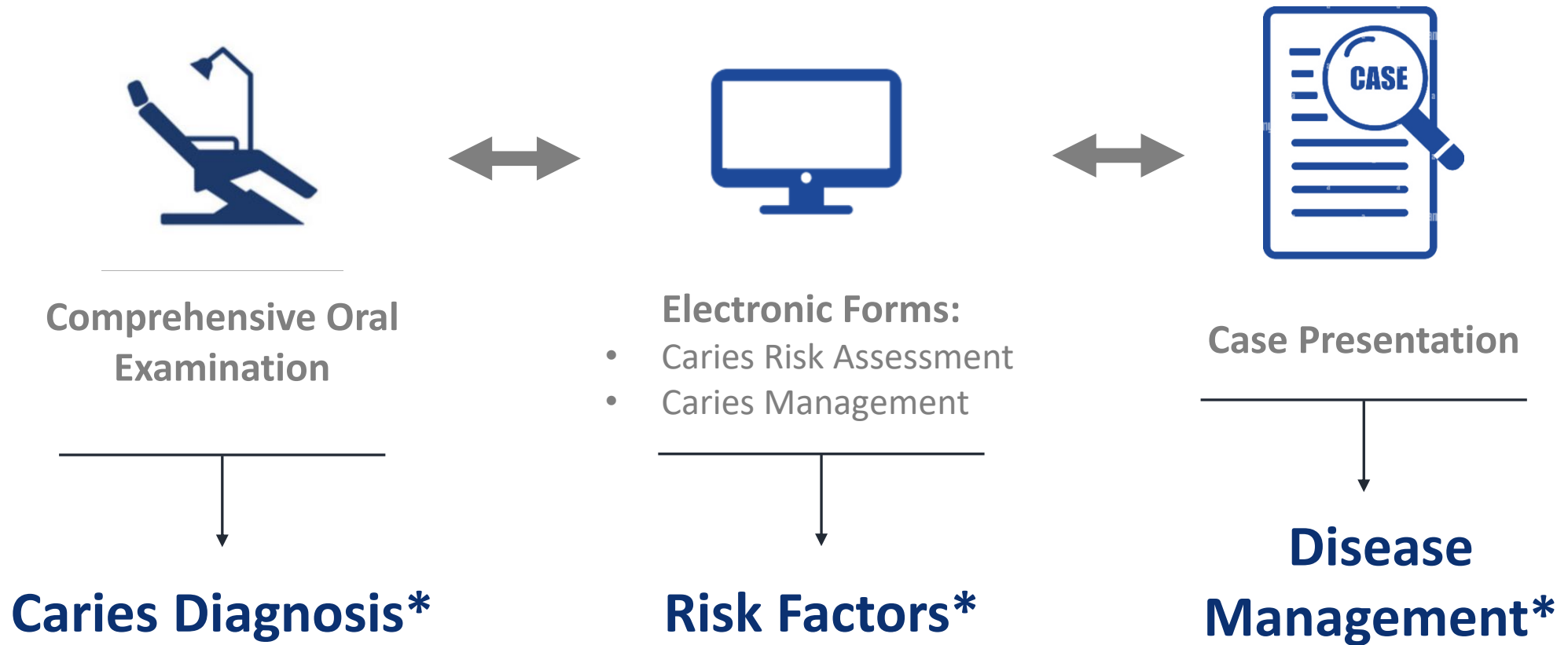
☐ Add another evaluation

Time (Hrs)
Total RVU
[View Other](#)

Procedure	Site	Surf.	Stat.	Description	RVU	Question	Grade	User	Other Forms
D2070			C	Caries Risk Ass...	30.00	Competency pass or fail?	P		
					0.00	Classification	CM		
						Caries Risk Assessment Competency			
						Any "Fail" will fail the competency			
					0.00	Successfully presented complete case	P		
					0.00	Detect/diagnose clinically/xray	P		
					0.00	Identify risk factors	P		
					0.00	Identify protective factors	P		
					0.00	Balance indicator/factors to assess risk	P		
					0.00	Develop proper caries plan	P		
					0.00	Identify conditions	P		
					0.00	Attempt to educate patient on caries	P		

Caries Management Case Completion

4th year Skills Assessment



Caries Management Case Completion

4th year Skills Assessment



Assessment Criteria

1. Must be completed on a patient assigned to you as the primary provider.
2. Patient must have been diagnosed **initially as High or Extreme** Caries Risk Status with **12+ teeth**.
3. Must have completed at least:
 - a. An **initial** Caries Risk Assessment
 - b. A **second** Caries Risk Assessment (any number of additional assessments can be completed within the minimum time frame of 6 months)
 - c. A **final** Caries Risk Assessment (must be at least 6 months out from the initial assessment)
4. All Caries Risk Assessments that are presented **MUST** be completed by the student calling competency and ideally should have been completed by operative faculty.
5. Must be presented as a power point presentation with the patient present in the chair. See Canvas for examples.
6. The final Hard Tissue and Caries Risk Assessment can be completed on the day of the presentation and added to the power point.
7. The focus of the presentation must be on how the patient's caries risk has been managed via balance between risk factors and protective factors
8. Ideally, the caries risk status should be lowered, however, this is not required as long as the student can demonstrate that they have balanced the risk factors and protective factors.
9. Must be graded as a competency in axiUm using the Skills Assessment paperwork. The carbon copy stays with the student and the white page goes into the clinical forms box in each clinic.



Assessment Rubric



4th year



College of Dentistry
Division of Operative Dentistry

Clinical Skills Assessment Caries Management - Case Completion Form

Student Name: _____

Chart #: _____

Date of Initial Caries Risk Assessment: ____/____/____. (must be completed by the same student)

Date of Caries Risk Re-Assessment: ____/____/____. 2nd Caries Risk Re-Assessment: ____/____/____ (if done).

Date of Case Completion Caries Management Assessment: ____/____/____. (minimum 6 months after initial CRA)

Initial Risk Level: HIGH EXTREME

Current Risk Level: LOW MODERATE HIGH EXTREME

Main goals of initial caries management plan: _____

Problems encountered during re-assessments & changes made on management plan: _____

Case Presentation

The student successfully presented the completed case, which included documented changes in: carious active lesions, risk factors, and risk level (circle): YES NO. If no, explain: _____

F P

Change in the Activity of Carious Lesions

The student was able to detect changes in the activity of carious lesions and/or to detect and diagnose new active lesions: noncavitated, cavitated, and recurrent.

F P

Change in Risk Factors

The student was able to identify new, changed and/or unchanged risk factors and contributing conditions such as amount of plaque formation, oral hygiene habits, dietary habits, defective restorations, appliances, medical risk factors, dry mouth, etc.

F P

Change in Risk Level

The student was able to modify the initial caries management plan based on the patient's specific needs and risk level. In addition, behavior modification techniques have been incorporated to balance the disease indicators, risk factors and protective factors which decreased the patient's caries risk (circle): YES NO. If no, explain: _____

F P

Professionalism and Patient Management

The student demonstrated a conceptual understanding and insightful application of relevant scientific evidence.

F P

The student utilized universal precautions and complied with regulations regarding infection control, hazard communication and medical waste disposal.

F P

The student was prepared and was familiar with the patient's dental and medical history and dental needs. The student demonstrated acceptable interpersonal skills while interacting with faculty, staff and the patient; including the appropriate use of effective techniques to manage anxiety, distress, discomfort and pain associated with this procedure.

F P

The student managed time appropriately. The examination was completed by 11:00 AM or 4:30 PM.

F P

One "F" in any category is a failure for the exam.

Panel Discussion and Questions

