

# Dental Science

## 2023-2024 MICHIGAN HOSA EVENT MODIFICATIONS FOR REGIONAL CONFERENCES!



future health professionals



### New for 2023 - 2024

A new PPE skill has been added.

Skill events now require attire appropriate to the occupational area be worn for Round 2.

These guidelines are written for ILC. States may modify events or have different event processes and deadlines. Be sure to check with your Local/State Advisor (or state website) to determine how the event is implemented for the regional/area or state conference. Editorial updates have been made.

These guidelines are specifically for Michigan HOSA members in preparation for the regional leadership conferences. For more information about regionals, please visit [www.michiganhosa.org/regionals](http://www.michiganhosa.org/regionals).

### Event Summary

Dental Science provides members with the opportunity to gain knowledge and skills required for dental careers. This competitive event consists of 2 rounds. Round One is a written, multiple-choice test and the top scoring competitors will advance to Round Two for the skills assessment. This event aims to inspire members to learn more about careers in the dental field. **At the regional level, all teams will advance to the round two- skill round. The test scores will be combined with the skill scores for final rating**

### Sponsorship

This competitive event is sponsored by the [American Dental Education Association](http://www.american-dental-education-association.org).



### Dress Code

Competitors shall wear proper business attire or official HOSA uniform or attire appropriate to the occupational area during testing. Round 2 skill events require attire appropriate to the occupational area be worn. Bonus points will be awarded for [proper dress](#). **At the regional level, teams can wear the occupational appropriate attire to test in, in addition to the skills. They do NOT need to change into business attire to take the test. Bonus points will not be added for proper dress, but judges/event managers will make note if competitors are NOT in proper dress which could result in overall point deduction.**

### Competitors Must Provide:

- A [photo ID](#)
- Two #2 lead pencils (not mechanical) with eraser for both rounds
- Disposable non-latex gloves, and utility gloves
- Disposable mask and gown
- Protective eyewear for the competitor

## General Rules

1. Competitors in this event must be active members of HOSA and in good standing
2. **Eligible Divisions:** Secondary and Postsecondary/Collegiate divisions are eligible to compete in this event.
3. Competitors must be familiar with and adhere to the [General Rules and Regulations of the HOSA Competitive Events Program \(GRR\)](#).
  - A. Per the [GRRs](#) and [Appendix H](#), HOSA members may request accommodation in any competitive event. To learn the definition of an accommodation, please read [Appendix H](#). To request accommodation for the International Leadership Conference, [submit the request form here](#) by May 15 at midnight EST.
  - B. To request accommodation for any regional/area or state level conferences, submit the request form [here](#) by your state published deadline. Accommodations must first be done at state in order to be considered for ILC. **Regional accommodations MUST be submitted two weeks prior to your regional conference date. Email [Samantha.pohl@mhc.org](mailto:Samantha.pohl@mhc.org) for questions.**
4. All competitors shall report to the site of the event at the time designated for each round of competition. At ILC, competitor's [photo ID](#) must be presented prior to ALL competition rounds. **Event managers will be checking photo IDs at the regional level as well. A digital copy of a photo is appropriate (i.e. picture on phone of photo ID on school portal).**

## Official References

5. All official references are used in the development of the written test and skill rating sheets.
6. [Boyd, Linda. \*Dental Instruments: A Pocket Guide\*. Saunders, latest edition.](#)
7. [Singhal, Kantz, Damatta, Phinney & Halstead. \*Dental Assisting: A Comprehensive Approach\*. Cengage, latest edition.](#)

## Round One Test

8. [Test Instructions](#): The written test will consist of 50 multiple choice items in a maximum of 60 minutes.
9. **Time Remaining Announcements:** There will be NO verbal announcements for time remaining during ILC testing. All ILC testing will be completed in the Testing Center and competitors are responsible for monitoring their own time. **There will be NO verbal announcements for time remaining during regional testing. Students are responsible for monitoring their own time.**

## 10. Written Test Plan

• The Dental Team, Dental Specialties, and History.....	12%
• Oral Health and Nutrition.....	6%
• General Anatomy and Physiology.....	4%
• Head and Neck Anatomy.....	10%
• Tooth Morphology.....	12%
• Infection Control / Occupational Health and Safety.....	16%
• Chairside Assisting/Instruments.....	16%
• Radiology.....	8%
• Medical Emergencies in the Dental Office.....	10%
• Restorative and Laboratory Materials.....	6%

11. The test score from Round One will be used to qualify the competitor for the Round Two. **All teams will advance to the round two skills.**

## 12. Sample Round One Test Questions

1. What is the term for the area where two bones fused to form the mandible? (Singhal pp 128)
  - A. Condyles

- B. Ramus
  - C. Coronoid notch
  - D. **Symphysis**
2. Which instruments are best suited for examining teeth for caries, calculus, furcations or other abnormalities? (Boyd pp 5)
- A. Dull chisels
  - B. Ball burnishers
  - C. **Explorers**
  - D. Scalpels
3. In the dental unit, what does the rheostat control? (Singhal pp 597)
- A. Air-water syringe
  - B. **Speed of the handpiece**
  - C. Position of the head of the dental chair
  - D. Overhead lights

**Round Two Skills** Highlighted in yellow are the two skills that will be evaluated at the regional level.

13. Round Two is the performance of a selected skill(s). The Round Two skills approved for this event are:

**Skill I: Dental Instrument Identification (Including name of instrument and purpose or use) 15 minutes**

15 instruments or photos from the following list:

Amalgam Carrier – Double Ended	Burs – Pear-Shaped	Elevators - Straight	Rongeurs
Amalgam Condenser	Burs – Inverted Cone	Endodontic Explorer	Scaler-Straight Sickle
Amalgam Well	Burs – Finishing	Evacuation Tip High-Volume	Scaler-Curved Sickle
Anesthetic Aspirating Syringe	Burs - Diamond	Forceps- Mandibular Universal – Cryer 151	Scissors – Crown & Bridge
Articulating Paper Holder with paper	Burs - Round	Forceps- Maxillary Universal – Cryer 150	Scissors – Suture
Bird Beak Pliers	Carvers- Discoid-Cleoid	Handpieces -Fiberoptic High-Speed	Spoon Excavator
Bite-Wing Tabs	Carvers - Hollenback	Handpieces – High-Speed	Tongue & Cheek Retractor
Bone File	Composite Placement Instrument	Handpieces – Slow Speed with Contra Angle Attachment	Universal Matrix Band
Burnisher – Ball	Cotton Forceps (pliers)	Handpieces – Slow Speed with Propphy Angle Attachment	Universal Clamps – Mandibular (Winged Clamp)
Burnisher - Football	Curing Light	Hemostat	Universal Clamps – Mandibular (Wingless Clamp)
Burnisher – T- Ball	Dental Dam Forceps	Howe (or How) Pliers	Universal Clamps – Maxillary (Winged Clamp)
Burnisher – Acorn	Dental Dam Punch	Liner Applicator	Universal Clamps – Maxillary (Wingless Clamp)
	Elevators – Root-Tip	Periodontal Probe	

- Skill II: Assembly and Disassembly of Local Anesthetic Syringe 7 minutes
- Skill III: Seat, Prepare, and Dismiss Patient for Basic Dental Exam 10 minutes
- Skill IV: Treatment Room Disinfecting and Cleaning 7 minutes
- Skill V: Patient Education – Brushing and Flossing 7 minutes**
- Skill VI: Preparation, Manipulation, Delivery, & Handling of Alginate Impressions 7 minutes
- Skill VII: Treatment of Contaminated Tray in the Sterilization Center 8 minutes
- Skill VIII: Donning and Doffing PPE 5 minutes

14. The selected Skill(s) will be presented to competitors as a written scenario at the beginning of the round. The scenario will be the same for each competitor and will include a challenging component that will require the competitor to apply critical thinking skills. A sample scenario can be found [here](#).
15. Timing will begin when the scenario is presented to the competitors and competitors will be stopped at the end of the time allowed.
16. The scenario is a secret topic. Competitors MAY NOT discuss or reveal the secret topic until after the event has Concluded or will face penalties per [the GRRs](#).
17. Judges will provide information to competitors as directed by the rating sheets. Competitors may ask questions of the judges while performing skills if the questions relate to patient's condition and will be included in the scenario or the judge script.

**Final Scoring**

18. The competitor must earn a score of 70% or higher on the combined skill(s) of the event (excluding the test and ID instruments) in order to be recognized as an award winner at the ILC.
19. Final rank is determined by adding the round one test score plus round two skill score. In case of a tie, the

highest test score will be used to determine the rank.

## DENTAL SCIENCE

### SKILL I: DENTAL INSTRUMENT IDENTIFICATION

Time = 15 minutes

Competitor ID #: \_\_\_\_\_ Judge's Initials: \_\_\_\_\_ Total Points (45 possible) \_\_\_\_\_

	Name of Instrument	Points (1 each for name & spelling)	Purpose or Use	Points (1 point for correct purpose/use)
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
<b>TOTAL: ID &amp; Spelling (30 poss.)</b>			<b>TOTAL: Purpose (15 poss.)</b>	

## DENTAL SCIENCE

Section # \_\_\_\_\_  
 Competitor # \_\_\_\_\_

Division: \_\_\_\_\_ SS \_\_\_\_\_ PS/C  
 Judge's Signature \_\_\_\_\_

<b>Skill V: Patient Education- Brushing (Bass Brushing Method) and Flossing (Time: 7 minutes)</b>	<b>Possible</b>	<b>Awarded</b>
1. Assembled materials and dentoform/typodont.	1 0	
2. Greeted patient and introduced self.	1 0	
3. Washed hands or used alcohol based hand-rub for hand hygiene.	2 0	
4. Donned protective clothing, mask, and gloves.	2 0	
5. Using dentoform/typodont demonstrated the Bass Brushing Method:		
a. Grasped toothbrush and placed tips of bristles angled apically into the sulcus at 45°.	1 0	
b. Used gentle, short vibratory strokes without removing the bristles from the sulcus.	1 0	
c. Lifted brush and continued into next area or group of teeth until all areas have been cleaned.	1 0	
d. For the lingual side of anterior teeth, held the brush vertically with the bristle tips in the sulcus.	1 0	
6. Using dentoform/typodont demonstrated flossing:		
a. Removed approximately 18 inches of floss from the container.	1 0	
b. Wound floss around middle fingers of each hand.	1 0	
c. Pinched floss between thumbs and index fingers, leaving a 1 to 2 inch length in between.	1 0	
d. Kept the floss tight between fingers, used index fingers or a combination of index finger and thumb and placed the floss between two teeth.	1 0	
e. Guided the floss gently between the teeth by using a see-saw motion until the floss is below the contact.	1 0	
f. Avoided injury to the gingiva by not snapping the floss between the teeth.	2 0	
g. Curved the floss in a "C" shape tight against the tooth.	1 0	
h. Slid the floss gently under the gumline.	1 0	
i. Removed biofilm and debris by scraping up and down several times.	1 0	
j. Avoided injury to the gingiva, by not using too much force and not going too far under the gum line.	2 0	
k. Lifted the floss over the interproximal papillae just below the contact area without removing the floss from between the teeth.	1 0	
l. Moved the floss to the adjacent tooth and repeated the procedure.	1 0	
m. Removed the floss gently from between the teeth. If floss tears when sliding past the contact area gently placed floss below contact area and pulled between the teeth.	2 0	
n. Wound the floss on the fingers to allow for a fresh section to be used.	1 0	
o. Used a clean piece of floss, moved between the next two teeth and repeated procedure.	1 0	

<b>Skill V: Patient Education- Brushing (Bass Brushing Method) and Flossing con't (Time: 7 minutes)</b>	<b>Possible</b>	<b>Awarded</b>
p. Flossed each tooth thoroughly until entire mouth is clean.	1      0	
7. Used appropriate verbal and nonverbal communication with patient and other personnel.	2      0	
8. Removed & disposed of PPE.	2      0	
9. Washed hands or used alcohol based hand-rub for hand hygiene.	2      0	
<b>TOTAL POINTS - SKILL V 70% Mastery for Skill V = 24.5</b>	<b>35</b>	