

Course: DENT 232 Community Dental Health and Education

Topic: Dental Hygiene Care Delivery in the Global Community

Audience: Adult Learners (Senior Level Dental Hygiene Students)

Time: 50 minutes total

- Anticipatory set= 5 minutes
- Lesson content= 40 minutes
- Summary= 5 minutes

Materials: Computer, Projector, PowerPoint slides, Microsoft Teams, Stable internet connection, Microphone, Webcam

Instructional Objectives:

Upon completion of the lecture, the student should be able to:

1. State how the dental hygiene profession developed internationally.
2. Summarize the major global oral health challenges.
3. Analyze global workforce distribution patterns.
4. Evaluate differences in global dental hygiene education models, work roles, and regulatory structures.
5. Value the role of international professional organizations in promoting global oral health.

References:

American Dental Hygienists' Association. (n.d.). *Direct access*.

<https://www.adha.org/advocacy/scope-of-practice/direct-access>

FDI World Dental Federation. (2025). *2024 annual report*.

https://www.fdiworlddental.org/sites/default/files/2025-05/FDI-Annual-Report-2024_FINAL.pdf

International Federation of Dental Hygienists. (2025). *Meet our newest members: Oral health therapists, oral therapists and dental therapists*. <https://ifdh.org/ohts-ots-dts/>

Nathe, C. N. (2016). *Dental Public Health & Research: Contemporary Practice for the Dental Hygienist* (4th ed.). Pearson.

Wan, X., Zhou, X., Jiang, W., Shen, Y., Du, Y., Shi, Y. (2025). Visual mapping of global studies on dental hygienists: Trends and emerging hotspots. *Oral Health and Preventive Dentistry*, 23, 525-534. <https://pmc.ncbi.nlm.nih.gov/articles/PMC12427096/>

World Health Organization. (2026). *Oral health*. <https://www.who.int/health-topics/oral-health>

LESSON CONTENT	NOTES – MEDIA – Q/A
<p>I. ANTICIPATORY SET</p> <p><u>A. Introduction</u> Around the world, oral health needs and dental hygiene practices look very different from what we experience in the United States. Political systems, cultural beliefs, and economic resources shape how people access care, who provides it, and what preventive services are available. Understanding these global differences helps us see the profession from a broader perspective and recognize the challenges many populations face in achieving basic oral health.</p> <p><u>B. Gain Attention/Motivate</u> What do you think happens in a country where there is only one dental hygienist for every 1 million people? In Austria, that ratio is real.</p> <p><u>C. Activate Prior Knowledge</u> Consider what you already know about how dental hygienists practice in the United States, including our education, our scope, and our role in prevention. Hold that picture in your mind as we explore how differently the profession looks around the world.</p> <p><u>D. Establish Rationale</u> Today, you will learn how dental hygiene looks beyond the United States and why those global differences matter for you as future clinicians. Understanding how other countries educate, regulate, and utilize dental hygienists helps you see the profession from a broader public health perspective. Many parts of the world have limited access to preventive care, very small oral health workforces, or no dental hygiene profession at all. By exploring these global patterns, you will gain insight into why oral health disparities persist and how the role of the dental hygienist contributes to improving health outcomes worldwide.</p> <p><u>E. Present Instructional Objectives</u> After today’s lecture, you should be able to:</p> <ol style="list-style-type: none"> 1. State how the dental hygiene profession developed internationally. 	<p>PP Slide #1: Title slide: Dental Hygiene Care Delivery in the Global Community</p> <p>PP Slide #2: Image of crowd to visually reinforce global population differences</p> <p>Note: This statistic is from Table 4-3 in textbook.</p> <p>PP Slide #3: Direct access map</p> <p>Q: When countries want to improve oral health, where do you think they look for help?</p> <p>A: Answers will vary, but students will learn the answers are global health organizations and international professional groups.</p> <p>PP Slide #4: Objectives</p>

2. Summarize the major global oral health challenges.
3. Analyze global workforce distribution patterns.
4. Evaluate differences in global dental hygiene education models, work roles, and regulatory structures.
5. Value the role of international professional organizations in promoting global oral health.

LESSON CONTENT	NOTES – MEDIA – Q/A
<p>I. Evolution of Dental Hygiene Globally:</p> <p>A. Early development</p> <ol style="list-style-type: none"> 1. Relatively new profession 2. Began different times globally 3. Influenced by public health needs 4. Driven by prevention emphasis 5. Developed in response to workforce shortages <p>B. Early adoption</p> <ol style="list-style-type: none"> 1. Countries <ol style="list-style-type: none"> a. United States b. Norway c. Great Britain <ol style="list-style-type: none"> i. England first aside from U.S. 2. Supported by strong public health systems 3. Economically developed 4. Strong preventive philosophies <p>C. Slow adoption</p> <ol style="list-style-type: none"> 1. Countries <ol style="list-style-type: none"> a. Lithuania b. Czech Republic c. New Zealand 2. Prevention not prioritized in health systems 3. Limited public health infrastructure 4. Lack of educational resources 5. Dentist-centered models of care <p>D. No dental hygiene profession</p> <ol style="list-style-type: none"> 1. Country <ol style="list-style-type: none"> a. France 2. Reliance on alternative providers <ol style="list-style-type: none"> a. Dentist b. Assistant 3. Limited investment in prevention 4. Emphasis on treatment <p>E. Emerging trends in global evolution</p> <ol style="list-style-type: none"> 1. Growth of mid-level providers <ol style="list-style-type: none"> a. Underserved regions 2. Expansion of community-based prevention roles 3. Increasing global alignment with WHO prevention goals 4. Movement toward standardized education and competencies 	<p>PP Slide #5: Evolution of dental hygiene</p> <p>PP Slide #6: Education timeline</p> <p>Note: The chart is adopted from Table 4-2 in textbook.</p> <p>PP Slide #7: Early vs. slow adoption</p> <p>PP Slide #8: No dental hygiene profession</p> <p>Q: What challenges might arise in a country without a dental hygiene profession?</p> <p>A: Possible challenges include less prevention, higher disease rates, and more burden on dentists.</p> <p>PP Slide #9: Emerging trends</p>

II. Global Oral Health Challenges:

A. Major challenges

1. Caries treatment gap
 - a. Estimated 90% unable to receive standardized caries treatment in developing countries
2. Untreated dental disease
 - a. High rates
3. Preventive care
 - a. Limited access
4. Pain-driven care-seeking
 - a. Seek care only when symptomatic

B. System-level challenges

1. Economic barriers
 - a. Cost limits utilization
2. Cultural barriers influence care-seeking
 - a. Beliefs
 - b. Norms
3. Uneven distribution of providers
 - a. Workforce concentration
 - i. Urban regions
 - ii. Wealthy regions
4. Policy and regulatory gaps
 - a. Weak
 - b. Absent
 - c. Limits system capacity and consistency

C. Social determinants

1. Education
2. Income
3. Cultural beliefs
4. Availability of resources
5. Access to care
6. Political stability and governance

D. Breakdown of social determinants

1. Dietary norms
2. Gender norms
3. Alternative medicine
4. Fluoridated water
5. Toothpaste
6. Toothbrush
7. Floss
8. Transportation
9. Clinics
10. Health literacy

PP Slide #10: Major oral health challenges

Note: The pictures on slides 10-13 are from Dr. Claeys' experience in Tanzania in 2005.

Q: How does prevention change long-term oral health outcomes?

A: Outcomes include lower decay rates and periodontal disease, improved systemic health, and better quality of life.

PP Slide #11: System-level challenges

PP Slide #12: Social determinants of oral health

PP Slide #13: Breakdown of social determinants

III. Workforce Distribution:

A. Workforce variation

1. Ratios differ dramatically
 - a. Strong presence
 - b. Limited presence
 - c. No presence
2. Influenced by
 - a. national health priorities
3. Dependent on
 - a. education system capacity
4. Shaped by
 - a. Regulation
 - b. Scope of practice
5. Affected by
 - a. Economic resources
 - b. Infrastructure

B. Workforce examples

1. High ratio (dental hygienist vs. population)
 - a. Japan
 - i. 1:846
 - b. South Korea
 - i. 1:1500
 - c. United States
 - i. 1:1700
 - d. Canada
 - i. 1:1800
2. Low ratio
 - a. Austria
 - i. 1:1,000,000
 - b. Germany
 - i. 1:550,000
3. No dental hygienists
 - a. Developing nations
 - b. France

C. Impact on access to care

1. Fewer preventive services
2. Higher disease rates
3. Greater burden on dentists
4. Longer wait times for services
5. Limited school-based prevention
6. Reduced availability of community-based programs
7. Most affected
 - a. Rural areas

PP Slide #14: Workforce distribution

PP Slide #15: Dental hygienist vs. population

Note: The picture is Table 4-3 from textbook.

Q: What happens to preventive care access when a country has a highly concentrated workforce in urban areas compared to rural regions?

A: Preventive care access drops in rural regions because most providers are clustered in cities, leaving rural communities with fewer services, longer travel distances, and limited appointment availability.

PP Slide #16: Impact on access to care

IV. Education, Roles, and Regulation:

A. Education models

1. Certificate programs
 - a. Germany
2. Associate degree
3. Bachelor's degree
4. Post-graduate specialization
 - a. U.S. has highest number of master's programs
5. Average duration of study
 - a. 3 years

B. Dental hygiene roles

1. Role varies widely
 - a. 98% of hygienists are women
 - b. Primary oral health providers
 - i. Norway
 - c. Restricted roles
 - i. Japan
 - d. No roles
 - i. France
 - e. Public health roles
 - i. Finland
 - ii. Sweden
 - f. Community outreach roles
 - i. Dominican Republic
 - ii. Nepal

C. Scope of practice

1. Independent practice
2. Independent referred practice
3. General supervision
4. Direct supervision
5. Preventive services
 - a. Limited
 - b. Expanded

D. Regulatory structures

1. National regulation
2. Regional/provincial regulation
3. Dentist-controlled systems
4. No regulation

E. Other providers

1. Dental therapists
 - a. Provide restorative and preventive care
 - b. Primarily treat children
 - i. some adult scope

PP Slide #17: Education models

Note: Emphasize that these education variations influence access to care, workforce capacity, and the profession's global identity.

PP Slide #18: Roles

PP Slide #19: Scope of practice

PP Slide #20: Regulatory structures

Q: How might regulation shape the daily work of a dental hygienist?

A: It shapes procedures we can perform, how much supervision we need, and where we're allowed to practice.

- c. Expand access in underserved regions
- d. Common in
 - i. United Kingdom
 - ii. Australia
 - iii. Canada
 - iv. Nigeria
- e. Similar to dental nurses
- 2. Oral health therapists
 - a. Dual-qualified in
 - i. Dental therapy
 - ii. Dental hygiene
 - b. Provide primary oral health care for all ages
 - c. Broadest scope
 - d. Common in Australia
- 3. Oral health educators
 - a. Developing countries
 - b. Provide basic oral health awareness
 - i. Poor populations
 - ii. Remote areas

V. International Organizations:

A. Why global organizations matter

- 1. Support
 - a. Collaboration
- 2. Promote
 - a. Prevention
 - b. Oral health
- 3. Provide
 - a. Education
 - b. Research
- 4. Strengthen
 - a. Global recognition of profession

B. Global organizations

- 1. World Health Organization (WHO)
 - a. Oral health policy
 - b. Surveillance
 - i. Global Oral Health Database
 - c. Strategy
- 2. FDI World Dental Organization
 - a. Also known as Fédération Dentaire Internationale (FDI)
 - b. Founded in 1900

PP Slide #21: Other global oral health providers

PP Slide #22: International organizations

Note: Point out that national differences don't happen in isolation. International organizations play a major role in shaping education, scope, and regulation.

Q: Why is international collaboration important for improving global oral health?

A: They share knowledge, resources, and successful prevention strategies, which helps strengthen the oral health workforce and improve outcomes worldwide.

PP Slide #23: Global organizations

<ul style="list-style-type: none"> c. Collaborates with WHO d. Advocacy e. Standards <ol style="list-style-type: none"> 3. International Association for Dental Research (IADR) <ul style="list-style-type: none"> a. Also known as International Association for Dental, Oral, and Craniofacial Research b. Advance research 4. International Federation of Dental Hygienists (IFDH) <ul style="list-style-type: none"> a. Formed in 1986 b. Professional representation c. Publishes the <i>International Journal of Dental Hygiene</i> <p>C. Regional organizations</p> <ol style="list-style-type: none"> 1. European Dental Hygienists Federation (EDHF) <ul style="list-style-type: none"> a. Advocacy b. Standards 2. Council of European Dentists (CED) <ul style="list-style-type: none"> a. Policy b. Regulation 3. Council of European Chief Dental Officers (CECDO) <ul style="list-style-type: none"> a. Promote policy 4. European Federation of Periodontology (EFP) <ul style="list-style-type: none"> a. Periodontal guidelines b. Education and training c. Promote periodontal health <p>D. Impact of these organizations</p> <ol style="list-style-type: none"> 1. Workforce development 2. Standard setting 3. Advocacy for <ul style="list-style-type: none"> a. Prevention 4. Global oral health initiatives 	<p>Q: Which global organization has the greatest impact on the dental hygiene profession and why?</p> <p>A: Answers will vary. All listed organizations are important. Students should justify their choice using evidence from the lecture.</p> <p>PP Slide #24: Regional organizations</p> <p>Note: Point out that these organizations function at the European level and focus on coordinating policy, standards, and research across EU member states.</p> <p>PP Slide #25: Impact</p>
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LESSON CONTENT

SUMMARY:

Let's recap what we covered today. We examined how dental hygiene systems vary internationally by exploring differences in education models, workforce distribution, and the professional roles dental hygienists hold across countries. We also learned how regulatory structures influence autonomy, supervision requirements, and the types of services hygienists are permitted to provide. This lesson highlighted the contributions of global professional organizations in promoting collaboration, setting standards, and advancing oral health worldwide. We also considered how regional organizations coordinate policy, support professional development, and guide research within specific areas of the world. These points directly relate back to our objectives by helping you compare global systems, understand workforce patterns, and recognize the role of international organizations.

NOTES — MEDIA — Q/A

PP Slide #26: Summary

Note: Thank the students for their attention and participation.

Q: What is one insight from today's lecture that changes how you think about global dental hygiene?

A: Answers will vary. Provide clarity on any misconceptions.

Test Items

Objective #1: State how the dental hygiene profession developed internationally.

Test Item #1: Which of the following countries did **NOT** adopt dental hygiene early?

- a. United States
- b. England
- c. Lithuania
- d. Norway

Objective #2: Summarize the major global oral health challenges.

Test Item #2: Which of the following is a major global oral health challenge that highlights the need for strong dental hygiene care?

- a. Unequal access to preventive services
- b. Universal coverage of dental care
- c. Consistent regulations across all countries
- d. Low rates of periodontal disease worldwide

Objective #3: Analyze global workforce distribution patterns.

Test Item #3: Which factor **best** explains why global dental hygiene workforce distribution is uneven across countries?

- a. Equal regulations
- b. Population needs
- c. Identical education
- d. Uniform access

Objective #4: Evaluate differences in global dental hygiene education models, work roles, and regulatory structures.

Test Item #4: In 3-4 sentences, explain how education, work roles, and regulatory structures for dental hygienists differ internationally.

Objective #5: Value the role of international professional organizations in promoting global oral health.

Test Item #5: In 3-4 sentences, explain how international professional organizations contribute to improving global oral health and why their role is important.

Correct Answer Key:

1. C
2. A
3. B
4. Education, work roles, and regulation for dental hygienists differ widely from country to country because each nation structures its oral health system according to its own needs and resources. Some countries require university-level dental hygiene programs, while others offer shorter certificate-based training. Work roles also vary, with some countries granting broad preventive and therapeutic responsibilities and others limiting hygienists to basic services under close supervision. Regulatory systems also differ, shaping how much autonomy hygienists have and what services they are permitted to provide.
5. International professional organizations play an important role in promoting global oral health by setting shared standards and encouraging consistent, evidence-based practices across countries. They support collaboration among dental professionals, helping nations learn from one another and strengthen their preventive approaches. These organizations also advocate for policies that expand access to care and elevate the importance of oral health within broader public health systems. Their work helps unify the profession globally and drives improvements in oral health outcomes worldwide.