

## **Global Health Starter Kit for Pre-Doctoral Dental Education**

### **Module 1: Global Trends**

#### **PLEASE READ ALL INFORMATION AND INSTRUCTIONS**

Please plan for approximately two hours to complete Module one. This includes three pre-readings, watching the video, and noting your answers to questions posed throughout the video.

#### **What to Know:**

Pay attention to the Learning Objectives of the module, as well as Key Messages outlined throughout the video and questions we pose along the way. These together indicate the take-home concepts you should master for this module.

#### **What to Do:**

##### **Pre-readings:**

- Chapter 2, Chapter 3, and Chapter 7 pgs. 79-83 in: The Challenge of Oral Disease- A call for global action. The Oral Health Atlas. 2<sup>nd</sup> ed. Geneva: FDI World Dental Federation; 2015. [http://www.fdiworldental.org/media/77552/complete\\_oh\\_atlas.pdf](http://www.fdiworldental.org/media/77552/complete_oh_atlas.pdf)
- Sheiham A, Williams DM, Weyant RJ, Glick M, Naidoo S, Eiselé JL, Selikowitz HS. Billions with oral disease: A global health crisis- a call to action. J Am Dent Assoc. 2015 Dec;146(12):861-4. [https://jada.ada.org/article/S0002-8177\(15\)01036-3/fulltext](https://jada.ada.org/article/S0002-8177(15)01036-3/fulltext)
- Kassebaum NJ, Smith AGC, Bernabe E, Fleming TD, Reynolds AE, Vos T, Abyu GY, Alsharif U, Asayesh H, Benzian H, Dandona L, Dandona R, Kasaeian A, Khader YS, Khang YH, Kokubo Y, Kotsakis GA, Lalloo R, Misganaw A, Montero P, Nourzadeh M, Pinho C, Qorbani M, Rios Blancas MJ, Sawhney M, Steiner C, Traebert J, Tyrovolas S, Ukwaja KN, Vollset SE, Yonemoto N, Murray CJL, Marcenes W. Global, regional, and national prevalence, incidence, and disability-adjusted life years for oral conditions for 195 countries, 1990–2015: a systematic analysis for the Global Burden of Diseases, Injuries, and Risk Factors. *Journal of Dental Research*. 2017 Apr;96(4):380–387. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5912207/>

##### **Pre-class Video:**

After completing the readings, please watch the Module 1: Global Trends pre-class video. Please refer to the video notes supplement document to support your learning and viewing.

## The Learning Process for Module 1:

The process of creating and designing this module took place in the following order:

Competencies → Learning Objectives → Evaluation Metric → Content → Pedagogy → Evaluation Measure

Module	Themes	Related Competencies	Collaborating Author (with Brittany Seymour- project PI)
1	Global burden of disease; demographic and epidemiologic trends	1.1.1, 1.1.2, 1.1.3, 1.1.4, 2.2.1, 2.3.2	<u>Christy Colburn, MA</u> Associate Director Global Health and Health Policy Undergraduate Program Harvard University

**Related competencies:** (from the Global Oral Health Competency Matrix)

1.1.1. Explain the global burden of oral diseases with regard to prevalence, distribution, and the relationship among oral disease, population trends, and global disease patterns.

1.1.2. Understand the essential facts about the etiology of main oral conditions and their symptoms and signs.

1.1.3. Describe the impact of oral diseases on well-being and quality of life, as well as its social and economic impact.

1.1.4. Identify and assess relevant oral health information and make sound decisions (oral health literacy).

2.2.1. Understand the burden and distribution of oral and associated diseases in specific community and country.

2.3.2. Identify and advocate to address specific oral health needs and reduce inequities and health care system deficits.

### Learning objectives:

- Describe major population trends at the global level
- Discuss the relationship between the global burden of infectious/communicable, non-communicable/chronic, and oral diseases
- Predict how current global trends could be affecting oral health across the world
- Explain how the epidemiologic and demographic transition theories assist in understanding the disease patterns (including oral conditions) of and their impact on a community, country, or region

**Module Content Themes:** Population trends and risk factors for disease trends, demographic and epidemiologic transitions, global burden of disease, and oral disease

### Evaluation metric for determining competence:

*Baseline/Pass:*

- Student is able to state that the world population is aging and growing on average
- Student is able to describe the basic characteristics of the stages of the epidemiologic and demographic transitions (e.g. shift from communicable to non-communicable disease; as death rates drop and birth rates remain the same, the population grows)
- Student is able to express that the world has changed from more rural to more urban, on average
- Student is able to describe the oral disease burden is increasing on average
- Student is able to make the connection between changing risk factors and differing disease outcomes, should be able to describe at least 2-3 specific examples (e.g. lack of sanitation and higher rates of infectious disease, increasing access to sugar and higher rates of NCDs, etc.)
- Student is able to link evolving risk factors with oral disease patterns, should be able to describe at least 2-3 specific examples (e.g. more urbanization and access to processed foods/refined sugars leads to higher caries rates; sedentary lifestyle increases risk for NCDs such as diabetes and periodontal disease)

- Student is able to describe the impact of a growing burden of oral disease on society, should be able to name at least 3 outcomes (missed school days, missed work days, negative impact on other systemic diseases, pain, decline in self-confidence, lower quality of life, etc.)

*Critical error/Remediation:*

- Student is not able to state that the world population, on average, is aging, growing, and urbanizing
- Student cannot describe at least three basic characteristics of the demographic transition stages and at least two of the epidemiologic transition
- Student is not able to state that the global burden of oral disease, on average, is increasing
- Student is not able to make the connection between risk factors and resulting disease/demographic trends, cannot name at least two examples (e.g. urbanization leads to greater access to processed/sugary foods and beverages, which is a risk factor for non-communicable disease)
- Student is not able to list at least two examples of global trends and related oral disease outcomes
- Student is not able to list at least three ways oral disease impacts their respective communities (e.g. missed school days)