**Harvard School of Dental Med. | Global Health Starter Kit: Module 7 Instructor Video**

Hello and welcome to Module 7 of the Global Health Starter Kit: “COVID-19, Global Lessons for a Global Profession.” This module introduces concepts such as COVID-19’s links with oral health and systemic health, syndemics, problems within a fractured healthcare system, COVID-19’s impact on provision of dental care, and digital oral health. While there are numerous resources and references available about these topics, for the purpose of this module, we have curated a small sample of high-quality resources to support the learning outcomes. We encourage learners (and educators) to explore the literature further, beyond what is contained in this module.

This module is intended to be presented in 30 minutes, but to extend the learning experience, optional in-class activities and questions have been inserted along the way, which allow for one additional hour of active learning during the module.

This module is related to the three competencies from the Global Oral Health Competency Matrix. While these competencies cannot be met through a single teaching module, this module is working toward competency-based best practices in global health for dental education.

To understand COVID-19 in context of our history, a timeline of major pandemics and disease outbreaks is offered. This timeline, informed by data from the CDC, is used to highlight that the next pandemic may happen at any time. Have students think about how these timelines have offered opportunities for scientific advancement and why. Consider how tragedy can shed light on opportunities for innovation and change.

Now we zoom in a timeline of major COVID-19 events. Try to have students think about how broad concepts such as travel restrictions, work-at-home orders, school closures, economic downturn, medical equipment shortages, and distribution inequalities may impact population oral health and the field of dentistry.

We next transition into transmission and symptoms of COVID-19, both of which are relevant to the field of dentistry, especially since dental professionals are in a position to detect COVID-19 by identifying symptoms such as loss of taste and smell. One important point to emphasize is how the main cause of mortality for COVID-19, hospital-acquired pneumonia, is connected to oral health.

This slide covers COVID-19 and the Oral Systemic Link. Emphasize how the mouth is not only a COVID-19 entryway but also a key player for the body’s overall health. Improving oral health can improve COVID-19 outcomes and reduce severity.

This Social Determinants slide transitions us from how oral health affects COVID-19 into how COVID-19 affects population oral health. We present a Venn diagram showing how risk factors for oral disease and COVID-19 overlap. Because Module 4 of the Global Health Starter Kit already covers social determinants, students should be encouraged to revisit Module 4 for more details.

Now, let us zoom out to the epidemic of oral disease and the influencers of oral disease at the population level. This slide builds from the previous topic on social determinants to highlight the structural factors that influence oral health and ultimately, oral disease.

Now, let us zoom out even further by thinking about Synergistic Epidemics, or “Syndemics”. Have students think about the underlying public health crisis of the “COR” Syndemic and how they exacerbate systemic barriers. Encourage students to think about other systems of inequity that could impact oral health accessibility and disease prevention.

This slide introduces the concept of “Infodemics”. Understanding the root of public influence is a context public health professionals should have. Oral health is adversely impacted by the infodemic because it increases hesitancy to engage with oral disease prevention.

Now that students have been introduced to different “demic” models, we transition into COVID-19 pandemic’s specific impacts on dental care. The key point to emphasize is that while dental care utilization decreased, population dental infection increased.

The next three slides on Population Oral Health provide an optional in-class activity for students to consider why and how population oral health was worsened by COVID-19. Encourage learners to think about the different intersections of social, structural, and economic barriers.

You can describe the impact of COVID-19 on population oral health as a Snowball Effect that builds upon itself, becoming larger and more dangerous. The concept of a “vicious cycle” has already been introduced in relation to risk factors, oral health, overall health, and COVID-19 exacerbating each other in a biological loop. Encourage students to consider how this biological cycle fits in with larger cycles. Ask them to revisit what “access to care” means.

Beyond focusing on population oral health, it’s important for students to consider how COVID-19 fundamentally impacts the way dentistry is practiced and delivered, which shines light upon the economic barriers mentioned earlier. A key takeaway is that these guidelines resulted in higher dental costs, decreased patient capacity, and delayed preventative care.

Comparing and contrasting is important in the field of global health when examining countries varying in policies, social conditions, economic independence, and healthcare systems. We provide a case study of Canada vs Nigeria as a walkthrough example, but you are welcome to develop your own. Furthermore, you should encourage students to compare/contrast two different countries that you have not covered. While in this example, we address Universal Healthcare, Dental Governing Bodies, Reopening Process, Routine Dental Care, and Air Ventilation Systems, your students may find other themes or topics to address.

This slide investigates the longitudinal and cross-sectional relationship between COVID-19 and HIV/AIDS. There is not enough time to assess long-term impacts of COVID-19, but given the lessons we’ve learned from HIV/AIDS and other disease outbreaks, you should encourage students to imagine how dentistry may be practiced 10, 20, or even 50 years later. This is also a perfect time for students to reflect on syndemic interactions between COVID-19, HIV/AIDS, the global burden of oral disease, and how power dynamics between high-resource and low-resource countries intersect with this public health crisis.

Now, we transition to the next section of our module: opportunities for growth. This slide introduces three main concepts: integration, prevention, and promotion. For each bubble, we will discuss the changes sparked by COVID-19, the steps moving forward, and how to capitalize on these opportunities.

The first concept we will cover is Oral Health Integration. Encourage students to imagine their role not just as dental professionals but as oral health physicians and team players within the broader medical infrastructure. Students should brainstorm how they can collaborate with other disciplines beyond the ones mentioned in the slide. What are the first steps to establishing integrated systems? How do we maintain them?

Next, we move onto prevention-focused care. Guide students to consider how Minimum Intervention Dentistry can not only prevent tooth decay but also mitigate environmental problems. Students can discuss how they can practice and deliver Minimum Intervention Dentistry outside of traditional dental offices, such as through fluoridation, dietary education, and oral hygiene programs.

The last bubble is Oral Health Promotion, which should function on multiple levels and be happening simultaneously. The examples provided are not all-inclusive, but they can guide students to reimagine how they can disseminate oral health information on different magnitudes, and how these different levels may be more accessible for different audiences.

Teledentistry is introduced as a digital oral health concept that can connect all three bubbles. Students should assess teledentistry’s barriers in order to anticipate and develop solutions that are equitable, safe, and sustainable, using the sample questions to generate their own questions.

mOralHealth is a case study that can be used to examine digital oral health deployment. It’s important to remember that mOralHealth should be treated as an example, rather than “one right answer.” Similarly to the previous slide, students should be encouraged to consider potential strengths and weaknesses of this program.

Let us now reflect on population health and our current health systems. The metaphor of the “Elephant in the Dark” highlights how our fragmented healthcare system will ultimately harm individuals. Yet, innovations to foster connection, such as telehealth models, “turn on the light” and offer greater connection. Students should consider facets of oral health where the “light is off” (navigating in fragmentation), and when the “light is on” (connected care system).

This last slide brings us back to the title of this module: “Global Lessons for a Global Profession,” serving as a space for students to digest, synthesize, and reflect on the concepts and ideas learned throughout the module. Beyond just going over the sample questions, you should encourage students to brainstorm collaboratively on how they can bring their lessons into the real world.