Hello, and welcome to Module 2 of the Global Health Starter Kit, Global Goals, co-authored with John McDonough. This module introduces a few of the major milestones in global health and development, including the Millennium Development Goals, the MDGs, and sustainable development goals, SDGs, and the growing movement toward universal health coverage and how they relate to your role as dental providers and the oral health of your patients.

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 you to explore the literature further beyond what is contained in this module. I also encourage you to visit the project website so you can see the full citations and graphics sources as well as references and additional resources that support this module.

This module is related to the competencies you see here. And while these competencies cannot be met through a single teaching module, the module's working toward competency-based best practices in global health for dental education.

We aim to meet the following learning objectives for this module. Explain the Millennium Development Goals, Sustainable Development Goals, and their origins. Discuss both the critiques and importance of the MDGs and SDGs and how oral health integrates with them. Describe how the SDGs might affect oral health as a global priority in the future. And define universal health coverage.

I'm going to begin with a warm-up exercise to get you thinking. This is Dr. Tooth. Dr. Tooth is a dentist. What now?

Most students say something like, practice dentistry, or Dr. Tooth should treat patients. So let's brainstorm. What does Dr. Tooth need to practice?

Well, to start, a license to practice, a defined scope of practice, policies in place that allow Dr. Tooth to provide oral health care. So in other words, all of these things fall into the category of a leadership and governance structure around providing health care services.

So what else? What about things like knowledge around disease burden and the needs of the patients in the community? How many providers are present versus how many patients need care? And what about health information technology?

Now let's think about things like, how might Dr. Tooth be compensated for providing that care? And how can

patients pay for it? What about funding to make sure that Dr. Tooth is adequately trained? And are there any insurance payments involved in providing care? So in other words, all of these fall into the category of health financing and payment.

OK. So what else? We've got a legal and governance structure. We have an information system in place. We have a financing system in place. So what else does Dr. Tooth need?

What about help, providers and staff who are also adequately trained? And what about a set of norms and values for delivering care to patients? And how about coordination between the health care providers, the payers, who are covering the costs of those services, and the patients themselves? So all of this that I've just described is a health care workforce.

All right. So we've got the workforce. We've got a way to pay for the care. We have the information we need to provide the care. We have regulations in place to make sure that care is legal and within the scope. So what else?

How about adequate supplies, and equipment, and technology? So dental supplies, and an office space, and dental records system, and a supply chain, so when something runs out, there's a way to replenish that supply, like gauze, or anesthetic, and prescription medicines. So in other words, supplies, equipment, and technology in order to provide that care.

OK. So there's one more component. We've got governance and regulation and law, information, finance system, health care workforce, supplies and equipment. What else? How about service delivery, including access to care? So a way for patients to be able to access that care to ensure that the care is of high quality and is ethical.

So what we've described here are actually the six components of a well-functioning health care system. So let's keep these components in mind as we move through the rest of the module. In an ideal scenario, health services are provided within a well-functioning health system that includes all of the components from our warm-up exercise. But there's a problem.

In reality, half of the people in the world don't have access to essential health services, including dental care. And those who can get care too often fall into poverty trying to pay for it. Strikingly, about 100 million people fall into extreme poverty each year, defined as living on $1.90 a day or less, due to health care costs.

There are people in the US living in extreme poverty as well. And health care costs are the leading reason for bankruptcy in the United States. And cost of care is the number one reason people avoid going to the dentist in the US.

So we're going to spend the rest of this module laying the groundwork to answer the question of what is being

done so Dr. Tooth can provide appropriate high-quality care to all people who need it, without causing financial hardship for them. And the rest of this module series will continue to answer this question more deeply.

OK. So let's back up and take a tour of global development's recent history. We'll discuss why these moments in history matter to health and how they are assisting in cultivating Dr. Tooth's role in the world today. Let's review some major milestones in global health and development and explore what they mean for oral health and oral health care. This will help us to begin to understand what's in motion to assist Dr. Tooth in providing affordable high-quality care to all patients who need it, particularly those who can least afford it.

The first Global Burden of Disease data dates back to 1990, when data about the risks and determinants of morbidity and mortality, so death rates and disease burden, were systematically collected across eight regions of the world through 1990. This was the most comprehensive effort to date and introduced highly influential new disease measurements. It allowed international comparisons of morbidity and mortality rates and causes in ways that were never before possible. Data collected included oral diseases and conditions. And if you haven't reviewed Module 1 yet, this topic is covered further in that module.

Each year, the World Bank releases the World Development Report, a summary of the economic, social, and developmental status of the globe. The findings from the Global Burden of Disease 1990 study were released in the 1993 World Development Report. This report has become highly influential because it was among the early data and evidence linking an investment in health to improved economic outcomes, and it introduced these new methods for measuring the burden of disease.

This was the first World Development Report with such a strong focus on health. So think about what might that mean if such a large and influential report connects investing in health to improved economic productivity. Think about what that might mean for health moving forward after something like this is released.

In September 2000, in light of the new millennium, world leaders convened for the United Nations Millennium Summit at the UN headquarters in New York City. The resulting document, the Millennium Declaration, resolved that leading into the new millennium, a major challenge for global development was the needs of developing countries and emerging economies. So particularly, countries that were low-income or experiencing high rates of poverty.

It declared that we have a collective responsibility to uphold human dignity, equity, and equality. The declaration set forth concrete, measurable objectives for achieving those outcomes. These became known as the Millennium Development Goals.

The eight Millennium Development Goals, MDGs, were instrumental in unifying the world in setting, implementing,

and monitoring shared goals for poverty reduction. Several of these goals were directly related to health. And the rest certainly had an indirect relationship to health.

Now, I want to go back and highlight why do you think, when these goals were set to reduce poverty, why did several of them have a focus on health? Well, this is, again, why the world development report's link between economics and health was so important, because it demonstrated investing in health can improve an economic situation.

The Millennium Development Goals included targeted, measurable, specific outcomes that allowed for feasibility of monitoring over the 15-year period during which they were set, 2000 to 2015. They were also critiqued for a number of reasons.

Many felt that they were not written with adequate transparency or inclusion of various stakeholders, and this resulted in a relatively narrow set of goals that did not include other important issues, such as non-communicable diseases. They focus largely on mortality and infectious disease, and many felt they did not adequately target conditions with significant morbidity, like non-communicable diseases. Nonetheless, all UN member states agreed to the MDGs. And they have had a significant impact both on health globally as well as political collaboration for poverty reduction worldwide.

Although none of the goals, targets, or indicators specifically addressed the burden of oral diseases, all eight of the MDGs have links to oral health. The MDGs provided valuable opportunities to the global oral health community regarding the importance of identifying common linkages between oral health and the global health and development agenda, even when not explicitly recognized by global leadership charged with setting the MDG agenda at the time. So as you can see here, this is from the FDI Oral Health Atlas, 2009 version. And you can see where they bulleted specific ways that oral health and the MDGs align.

In 2010, the Institute for Health Metrics and Evaluation and other academic partners collaborated on a follow-up Global Burden of Disease study. Researchers could now compare disease rates over the years and measure trends, as discussed in Module 1, aptly named Global Trends. Data have continued to be collected and updated and include oral diseases and conditions.

Untreated dental caries was found to be the most prevalent disease of all the 291 diseases and conditions measured in the study. 2016 data maintains this trend, with caries still leading in prevalence out of over 300 diseases and conditions that have continued to be monitored.

As evidence continued to mount from the Global Burden of Disease study, among other sources, global leaders began to recognize that NCDs, Noncommunicable Diseases, required more attention and a place on the global

stage. The UN High-level Summit for Noncommunicable Diseases was held in September 2011 at the headquarters in NYC. UN Secretary General Ban Ki-moon declared, "the summit in September in New York is our chance to broker an international commitment that puts noncommunicable diseases high on the development agenda, where they belong."

Learning from the progress and challenges from the MDGs and turn of events since the Millennium Summit, leaders in global oral health and the dental profession organized a side session at the 2011 summit devoted specifically to oral health. These efforts resulted in the UN summit declaration stating that oral diseases are a major global problem. This landmark achievement was the first time oral diseases were formally recognized by a UN political declaration.

In September 2015, world leaders convened at the UN headquarters once again in New York City for the UN Sustainable Development Summit. This year marked the conclusion of the MDG era, remember 2000 to 2015. And here, they adopted the 2030 agenda for sustainable development.

This resolution agenda stated that all countries and stakeholders will work together in collaboration toward continued progress for the eradication of poverty, with a focus on people, planet, and prosperity. A new set of global goals emerged, designed to carry forward the global development agenda as it moved from the MDG era into the sustainability era, 2015 to 2030. These are known as the Sustainable Development Goals.

Now, the goals have expanded from eight MDGs to 17 SDGs. Though there are more goals, there are fewer directly related to health this time, with only goal number three explicitly written about good health and well-being.

As with the MDGs, oral health is not explicitly addressed in the SDGs. Global oral health leaders continue to draw links in their political and advocacy efforts. This work to integrate the MDGs, SDGs, and oral health is paving the way for recognition and improved political prioritization of oral health at the global level.

So if you want to explore further, I encourage you to access the SDG indicator framework online, which lists all 17 goals and their 169 indicators and targets. Review together or on your own where you see an opportunity to integrate oral health within the SDG agenda.

Let's spend a little time talking about SDG number 3, the goal focused on health. Goal number 3, Target 8, states achieve universal health coverage, including financial risk protection, access to quality essential health care services, and access to safe, effective, quality, and affordable essential medicines and vaccines for all. Universal health coverage is defined by the World Health Organization as all people having the ability to access health care services without incurring financial hardship.

Universal coverage consists of three main pillars. One, who's covered, the percentage of the population covered;

which services are covered, so the percentage of services or treatments covered by prepaid costs; and what do people pay out of pocket for those services, so the percentage of those costs that are covered and the percentage that are not, that people then will be responsible for paying for.

The overall aim of universal coverage is to reach as many people as possible with essential health services, particularly people who otherwise do not have access, and to include coverage for as many services as possible, and to cover as much of those services as possible. These aims overall will assist to reduce out-of-pocket spending on health care by individuals, specifically those who can least afford it. So if we think back to Dr. Tooth, and all these things Dr. Tooth needs to provide adequate care, this ties into the concept of universal coverage-- safe, affordable, appropriate care for everyone who needs it.

To achieve universal health coverage, the World Health Organization has identified essential packages of population-based and clinical interventions, nicknamed "Best Buys," due to their cost effectiveness, their effect on health, feasibility, and low-implementation costs. The population Best Buys aim to tackle the main common risk factors for multiple diseases and conditions. These risk factors include sugar and poor diet, tobacco, alcohol, and physical inactivity.

The clinical package targets common NCDs in the current global health agenda-- cancer, mental health, cardiovascular disease, and pulmonary disease, as well as some preventive measures for infectious diseases, such as the hepatitis B vaccine. More detailed understanding of the current clinical package reveals that oral health clinical preventive interventions, such as fluorides, or treatments are not part of the basic package of services. But one could argue that resources could be allocated to oral health care under the expanded package that addresses more complex needs, including the hospital platform surgical package.

It could also be justified that oral health services must be included in the clinical interventions because of oral disease associations with common NCDs and the fact that caries remains the most prevalent disease worldwide. So the key message here, oral diseases share common risk factors with other NCDs, including those risk factors targeted through the population-based package. Integrating oral health efforts into the essential package of recommended population-based interventions follows ongoing efforts and the common risk factor approach to the prevention of NCDs, including oral diseases and for health promotion.

While efforts to include oral health in the clinical package should continue, a successful focus on oral disease prevention and oral health promotion will assist in minimizing costs to governments and individuals within universal health coverage system models. And we'll discuss more specific strategies related to prevention and health promotion in Module 3, Back to Basics, Primary Care.

Currently, there are a number of organizations and sub-organizations collaborating to implement not only the SDG agenda but to ensure that oral health is integrated into an interdisciplinary effort to do this. Collectively, these and many other groups are focusing on access to care, quality improvement, and controlling risk factors for oral diseases through prevention and health promotion.

We've listed a few examples here-- the International Association of Dental Research, and the subgroup within IADR, the Global Oral Health Inequalities Research Agenda and Network, FDI World Dental Federation, the World Health Organization Oral Health Division, International Federation of Dental Educators and Associations, and the American Dental Education Association, the National Institutes for Dental and Craniofacial Research, the American Dental Association Foundation, Consortium of Universities for Global Health and the Global Oral Health Interest Group.

I encourage you to explore these global oral health organizations further on your own. So you can go and you can find their websites, read and review about their mission, learn about their leadership, and you can read about examples of their work. And you can even look for opportunities to get involved both now, as students, and as future oral health professionals.

FDI's Vision 2020 publication underscores many of the themes in this module. The sustainable development era is leading us toward universal health coverage, where priority-setting based on cost-effectiveness and feasibility will be key drivers for who gets which services and how much will be covered, including dental care.

With a continued common risk factor approach for prevention and health promotion, we can minimize the oral health needs that require costly surgical intervention and maximize opportunities for those who do need oral care to receive it without incurring personal financial hardship. Dr. Tooth can be very happy and treat patients that need care.

Thank you so much for joining me on a tour of the global health and development agenda. I hope you are able to visualize for yourselves the evolving role of the dental profession in today's globalizing world.

In Module 1, we discuss the extensive challenge of oral diseases around the world. This module introduced you to solutions under way to address these challenges as well as opportunities for new and innovative approaches to managing and even preventing the global oral disease burden. We will continue to discuss strategies for the dental profession in modules 3, 4, and 5. Thanks again. I look forward to seeing you next time.