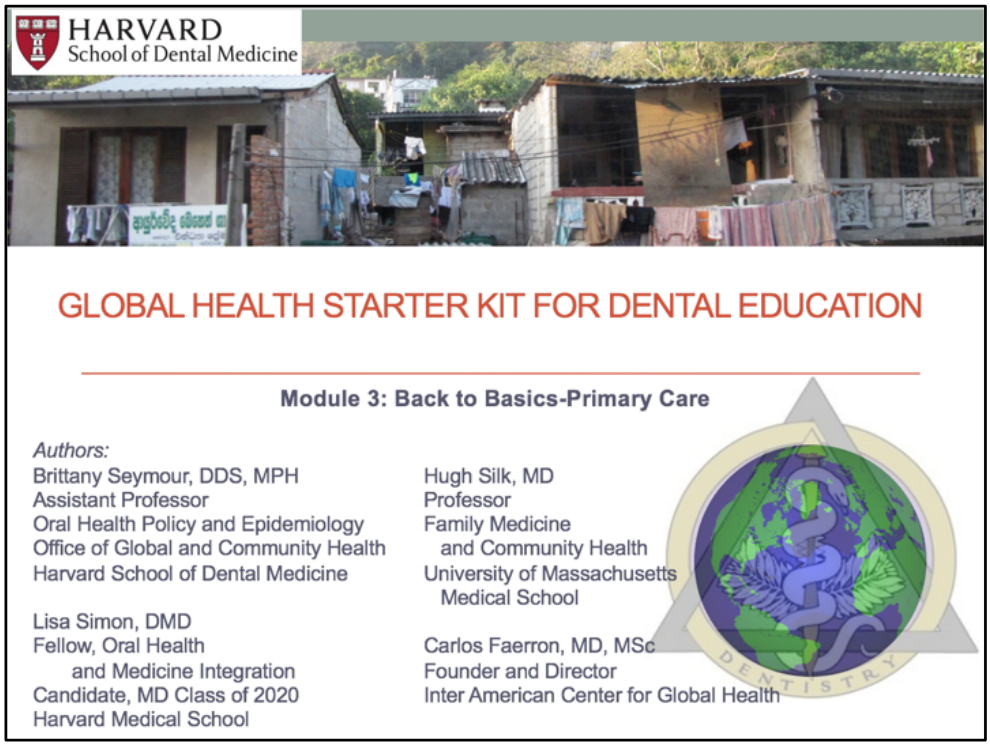
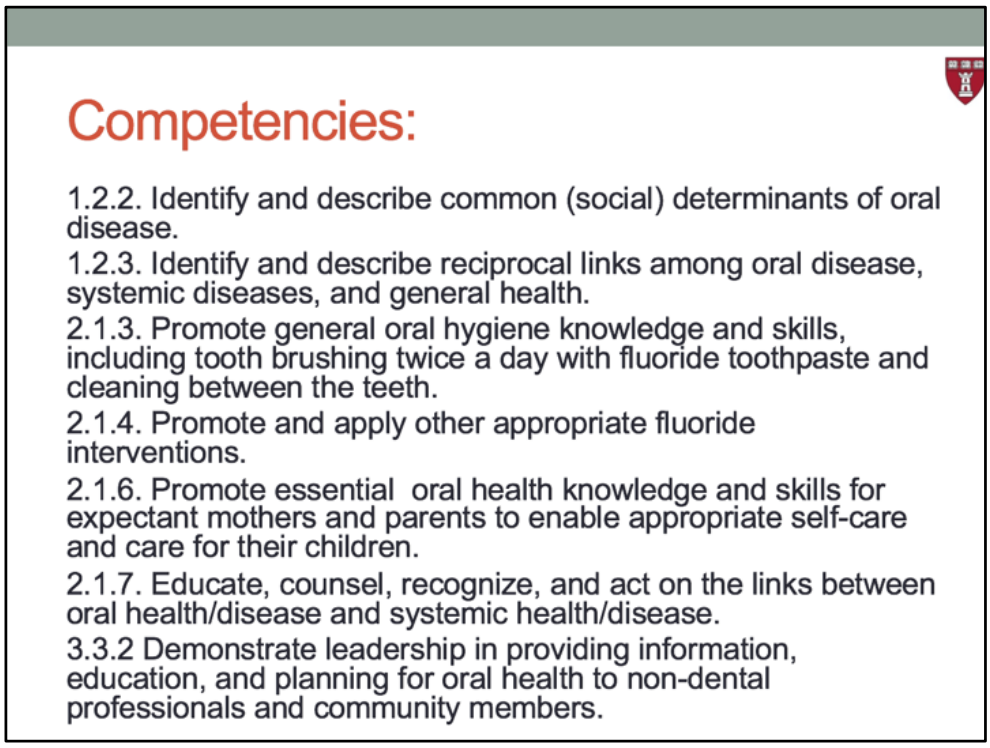


Hello and welcome to Module 3 of the Global Health Starter Kit Back to Basics-Primary Care, co authored with Lisa Simon, Hugh Silk, and Carlos Faerron.

This module introduces the connection between oral health and overall health, including oral and systemic disease associations, the integration of oral health and primary care, and workforce and policy implications.

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.

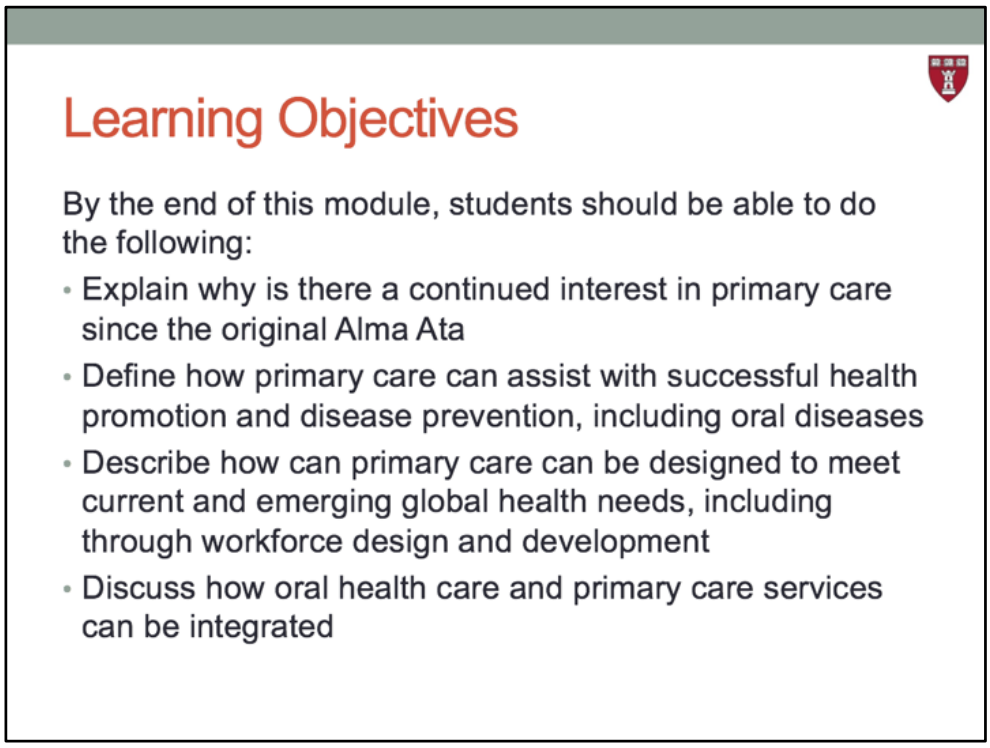


This module is related to the competencies shown here from the Global Oral Health Competency Matrix. While these competencies cannot be met through a single teaching module, this module is working toward competency-based best practices in global health for dental education.

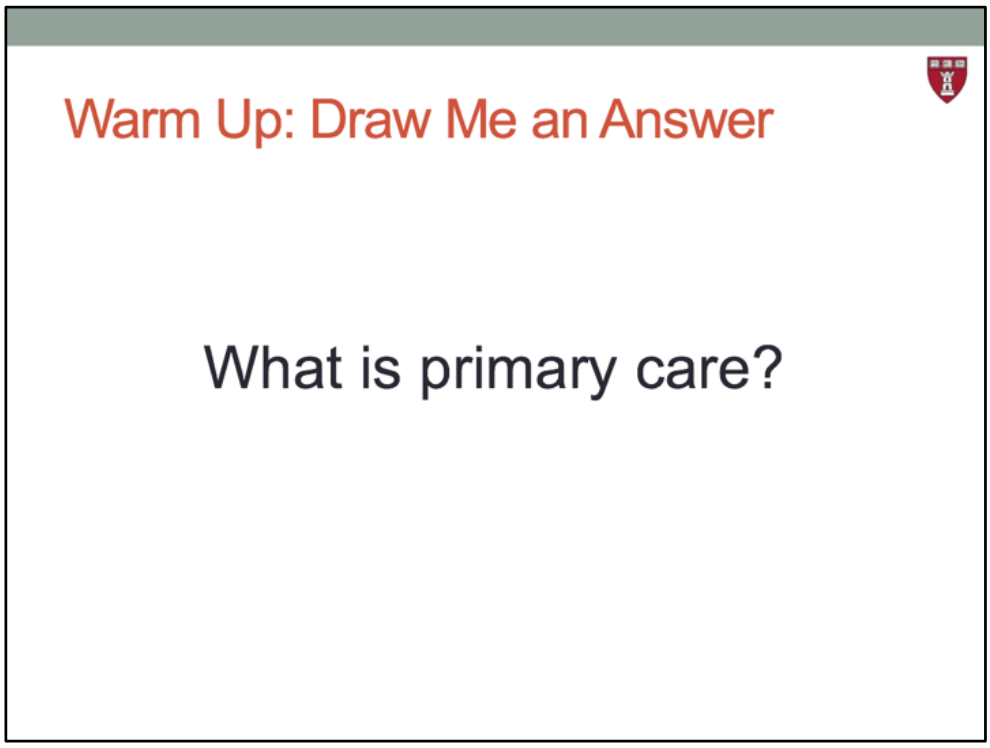
From:

Benzian, H., Greenspan, J.S., Barrow, J., Hutter, J.W., Loomer, P.M., Stauf, N. and Perry, D.A., 2015. A competency matrix for global oral health. Journal of dental education, 79(4), pp.353-361

Seymour B, Shick E, Chaffee B, Benzian H. Going global: toward competency-based best practices for global health in dental education. J. Dent. Educ. 2017;18(6):707-15.

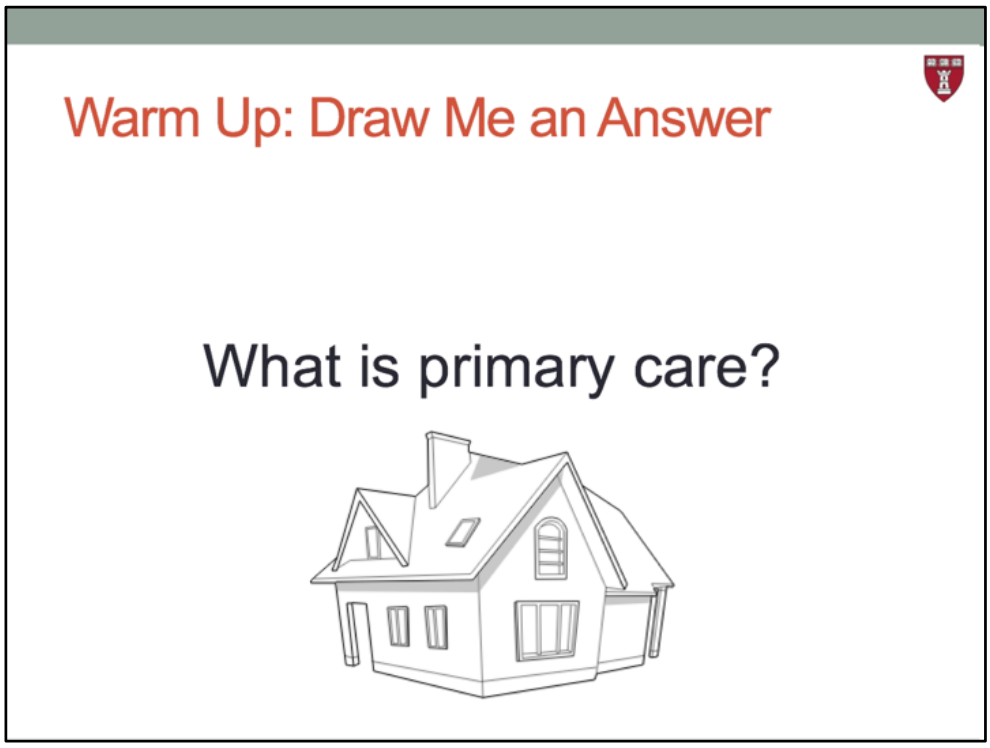


We aim to meet the following learning objectives in this module:

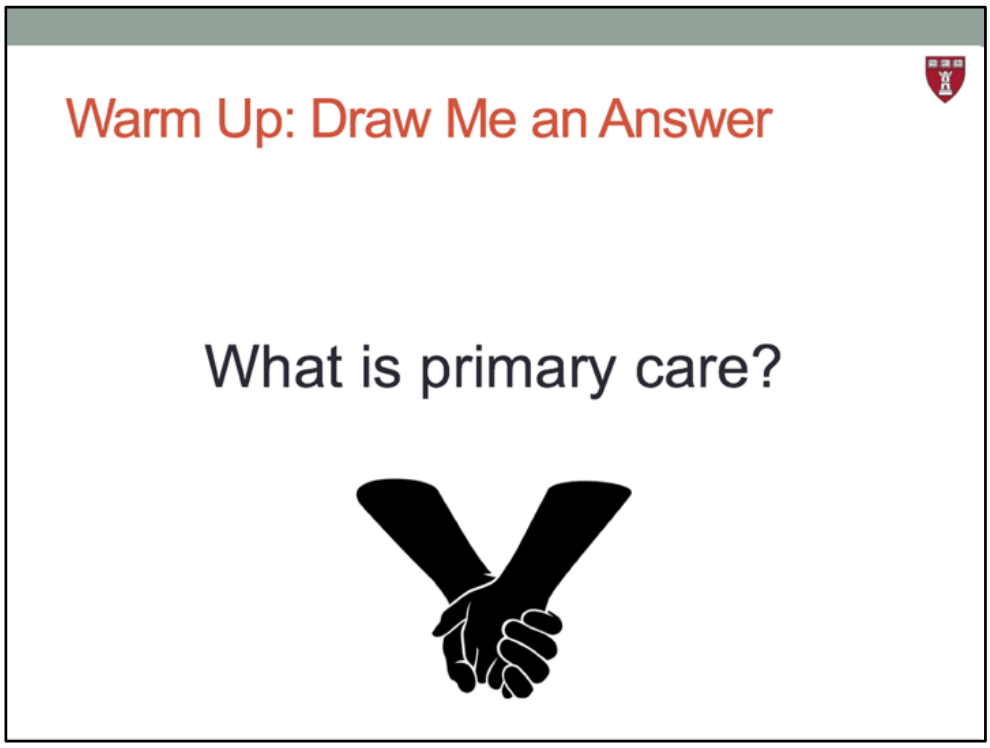


Let's begin with a warm up activity. I want you to take a minute and think about how you would define primary care. In fact, I'm going to ask you to pause the video and actually do just that. But instead of writing a list or an actual written definition, I want you to *draw* a picture that represents primary care to you. Drawing can expand your thinking in creative ways, and open your mind to even more imaginative ideas. There are no right or wrong answers right now, this is merely an exercise to get you thinking about what primary care looks like in practice, beyond words on a page. I think you will find it interesting to compare your initial thoughts and your drawing to what we cover for the rest of the module. Let's see how you stack up! Are you right on, or do you perhaps have some preconceived notions that may not actually be completely accurate? Ok, so go ahead and pause me right now…

Welcome back. What did you draw?



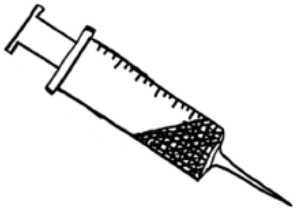
In the past, my students have drawn a house, to represent a medical or dental care home for patients.



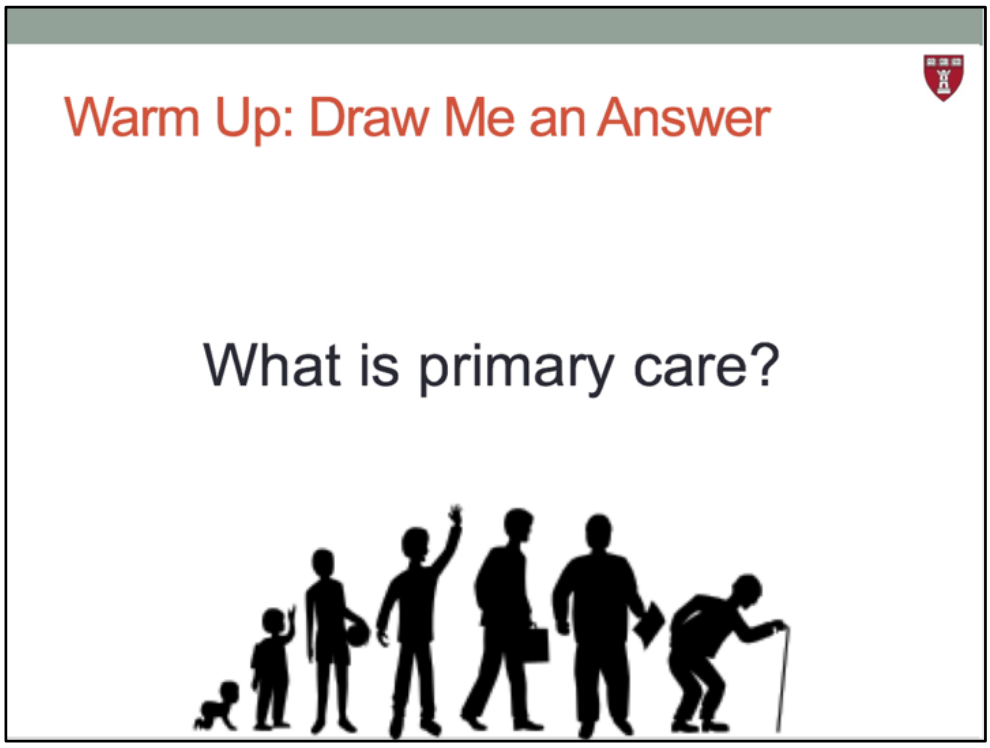
Or two figures holding hands to represent the important, long term relationship between patient and provider.

Warm Up: Draw Me an Answer

What is primary care?



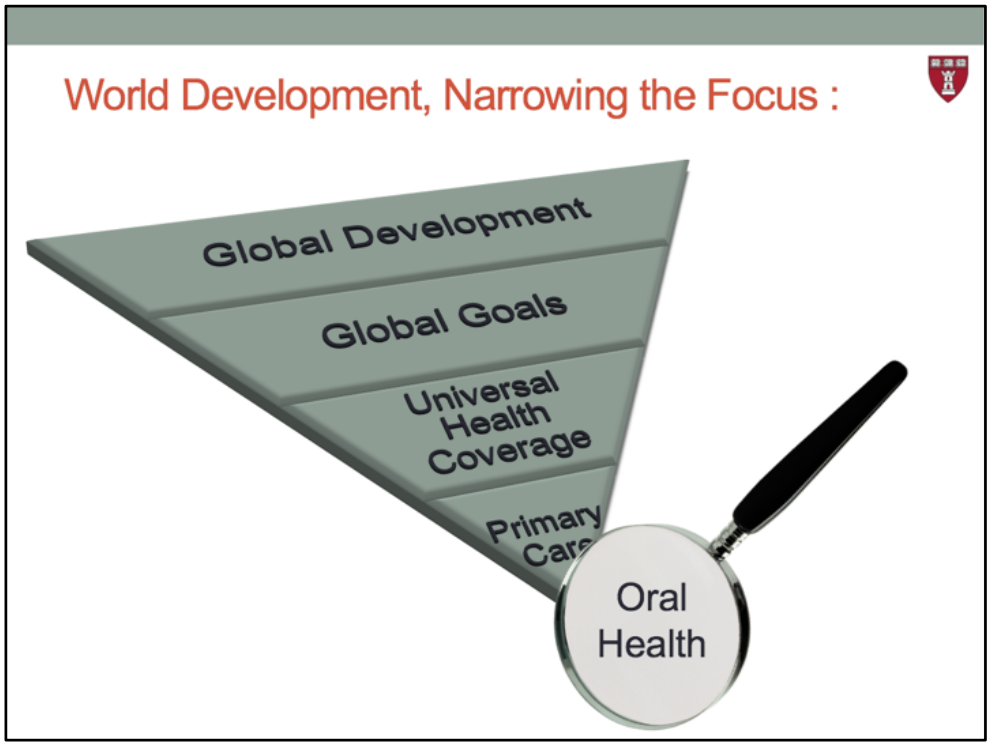
Or a vaccine to represent prevention of disease.



Or a person growing from infancy to old age, representing continuity of care throughout one's life.

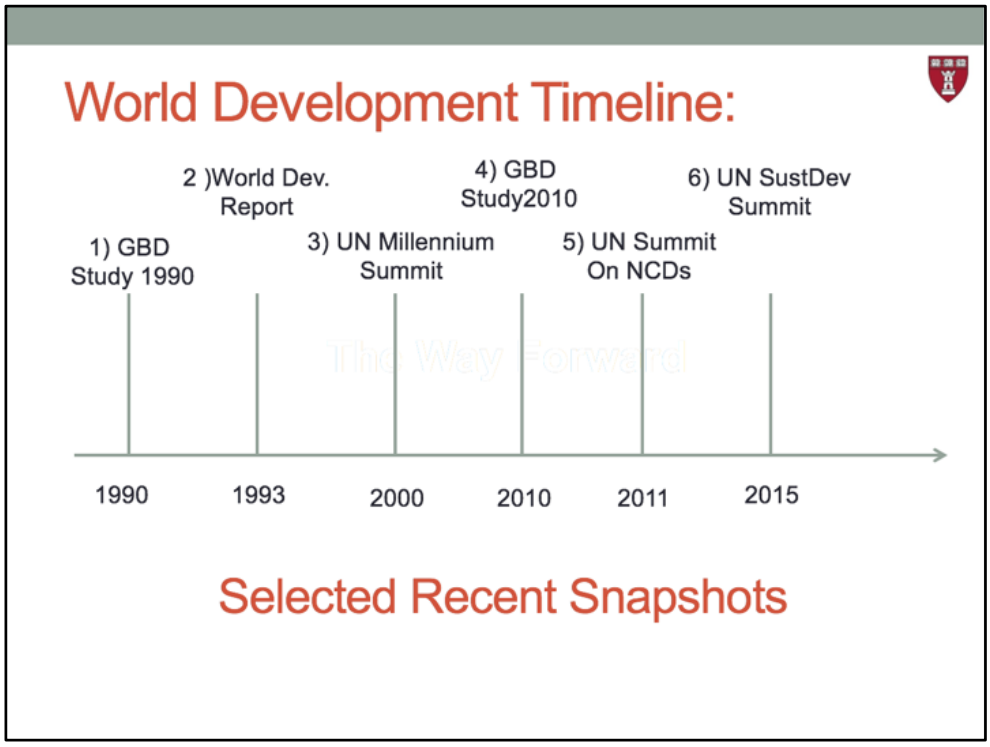
All of these are great examples of primary care.

So, what did you draw? I'd love to hear from you, maybe I will include your drawing next time as an example for others!



The global health and development agenda presents numerous opportunities for improved oral health. This module focuses on one example: the integration of oral health and primary care. We will narrow the broad focus of global development down from the global trends (Module 1), to the specific target for universal health coverage (Module 2), to UHC's essential component of primary care, and finally to the integration of oral health. Although this module narrows the focus of global development to one highly specific component, this example is anything but small.

Key Message: In fact, the integration of oral health and primary care is an enormous task that requires substantial shifts in how we think about financing and payments for services, workforce development and scope of practice, and policy. Each of these sub-components is in and of itself a monumental undertaking and detailing these is beyond the scope of this module. But I encourage you to explore these subjects further on your own.



This timeline is covered in more detail in Module 2. For the purpose of this Module 3, we will discuss how key events in the timeline have lead to the current need for primary care services and oral health integration.

As a reminder from Module 2, or if you are just joining me for the first time in this module, let's briefly review:
The first global burden of disease (GBD) data dates back to 1990, when data about the risks and determinants of morbidity and mortality were systematically collected across 8 regions of the world through 1990.

The 1993 World Development Report, grounded in GBD data, has become highly influential because it was among the early data and evidence linking an investment in health to improved economic outcomes, and introduced new methods for measuring the burden of disease.

In September 2000, world leaders convened for the United Nations Millennium Summit, where the Millennium Development Goals were born, several of which had a direct focus on investing in health in order to eliminate poverty.

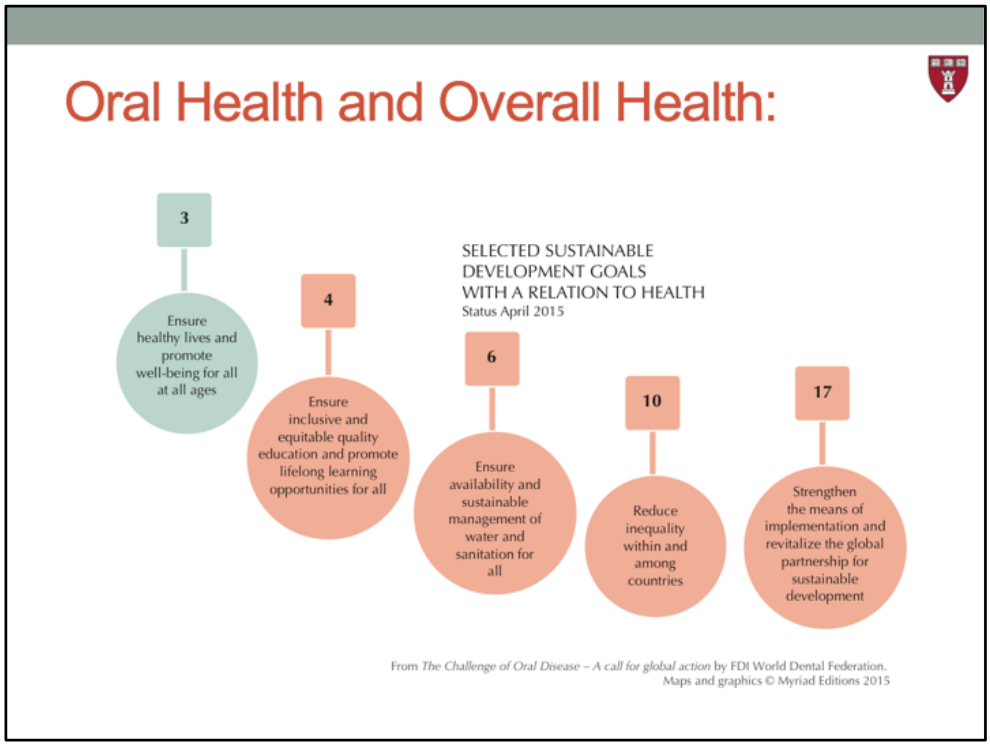
The Institute for Health Metrics and Evaluation and other academic partners collaborated on a follow up global burden of disease study in 2010. Data continues to be updated today.

As evidence continued to mount from the GBD studies, among other sources, global leaders began to recognize that NCDs required more attention and a place on the global stage. The UN High-Level Summit for Non-communicable Diseases was held in September 2011, which included a side session devoted to oral health.

In 2015, world leaders convened at the UN headquarters in New York City for the UN Sustainable Development Summit. A new set of global goals emerged, designed to carry forward the global development agenda as it moved from the MDG era (2000-2015) into the sustainable era (2015-2030). These are known as the Sustainable Development Goals.

Initiated with the Millennium Development Goals and continued through the Sustainable Development Goals, investing in, implementing, and monitoring poverty reduction strategies with a direct focus on health has lead to remarkable progress globally. Although gains have been uneven between and within countries, the global goals have resulted in unprecedented coordination among world leaders, a surge in global funders of development assistance for health, and impressive political prioritization of risks and causes of morbidity and mortality around the world.

Although none of the goals, targets, or indicators specifically addressed the burden of oral diseases, all 8 of the MDGs and many of the SDGs 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 oral health was not explicitly recognized by global leadership charged with setting the MDG agenda at the time. The success of these efforts was clear, for example, when a side session at the UN Summit on Non Communicable Diseases had a specific focus on oral health, and the resulting UN Declaration stated that oral diseases are a major global problem.



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 between oral diseases and the global goals. This work to integrate the MDGs, SDGs, and oral health is paving the way for recognition and improved political and financial prioritization of oral health at the global level.

Key Message: Oral health is linked to the global goals in many important ways. The goals focus on many social determinants of health(which are covered in Module 4 by the way) that are also relevant for oral health, including ability to attend school and get an education, improved maternal and child health, and improved nutrition. Furthermore, the goals focus on addressing common risk factors for multiple diseases, particularly NCDs, including tobacco, alcohol, and sugar.

The global goals underscore the specific links between poor oral health and systemic diseases. Evidence demonstrates clear linkages between oral and systemic health, and if the global goals are to be achieved, oral health must be included in the efforts underway. In other words, the global goals are not achievable without addressing poor oral health.

Examples:
MDG #5: Maternal and Child Health: Mothers with untreated periodontal disease are at increased risk for pre-term birth, lower birth-weight babies and pre-eclampsia. If we want to improve maternal health, we must address oral diseases in pregnant women.

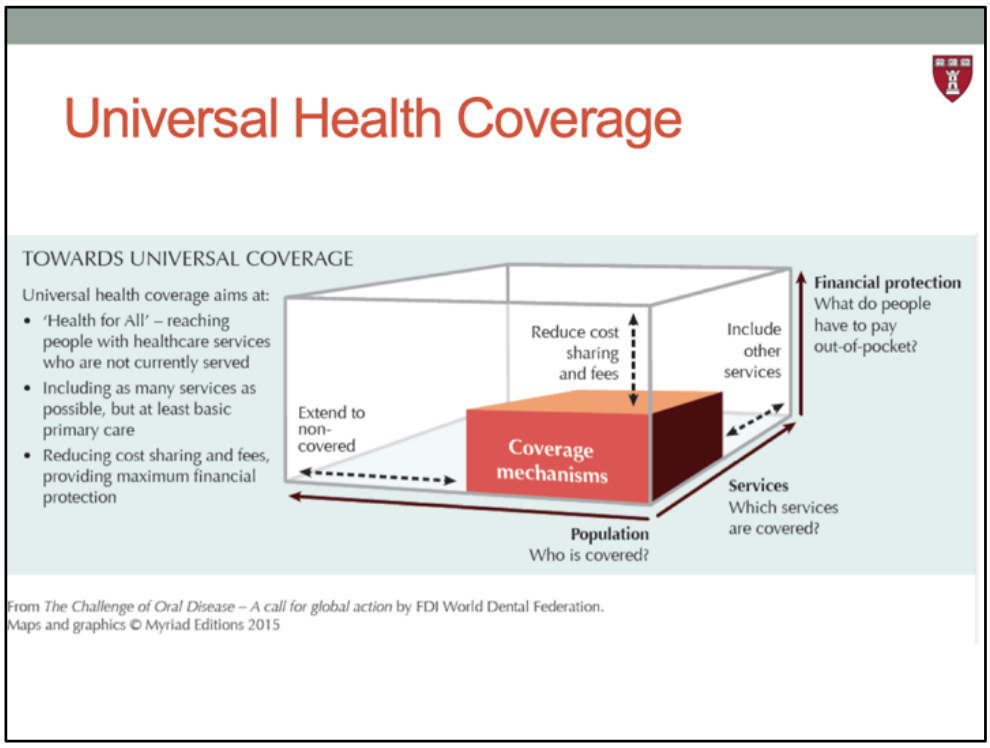
Let's think about oral health and NCDs, for example, Diabetes: People with diabetes are more likely to develop periodontal disease. Those who receive periodontal treatment are better able to control their blood sugar levels, less likely to be admitted to the hospital for their diabetes, and see reduced annual healthcare costs for their diabetes.

Another example, Cardiovascular Disease: Those with periodontal disease are at increased risk for cardiovascular disease, and periodontal treatment has been shown to improve cardiovascular health.

Aging (Module 1,- 65>5) : Seniors with poor oral health and edentulism have poorer nutritional status.

These are examples of how evidence-based advocacy efforts are working to build upon existing global health priorities in order to ensure oral health is included.

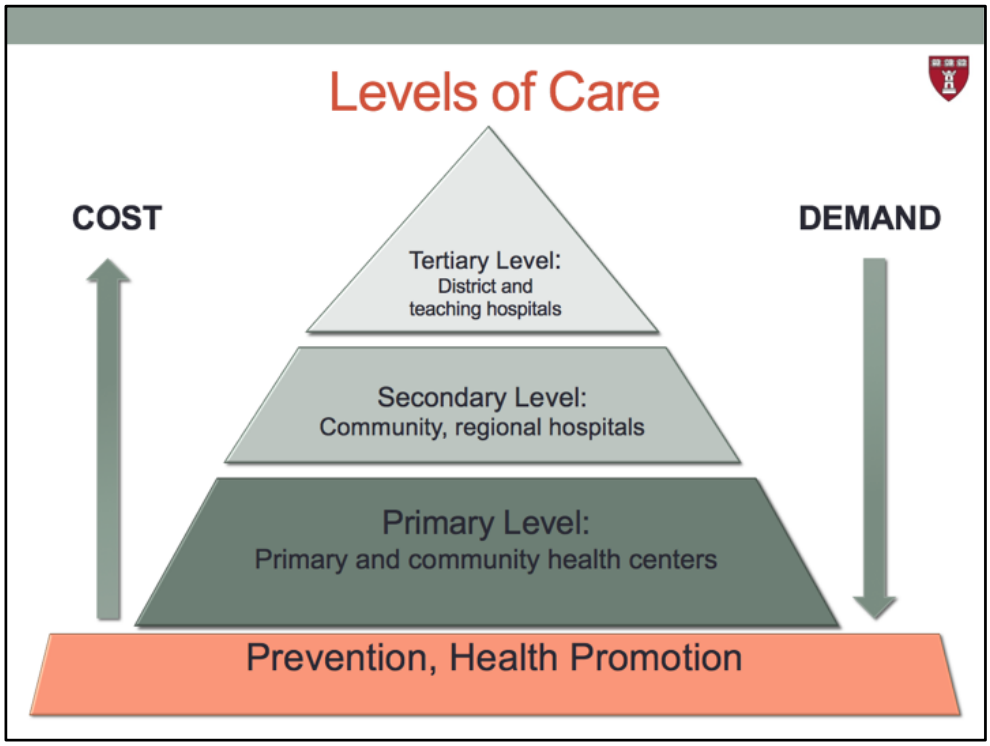
The evidence is mounting that poor oral health results in higher health care costs overall. In the United States for example, over $1billion is spent annually managing dental infections in the emergency room. People living with chronic illnesses have fewer hospitalizations and their total medical costs are lower if they receive regular dental care.



So let's tie this to SDG Goal 3, target 8: Achieve universal health coverage.

Universal health coverage is defined by the WHO as all people having the ability to access health care services without incurring financial hardship.

The overall aim of universal coverage is to reach as many people as possible with essential health services, particular people who otherwise do not have access, 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, especially those who can least afford it. This concept is also discussed in more detail in Module 2.



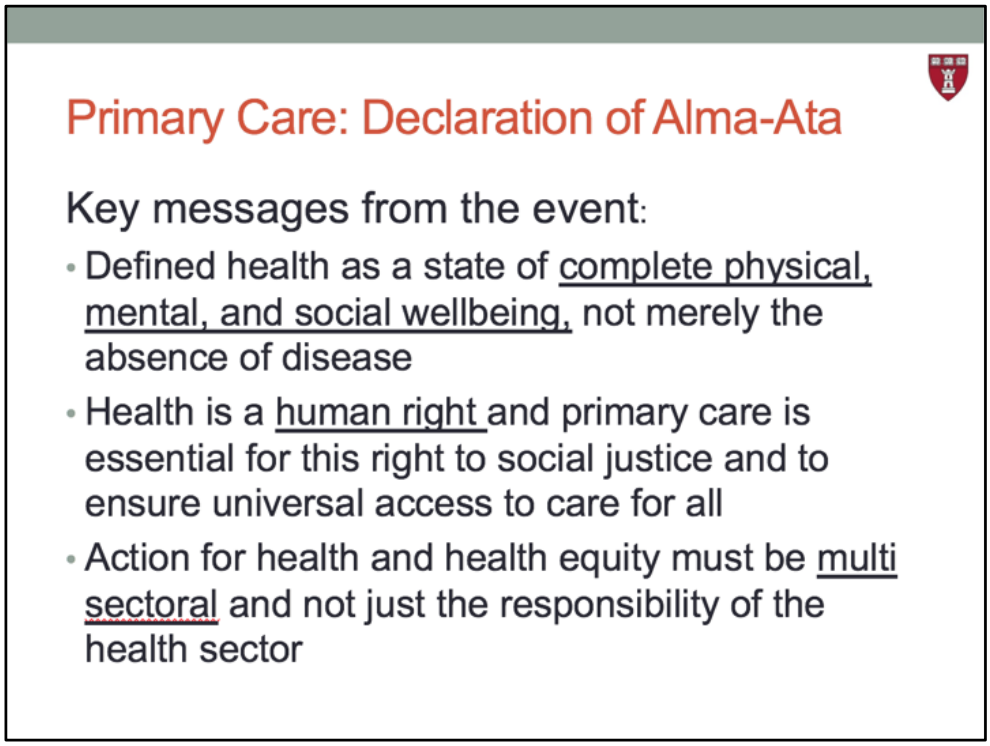
And now we begin to make connections: In order to achieve universal health coverage, a well-functioning health system is necessary, where cost of care to individuals is kept to a minimum and costs to the health care system are reduced through a tiered approach to care delivery.

A well functioning health system capable of delivering universal coverage to its population must rest on a foundation of prevention and health promotion. This foundation mitigates costs by addressing preventable illnesses before they occur, and sustains these cost reductions through ongoing health promotion efforts. The World Health Organization has identified essential packages of population-based interventions designed to tackle the main common risk factors for multiple diseases and conditions, including sugar/poor diet, tobacco, alcohol, and physical inactivity. Bang for our buck…

When preventive efforts are not enough and individuals show preliminary signs of or are at risk for illness, they can seek early, efficient care in primary care centers. The World Health Organization has also identified essential packages of clinical interventions, nicknamed ‘best buys’ due to their cost-effectiveness, effect on health, feasibility, and low implementation costs.

When early clinical intervention is insufficient, and more advanced care is needed, this is available at local hospitals by specialists. As needs progress and become

increasingly complex, further specialized care is available at district and university hospitals. In an ideal model, though health care costs increase at each tier higher on the pyramid, demand for services is reduced because much of this costly treatment by expensive specialists is prevented from being necessary in the first place. So, now you see the importance of primary care in global poverty reduction efforts.

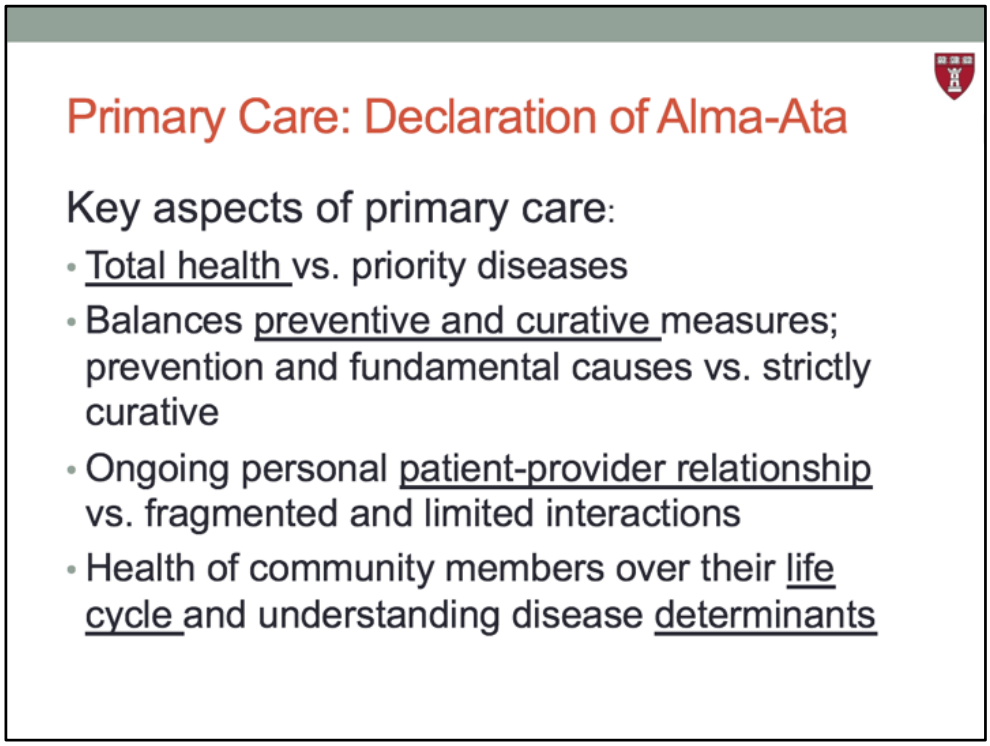


In fact, in 1978, the International Conference on Primary Health Care was held to urge governments and other global actors such as the WHO and UNICEF to increase support for primary care services through increased technical and financial resources. The Declaration of Alma-Ata (the city where the meeting was held) focused on redefining health not just as the absence of disease, but as a state of complete physical, mental, and social well-being. It described health as a human right that requires collaboration between multiple sectors including but not limited to the health sector.

References:

WHO, UNICEF. Declaration of Alma-Ata. International Conference on Primary Health Care, Alma-Ata, USSR, Sept 6–12, 1978. http://www.who.int/publications/almaata_declaration_en.pdf (accessed January 7, 2018).

Primary Health Care, Now More Than Ever. WHO: The World Health Report 2008. World Health Organization website. http://www.who.int/whr/2008/whr08_en.pdf. Accessed October13, 2010.



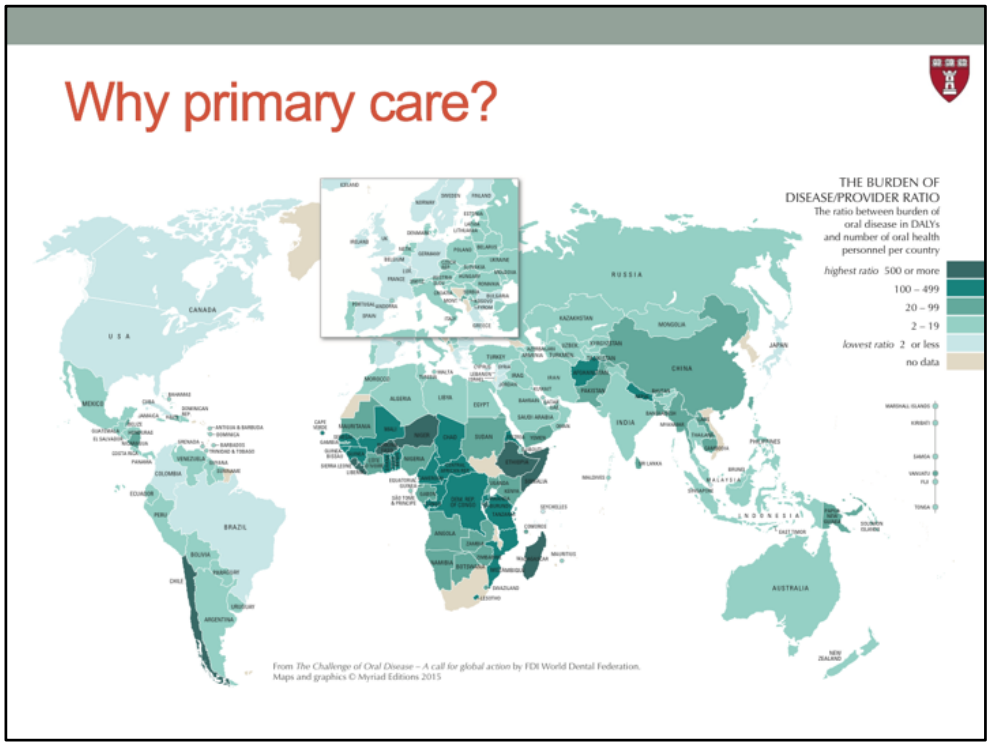
The Declaration of Alma-Ata created a paradigm shift in how we think about health and health care. The values placed on whole person health over the course of their lifetime, through ongoing patient-provider relationships and a proper balance between prevention and clinical care, have resulted in a stronger focus on health equity today by global leaders, governments and ministries of health, as well as local organizations.

References:

WHO, UNICEF. Declaration of Alma-Ata. International Conference on Primary Health Care, Alma-Ata, USSR, Sept 6–12, 1978. http://www.who.int/publications/almaata_declaration_en.pdf (accessed January 7, 2018).

Primary Health Care, Now More Than Ever. WHO: The World Health Report 2008. World Health Organization website. http://www.who.int/whr/2008/whr08_en.pdf. Accessed October13, 2010.

WHO: Declaration of Alma-Ata , International Conference on Primary Health Care, Alma-Ata, USSR, 6-12 September 1978. http://www.who.int/hpr/NPH/docs/declaration_almaata.pdf

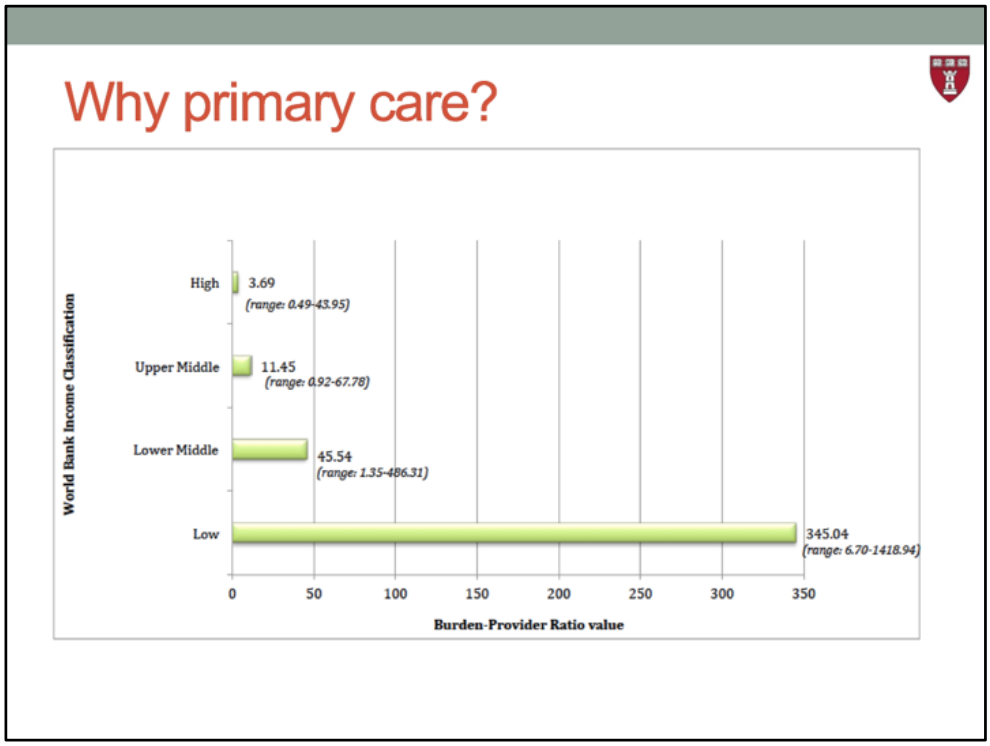


Global trends and transitions are changing disease and demographic patterns, as we explored in detail in Module 1. The world is also facing serious oral health workforce shortages, which reduces the ability of health systems to respond to growing oral health challenges and leaves large population groups without access to essential oral health care services. Traditionally, the ratio of patients to providers has been used to measure the workforce's ability to response to patient needs. However, global trends indicate that today compared to the past, there are more people in the world, they are living longer, and are requiring more *complex* dental care, and more of it. Thus, if patients' needs are higher and more complex today than previously, the patient-provider ratio may have limitations in its ability to gauge how many providers are needed to truly meet today's challenges.

A new metric for quantifying this challenge was published by the FDI in the Oral Health Atlas in 2015. The metric analyzes the mismatch between the burden of oral disease and persisting shortages of the oral health workforce– the "Burden/Provider Ratio" (BPR). BPR was calculated by dividing the sum of all disability-adjusted-life-years (DALYs) lost to oral diseases (in this case periodontal disease and dental caries) by the number of providers able to provide disease treatment in each country. The highest values of this ratio (meaning greatest burden of disease each provider is responsible to treat) are heavily skewed toward the poorer countries, which are characterized by a combination of a high disease burden and a low provider availability. Interestingly, the United States exhibits the lowest BPR of 0.49 and

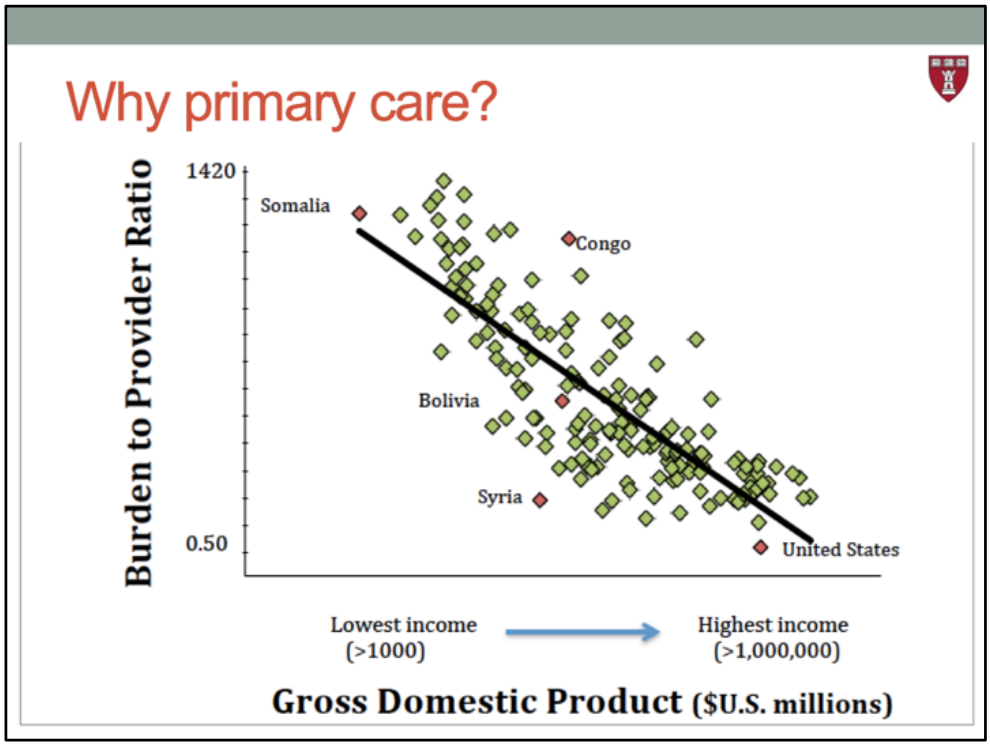
Ethiopia the highest BPR of 1419. It should be noted that even with the lowest BPR, the United States has severe challenges in oral health workforce distribution, highlighting the fact that oral health and workforce disparities exist not only between countries but within them.

Key Message: In today's evolving world, global trends are illuminating the fact that there are not enough dentists to treat the needs of all patients who need care in the world, and that's likely to worsen as global trends continue. We need innovative solutions to meet the challenges posed by the global disease burden.



BPR calculations for each nation were plotted against that nation's annual Gross Domestic Product (GDP.) As the GDP of countries increases, the BPR decreases. This is useful to know because it emphasizes the multiple ways oral disease can be addressed in the primary care setting, either through prevention/reducing disease incidence, increasing available workforce, or through expanding the knowledge base of the existing workforce, such as training nurses or other medical providers to provide oral care and prevention.

Key Message: In summary, the mismatch between high disease burden and low provider availability worsens for the lowest income nations who are least equipped to manage it.

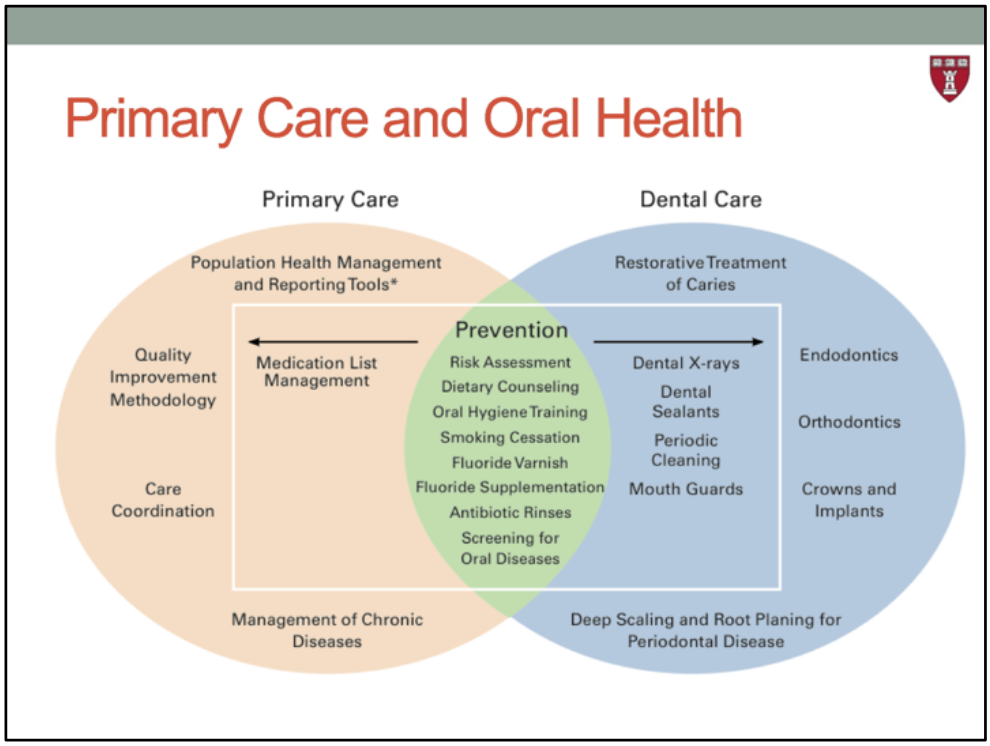


Take a moment and look at this graph. What is it showing?

The linear relationship between country income and oral health-related BPR shows the extent of the double challenge that low-income countries in particular are generally facing, which is characterized by a high disease burden and low health provider numbers, compounded by weak protective legislations or absence of health promoting environments.

The themes of the Declaration of Alma-Ata are underscored through these findings. In order to effectively reduce the burden of oral disease and reduce oral health inequities both between and within countries, interdisciplinary efforts must focus on prevention, addressing determinants of oral diseases, and the relationship between oral health and overall health. In other words, the integration of primary care and oral health is needed.

Before we move on, I have a question for you. “Why are there such disparities in BPR values? What factors play a role in these disparities?” Think about this question a bit, and keep it in mind because we begin to answer it in Module 4- Social Determinants and Risks.



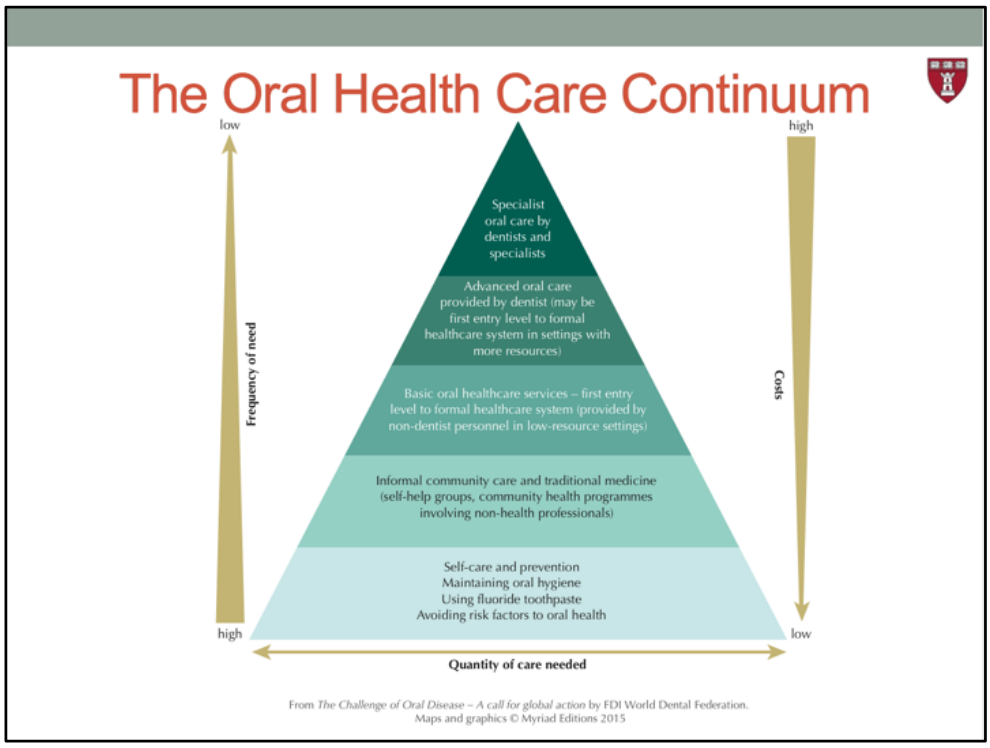
There is natural overlap between key concepts of primary care and dental care (more appropriately named oral health care, which includes more than just the teeth). This overlap consists largely of primary and secondary prevention.

Take a look at this visual overlap. Currently, the dental profession is trained to deliver services most heavily emphasized in the blue bubble, which is strongly focused on curative care.

Now take a look at the services in the green and peach bubbles. Where could these oral health services be delivered, other than the dental office? How would they be delivered, and by whom? How will they be paid? We won't fully answer these questions, but I want you to continue to think about them. I will also tell you a quick story about when I recently took my daughter to the doctor.

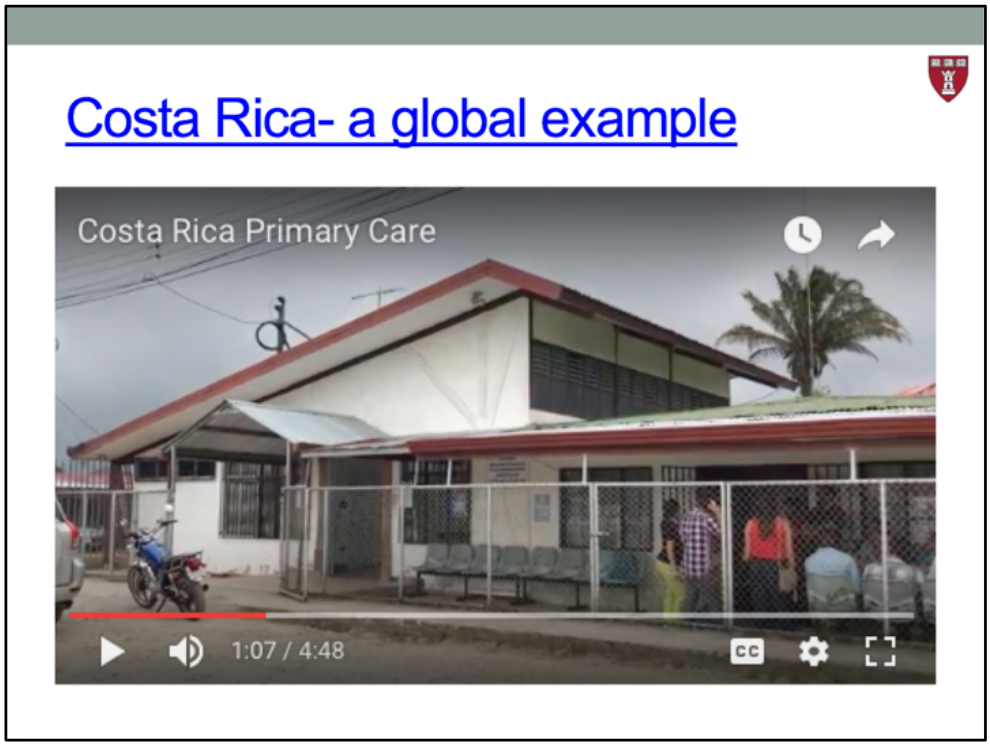
Key messages: Challenges to the status quo by considering new and alternative workforce, finance, and payment schemes are underway. These include alternative, oral health focused workforce models and task-shifting that may include preventive and clinical services delivered by dental therapists, dental nurses, community health workers, nurses, and physicians, with improved communication between and among providers. Oral health care reimbursement may come through medical insurance payments, eliminating the separation between medical and dental insurances. Workforce and health system financings will become more integrated to support oral

health services, with dentists providing specialized and curative care as part of the medical system. Oral health training will be provided to non-dental professionals, and dentists will receive stronger training in medicine and overall health. Improved integration of medical and dental care in health care settings is thus increasingly possible. This aligns with the FDI Vision 2020, where dentists are the leads over an interdisciplinary, team-based approached to whole patient care, oral health improvement, and oral disease reduction globally.



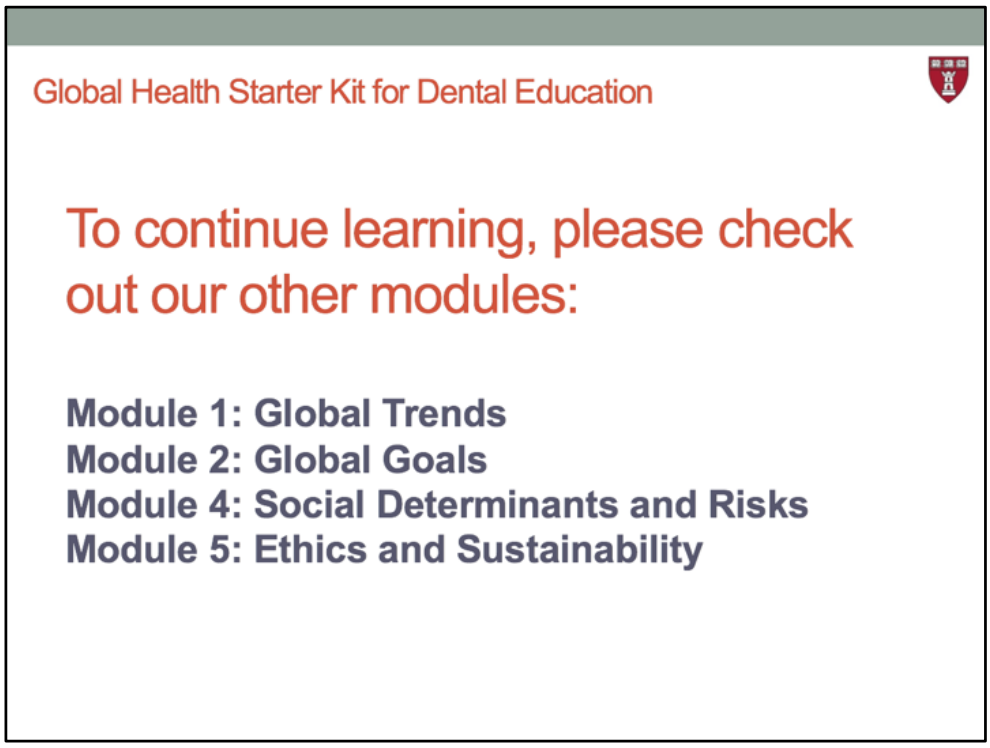
In the Oral Health Atlas, the FDI has illustrated the Oral Health Care Continuum, which begins to dissolve the boundaries between oral health and overall health, removing the historical separation of medicine and dentistry. It illuminates an ideal system where efforts are cost-effective, focus on where the greatest needs are for the most people, and reduce the amount of costly, specialized care that is needed.

This continuum brings together oral health, primary care, and universal health coverage. It ensures a people-centered approach based on need for care, and benefits more of the population than restrictive, expensive, curative-only approaches.



To further illustrate the concept of the oral heath care continuum, I'm now going to show you a video we made during our work in Costa Rica. Costa Rica is known for its successful implementation of universal health coverage through a strong primary care system that includes oral health. After discussing the theoretical integration of oral health and primary care, I will show this actually looks like in practice a country that has implemented it within its national health care system.

To continue to think about all that we've discssed today, I encourage you to review the original Declaration of Alma-Ata. On your own or with friends, write a new draft of the Declaration- the Primary Care and Oral Health edition. Review the major components of the original declaration and edit them to have a direct oral health focus. To extend this even further, begin to brainstorm on implementation strategies for your declaration. How can your vision become a reality?



Thank you for joining me today for Module 3. I encourage you to continue learning with us and explore our remaining Modules. I look forward to seeing you next time.

Global Health Starter Kit for Dental Education

Funding for the project "Toward Competency-Based Best Practices for Global Health in Dental Education: A Global Health Starter Kit" was provided by a Consortium of Universities for Global Health Dr. Thomas Hall Global Health Education Grant and the International College of Dentists- USA Section Foundation. We wish to acknowledge the CUGH Global Oral Health Interest Group for their support of this project and the competency work on which it was based.

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