Hello, and welcome to Module 5 of the Global Health Starter Kit--Ethics and Sustainability. This module introduces concepts of sustainable and ethical global health programs, including research, clinical service delivery, and training experiences, their potential unintended consequences for communities, and suggested solutions for optimizing positive impacts for all involved through practice, self-reflection, and partnership.

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 your learning outcomes. We encourage you to explore the literature further beyond what is contained in this module. Please visit the project website so you can see the full citations and graphics sources, as well as references and additional resources to support you and your learning.

I will caution you that we will cover concepts that may be uncomfortable and may challenge your thinking in unexpected ways, particularly as it relates to volunteer dentistry. You may also notice that today's module is longer than our others, but that's because we are providing you with practical tips and tools so that you as students can begin to address the many challenges our previous modules introduced.

We have had the input of well-respected global experts on this module, including our co-authors, as you see here, which include Judith Lasker, Jessica Evert, Irene Adyatmaka, Gustavo Bermúdez Mora, and Karl Woodmansey. We truly believe that what you learn today can positively impact you, your career, and communities around the world for years to come. This module is related to the competencies you see 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. We aim to meet the following learning objectives for this module-- discuss issues of global health conduct and regulation, including ethical concerns. Practice performing self-checks in order to recognize one's motivations.

Identify how a volunteer's presence in a community could lead to unintended negative impacts. Analyze the differences between vertical and horizontal approaches to health, and formulate a combination of the two approaches-- a diagonal approach-- when considering global oral health improvement programs. Let's begin with a warm-up.

I'm going to show you a series of statements and ask if you agree or disagree with each statement. There's only one rule for this warm-up-- you must decide whether you would agree or disagree. There are no right or wrong answers, and that's why it can be hard to choose. But this is designed to get you thinking about all that we're going to cover in today's session. While you must choose either agree or disagree for the warm-up, your answers will likely evolve as we go through today's module, and that's the point. If it makes you feel better, my students are usually split down the middle whenever we do this exercise in class.

OK, so statement 1-- it's OK to be biased, as long as you acknowledge it. So do you agree or disagree? My students who agree with this statement typically explain that we are all biased. It's part of being human. And acknowledging that can help us try to minimize harm to others that our own biases may cause. My students who disagree say that acknowledging our biases doesn't go far enough, and that we must also work on them, particularly if we're working in unfamiliar settings or in new

communities, or in communities that we might consider different from ourselves.

OK, next statement-- some care is better than no care. What do you think about this one? Do you agree or disagree? Why? This statement usually stirs a lot of conversation-- understandably. Let's see if your answer changes or not as we go through today's module.

How about this one? Donated supplies and services are a valued contribution by the dental profession to underserved populations. This one leads to great discussion as well.

My students who agree say that our profession has a history of altruism, always volunteering our time and resources for those less fortunate, which is why they agree with this statement. My students who disagree say, for example, that it's not up to us to determine if our volunteer efforts and donations are valued, that it's the community's served, and sometimes our altruism leads to unintended consequences. So what do you think? Let's see what you think as we learn more today.

Understanding the history and roots of global health today assists to appreciate current models and methods for engaging with global communities, as well as their limitations. Because global health is not currently a distinct field, profession, or discipline, per se-- as opposed to public health, for example-- global health's definition and activities continue to evolve and have been somewhat amorphous in the past, drawing from related models and practices as it has taken on its own form today.

In fact, the term global health itself was not commonplace until after the new millennium. Among the earliest roots of modern-day global health were sanitation and tropical medicine. In the 19th century, a cholera outbreak in Europe triggered the first

international sanitation conference.

Around the same time, early medical missionaries were accompanying colonization activities, which led to the creation of the London School of Hygiene and Tropical Medicine, and that school began as a dockside hospital to provide care to ill missionaries returning from their travels. Activities such as these examples, among many others, coalesced over time to form the fields of public health and international medicine.

The London School began an epidemiological research expedition which led to the discovery that mosquitoes were linked to malaria transmission, for example. The sanitation conference continued for nearly a century and eventually led to the creation of the International Sanitary Office of the American Republics, which today is the Pan American Health Organization. International health began to grow during much of the 20th century. Public health today, as you may know, is a robust field with many direct synergies with global health, and oftentimes they can't really be distinguished.

After the new millennium, the term global health began to replace international health. Why do you think that happened? What does the term "global" encompass to you, and what might the term "international" imply that is becoming obsolete in today's globalizing world?

This change in terminology marked a significant change in philosophy and recommended practices for health endeavors internationally. The reference to global encouraged a broader understanding of health and disease, including recognition of shared risks and determinants of disease that cross borders and even oceans. This change also recognizes potential for shared solutions and global innovations.

In addition, global encourages broad collaboration across

disciplines, regions, income levels, and societies. It works to eliminate merely a geographic or economic focus on health by only the health sector, for example. The graph you see here shows trends in the appearance of terms global health and international health in a large sample of books written in English and published in the United States between 1870 and 2008.

So the x-axis is the year, which spans from 1870s to after the new millennium. The y-axis shows the percentage of the times that those terms-- either global health or international health appear in the literature sample. So this visual illustrates a change in terminology from international health to global health near the beginning of the new millennium, where their frequencies cross one another around 2003.

Today, global health is fast becoming a vigorous model for improving health worldwide, grounded in principles and practices of public health with a global approach and mindset. In Module 1, we explored the oral burden of disease worldwide. We learned that oral diseases are on the rise and are among the most common conditions in the world.

When understood through the global lens, the burden of oral disease is immense and continues to be relatively neglected. The oral disease burden is compounded by the rising burden of non-communicable diseases globally, and vice versa. This is explored further in Module 3.

The tremendous burden of oral diseases and their sequelae have persisted for decades-- and centuries in some regions of the world. As a result, the dental profession has traditionally been quite altruistic, with a history of volunteer services and efforts to address this burden. This sense of altruism takes many forms in the dental profession, and students today are engaging in various activities globally inspired by the profession's historic and altruistic response for oral disease reduction in the world's

most vulnerable communities.

According to recent surveys of deans, department chairs, and dental students, a majority of dental schools offer global health opportunities to students. Over 80% of students who responded to a recent national survey expressed that they're interested in an opportunity while in school, and over 90% of you expressed interest in participating in a global health opportunity at some point in your career.

In this module, we focus on three common student activities for global health learning in dental education today-- research learning, clinical service learning, and experiential learning. Because there is certainly overlap among these three kinds of learning activities, we'll focus on some of the unique considerations for each.

In this module, research learning refers to systematic investigation of a research question or hypothesis. Clinical service learning consists of providing direct patient care as a student under the supervision of a dentist. Experiential learning involves having a concrete experience related to but beyond content taught within the four walls of the classroom that informs how students perceive a given concept.

So for example, you might learn about the social determinants of health in class-- which is Module 4 of this series-- and then you might visit a community without running water and learn first-hand how this directly and indirectly impacts the health of community members. We'll start with research learning.

Research is a robust method for understanding and addressing oral diseases worldwide. The National Institute of Dental and Craniofacial Research is an example of a leading funder of global oral health research activities. Increasingly, dental students are seeking research experiences in communities

around the world.

Voluntary clinical services provided for free or at a reduced cost is arguably the most common outreach model for the dental profession currently, including for dental students. In the United States, thousands of dental teams provide care each year to low-income and underserved children. To date, approximately 5 and 1/2 million children have received dental services during the annual Give Kids a Smile Day, for example.

Mission of Mercy collaborates with state dental societies each year and provides approx 25,000 free dental screenings and limited clinical treatment appointments each year. Voluntary clinical services such as these examples can provide an entry way into the dental care system for children and their families who have otherwise been denied access to care for a multitude of reasons. Clinical service outreach activities are extremely popular with dentists and dental students alike, both in the US and increasingly around the world.

Although the experiential learning model shares many similarities with the other learning models-- particularly clinical service learning-- it is a growing and distinct approach for global engagement by dental students that provides a deeper learning experience beyond what a typical volunteer experience might offer. Dental service trips and global health educational experiences should not be conflated, but often are.

While service learning is centered on direct patient care, experiential learning is structured as a concrete educational experience tied to a course or curriculum structure with measurable learning objectives. Experiential learning may include a clinical component, but it's not limited to that aspect, which is why we are considering it as a separate model here.

Experiential learning also considers other areas of knowledge,

skills, and attitudes such as the social determinants of health, prevention, and health promotion, the relationship between oral health and overall health, cultural humility, partnership, and teamwork, interdisciplinary and interprofessional collaboration, advocacy, and policy work. All of these topics are covered in our other modules in this series, by the way. In other words, students can continue learning in the field about concepts that may be first introduced in a classroom setting.

Another major difference between a clinical service trip and experiential learning is often a pre-departure and post-travel education component-- training and reflection-- which may be more likely to take place within an educational framework of experiential learning, but not always with volunteer service trips. Addressing each of these additional aspects goes beyond the scope of this module, but they are important components of experiential learning.

Benefits to students who engage in community-based learning experiences are well-documented. Reported positive outcomes from community and global health learning include an increased likelihood to care for patients who are economically and socially disadvantaged in the future, improved cultural awareness, and increased interest in public health and primary care career-related opportunities. But less is known about positive outcomes for host communities, particularly long term.

There are some documented benefits. These include an influx of resources, including extra hands-- quite literally-- as well as supplies and equipment. The presence of well-trained and skilled volunteers can lead to skills transfer, either intentionally-- through education-- or more indirectly, where community members learn from volunteers.

Volunteers and hosts may develop a sense of solidarity, and hosts may gain social capital with their peers because members

of other countries have spent time in their communities. Though there are other documented benefits, as more systematic research is conducted on the outcomes of global health engagement, evidence of unintended consequences is rising.

Many student research experiences are not with formal research institutions, but are instead with non-governmental organizations or private philanthropies. It's difficult to gauge how consistently students and hosting organizations adhere to important research principles, such as those outlined in the Declaration of Helsinki and the Belmont Report, for example.

Are the circumstances safe for the community member research subjects and based on prior knowledge? Can the research be stopped at any point? Can research subjects consent? Are they fairly selected, and do the benefits of the research outweigh the risks to the research subjects? Have students obtained proper human subjects protection determination from both their own institutions and their host or sponsor organization? Additionally, poorly-designed research can produce misleading results and waste time and precious resources.

Currently there is no enforceable global standard for research and no formal regulatory body at the global level. Thus, vulnerable communities are particularly at risk for ethics violations due to disparities in regulations, education level and literacy, and ability to understand consent, not to mention power and resource differentials.

Challenges arise when clinical services are rendered outside a student's typical setting, particularly internationally. Dental student volunteers may not comply with rules and regulations where they're volunteering-- the same kinds of rules that would guide the safe and ethical treatment of patients in the United States. Yet many countries have licensure regulation for international volunteer dentists in place.

You should be aware of and respect national policies for temporary licensure to provide any dental care. The process can be as simple as providing US dental education and licensure status of you and your faculty supervisor, and sometimes paying a nominal fee. But often, students and even faculty do not realize that these regulations are in place and that they are, in fact, in violation of national law because they're providing unlicensed dental treatment.

For these reasons, among others, it's never acceptable to provide clinical care without a supervising faculty member present and accountable. Students who do not provide direct dental treatment during their global volunteering may still provide dental assisting services. In the US, many states have dental assisting licensure requirements, including training requirements.

Students should perform assisting duties responsibly in the global community, just as would be expected at home, including respecting licensure regulations in country for assistance. Even things as seemingly simple as fluoride varnish underscore the importance of knowing the licensure regulations in country. While risk to patients may seem minimal, it's still necessary to adhere to the local rules and regulations for fluoride varnish application.

You should also be familiar with how OSHA standards for bloodborne pathogens will be maintained in a volunteer setting. Never assume that a lower standard is necessary. And similar to OSHA standards, it can be quite challenging to meet disinfection and sterilization standards in under-resourced communities, particularly those without electricity or running water.

Legal liability is determined by each provider's malpractice insurance carrier, but their insurance policies may not apply outside the US or outside the state where the provider's legally licensed. Additionally, adequate follow-up and long-term regular

case monitoring is atypical in clinical service learning models, raising questions about accountability to patients. In the case of malpractice and neglect, or when problems arise after volunteers have left, this can create significant challenges in maintaining appropriate and ethical standards of care for patients and outside providers delivering limited and short-term treatments.

So the key message is volunteer clinical services in global settings should be held to the same standards as in the United States. Alternatives are possible without lowering the standard of care or compromising patient or provider safety. I encourage you to visit our project website for resources on this subject.

If alternative standards are not possible, it may be that the local circumstances are not appropriate for dental students to participate as a learning experience. Extreme caution should be taken on the part of the volunteer students and supervisors, and leadership and decision-making should come from within the community at every step, not from the volunteers. If any of these standards may be compromised, ideally, volunteers should find alternative ways to support the community in place of direct patient care or find an alternative community for the student experience in cases where potentially unsafe compromise may be required.

Experiential learning can assist in managing these ethical considerations that arise with research and clinical service, primarily because it is structurally set up as a learning experience rather than a doing experience. That being said, with any global health activity, major ethical considerations exist. These considerations become particularly notable when dental students are engaging in global communities, whether conducting research, delivering clinical care, or engaging in an experiential learning endeavor.

We've touched on some of the specific ethical concerns related

to research and clinical learning, because they are unique to those models. For the remainder of this module, we'll focus broadly on ethical considerations for any kind of global health learning model. No matter what kind of global health activity you plan to participate in, you should be familiar with three main ethical considerations-- the weight of authority, the volunteer effect, and the burden of hosting.

When you participate in global health learning, you should be aware of your authority in hosting communities, whether real or perceived, due to power differentials that often exist between volunteer and host community. Here we use the term weight of authority, an expression used by Native Americans in the early 2000s to describe their feelings toward a health education professor who was conducting an evaluation of New Mexico's Healthier Communities initiative.

Although the professor's intentions were positive, she carried a weight of authority that created distrust because she was of a dominant culture, urban, white-- compared to rural Native American-- received significant financial support for the project, and came from an outside institution. Power differentials come in many forms, including financial, racial, educational, and even institutional.

Power dynamics are deeply embedded in the political, social, and economic histories of the community, and students often present to new communities without full awareness of these factors or how they contribute to the weight of your authority merely by being present. This can lead to unintended consequences and unintentional harm.

It can influence every stage of your visit, including the kinds of activities you conduct, any supplies or services you may provide, the length of the interaction, any outcomes from your activities, and the kind of follow-up that occurs-- if at all. Potential for

coercive participation in student activities by community members rises with increasing weight of authority. This weight of authority can, at its worst, put students completely in the driver's seat and suppress the desires, interests, and autonomy of your host community.

Students engaging in global health volunteer services and activities should be aware of what we're calling the volunteer effect. Frequently, the reason volunteers travel to a particular community is because the existing health care system is weak and under-resourced. Volunteers bring donated equipment and supplies or provide education and training in order to provide much-needed services and treatments that the existing system is unable to do.

However, while volunteers are well-intentioned, their efforts are often disconnected from government programs underway to strengthen health care and training from the inside. Volunteers may be duplicating efforts and thus wasting valuable resources, creating education and care delivery models in parallel to community-based efforts. For example, some communities report that they wait for volunteers to return when they're in need of care rather than seeking care from local providers, because volunteer services are provided for free or they're perceived to be superior to local services because they're from an affluent country, for example.

So these volunteer effects can unintentionally devalue local health care providers and education systems further. They can create dependency on volunteer donations and services and lead to direct competition with local providers working to make their living in their own communities. Volunteers may relieve pain and address acute problems during their time in communities, but the risk of the volunteer effect often outweighs these benefits in the long-run.

The third major consideration for ethical engagement is what we are calling the burden of hosting. Even though students often provide services and conduct activities in communities at no cost, there is still a significant burden on the hosting community. The costs of providing housing, food, transportation, and a translator should be considered.

Additionally, hosts must often defer their own work and commitments in order to accommodate students and to keep you busy while you're there. And you typically can't just walk into a global health learning opportunity. Rather, these opportunities are created for you. The creation of the learning activities and all the support necessary to keep you safe, healthy, and productive during your time on the ground can place an extensive burden on your hosts.

Further, while most communities do their best to be good hosts, some volunteers forget about the necessity of being good guests. Volunteers should always treat hosts with respect and not expect accommodations to be like those at home. Students have provided inappropriate services and engaged in inappropriate activities for the particular treatment and cultural context of their host community settings in the past compared to their typical learning environment at home.

Hosts must often be cognizant of what students are doing in order to minimize harm both to student and community and maintain appropriate standards for everyone involved. So I like to use the analogy of a potluck dinner. When a host holds a potluck, guests each bring a dish of some sort so that the host does not have to provide all the food.

However, there are still significant costs to the host, even though they save on food. While the guests are there, the host must make sure everyone is comfortable, knows where to hang their jackets, knows where the restroom is, has enough seating and

table settings, et cetera. So there's constant work in the background that the host is doing, and the guests may not fully notice the host busily working from room to room as everyone is socializing.

And then once the guests leave, there's clean up, disposable storage containers or leftover food, figuring out the owners of items left behind. Whose coat is this? Who left their cell phone? So at the end of it, even though the food was provided by the guests, the host still takes on a burden that often outweighs any savings on food.

So the key message here is that in summary, you should never assume that because your intentions are good and your services are provided for free that you're doing no harm. Instead, through regular self-reflection, we all should maintain the ethical principle of first do no harm, even before we attempt to do good. Further, as with any endeavor, remember that you are learners first and foremost. Practice observation and listening rather than going straight to doing.

An important part of self-reflection and early steps to mitigating the weight of authority, the volunteer effect, and the burden of hosting is to honestly assess your own motivations for engaging in global health learning. Your motivations often set the roadmap for the rest of your learning experience, including the kind of opportunity you might pursue, the host organization you select to work with, and the outcomes from your activities, both in the short and long-term.

Thus, early and frequent assessment of your motivations can assist in drawing a road map that will take you down a path of optimal outcomes for all and minimal unintended consequences. So student motivations generally fall into two buckets-- volunteer-centric motivations that benefit the volunteer's goals and interests, and community-centric motivations that ultimately

foster positive outcomes for the community.

Some volunteer-centric motivations should be reflected upon and addressed with caution. While they can be natural reasons to want to engage in a global health learning experience, they are in danger of putting your interests above those of the community you're visiting. If you're unsure if your motivations are maybe too volunteer-centric, ask yourself a series of self-check questions.

Can I achieve my goal without volunteering in a global community? So exciting travel doesn't necessarily need to have a clinical service component, for example, and clinical skill development may be better suited within a safe and controlled educational environment. Will this experience feed my ego and make me feel good about myself?

Will this experience contribute to biased views and stigma about poverty or low-income countries, whether those are my own or those of others? Am I interested in seeing extreme poverty and severe forms of illness, while at the same time ill-equipped to really do something about that? Do I have any interest in continuing my learning once I return? Will I share my experience? Will I take next steps to deepen my learning? Do I see this as a one-time experience?

Global health learning experiences are most appropriate for students whose motivations extend beyond these described here. If you are honest about these questions and answer yes to any of them, you can work through these motivations and proceed with caution. Acknowledging them is an important first step to reassessing your goals and your interests. Further learning and seeking mentorship are a great way to grow your motivations if you're currently at this stage.

Many volunteer-centric motivations are perfectly acceptable, as

long as they're accompanied by a greater awareness of the community's goals as well. A good global health learning experience can benefit both you and your host community. Perhaps you're interested because you see your classmates having positive learning experiences and you've become inspired, or maybe you're seeking fulfillment as you plan your future career and you're thinking about how to optimize your knowledge and skill sets you're gaining in dental school.

You may be interested in learning more about clinical dentistry in other settings through experiential learning, not just limited to your own clinical skills development. Or perhaps you see connections to what you'll learn in the global setting and your own practices and patient populations. These motivations still serve you positively, but also have the potential to address health inequities and social injustices by strengthening your own empathy and humility as a provider.

Optimal global health learning experiences center on foundational global health principles such as community development, capacity building, partnership, and health system strengthening. Those of you who are able to develop and nurture these motivations have improved potential to optimize the positive impacts on yourselves and your host communities in the long-term. These motivations open the door for you to connect your learning experience to broader concepts such as integration of oral health and overall health, prevention and health promotion, interprofessionalism, and the social determinants of health.

So the key message here is that honest self-assessment, adequate mentorship, and appropriate opportunity selection can lead to a successful experience for all involved wherever your motivations may be initially. As you address your motivations, you can then become more critical of the kinds of opportunities

you seek and the types of organizations you work with. Here we discuss some red flags you can watch for as you consider global health learning opportunities. These red flags help you assess the motivation of sponsor organizations providing global health opportunities for students.

The quotes and examples I'm going to share are adapted from real organizations seeking to host students, though the names and any identifying details have been removed. Our purpose with these red flags and these real examples is to provide you with some guidance, but not to shame any organization.

So red flag number one-- they promise big changes in short periods of time. So look at this quote. Are you looking for a vacation experience that will allow you to travel while also making a huge difference in the lives of people in need? If so, you are in the right place.

A huge difference in one week, in people's lives that you've never met and will never see again? Measurable community health improvement cannot be achieved through the brief experience of a volunteer. You should never be encouraged to celebrate high-volume treatments in short periods of time. These high-volume treatment brigades are rarely sustainable and do not address the underlying causes of risks for disease, nor do they integrate into or work to strengthen existing systems already in place.

So the next red flag-- they don't pass the 90 second test. So what is that? If you spend less than 90 seconds on an organization's website and already you see that they promise that you will perform screenings, exams, treatments, or other skills on children before they've requested information about your training or background, they don't pass.

Additionally, there's growing awareness of the harm and

inappropriateness of orphanage-based volunteering. Children are a protected population and are often more vulnerable to risks and unintended negative impacts from volunteer effects. They glorify volunteers and their impacts on the community.

You can tell quickly if an organization is too focused on the impact it has on you rather than within a community's by evaluating images and texts on the organization website or their printed materials. Glorifying volunteers devalues community partnership and local leadership. If their measures for success are all about you, the volunteer, and not the community outcomes, that's a red flag that they are too volunteer-centric and are likely exploiting the local circumstances.

So here's an example of a testimony. My son told me, mom, I know you didn't want to come here. You wanted to go to Paris with Jen over her spring break. But you needed to come here, to save these people. With tears in my eyes, I was speechless. He was right.

This message perpetuates the myth that struggling communities are sitting around waiting to be saved by volunteers. In reality, as we discuss in Module 2, countries around the world are engaging in robust health improvement endeavors and efforts to achieve the global goals, the SDGs, and the unfinished MDG agenda. Rather than supporting these efforts, organizations that glorify volunteers undermine them instead.

"6-Day Visit to Rural African Village Completely Changes Woman's Facebook Profile Picture." So here's a sardonic example of a glorified volunteer by the well-known satire news organization The Onion. So while satirical, the article is meant to capture the problematic self-aggrandizement of global health volunteering.

Meaningful stories about long-term impact are absent. If an

organization is unable to demonstrate improvement in the health status of their community members long-term, their activities are likely geared much more towards satisfying your experience as a volunteer and less toward the community's health goals and interests. In this example, we looked for stories of the impact and experience in several countries and kept coming to this page. Sorry, this page is not available.

The organization had no stories from the community, only stories from satisfied volunteers. That's a red flag. This is an example from a survey that an organization uses to measure their impact, and look what they ask about.

How was your orientation? How did your airport pickup go? Were you satisfied with the living accommodations and your meals? Were you satisfied with the project that you got to work on? How was cooperation from in-country staff?

The survey questions are only about the volunteer experience. There are no surveys or survey questions addressing the impact on the host community or on their health. They imply this experience is a strategy for building your skills or building your resume.

The international experience that you will gain with us will be a great skill to add to your resume. Who can boast about experience working in China, India, Ghana, Peru? You can! The assurance of providing volunteer care should never be promised to you upfront.

As discussed earlier, most countries have licensure requirements for outside volunteers to provide any kind of care and laws in place to protect their communities from volunteer medicine. Furthermore, this reiterates the previous red flag as well. It's too focused on the volunteer, and not enough emphasis on community interests.

They promise adventure and exotic experiences. Motivations for engaging in activities geared toward a fascination with the other, or exotic experiences and adventures, are once again too volunteer-centric and have proven to be harmful to local communities who have real needs and goals for their health improvement. In previous slides, we discussed these shortcomings for volunteer motivations. They are also shortcomings for hosting organizations. Short-term engagement in a community because it's exciting or makes a volunteer feel good about themselves can undermine local efforts and displace local providers.

They solicit pity rather than build agency. All those sad-looking children living in boxes in the street, just waiting for you to come and help them. You'll change their lives. Global health is a goal and should build local capacity, empower community members, and strengthen health systems.

Soliciting pity is disempowering, demeaning, and offensive. These images too often take advantage of challenging situations for the benefit of volunteers so they feel good about themselves, and the pity approach often has a narrow focus on only the negatives of a given situation. I always like to think if the community had written this, is this how they would describe themselves?

No local partners or program leads. This red flag signals that the organization may be too reliant on volunteer time, donation, and what's available and convenient for volunteers. I can only come during my spring break. I hope you don't have any health needs until then!

When the leadership of an organization is primarily based in the United States-- their board members or the team, for example-- but the communities they work with are outside the United States, this is a red flag. This signals a lack of partnership,

community autonomy, and sustainability of efforts and follow-up when the volunteers are not in country.

Sadly, global volunteering has become a lucrative industry. Organizations charge volunteers hefty fees to engage in their programs, and host communities may not see any financial or long-term health benefits from any of these activities. Worse, host communities may be overly-burdened and exploited by organizations eager to provide volunteers with an adventurous, feel-good time.

By watching out for the red flags, you can begin to uncover more ethical and sustainable opportunities. Optimal opportunities adhere to important global health principles that preserve the dignity of the communities, engage proper motivations for student volunteers, focus on ethical and sustainable activities, avoid the volunteer effect through capacity-building, and local empowerment and leadership.

Additionally, evidence from host community perspectives demonstrates the value of language and cultural proficiency in volunteers, as well as a long-term commitment from them. While these specifics may not be feasible for US students-- because you have limited time and resources to commit to long-term global health experiences-- you can look for opportunities where your hosts and your faculty mentors are fulfilling these preferences.

OK, so enough with the red flags. Let's bring this back to positive. Again, as you address your own motivations and those of the organization providing your learning experience, you can then become more critical of the kinds of opportunities you seek and the types of organizations you work with. Here we discuss some green lights you can watch for as you consider global health learning opportunities. These green lights help you assess the sustainability and ethical motivations of host and

sponsor organizations providing global health opportunities for you.

Select opportunities that demonstrate established linkages between volunteer organization and host community. These include continuous communication for program planning and assessment and ongoing dialogue for program improvement and outcomes. This means there are demonstrable efforts to engage with the local community, and buy-in has been achieved with the local health care and dental workforce.

Shared goals and objectives between the volunteer organization and the host community are clear. The power dynamics have been mitigated through an invitation from the host community, rather than the feeling of being invaded by volunteers with potentially self-serving agendas. Both volunteer and host have equal voice in all stages, from planning to on-site collaboration, establishing goals together, developing measures of how they define success, and for long-term management and operation of the program.

A program that is sustainable will have champions from within the community who oversee the program at every step, including after you leave. Sustainable programs will have elements of prevention, education, and empowerment through local capacity-building. The relationships between volunteer organizations and hosts are longstanding and have a track record of positive local impact.

Appropriate monitoring and evaluation takes into account the experiences of everyone impacted by and involved with the program. Data collection should include long-term monitoring for improved health outcomes within the community over time, including once volunteers are no longer returning to the community. Monitoring and evaluation should also include measures for community engagement that mitigates or even

eliminates evidence of the weight of authority, the volunteer effect, and the burden of hosting so that everyone benefits from the experience.

Capacity-building includes a transition plan, or a handoff where volunteers are able to reduce or eliminate the need for their time, resources, and presence in the community. Capacity-building can be achieved through infrastructure, development, education and training, establishing chains of regular supplies, and in many other ways beyond just direct patient care. Ultimately, programs should be able to readily demonstrate positive outcomes to both you and the communities-- not only in the short-term, but in the long-term over many months, and even years.

What to consider positive and how to measure it should be established and undertaken together in partnership. So while these red flags we've covered are important, they're not meant to be discouraging. In summary, as we've covered in our other modules, efforts to improve health globally are undergoing a paradigm shift from disease-specific interventions and technologies alone, which are called vertical responses, to also strengthening the overall structure and function of the health system as a whole-- horizontal responses.

This combined diagonal approach requires interprofessional collaboration, addressing common risk factors and determinants for disease, and focusing on infrastructure and workforce development. This shift is echoed in concepts discussed in our previous modules, including the sustainable development goals and universal health coverage. Optimal global health learning opportunities will provide you with insights into a diagonal approach for oral health improvement for communities you visit. These opportunities combine necessary vertical interventions for the treatment and prevention of oral disease, while also

undertaking the larger underlying challenges present, such as poverty or lack of a dental workforce.

You may perform activities along either access of this module-- the vertical or horizontal-- according to your experience level and support from your dental school faculty. Your activities should contribute to the larger diagonal approach underway. Your contributions to these kinds of programs can integrate into and support long-term, sustainable, community-led efforts, while also providing a rich learning experience and meaningful impact for you.

So in the end, these kinds of opportunities are better for communities and prepare you for a more robust career where you can apply your unique skills and knowledge as oral health care providers in a globalizing world. We've identified for you some positive examples of global health learning opportunities for dental students that we feel meet the green light suggestions.

So for example, research learning-- over the last four years, dental students and residents at the University of California at San Francisco School of Dentistry completed over 20 faculty-mentored global health research projects in 12 countries through the UCSF Global Oral Health program. This program strives to add a rigorous evaluation or investigation component to an existing program, not to support one-off dental volunteering.

Projects are selected after competitive review and require ethics board approval. Global Oral Health research fellows must meet program milestones, formally present their finished projects, and are encouraged to disseminate their findings through a publication or an international conference, for example. Students don't even need to travel overseas to engage in this experience. Many projects take place in California, for example, focusing on the oral health needs of migrant families or other disadvantaged communities.

To prepare for their global health research experience, students and faculty mentors alike can take didactic courses in clinical research design or program evaluation. Ultimately, these programs aim for sustainable oral health improvements by focusing on the structural causes of poor oral health around the world and in California's own local neighborhoods. Here's a positive example of clinical service learning. The University of Colorado School of Dental Medicine and Center for Global Health at the School of Public Health have partnered with AgroAmerica, a private, family-owned Guatemalan banana and palm oil agro business, in an innovative private sector university partnership.

The primary goal is to operate a community health clinic to promote health and development and conduct health research in rural, impoverished regions of southwest Guatemala. The clinic serves approximately 5,000 workers and family members and 30,000 residents in the area surrounding one of the largest banana farms. The interdisciplinary clinic provides primary care, prenatal and maternal health services, and comprehensive dental care to children and adults.

The CU School of Dental Medicine is committed to taking groups of faculty and students to work in the clinic three to four times a year. The essential aims of the program are to develop a school-based oral health and education program that follows the WHO model, development of community oral health and education programs, and the offering of comprehensive dental care, including prevention, basic restorative procedures, and extractions. Students are always supervised by Colorado Dental faculty who maintain active temporary licensure status issued by the Guatemalan dental board.

The program implements US regulatory standards of care regarding charting, sterilization, radiographs, and clinical

protocols. Their program is entrenched in the local culture through local partnership, and community oral health programs are being developed to make population-based changes to improve oral health beyond clinical treatment. So this is a sustainable, permanent program that its supporters believe will have a positive, long-term effect on their communities.

Our third example for experiential learning comes from my school-- Harvard School of Dental Medicine-- in partnership with the InterAmerican Center for Global Health. So we've developed a unique experiential learning course for Harvard and University of Costa Rica dental students. HSDM students first completed a didactic course in their second year at Harvard, and common themes, competencies, and learning objectives began in the classroom and continued into an experiential learning course designed as an extension of their classroom learning and taught in local communities in Costa Rica. Students spent a week in Costa Rica learning about the social determinants of health, health systems and policies, integration of primary care and oral health, and community partnership and program sustainability.

So together, Harvard and University of Costa Rica students visited rural hospitals and ministries of health and learned about the country's health systems. Afterward they worked in teams to reflect, strategize, and create proposed solutions to challenges they saw in their field visits. Students reported that experiential learning successfully enhanced their learning of the concepts initially taught in the classroom. Community input on the course was also collected. Here I'll show you a brief video from our student reflection component of the course.

[VIDEO PLAYBACK]

[MUSIC PLAYING]

- This is an exciting program for us. It's a

combination of students from Harvard Dental and from the University of Costa Rica, from the School of Dentistry. Now they are here for a one-week extension course building on a program that they have been taking.

- Part of the project that we're calling the global health learning helix-- which basically, you imagine two threads of learning-- one that takes place in a classroom, and one that takes place in the world. Backbone of the helix are competencies or objectives that we are striving to meet, both through classroom learning and field-based learning.

Professional collaboration is one of those backbones. Team-based learning and problem-solving is another backbone. Focus on prevention and health promotion is one of the other backbones.

We're evaluating and piloting a lot of this as a team with CISG to see how this model works where we are learning together in a classroom setting in a totally different region of the world, but tackling common challenges and then bringing our learning to a new setting and seeing where the synergies are possible.

- So let's say today we were visiting the [INAUDIBLE] indigenous territory, where we've worked closely with both traditional birth attendants and traditional healers in order to provide better channels of communication between the traditional health system and the Western health system. So that's just one example of what the students do and how they combine the in-class learning with the experiential learning.

- I gained an appreciation for the importance of forming connections with communities and building these relationships that can have health impacts that are far superior to just going into a community and providing care, whether it's dentistry, medicine, surgery. Forming a sustainable relationship with community where you can facilitate autonomy is really something that I took away from this course.

- One of our core values is really whole-patient health and seeing the mouth as part of the body. So our students learn, from the moment they begin, that the mouth belongs in the body. I think Costa Rica is a really exciting example of that in practice, where patients are seen and treated holistically, and oral health is included from the primary care level all the way into their hospital care.

- I had never learned about Costa Rica's health care system. I had heard, from looking into this course, that it was very well-planned and developed, but other than that, I didn't know anything about it. And I think seeing how their approach to a smaller country has been seemingly very successful and how much trust and value people in this country actually place in their health care system and the government-- I think that surprised me coming from the US, where I've lived my entire life, and most people will question me constantly as a health care provider one day, and I think it is both encouraging and truly surprising.

- The potential takeaways from this week for our students at HSDM, I think, are enormous. It depends, I think, where they are in their thinking around their role as a dentist in today's world. But my hope is that they really think about how to optimize the skills and knowledge they're gaining with HSDM in ways they maybe haven't even considered, or if they have considered, that that's really begin to clarify the direction they may want to go with their careers in the short-term, in the long-term so that they can really feel like they're contributing and meeting their full potential as dentists.

- I really learned how collaborative global health is. Global health is not done in a vacuum. It's not one person that can improve global health and work on global health alone. It's all collaborative. And connecting with the University of Costa Rica dental students, we both learned so much from each other, and we'll be future colleagues in global health as well. That's the biggest takeaway I've had about global health through this course.

- I didn't realize how immersive the experience would be. Between living in this jungle environment for a week to entering indigenous communities and interacting with the community leaders and going to someone's home and seeing what their life was like to visiting an African palm oil plantation to talking with somebody in the Ministry of Health, there were just so many factors that I didn't realize would enrich the experience that-- I'm just incredibly

appreciative of this experience. It's definitely far exceeded my expectations. I've learned so much. I've made so many awesome connections with people.

- This week just really bolstered my toolbox of questions to ask or perspectives to think about so that wherever and whatever I end up doing, I think it gave me a greater sense of humility, as well as tools to use down the road to hopefully make an impact wherever I am and use my dental career to serve others.

[END PLAYBACK]

Selecting an ethical and sustainable global health experience is nuanced and can be extremely challenging, particularly when you are also balancing your busy schedules and tight budgets. More dental schools are offering opportunities than in previous years, which may assist with some of the logistical and feasibility challenges. By avoiding red flags and focusing on green lights, you can increase the positive outcomes for both you and the communities you visit.

Global health work is extremely rewarding. I love my career. But believe me, it takes time and work to ensure it's done right for all involved. I encourage you to reach out to me or any of the authors of this module with questions or concerns as you navigate the growing list of global health opportunities available to dental students today, or perhaps you will even start your own someday. We're here as a resource anytime. I want to thank you for learning about ethics and sustainability in Module 5, and I encourage you to participate in our other modules. Thank you so much.