



**Southern Great Plains Learning Collaborative  
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00:00:02.820 --> 00:00:17.290

Lisa: Thanks so much, everyone, for joining us. My name is Dr. Lisa Patel. I'm the Executive Director for the Medical Society Consortium on Climate and Health, and a member, as well, of NAM's Climate Collaborative, and we'll just give a second for folks to filter in.

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00:00:25.210 --> 00:00:39.239

Lisa: And as folks are filtering in, we're here for the Climate and Health Learning Collaborative, the regional webinar series. Today, our focus is going to be on the Great Plains, and so that includes Texas, Oklahoma, Kansas, and Missouri.

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Lisa: This is part of an ongoing effort by NAMM. These regional-based workshops are an opportunity for folks to learn and connect with the resources and the other health professionals that are working in the space in terms of climate change and health threats that are unique to their particular region.

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Lisa: Many of our goals are to both connect community and, create opportunities to lesson share in terms of opportunities to move education forward.

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Lisa: And I'm really grateful today to be joined by amazing colleagues throughout the Great Plains that are going to be talking about each different space that they occupy in the climate and health world and sustainability. And with that, I'm going to turn it over to Elizabeth.

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00:01:25.840 --> 00:01:36.709

Elizabeth: Hi everyone, I'm Elizabeth Friedman. I work as an environmental physician at Children's Mercy in Kansas City, and I'm also the co-founder of Science and Community Action Network, where we do a variety of

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Elizabeth: types of work, including bringing together subject matter experts like you all, and equitable partnerships with community activists. So today, you're going to be hearing from four individuals,

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Elizabeth: Dr. Annabelle Rodriguez, who's an assistant professor at Texas A&M School of Public Health.

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Elizabeth: Alicia Este, who is the ICU director at Houston Methodist at the Woodlands, Dr. Brett Perkinson, an assistant professor at UT Health Houston, and Dr. Anusha Govind, an assistant professor at UT Southwestern Medical Center.

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00:02:08.940 --> 00:02:27.290

Elizabeth: So, we're going to hear brief presentations from each of our four speakers, and that'll be followed by a panel discussion and audience Q&A. We want to encourage the audience members to use the Q&A function at the bottom of your screen to submit your questions. And with that, I will...

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00:02:27.290 --> 00:02:30.820

Elizabeth: pass the mic to Dr. Annabelle Rodriguez.

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00:02:32.450 --> 00:02:33.890

Anabel: Thank you so much.

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00:02:36.960 --> 00:02:38.230

Anabel: Okay.

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Anabel: So, I want you to take a look at this, slide that has all of these headlines, of different events that have happened.

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00:02:49.350 --> 00:03:07.800

Anabel: among agricultural workers, occupation is a critical social determinant of health, especially among agricultural workers who often endure these precarious employment conditions, hazardous work conditions, and limited access to healthcare, which is what I'll focus on today, and the barriers.

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00:03:07.800 --> 00:03:24.360

Anabel: These workers are frequently immigrants or migrants with limited English proficiency, and they face elevated risks of heat-related



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illnesses, pesticide exposures, infectious diseases, musculoskeletal injuries, basically everything that you see on this slide.

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00:03:24.470 --> 00:03:37.599

Anabel: while lacking the proper labor protections and preventative services. In addition to this, environmental justice is essential to address these disparities. Agricultural workers are disproportionately exposed

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00:03:37.600 --> 00:04:00.479

Anabel: to environmental hazards due to the nature of their work in rural regions, which is where most of these farms are, underserved areas where they live, and they labor, these medical deserts, as we refer to. These communities often lack clean water, running water, running electricity, adequate housing, access to health infrastructure, and compounding

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00:04:00.740 --> 00:04:03.980

Anabel: Occupational risks, and really promoting

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00:04:04.190 --> 00:04:09.600

Anabel: Not only access to healthcare, but environmental justice means ensuring that no group, especially this

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00:04:09.600 --> 00:04:29.939

Anabel: historically marginalized group, there's an unequal burden of the environmental and occupational harm. So really advancing the health equity of agricultural workers requires this integrated approach, right, which is why I'm here as a field occupational epidemiologist, talking to a group of physicians, because it not only addresses

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00:04:29.940 --> 00:04:36.800

Anabel: The health barriers, but also that workplace safety and the broader environmental conditions that shape their health outcomes.

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Anabel: Next slide.

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Anabel: So I want to give you just a soft introduction into the U.S. ag industry. It's divided into the produce side and the livestock. The produce side is... it's seasonal, it's very weather-dependent. It's what we



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call chasing the crop, or following the crop where people migrate to where the job is.

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Anabel: Versus livestock is non-seasonal. This operates 365 days a year, 7 days a week, 24 hours a day. This includes, the dairy industry, the poultry industry, the swine industry.

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00:05:12.760 --> 00:05:29.869

Anabel: It's all, though, an integrated system of inherent hazards, as I said in the last slide. It's very injury-prone, there are many environmental exposures. Most of these farms, especially the livestock farms, like dairy farms, are family-operated.

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Anabel: We're seeing more and more, kind of, this merging of the smaller farms into bigger operations. On the produce side, you have farm labor contractors that work with the bigger farm owners, producers, growers, and the bodegas, or the packhouses, where they're paid

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00:05:48.940 --> 00:05:52.099

Anabel: In either weekly, daily, or by piece.

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Anabel: And more so than ever, there's a high dependency on foreign labor. There's been an increase in the seasonal H-2A visa, which is a visa just for agricultural workers since 2019. There's been a huge spike of it.

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Anabel: And really relying on this type of visa, which, of course, within itself has, its, its, labor issues.

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00:06:12.910 --> 00:06:25.489

Anabel: So that's the ag industry. Now, I want to introduce you to the... your modern farm, worker. This is predominantly an immigrant Hispanic male, about 30, 35 years of age, ranging anywhere from,

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00:06:25.520 --> 00:06:43.419

Anabel: teenage years all the way into, we've seen, deep into the 70s. I've spoken to a 91-year-old who was still out, in the field, cleaning



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fields in the middle of the day. An average of maybe about a little bit less than 5 years in the U.S.

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00:06:43.750 --> 00:06:58.539

Anabel: Limited English proficiency, speaking languages apart from Spanish, Nahual ten quiche. Quiche is one of 25 languages in Guatemala. Limited English proficiency, and living below the poverty level for a family of 5 in Texas. Next slide.

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Anabel: And to wrap it up, I just want to really give you a summary of the systemic barriers to health.

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Anabel: that a lot of agricultural workers face, especially in the Texas Panhandle, South Texas, eastern New Mexico, and basically the region that we're covering today. In previous studies, we've had reported needs, from diabetes type 2, hypertension, musculoskeletal pain.

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Anabel: dental hygiene problems, undiagnosed and untreated mental health problems, especially after 2020. We've seen a spike in that, in the work that we've done in these areas.

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Anabel: Lots of social isolation, especially in the very rural areas, and then infectious disease, and with that, vaccine hesitancy, that comes with it. We worked outbreaks of,

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00:07:50.140 --> 00:08:07.349

Anabel: of bird flu. We just finished a really big project on that, and looking at the seropositivity of bird flu among dairy farm workers. Right now, I'm working TB. There's a current TB outbreak on one of the farms, and so really staying on top of these things, and trying to address these systemic barriers, like

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00:08:07.390 --> 00:08:17.920

Anabel: The cost or the lack of health insurance, which we know probably a third of ag workers have health insurance, that at least covers some type of preventative service.

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Anabel: The barrier of communication, culture, and literacy, right? Lacking that English proficiency, and sometimes speaking languages that are a side of English and Spanish, conflicting work schedules, working from dawn to dusk. Some of the... some of the farms that we have gone to have moved to

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Anabel: a different type of harvest, starting at 2am and ending at 9am, to avoid the heat of the sun.

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Anabel: Lack of childcare, limited knowledge of health centers and their locations, right, being new and migrating in that area.

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00:08:50.710 --> 00:09:12.770

Anabel: With that, the health deserts piece that I touched on, the lack of specialty services in these rural areas, that transient lifestyle, lack of public transportation, and then, of course, this has been, here more than ever, is the fear of law and immigration enforcement. So, I hope that this very quick summary has got you thinking. I'm excited for our panel discussion and see what

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00:09:12.770 --> 00:09:15.260

Anabel: what, what ideas we come up with. Thank you.

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Elizabeth: Thanks so much, Annabel. That was... that was really fascinating. Our next speaker is Alicia Estee. The... she is the ICU Director at Houston Methodist at the Woodlands.

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Alisha: Hello, everybody. Like she said, my name is Alicia. I am over Critical Care Services at Houston Methodist Woodlands Hospital. You can go over the... you can go to the next slide.

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00:09:39.790 --> 00:10:04.580

Alisha: So, we are one of nine hospitals in the Houston region. We're very thankful that we do have an Office of Sustainability in the Houston Medical Center. They support us through calculating emissions, running life cycle analysis, but today I kind of wanted to focus on how we got



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our sustainability committee up and running here at Houston Methodist, the Woodlands, some of the

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00:10:04.580 --> 00:10:11.269

Alisha: The projects that we've been working on, and then how you can probably translate some of these practices into your own organization.

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Alisha: So I really think recruitment starts during hospital orientation, so as we have new staff members on board, we educate them on the different councils we have here at the hospital. Our, sustainability committee is one of them. So we're always recruiting green leaders, and we also educate them on the different practices, that we focus on in our Sustainability Council. You can go to the next slide.

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Alisha: This is, we also educate them on the commitments for the committee, so we want them to attend regularly. We want them to not only show up, check the box that they're here, but we want them to be engaged. Some of the best ideas that we've had for sustainability have come from staff who are at the bedside. They're more aware of, hey, maybe we can recycle this, or hey, let's try this. So, we really want staff who want to get involved

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00:11:01.320 --> 00:11:05.939

Alisha: generate those ideas and actively participate. And go to the next slide.

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Alisha: So it's not just nursing that we want involvement from. As you can see from the slide, you know, sustainability touches every part of the hospital. So not only nursing, but facility security, marketing, who uses a lot of paper. So every department in the hospital has an opportunity, to play a role in sustainability. So, we have members on our council

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00:11:31.180 --> 00:11:34.170

Alisha: from all over the hospital. You can go to the next slide.

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Alisha: So, as I mentioned earlier, our Office of Sustainability is downtown in the medical center, and we really work with that department



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on if we want to do a project. They help us with the life cycle analysis, they also help us with our carbon footprint. This is our own hospital's footprint that they shared at the beginning of the year. So we noticed that we're pretty high in electricity and

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00:12:00.090 --> 00:12:24.009

Alisha: water aspects, so just kind of food for thought with the electricity. So, you know, in healthcare, we use a lot of machines, so understanding the emissions that are driven with equipment when it's turned on, when it's off, or when it's on standby, we know we have some opportunities with re-educating some of the staff on if an equipment's not needed, to make sure that it's turned off. You can go to the next slide.

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00:12:25.250 --> 00:12:50.180

Alisha: So this is kind of our annual goals, and this isn't just the leaders on the committee coming up with these goals, it's shared decision-making during the council at the beginning of the year of things that, staff want to focus on throughout the year. So we did, we have a heal center here where patients can go and do, healthy meal prep options. So, our Sustainability Council, met over there, and we did healthy meal

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00:12:50.180 --> 00:13:10.080

Alisha: options there. We have an upcoming, outing going to Moonshot, which is a composting facility here near the hospital. Ongoing recruitment of green leaders. We also are going to have an upcoming community initiative, which is a women's blanket drive.

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00:13:10.080 --> 00:13:22.350

Alisha: And then, so a lot of activities and thought go into our Sustainability Council. Like I mentioned earlier, these ideas are driven from, the committee members. You can go to the next one.

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Alisha: So these are some things that we've done throughout the year. Like I said, ongoing recruitment. Our biggest thing is partnering with our vendors. So our recycling company, Medline, is our huge vendor that, supplies the majority of our supplies here at the hospital. They come into our organization and re-educate staff on, items that we can reprocess, items that can we recycle. We want staff to know

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Alisha: things that can be recycled or reprocessed so it doesn't end up at the landfill. So, really partnering with them. And then also partnering, with waste management to ensure that the items that we are recycling is actually getting recycled. And then, we do have, an upcoming partnership with Moonshot on compost,

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Alisha: recycling as well. We did adopt a family for a sustainable food drive. We also have Starbucks here in the hospital, so we partnered them... with them for a coffee ground initiative. So as you can see the picture on the left, so they place the used coffee grounds into a basket. Patients, families, staff can pick up the coffee grounds, bring it home to put in their garden, so

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Alisha: That's been well received by staff and patients. And then we recently held a sustainability fair in the hospital, just to kind of give staff, physicians.

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Alisha: an idea of what our council does, the different vendors that we connect with, and then how their work at the bedside can help us meet our goals. And then we just have monthly socials, just to get staff and our committee members, involved. You can go to the next slide.

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Alisha: And then on Wednesday, we held our inaugural green ICU conference, so we had guest speakers from all around the globe. In the ICU realm of healthcare, the United Kingdom is leading the way in sustainability. One of our guest speakers, who I was a panelist on, Dr. Heather Bage, she's a nurse out of the UK, they just recently released a recipe book, so it's kind of a

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Alisha: step-by-step guide to sustainability in the ICU. She's done a lot of work with gloves off campaigns, so reducing the amount of gloves that healthcare workers are utilizing without compromising infection control purposes, so a lot of work there. I think we had over 250 attendees, from around the world, so it was an awesome, first conference. We will hold it again next

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Alisha: year, so if you're interested, let me know, and we can send you the invite, but great conference. And go to the next one.

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00:15:54.920 --> 00:15:59.049

Alisha: And that's all I have, and I will pass the baton to William.

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00:16:00.730 --> 00:16:02.020

Elizabeth: Actually...

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Elizabeth: follow the rules. Yeah, so Dr. Brett Perkinson, the assistant professor, or an assistant professor at UT Health Houston, is going to be presenting next.

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Brett: Hi, thanks so much for having me here this afternoon. So, I'm talking a little bit about disaster response, and I consider myself a hurricane expert just by virtue of simply practicing in Houston for the last 25 years. Next slide.

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00:16:30.110 --> 00:16:45.569

Brett: And during that time, I was involved in Katrina. After Katrina, we set up a clinic for... at the Astrodome for, for the New Orleans, residents that were sent in, for Ike and went over to Beaumont. But really, I think the formal.

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00:16:45.570 --> 00:16:54.339

Brett: kind of disaster response training began with Hurricane Harvey in 2017. And after, Houston was affected by the floods.

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Brett: Our department, the School of Public Health, passed out N95 masks, gloves, and instructions in Spanish and English on how to mitigate successful and safe remediation of their homes after being flooded.

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00:17:08.730 --> 00:17:10.710

Brett: Next slide.

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Brett: And we went throughout the area, passing out this to both residents and workers as well, to provide information and education. And one of the experiences that I got out of Katrina was that we really wanted to measure

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Brett: are we making a difference? What are the health impacts after flooding and disasters of this nature? And so we were able to do a small study, after Hurricane Harvey, where we contacted the residents and workers 6 months after the event to see how they were doing. Next slide.

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00:17:43.800 --> 00:17:55.940

Brett: And so, what did we learn? We really divided up is that there are some needs for any community that really applies to the Great Plains, be that after a tornado, after a wildfire, after hurricane and flooding.

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Brett: And you really can divide that up between before the disaster, and that's where training is needed, education, and assessment, both in terms of health assessment and education.

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Brett: And then during a disaster, logistical coordination is needed in terms of communications. Where can workers and residents find food, supply, and housing?

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Brett: Hazard identification for specific hazards that might be in the area. And then afterwards, there's development of chronic diseases that develop from these prolonged exposures. Many residents will not be able to renovate their homes soon. It's a slow process.

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00:18:31.610 --> 00:18:51.589

Brett: from a financial standpoint and supply point, chain standpoint, and then for the workers to continue to train and improve their training, so that next time that they're even more prepared. And so, these are very repeatable for different disasters. They're a very set of items that we need to learn about.

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00:18:51.590 --> 00:19:01.749



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Brett: And as a result, I was able to, with a grant, created an app over the last few years called PucketArt. I'm going to just tell you a few features about that in your next slide.

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Brett: And so it tries to address that. Next slide.

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00:19:06.840 --> 00:19:24.589

Brett: And so, what this app does is that it tries to address a number of these different issues for users, and you can think of this in terms of construction workers that are going into an affected area. You could think of it in terms of people that are insurance subscribers, perhaps that have

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00:19:24.590 --> 00:19:42.509

Brett: of cancer or other chronic needs, and how they can stay in communication after a storm. But we have one is creating a contract, that's for the construction workers, so they can document, their, their, their wages and how they're getting paid, when they're getting paid. that's very useful. Also, ask them a set of

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00:19:42.510 --> 00:19:59.120

Brett: questions, for health surveillance of, do they have any breathing problems, cardiovascular problems, anything that would preclude them from going into, an area that is affected. And we have installed HIPAA, HIPAA walls to protect

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00:19:59.120 --> 00:20:07.729

Brett: personal information, we also make that optional, but as a way of kind of ensuring, are you ready to go into this area? Next slide.

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00:20:09.090 --> 00:20:23.710

Brett: We also have, again, for workers, we have information on proper use of wearing masks, wearing gloves, watertight boots. We also were able to use a COVID-19 supplemental grant to provide just information on respiratory-borne diseases, and

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00:20:23.710 --> 00:20:36.090

Brett: As many of you probably remember, during COVID, or after a natural disaster, you don't have running water. Respiratory-borne diseases are a tremendous problem, so providing education for that.



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Brett: And then for, again, for workers, a place where... where is the worker picked up, and where are they dropped off in the chaos and in aftermath of the storm, a lot of times workers aren't picked up afterwards.

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Brett: they're not... people aren't able to get in, and this helps to kind of ensure... provide kind of a backup for the worker advocacy group or family members to locate where the worker is.

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00:20:57.860 --> 00:20:58.930

Brett: Next slide.

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00:21:00.260 --> 00:21:15.269

Brett: And it also provides, you think of it in terms of both the resident and worker who's completing the training, who's doing the action plan, and then deploying to the site and utilizing these tools. Next slide.

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00:21:16.460 --> 00:21:31.210

Brett: But it also looks at the coordinator, who really is, if it's a foreman for a construction company, is you've got a group of people going to one site, and they have these workers that are now qualified and taken these health assessments, they've had

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00:21:31.210 --> 00:21:44.750

Brett: the education that they need, they've been evaluated for readiness, and they're cleared for deployment. But this can also be used, you can think of it in terms of first responders or other volunteer groups. We have coordinators, like with the Red Cross.

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00:21:44.750 --> 00:21:56.110

Brett: That are coordinating the volunteer work. So this kind of two-part communication can help provide a little bit of organization to an otherwise very chaotic environment.

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00:21:56.610 --> 00:21:57.660

Brett: Next slide.

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00:21:58.770 --> 00:22:14.320

Brett: And this is really kind of just the last point, is that you're really... what you're looking for is a commonality here, where you're... you're having allocation of resources to an at-risk group, to enhance their health and safety environment.

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00:22:14.320 --> 00:22:32.490

Brett: And so, because we are providers, there's tools like this, and I'd be glad to, if you'd like to reach out, I'd be glad to tell you more about PocketArc and partner with you if your healthcare organization is interested. But aside from that, you as an individual provider or your healthcare organization.

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Brett: you can... you can start providing education to your patients and your healthcare education about the risks that are unique to you regarding natural disasters. And that can be, of course, heat stress, which applies to all of us, but it can also be, where can you get resources.

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00:22:47.850 --> 00:22:52.599

Brett: Who's at risk in the flooding? Where are the floodgates? A lot of people don't even know that they're in.

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00:22:52.600 --> 00:22:58.109

Brett: risk in a flood zone. And when you're providing that education, I also recommend that you

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00:22:58.110 --> 00:23:12.579

Brett: do... use environmental coding, environmental counseling, there's T-codes on this, because then we can begin to really assess, you know, what is the impact of natural disasters on our community? You, as an individual provider, can provide that... can provide that input.

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00:23:12.750 --> 00:23:13.650

Brett: And then

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00:23:14.110 --> 00:23:27.379

Brett: Being active in disaster response communities and committees, whether in your hospital or your organization, you know, providing your medical knowledge and being aware of what are some of the hazards that are associated with natural disasters.



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00:23:27.380 --> 00:23:37.100

Brett: And then afterwards, when you see people after one of these natural disasters, again, using, documenting that, looking at the associations.

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00:23:37.100 --> 00:23:49.660

Brett: And then... and then providing that... providing feedback to the medical community. Sometimes we think we have to have this, 20,000-member study of a randomized controlled trial in order to publish something, but

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00:23:49.660 --> 00:24:06.729

Brett: case studies, your own individual encounters within your own clinic, can provide a powerful voice, not only to your community, but to your policy makers. We really are kind of the eyes and ears of some of these natural disasters that are affecting us. So, thank you for your time.

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00:24:11.090 --> 00:24:22.819

Elizabeth: Thank you so much, Brett. So, our final speaker before we start the panel conversation is Dr. Anusha Govind. She's an assistant professor at UT Southwestern Medical Center.

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Anusha: Thank you so much, Elizabeth, and thank you, everyone for joining, and thank you to all of my other panelists for kind of highlighting all the great boots-on-the-ground work that you guys are doing in your individual communities and beyond. I'd like to sort of wrap up our panel by offering a little bit of a different viewpoint. So, I'm an infectious disease physician at UT Southwestern in Dallas, and I started the, our first

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00:24:47.970 --> 00:25:03.020

Anusha: climate and health elective for our medical students, and I'd like to talk about how we implemented that, and kind of how we're really preparing our future physicians and other healthcare workers on these changes that are coming related to climate. Next slide, please.

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00:25:05.490 --> 00:25:28.009

Anusha: So, this started out... I started this elective back in 2021. It was the year after the big Snowmageddon, situation here in Dallas. At that time, I had been 38 weeks pregnant, and I remember a student... I



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mean, it was just kind of a disaster. And it was actually a student that reached out to me and said, hey, we really got to start thinking about this. We need to start some...

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Anusha: modicum of teaching about climate and health. So we put this, elective together, so it was me and one of, two other students, actually, at the time.

114

00:25:37.120 --> 00:26:00.029

Anusha: It's a 14-week longitudinal elective, right now, so it spans 14 lunchtime sessions. It's really geared towards first-year medical students only because they have the most availability at lunchtime. Initially, we started out, our sessions included, basically, I think it started off at 12 weeks, we had 12 didactic sessions. In the last 4 iterations now, we've

115

00:26:00.030 --> 00:26:23.649

Anusha: kind of really broaden the scope, so we've got didactics, we have small group case-based learning sessions, we've invited community speakers who are doing work in our local communities on climate and environmental health risks. Our students that are the liaisons for each elective year lead a journal club, they... we do a book club, so we've actually chosen a historical fiction novel in the past.

116

00:26:23.650 --> 00:26:27.929

Anusha: That's set in the Dust Bowl. And then our last,

117

00:26:27.980 --> 00:26:51.050

Anusha: week as project presentations of our students. Every year, we've had one or two student liaisons, and I actually just found out, for next spring, we have four student liaisons. I think we're garnering more interest every year. And initially, in 2021, of course, we started it as fully virtual, and with building upon feedback year after year, we've really switched it to a hybrid schedule now.

118

00:26:51.050 --> 00:26:59.959

Anusha: I would say about 75% of our lecture... our discussions are... our sessions are in person, and about 25 are virtual, really depending on the speaker location.

119

00:26:59.960 --> 00:27:01.140





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Anusha: Next slide, please.

120

00:27:02.060 --> 00:27:26.280

Anusha: So, I've just listed, I'm not gonna read through all of this for you, but I wanted to give you guys, kind of an example from our syllabus of our objectives. So, students learn the basics of science behind climate change. They understand, like, natural and human causes that are worsening global warming. They are able to identify adverse health effects, including pulmonary health, cardiovascular effects on nutrition and infectious diseases.

121

00:27:26.420 --> 00:27:50.639

Anusha: They learn throughout the course about the exaggeration of existing healthcare disparities in the populations that we're studying. One of our favorite sessions that we have is one of our speakers talks about how to appropriately take an environmental health history, and also do a lot of patient counseling on their chronic conditions, how those are going to be affected by weather variables, medications.

122

00:27:50.640 --> 00:28:13.629

Anusha: And so that's really always a favorite for our students. Based on this, we also have actually incorporated, like, a standardized patient session now. Students are going to be able to list concrete changes that they can implement in their practices and in their lives to decrease their individual carbon footprint. And then we do do a session on learning some tools and skills to advocate at the local, state, and national level.

123

00:28:13.700 --> 00:28:19.060

Anusha: to, make an impact broader than just outside your own clinical practice. Next slide.

124

00:28:21.080 --> 00:28:36.090

Anusha: I wanted to give you guys also a sample schedule from our syllabus from this last spring. So, as you can see, we have a couple of sessions right off the bat on heat, as it's very pertinent to our climate here in Texas.

125

00:28:36.090 --> 00:28:48.580

Anusha: We have climate effects on pulmonary health, we have our nutritionists come and talk about, sort of, both, the effects on nutrition, as well as, sort of, how



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126

00:28:48.580 --> 00:29:13.559

Anusha: crops and all of that will affect the climate in the future. We have a great talk on sort of multiple aspects of mental health related to climate, including migration, sort of indirect and direct mental health adverse effects. Again, we have our session on taking environmental history. Then we let our students do some creative things, so they come up with the journal articles, which, you know, luckily for us, are becoming more and more robust, and so we're

127

00:29:13.560 --> 00:29:38.550

Anusha: having a hard time picking. We've done some video discussions on different TED Talks and even documentaries. We have a standardized patient interview where we work through one or two patient cases with a standardized patient. Like I said, we've had some local community groups in the past come and talk about the work that they're doing. We actually have one of our faculty who does a great talk on the disparate impacts of climate on the marginalized

128

00:29:38.550 --> 00:29:44.199

Anusha: population, specifically surrounding DFW, which is great and very pertinent for our

129

00:29:44.200 --> 00:30:09.139

Anusha: students. One of the talks that I gave is actually looking at the effects of the healthcare industry on climate, so sort of a reverse lens, but what can we do as future healthcare workers? You know, as Alicia had pointed out, on decreasing our carbon footprint and increasing sustainability in healthcare, and then we talk a little bit about how to be an informed and effective advocate, and then let the students

130

00:30:09.270 --> 00:30:12.159

Anusha: present their projects. Next slide.

131

00:30:13.450 --> 00:30:22.319

Anusha: I wanted to offer, a little bit of some of our student testimonials from the last few, sessions that we've had, or the last few years that we've,

132

00:30:22.420 --> 00:30:28.170

Anusha: had this elective. I think what's really exciting is that the feedback is generally



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133

00:30:28.370 --> 00:30:46.160

Anusha: always very positive. What we've noticed is that students want more and more information. That's why we expanded, I think, from the initial 11 or 12 to 14 sessions, because there's just way too much to cover in just 12 lunch periods. You know, I think they really are able to take some of the

134

00:30:46.480 --> 00:31:03.659

Anusha: points that we teach into both their personal lives and how they lead it, but as well as what they would do in future patient care scenarios. And it's really fun when we watch the presentations of our students to just see the amount of creativity, the amount of excitement,

135

00:31:03.660 --> 00:31:20.060

Anusha: it's really, you know, for us as instructors, every year, I think we just love this course because of how excited we can see the, sort of, the next generation of students being. It's really hopeful, honestly. And then again.

136

00:31:20.060 --> 00:31:44.229

Anusha: one of the important things that I'll kind of touch on, I think, on the next slide, is that our students have recognized very early on that, this should be sort of longitudinally flipped in, or into the curriculum. And so I actually have titled this a little bit incorrectly. It's the integration into the full, like, the core preclinical curriculum for medical students, not residents, yet. So we started our attempt number one

137

00:31:44.500 --> 00:31:52.860

Anusha: Two and a half years ago now, where our goal was to get this not as just an elective, but into the curriculum for all of our med students.

138

00:31:52.860 --> 00:32:07.429

Anusha: One of the... I think the biggest way that we accomplished this was when we presented to the MedEd committee, the presentation didn't come from me, it actually came from one of our students who took the elective, and this was her capstone project for the elective, which she recognized the importance

139

00:32:07.430 --> 00:32:31.759

Anusha: of it being in the full curriculum. So one of the, again, surprising things and just really mind-blowing things for me is that we



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passed unanimously in the Med-Ed committee. There was no one on the committee that didn't think this was vital information to include. So our first attempt, we, basically made a slide deck of, I think, 6 or 9 slides per organ systems, and we handed it out to each

140

00:32:31.800 --> 00:32:51.099

Anusha: block director, and said, hey, whichever lecture you think this would best fit, we've already made the slides for you, you can just hand them off to the speaker, and they can just include them in their slides. Our hope was that this would be a really low-barrier way to include the information in the curriculum.

141

00:32:51.520 --> 00:33:14.159

Anusha: What we didn't recognize was at that time, two years ago, the UT Southwestern curriculum was really going through a very, pretty big shift, as I think a lot of men's schools now are going. A lot of the curriculum has moved to a flipped classroom model, so there's a lot less didactics, and if there are, they're pre-recorded, and the focus is more in case-based learning sessions or small group sessions.

142

00:33:14.160 --> 00:33:39.139

Anusha: So for this year, our, we've again gotten it approved by the MedEd Committee. So our goal for this year, as our revised plan in getting it into the full pre-clerkship curriculum, is to go along with the flipped classroom model, and instead of didactic sessions, actually have small group case-based learning sessions. So we're hoping to implement these one- to two hour sessions in our, HEMONC, or sort of the infectious diseases

143

00:33:39.140 --> 00:33:39.930

Anusha: block.

144

00:33:39.930 --> 00:34:03.949

Anusha: the cardiovascular systems block and the respiratory systems block. So it's pretty exciting, I think, that our curriculum, which really had just started as an elective, will be implemented to all of our medical students. And then to build on this, we're trying to implement sort of a very similar case-based learning session into our internal medicine residency curriculum. So myself and another faculty who runs the elective with me.

145

00:34:03.950 --> 00:34:07.909

Anusha: We will be, hopefully doing a week of noon conferences.



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146

00:34:07.910 --> 00:34:15.910

Anusha: Where we'll have two to three didactic sessions, and then the other two and a half sessions will be case-based learning sessions on the effects of climate and health.

147

00:34:16.190 --> 00:34:17.890

Anusha: Next, next slide.

148

00:34:18.560 --> 00:34:38.019

Anusha: So, just a couple of take-home points. That was the very high-level overview. I'm really happy to sit down and discuss with any of you guys how we got this started, you know, what it took, how we've kept it running and sustainable. I think we were one of the first, if not the first or the second institution in Texas

149

00:34:38.020 --> 00:34:52.700

Anusha: to have climate and health as a part of our curriculum. So it's been very exciting. We've networked with people around the country. There's lots of other programs, as you can imagine, in other parts of the country that are already working on this, and so it's really exciting to be one of the first in the South.

150

00:34:53.080 --> 00:35:08.730

Anusha: So, take-home points, I think it's really important that it should come from the students. I think having student buy-in is very important, so having your students go to the leadership saying, this is something we think is necessary, is very important and really goes a long way.

151

00:35:08.730 --> 00:35:24.719

Anusha: You want to make sure you're collaborating with faculty and speakers from within your institution, but also outside. A few of our speakers are actually not affiliated with UT Southwestern, and some are from out of state, and that just, like, brings in such a much more wide variety of expertise.

152

00:35:24.780 --> 00:35:48.340

Anusha: I think it's important, as we've learned, to have a variety of materials and learning methods. So, again, we started out as pretty much all didactics, really due to COVID and being fully virtual, and the students are able to gain so much more from the case-based learning



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sessions, and when the students are designing some of the sessions themselves, that really goes a long way. And then, of course, as with anything, you want to elicit feedback with every iteration of the course.

153

00:35:48.340 --> 00:36:03.819

Anusha: see what your students feel is missing, see what they think, you know, could be condensed, what do they want to learn more about, what do they want to see about? And I think it really helps to make the course better every single year. So that's all I have for you guys, and again, I'm happy to answer any more questions.

154

00:36:05.850 --> 00:36:17.490

Elizabeth: Wow, thank you, each of you, for really fascinating presentations on how you've been able to integrate a climate response into your day-to-day.

155

00:36:17.490 --> 00:36:30.750

Elizabeth: We're opening the... we're opening it up to all four panelists now, and hope that the audience members will start entering some questions into the Q&A option.

156

00:36:30.750 --> 00:36:38.699

Elizabeth: I'll start with a question. I was hoping, and feel free to... anyone can answer.

157

00:36:38.700 --> 00:36:58.260

Elizabeth: You would talk a little bit more about how you've been able to engage, across disciplines and sectors, like with community groups and government agencies, tribal organizations, and why and where it's been helpful or where it has not.

158

00:37:01.760 --> 00:37:12.030

Anabel: And this is in general. I think I can take it. Yeah, so we've worked closely with our local health departments.

159

00:37:12.040 --> 00:37:28.340

Anabel: To try to get workers vaccinated. Also, all the Federby qualified health clinics in the area, to get services to workers either on-site or have some type of voucher program where we can send them or refer them over to their clinics.

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00:37:28.460 --> 00:37:42.009

Anabel: As far as with the infectious disease piece of this, like with bird flu and TB, we've also worked with the Texas Animal Health Commission, the USDA, CDC, to really bring that One Health perspective.

161

00:37:42.010 --> 00:37:51.840

Anabel: of not only the worker side, but also the health of the animal, which is also important, and environmental health. And I think those three pieces

162

00:37:52.240 --> 00:38:04.820

Anabel: Although sometimes it's very hard to hurt the cats, right, and get everyone in the same room, is key, and has been a really good strategy to really improving the health and safety and well-being of workers.

163

00:38:06.690 --> 00:38:13.129

Elizabeth: Oh, Sorry, I was just gonna follow up with Annabelle. Who's doing the herding?

164

00:38:14.390 --> 00:38:15.620

Anabel: Usually me.

165

00:38:15.730 --> 00:38:23.790

Anabel: And asking for lots of favors and lots of free things, but it helps that there are...

166

00:38:23.830 --> 00:38:41.980

Anabel: amazing people working in some of these institutions that care about their communities, and it just... it just takes poking and... and advocating, which is why I agreed to be here, because if I could just spread a little bit about what ag workers are going through in these rural areas, and just give you that

167

00:38:41.990 --> 00:38:58.139

Anabel: Just a little thought in there to... so that the next time maybe that you encounter an ag worker, or think that it's an ag worker, maybe ask about the occupation and the exposures, and maybe their living conditions, because it could tell you a lot about, a person's health, and their well-being, and their safety.

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00:38:58.870 --> 00:39:00.440

Elizabeth: Oh, thank you.

169

00:39:00.740 --> 00:39:02.929

Elizabeth: Brett, sorry I interrupted you.

170

00:39:02.930 --> 00:39:05.689

Brett: Oh, no, no problem. I was just gonna add that

171

00:39:05.710 --> 00:39:21.519

Brett: you know, when you have a particular group, like, we were interested a lot in day laborers and finding out how their response to disaster work was. As you... a physician group from UT Health didn't have a lot of, we hadn't built up a lot of trust or rapport with that group.

172

00:39:21.520 --> 00:39:34.060

Brett: And the way... way we did that was we partnered with a worker advocacy group that did have that relationship in that time. And so, I would just say to the audience, you know, if there's a particular group you'd like to reach out to that you feel like is at risk, is

173

00:39:34.060 --> 00:39:53.029

Brett: partner with organizations that are out there, and it can help you advance years, really, in a relationship to gain their trust, because my experience is if the supporting organization trusts you, then the affected group will trust you automatically. It helps a lot.

174

00:39:56.280 --> 00:40:01.219

Elizabeth: Yeah, building that legitimacy is so important, when working in the service of others.

175

00:40:01.510 --> 00:40:06.339

Elizabeth: Do any of the other speakers have thoughts on that question? Julie?

176

00:40:06.850 --> 00:40:31.470

Alisha: I would just say, from a healthcare standpoint, one of our partners is Medline, so they are our supply chain, so we meet with them a couple times a year and look at our reprocessing numbers. If we are reprocessing, that means we're diverting stuff from the landfill. So that's a... that's a big partnership for us to make sure we're doing the





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things that we need to do. As we have new employees on board, it's important to educate them on the

177

00:40:31.470 --> 00:40:38.570

Alisha: items that we can recycle and reprocess, so that way, you know, we're going on an upstream with our reprocessing.

178

00:40:40.240 --> 00:41:03.689

Anusha: And I would say, from the education standpoint, everything that everyone already mentioned fits the bill there, too. You really have to... when I started, it was just me, and then I think over the last 4 years, we found at least, like, 4 or 5 faculty, in other divisions who were very interested, and then we just, like, didn't know each other existed. So, a lot of it is just... it was... in the beginning, it was a lot of cold emailing, and cold calling, and, like.

179

00:41:03.690 --> 00:41:15.669

Anusha: tapping on people's doors, and so I think just putting yourself out there, it's very important to network and kind of meet people, and remember them and reach out to them again and again. It really does work.

180

00:41:18.390 --> 00:41:21.350

Elizabeth: Right, so persistence pays off.

181

00:41:22.170 --> 00:41:32.969

Elizabeth: Again, I want to invite the audience members to enter their questions if they have any. I have several, and I'm happy to keep going.

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00:41:34.500 --> 00:41:35.760

Elizabeth: Here is one.

183

00:41:35.890 --> 00:41:37.560

Elizabeth: From Teddy Potter.

184

00:41:38.800 --> 00:41:50.639

Elizabeth: What is the best way for us to share the narrative about the disproportionate climate risk for seasonal and agricultural workers? I do not think urban people in particular understand the challenges.

185

00:41:53.500 --> 00:42:00.520



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Anabel: Yeah, that's... that's... it's a great question. I think...

186

00:42:00.690 --> 00:42:16.000

Anabel: first of all, by being engaged with your patient, and asking them. I think this is maybe, hopefully, this is a perspective that I'm supposed to be answering it by, and asking those necessary questions about the occupational exposures that they have.

187

00:42:16.000 --> 00:42:22.670

Anabel: But also talking about it, I think the majority of Americans have no clue where their food comes from.

188

00:42:22.770 --> 00:42:40.929

Anabel: And I think that that's... it poses, you know, not only food security, but national security, is that we need to be able to take care of our ag workers, and understand all of the risk factors that they're exposed to, so that we can take care of them, and in essence, take care of ourselves and our family, and our food security.

189

00:42:45.990 --> 00:42:49.240

Elizabeth: Does anybody else have thoughts on that question, Brett?

190

00:42:53.130 --> 00:43:01.279

Brett: Yeah, I mean, I guess just to add is that, you know, for every group that I talk to, I try to... I try to really curtail the messaging to that group.

191

00:43:01.480 --> 00:43:06.110

Brett: To... to really... to truly try to understand,

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00:43:06.220 --> 00:43:23.629

Brett: you know, what their issues are. And so, any kind of examples you can use, or partnering with people, to try to, try to get these different areas of the world to communicate with each other, urban and urban and rural, and, you know, it just takes a lot of

193

00:43:23.860 --> 00:43:38.320

Brett: a lot of time and a lot of... a lot of thought and messaging. Case story... case histories really help, and we can show... show data, but sometimes just case stories of individuals that are affected really kind of help... help resonate with that to get the message out.



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194

00:43:40.490 --> 00:43:41.559

Elizabeth: Thank you, guys.

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00:43:43.990 --> 00:43:55.530

Elizabeth: Well, I have another question. So, our audience is pretty diverse in terms of what they do, where they do it, academia, non-academia.

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00:43:57.340 --> 00:44:06.719

Elizabeth: working for an institution, working independently. If a clinician came up to you and said, what can I do, where can I start?

197

00:44:06.970 --> 00:44:11.350

Elizabeth: Each of you has done some pretty robust, big work.

198

00:44:13.060 --> 00:44:17.130

Elizabeth: So I guess it's a two-part question. The first question is, you know, where do I start?

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00:44:17.530 --> 00:44:21.670

Elizabeth: you know, we heard a little bit from Anusha about just, you know.

200

00:44:22.310 --> 00:44:27.289

Elizabeth: being persistent. But let's say some... one individual approached you and said.

201

00:44:27.360 --> 00:44:43.470

Elizabeth: where could I be inserted into this type of work? I think a lot of us don't necessarily want to reinvent the wheel, we just want to... we would like to join a team. So, where do you see roles for filling gaps for those individuals? That's part two.

202

00:44:47.710 --> 00:45:03.659

Anusha: I think, I can start, and this is just, I guess, one opinion or one part of the answer, but I think what I've learned in the last four years, and I really only got into this, like, climate space, like, 5 years ago during COVID, and what I've learned is that there's so much. There's, like.



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00:45:03.700 --> 00:45:27.499

Anusha: you know, as you can see, all four of us are doing wildly different things, while sort of trying to achieve the same goals, maybe for a different population, a different community, a different subset of people. Some people are on, like, the hospital and healthcare sustainability side, and some people are on the, you know, community outreach and public health side. So, I think the first step is for an individual to

204

00:45:27.560 --> 00:45:45.080

Anusha: recognize that there's all these different venues where you can make a difference, make an impact, and kind of see what resonates the most with you, what's most... maybe in align with the work you're already doing. I think from, like, a hospital side, joining something like the Sustainability Committee, or first of all, identifying if one exists.

205

00:45:45.080 --> 00:46:00.220

Anusha: Kind of who's involved in something like that. If you're thinking about medical education, again, does the information already exist at your institution? Is someone already working in this space? How do you join them? And so I think the first thing is.

206

00:46:00.660 --> 00:46:09.079

Anusha: Recognizing that there's a lot to be done, trying to figure out where you feel like you might fit the best, or where your passion or talents lie, and then

207

00:46:09.080 --> 00:46:21.570

Anusha: figuring out what's already been done, who's already working on this, and collaborating with them. And again, I think, like I said, a lot of it is, like, cold emailing and cold calling people, and me was just, like, googling people who do climate work. So,

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00:46:21.570 --> 00:46:32.480

Anusha: I think... and venues like this are great, because you can kind of get a sense of what other people are doing, so I think attending more, you know, conferences, meetings, and really networking with people is a good way to get started.

209

00:46:34.900 --> 00:46:35.360

Elizabeth: Okay.



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210

00:46:35.360 --> 00:46:58.669

Alisha: I know for us here at Houston Methodist, the Woodlands, I got an email last week or the week before from a GI physician who wanted to discuss sustainability, and endoscopy, and that's not my area of expertise, so I kind of have to collaborate with other departments, so supply chain, looking at what product, he's looking at. Is it a product that we need to recycle? Is it a product that we need

211

00:46:58.670 --> 00:47:23.050

Alisha: To reprocess, and also partnering with our environmental services team, that if it is a recyclable, is it something that we can connect with our current vendor, or do we need to look at a different vendor? Because right now, our soft plastics, hard plastics go to a particular vendor, but if it's PVC, that's something we're still looking at, and who can do that type of plastic for us.

212

00:47:23.050 --> 00:47:36.299

Alisha: I guess I'm the face of sustainability here at the hospital, so people just email me. So, you know, I may not always have the answer, but I know who I can partner with in order to help those who are interested in sustainability in their department.

213

00:47:40.520 --> 00:47:41.849

Elizabeth: Thank you, Alicia.

214

00:47:42.670 --> 00:47:44.660

Elizabeth: Any, any other thoughts?

215

00:47:45.300 --> 00:47:49.140

Elizabeth: For the first or the second part of the question?

216

00:47:52.550 --> 00:47:53.140

Elizabeth: Boom.

217

00:47:53.140 --> 00:47:55.400

Brett: I guess I would just say,

218

00:47:55.570 --> 00:48:12.900



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Brett: it's a... it's an overwhelming problem, so... so start modestly, something that you can do. And yeah, look for your strengths. Wherever you happen to be, start from there, because, you know, if you're in the healthcare field, you're already a respected member of the

219

00:48:12.950 --> 00:48:16.149

Brett: community, and, you've had some

220

00:48:16.310 --> 00:48:28.559

Brett: No doubt, some... some experience that others don't, regarding climate change or sustainability, and... and start... start with that, and go slow, and... and it'll... it'll grow over time.

221

00:48:30.970 --> 00:48:32.070

Elizabeth: Thank you.

222

00:48:33.190 --> 00:48:38.530

Elizabeth: So, so I've got a few more, few more questions here.

223

00:48:39.670 --> 00:48:52.769

Elizabeth: Alright, let's go with this one. So, looking ahead, what bolder, innovative approaches do you think could transform how the Southern Great Plains prepares for in response to climate change, particularly in order to reduce negative health impact?

224

00:48:55.660 --> 00:48:56.769

Elizabeth: Who wants it?

225

00:49:03.070 --> 00:49:05.069

Brett: I guess, I guess I can start?

226

00:49:06.170 --> 00:49:23.979

Brett: Yeah, I mean, I think... I really think healthcare systems, in general, with the development of electronic health records and technology, that... that we're at a time when we can... we can do things that we... we... we haven't been able to. And one of those things is looking at associations of

227

00:49:24.290 --> 00:49:37.950



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Brett: climate effects on individuals and kind of monitoring that and assessing that has become easier. And so, one, I would say, if you're part of a healthcare system, you know, trying to work with your healthcare system to

228

00:49:37.960 --> 00:49:57.629

Brett: assess what... what is the impact on a particular disaster, climate change, on your... on your community. Start with health stress, if you need anything else, trying to capture that. And then... and then try to quantify that, amount about what is that impact, and then what... and then that will help leverage

229

00:49:57.630 --> 00:50:09.759

Brett: investment in the infrastructure to prevent that, whether that's... that's heat stress, that's cooling tents to... to... to do that, and policy advocacy work. All of those things can be done, but

230

00:50:09.760 --> 00:50:22.010

Brett: take these existing systems. I think it's got a lot of potential for that. To look at the financial and the health impact combined makes a powerful argument to start remediating systems.

231

00:50:26.570 --> 00:50:28.010

Elizabeth: Any other thoughts?

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00:50:30.450 --> 00:50:55.339

Alisha: I know within the healthcare arena, you know, with climate change and the flooding that we saw in North Carolina, it took out our, Baxter, one of our major IV suppliers, so, you know, we, you know, try to look at... we don't want to do what you've always done, so it really forced us to look at our, saline usage, you know, with patients and, you know, kind of mitigate from that of what else can we do? Do they really need

233

00:50:55.340 --> 00:51:11.629

Alisha: this amount of solutions, so it wasn't just something that we needed to do during that crisis, but it's something that we can sustain and move forward with. So, it's kind of like during COVID when, you know, we had to pivot and look at alternatives. The flooding in North Carolina, you know.

234

00:51:11.630 --> 00:51:13.440

Alisha: Had to do the same thing there.



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235

00:51:15.860 --> 00:51:18.709

Elizabeth: Yeah, you've made a really important point there, Alicia.

236

00:51:21.410 --> 00:51:28.550

Elizabeth: Anybody else want to answer it? I feel like you guys kind of answered it with your presentations and describing what it is that you're doing already, but...

237

00:51:28.750 --> 00:51:35.509

Elizabeth: Okay, here's one. Do you guys have any tips on, you know, how to navigate this

238

00:51:35.660 --> 00:51:52.329

Elizabeth: Current moment, the current state of the world, relating to, you know, how climate change might be a political word, and sort of navigating that situation while you continue to do good work and maintaining the integrity of science.

239

00:51:55.410 --> 00:52:03.090

Anabel: Yeah. I think in our state here in Texas, unfortunately, rest...

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00:52:03.650 --> 00:52:07.160

Anabel: Breaks at work became political.

241

00:52:07.230 --> 00:52:24.039

Anabel: And... and so the... the good thing is that some employers are really working with us to do training, and on heat illness and, you know, heat stroke, heat events for workers and educating them on, you know, even if you're not thirsty.

242

00:52:24.040 --> 00:52:30.340

Anabel: Let's try to drink water to prevent, you know, any kind of heat illness event.

243

00:52:30.790 --> 00:52:39.729

Anabel: and employers are trying to implement this on their own, but I do foresee there... some policy coming in the future.

244





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00:52:39.730 --> 00:52:51.049

Anabel: And so, it's... it's good to collect data now, so that we can make data-driven decisions in the future that are going to impact not only the employers, but the workers who are doing the job.

245

00:52:51.050 --> 00:53:02.590

Anabel: You know, in the fields, and it's beyond just the hierarchies of control, which we use a lot in, you know, industrial hygiene or occupational epidemiology, where, you know, PPE is the last

246

00:53:02.970 --> 00:53:17.889

Anabel: you know, defense. You have to do administrative controls and engineering controls that are gonna make a difference, and so I think that's where... where it's going to be key here to... as public health professionals, to work with the people who are making

247

00:53:18.350 --> 00:53:24.790

Anabel: These policy decisions, and to make them see the evidence of this work.

248

00:53:29.030 --> 00:53:45.330

Alisha: I know, at the Green Conference, this week, our international speakers, especially our UK speakers, were speaking on the NHS and how in the future, they're gonna be required to publicly report their carbon footprint and emissions with the companies. We're not...

249

00:53:45.330 --> 00:54:00.859

Alisha: anywhere near that in the United States, but in the future, you know, if we're going to partner with a particular vendor, we kind of already would know their carbon footprint and which direction we want to go, so that's just kind of some food for thought with climate change and emissions and stuff like that.

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00:54:03.670 --> 00:54:05.239

Brett: I'm just gonna add that

251

00:54:05.400 --> 00:54:17.459

Brett: You know, one of the reasons we find ourselves in this situation is that transitioning into a green economy has got a lot of financial implications.

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00:54:17.460 --> 00:54:26.809

Brett: to it. It's affecting a lot of people's jobs. I mean, we're here in Houston, and, you know, every third person is in oil and gas, and everyone's related to the

253

00:54:26.810 --> 00:54:41.969

Brett: the oil and gas industry, and it's... and it's... these are hard-working individuals, they're my friends, they're my neighbors, you know, they're... they're people, and so I think we have to, you know, one, show compassion that there's a... that there's a... there's a reason why there's this pushback.

254

00:54:42.190 --> 00:54:44.969

Brett: And then that being said,

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00:54:45.330 --> 00:54:54.369

Brett: when we present data, we... we can stick to the science, because... because we're... science is on our side, and very easy to show this stuff. And... and also.

256

00:54:54.480 --> 00:54:58.100

Brett: Frame it in terms of the financial, go back to the financial impact.

257

00:54:58.150 --> 00:55:09.880

Brett: Transitioning to other sources of energy, doing things to prevent climate change, you know, that's going to cost a lot of money, and so you have to make the case for it, as, you know, as...

258

00:55:09.880 --> 00:55:24.370

Brett: healthcare people were trained to think about science, but we really have to stretch ourselves and think of ourselves as financiers, and what is the... what is the return on investment? And everything has to be framed in that, because this is affecting, you know, people's livelihoods.

259

00:55:24.370 --> 00:55:34.210

Brett: And so, present everything in those two lenses, and then avoid the editorial comments about who's doing what to whom, and particular names. That's not good.

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00:55:34.210 --> 00:55:46.199

Brett: it makes people, defensive, and they're not open to suggestions. So, it's not an easy task, it's something that, you know, we all, you know, wrestle with, but I think that should be the goal.

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00:55:48.680 --> 00:55:49.740

Elizabeth: Thank you.

262

00:55:50.200 --> 00:56:06.040

Elizabeth: So I've got a final question for everyone. If you could leave the audience with one action or takeaway to focus on, tomorrow or Monday, what would it be, and what gives you the most hope as you continue to do this work?

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00:56:07.840 --> 00:56:09.460

Elizabeth: Let's just do a round.

264

00:56:12.420 --> 00:56:14.639

Anabel: Into... oh, go ahead.

265

00:56:14.640 --> 00:56:15.760

Anusha: Go ahead, do your thing.

266

00:56:16.610 --> 00:56:21.459

Anabel: No, I'll keep it simple. It's just to appreciate where your food comes from.

267

00:56:23.050 --> 00:56:37.879

Anusha: I like that. I was gonna say, you know, talk to people. So, I think one of the things that gave me hope through this whole process is seeing that there are lots of people who are on the science side of things, and so I think it's nice to have that reassurance once in a while.

268

00:56:37.880 --> 00:56:51.669

Anusha: So, you know, talk to people around you, like Brett was saying, these are your friends, your colleagues, your neighbors, you know, try to listen, try to understand, and I think the next generation is what gives me hope, and hopefully our generation, too.

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00:56:54.190 --> 00:57:04.550

Alisha: For me, I would just say everybody has a role to play, so get involved where you can, share the ideas, don't think your idea's too small, but definitely get involved.

270

00:57:08.990 --> 00:57:24.849

Brett: Yeah, I'll just say, stay optimistic. That's where the energy is. we... everything that you do is an improvement to the contrary. It's not a black or white issue. Everything we do is helping

271

00:57:24.850 --> 00:57:34.199

Brett: make a more sustainable society. And by just virtue of what you're in, you are, again, you know, to reiterate, you're a leader, and you can make a difference.

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00:57:36.300 --> 00:57:45.329

Elizabeth: Thank you all so much for your insight, and for sharing your expertise, and, you know, spending the time to put it all together.

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00:57:45.470 --> 00:57:54.950

Elizabeth: And thanks to the audience members for showing up on a Friday afternoon. So...

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00:57:56.430 --> 00:58:00.549

Elizabeth: This is our... our closing slide. The recording of today's webinar will be made available on the NAM website, and we would really love if you could take some time to give us feedback. And if you have any questions, please don't hesitate to reach out. Thanks for joining.