

Training physician investigators who are climate-aware

During a recent outpatient medicine block didactic session focused on social determinants of health, a group of third-year students reviewed a case that involved a local impoverished family whose home flooded because of an extreme weather event. Some members of the family were already coping with chronic diseases, which were exacerbated by the flooding. The stress of the flood, along with high outdoor temperatures, a power outage and food insecurity, created mental anguish for some family members. In reviewing the case, students were asked to document major health impacts related to climate change; identify questions they would ask when taking a patient's medical history, taking into consideration the health effects of climate change; and share the advice they would offer patients about their health related to climate change.

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Dr. Colleen Colbert



Dr. Ilyssa Gordon



Dr. Bud Isaacson



Dr. Neil Mehta

Why focus on climate change in medical school?

When the Lerner College of Medicine was established in 2002, its unique mission was to train physician investigators. Today CCLCM is expanding on that mission, aiming to train physician investigators who are climate-aware by longitudinally integrating the topic of climate change into the curriculum.

The team involved in developing the Climate Health Action Curriculum includes several faculty members: Colleen Colbert, PhD, Associate Professor of Medicine; Ilyssa Gordon, MD, PhD, Associate Professor of Pathology and Medical Director of Sustainability for Cleveland Clinic; Bud Isaacson, MD, Professor of Medicine and Executive Dean; Neil Mehta, MBBS, MS, Professor of Medicine and Associate Dean of Curricular Affairs; and Marvin Natowicz, MD, PhD, Professor of Pathology. The team also includes Jon Utech, MBA, Senior Director of Sustainability for Cleveland Clinic, and CCLCM students Kate Lowe ('24), James Sullivan ('24) and Nikki Winchester ('24).

"The idea behind the integration is to align climate change topics with the existing curriculum," says Dr. Gordon. "There can be resistance to incorporating new content into an already packed curriculum, and students already have so much to learn, it can be overwhelming. That's why we are presenting climate change as a 'lens.' We're not intending to add content; just tweak the content that already exists to include a climate change angle. We're trying to be realistic within the curriculum constraints."

The team has found it relatively easy to integrate climate change topics into the curriculum, carefully looking at existing sessions to find the best fit. "Because climate change touches all parts of the curriculum, it makes sense to integrate it and not make it its own course," says Kate, who studied geological sciences before deciding to enter medical school.

For example, Monica Yepes-Rios, MD, Associate Professor of Medicine, Director of Diversity and Inclusion, and Director of the Longitudinal Didactic and Learning Group Programs, offered the team an hour of class time with the third-year students each quarter. Drs. Gordon, Mehta and Colbert worked together to develop the case described at the beginning of the article (about the local family whose home flooded) that included both social determinants of health content and climate change and health content. Then Drs. Gordon and Mehta facilitated the interactive session.

For problem-based learning (PBL) sessions, James and Kate first met with course leaders to share ideas about adding a climate angle and then presented the ideas to the Basic Science Education Committee, who gave the green light to update the PBL case content.

The result was a recent PBL session focusing on asthma that was adapted to include an urban heat island scenario to help students identify climate health impacts within the local geographic area. Urban heat islands result from an overabundance of pavement and brick buildings, and a lack of trees and greenspace, and are closely linked to poverty. According to the Cleveland Climate Action Plan, an urban heat island can register air temperatures of up to 10°F warmer than nearby areas that offer open green space. During the summer months, the unrelenting heat adversely affects neighborhoods in myriad ways, from high air conditioning costs to heat-related illness and mortality.

The effects of urban heat islands are exacerbated by climate change and contribute to high levels of air pollution, which in turn affects people with respiratory conditions such as asthma, lung disease and chronic obstructive pulmonary disease (COPD), an area of particular interest to Kate, who is hopeful to research the effects of health disparities on COPD progression in patients and the connection between lung disease and environmental toxins, such as those found in air pollution.

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Training physician investigators who are climate-aware



Dr. Marvin Natowicz



Jon Utech



Kate Lowe



James Sullivan



Nikki Winchester

Thus far, students have reacted favorably to the integration. Following the outpatient medicine block case discussion, students are asked to complete a “one-minute paper” that captures what they learned from the exercise. Many reported learning new things about the effects of climate change on health and appreciate that the facilitator made the connection between mental health and climate change. Students say the cases have helped them view the patient more holistically.

Other beneficiaries are the regular PBL facilitators, says Dr. Gordon. “The majority of the educational content is contained in the facilitator’s guide, so we not only have the opportunity to teach the medical students, but also the facilitators,” she says.

The team is looking for opportunities to connect the changing patterns of vector-borne diseases, such as Lyme disease, malaria and chikungunya, into PBL cases. They also are considering climate change topics related to resilience and communications, as well as a journal club around climate and health.

Outside of the formal curriculum are small projects aimed at creating climate awareness. For example, Dr. Natowicz serves as the faculty lead for a lunch series called “Achieving the Possible: Projects to Repair the Planet.” The first session, on food sustainability, was held in January and featured Daniel Brown, one of the co-founders of Rust Belt Riders, a group that works to divert usable food from landfills to compost and to people in need, and two speakers from Case Western Reserve University: Siu Yan Scott, School of Medicine registrar, who established the HEC Community Cutlery Library program to reduce single-use plastics during events; and Nárcisz Fejes, faculty advisor of CWRU’s Food Recovery Network. Though the series currently is on pause because of the pandemic, it is anticipated to restart one day.

Because we as a nation have not properly addressed climate change, we must adapt to it as best we can. “Becoming a climate-aware healthcare professional means considering the effects of climate change not only on the approach to patient care, but also hospital operations, one example of which is how to properly equip a hospital so that it functions optimally both during and after an extreme storm,” says Kate.

Some medical schools across the country are including climate change topics in their curriculum, thanks in part to [Medical Students for a Sustainable Future](#), a national group of medical students who work to provide tools to medical students to make a difference around climate change and health at their schools and in their communities.

The CCLCM team believes that CCLCM is among the first to fully and intentionally integrate climate change into the curriculum, and they are writing a scholarly paper about how they developed the Climate Health Action Curriculum.

“We’re fortunate at CCLCM to have leadership support and involvement,” says Dr. Gordon, adding that the team has learned much from other schools’ experiences.

While the topic of climate change can feel daunting, Kate thinks her fellow CCLCM students are enthusiastic about the opportunity to learn more about climate change and its effects on health. “We’re trying to demonstrate how to make the world better and how to have hope through local projects.”

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Climate Health Action Curriculum Goals

The team developed these five overarching goals for the curriculum integration:

- 1. Understand the drivers of climate change**
- 2. Understand the impact of climate change on ecosystems and the downstream impacts on human health**
- 3. Understand the impacts of climate change on human health**
- 4. Understand the impacts of climate change on communities**
- 5. Engage in climate health action**

Hear what our students have to say about healing the planet

Lia Logio, MD, Vice Dean for Medical Education at Case Western Reserve University School of Medicine, organized a student forum prior to the first presidential debate, held at the Health Education Campus, called [“What is Healthcare?”](#)

At the forum, the students discussed four components of healthcare: learning, discovery, service to others and healing. We encourage you to view the entire recording, but if you’re interested only in what Dr. Natowicz and CCLCM students Kate Lowe, James Sullivan and Nikki Winchester have to share about their topic, healing the planet, start the recording at 43:26.

THREE QUESTIONS

Leonor Osorio, DO

Clinical Assistant Professor of Medicine



Dr. Leonor Osorio



Leonor Osorio, DO, practices internal medicine at Cleveland Clinic Lutheran Hospital, focusing on the health needs and concerns most prevalent among the area's large Hispanic population, including diabetes, obesity and mental health issues such as depression and anxiety. Dr. Osorio was instrumental in the opening in 2013 of the Lutheran Hospital Hispanic Clinic, which provides bilingual healthcare services and cultural understanding to its Hispanic patients. As a Hispanic physician, she knows that patients whose primary care physician understands their culture and language have a better patient experience, better understanding of the treatment plan, and, ultimately, lead a better, healthier life.

Q: What inspires you to teach?

We all have been students and remember when a teacher made us even more passionate and excited about knowledge. If you teach well, you are passing the torch, and it is such an investment in our medical future. The beauty of teaching is it is a symbiotic relationship in that I learn from students as well.

Q: What's one lesson you wish you would have learned in college/medical school?

Enjoy the race instead of looking towards the finish line.

Q: If I weren't a physician at Cleveland Clinic and a faculty member at CCLCM, I would be ...

I would have loved to have been a chef. I like to express my artistic skills through food and presentation.



Apply now for the 2021 Scholarship in Teaching Award

Case Western Reserve University invites medical educators to apply for the 2021 Scholarship in Teaching Award, designed to recognize and honor medical educators in the community who have contributed significantly to the educational mission of the school. The awards are intended to stimulate systematic sharing of best practices in medical education. The applications undergo external peer review.

The 2021 awardees will be honored either in person or virtually, yet to be determined, at the School of Medicine Annual Education Retreat.

When applying, be sure to include these six criteria to describe your project:

1. clear goals
2. adequate preparation
3. appropriate methods
4. significant results
5. effective presentation
6. reflective critique

Applications are due Nov. 24. [Get details including a link to the application.](#)

Questions? Please contact caml@case.edu.

Student co-authors pandemic paper

Congratulations to Perry Dinardo ('21), who was a co-author along with Ellen S. Rome, MD, MPH, Professor of Pediatrics, and Veronica E. Issac, MD, on "[Promoting resiliency in adolescents during a pandemic: A guide for clinicians and parents.](#)" published last month in the *Cleveland Clinic Journal of Medicine*.



Perry Dinardo



Dr. Ellen Rome



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REVIEW

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Promoting resiliency in adolescents during a pandemic: A guide for clinicians and parents

ABSTRACT

The COVID-19 pandemic has dramatically affected every aspect of daily life. Parents of adolescents, in particular, may be facing unique challenges in helping them navigate unexpected changes to their daily routine. This article discusses how adolescents may respond to stressful and traumatic situations and provides recommendations for clinicians who may be advising parents of adolescents or parenting their own children.

KEY POINTS

Young adults who are socially isolated during COVID-19 may experience intense feelings of loneliness, increasing their risk for depression and anxiety.

Primary care providers can help their adolescent patients by ensuring they continue to receive immunizations on time and have access to prescribed medications, as well as scheduling future well visits and contraceptive counseling when needed.

Family support is key to helping adolescents cope with the negative effects of stress caused by the pandemic.

When advising parents of teens, discuss ways in which they can support their child. This can include acknowledging their disappointment about missing important social events, encouraging time limits for social media, and helping them practice "adulting" skills such as planning and cooking meals.

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THE COVID-19 PANDEMIC has introduced a great global uncertainty, affecting every aspect of daily life and requiring sudden adaptation to ever-changing circumstances. Parents with children of all ages have seen enormous and unexpected changes in how their children are engaged in and out of the home. In particular, parents of adolescents may face unique challenges in helping their children navigate changes to their daily routine.

This article draws on experience from prior global catastrophes and suggests evidence-based counseling strategies for clinicians who are advising parents of adolescents and their families during the pandemic. These strategies can also be used by clinicians who are themselves parents of adolescents.

■ SOCIAL DISTANCING: A SOURCE OF STRESS FOR ADOLESCENTS

Adolescence is a developmental stage characterized by changes to parental and peer relationships, including a decrease in the amount of time spent with family and an increase in the amount of time spent with peers.¹ Many, but not all, experience a range of intense and volatile emotions.² A decrease in the quantity and quality of peer interactions for any reason can lead to intense feelings of loneliness,³ which has been identified as a risk factor for mental health disorders such as depression and anxiety.⁴ Loneliness has also been linked to impaired sleep quality,⁵ eating disorders,⁶ and increased risk of alcohol and drug abuse,⁷ among other mental health concerns.

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Dr. Julie Niezgoda

Dr. Niezgoda earns Humanism in Medicine Award

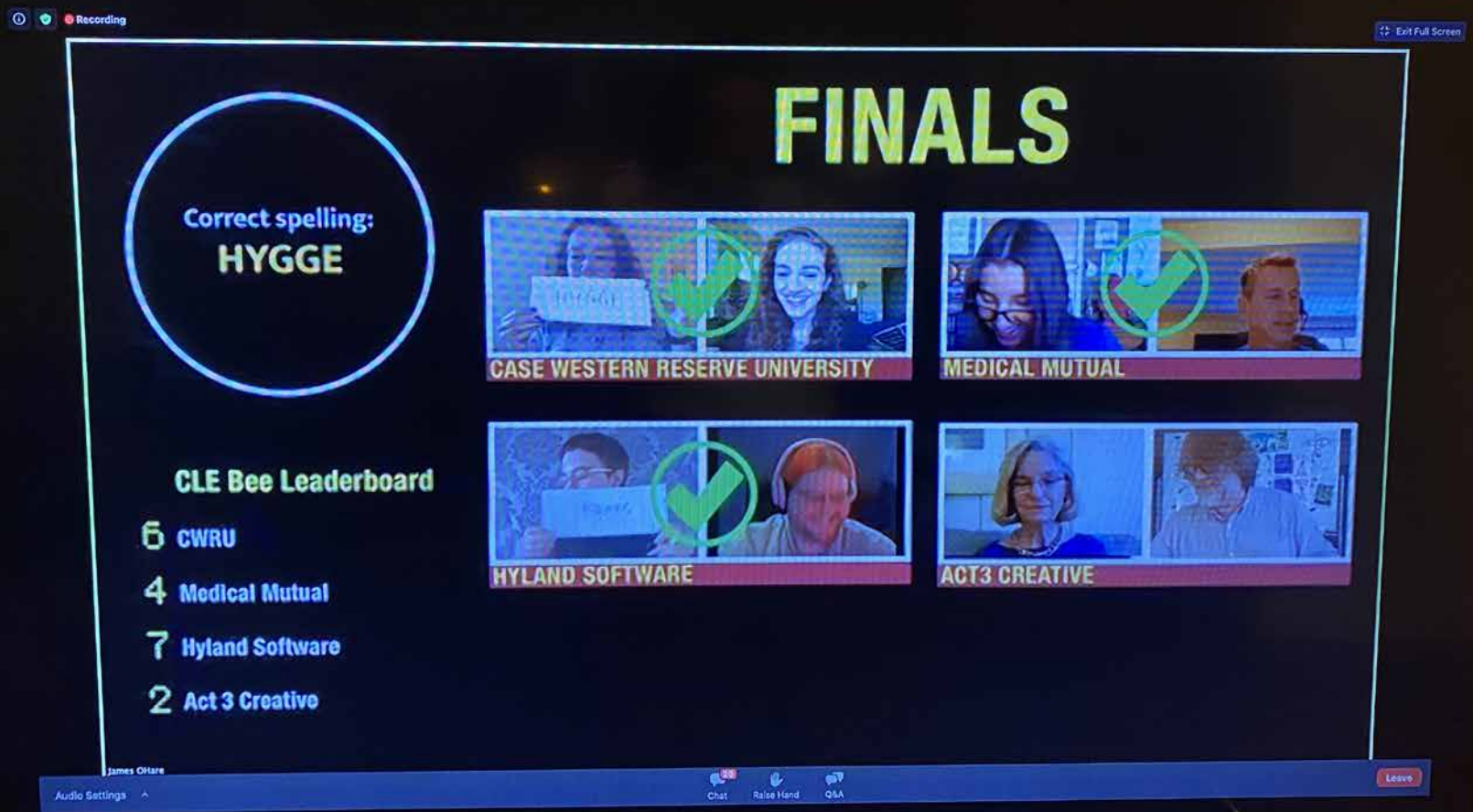
Congratulations to Julie Niezgoda, MD, Clinical Assistant Professor of Anesthesiology, who was awarded the 2020 Bruce Hubbard Stewart Humanism in Medicine Award at the Staff Celebration in September.



Dr. Monica Yepes-Rios

Dr. Yepes-Rios helps advance diversity, equity and inclusion

Kudos to Monica Yepes-Rios, MD, Associate Professor of Medicine and Director of Diversity and Inclusion, who co-authored ["Ten tips for dismantling racism: A roadmap for ensuring diversity, equity, and inclusion across the academic continuum."](#) along with members of the Community of Practice, National Collaborative Education on the Social Determinants of Health. The paper was published on the Society of General Internal Medicine Forum.



Students earn second place in spelling bee

Perry Dinardo ('21) and Sasha White ('23) recently competed in the annual Cleveland Corporate Spelling Bee, representing the CWRU School of Medicine. The CLE-BEE is held each year as a fundraiser for The Literacy Cooperative, a local organization that advances literacy for adults and children.

Sixteen teams from across the city participated in this year's event. In true 2020 fashion, the CLE-BEE was held virtually but was no less entertaining. Perry and Sasha tied for second place overall in the competition. Although they missed the final word, "lagniappe," they correctly spelled words such as "oleaginous," "nonpareil" and "vichyssoise."

Kudos to our super spellers whose talent and time benefit the crucial work of The Literacy Cooperative!

STUDENT SPOTLIGHT

Daniel Moussa



With a deep-rooted concern for healthcare disparities and a strong drive to make a change, it was a no-brainer for Daniel Moussa ('21) to travel down the path of medicine.

"Growing up, I would visit my parents' home countries and see first-hand the impact of limited healthcare resources," he says. "I knew then that I wanted to help make a difference."

Although Daniel knew he wanted to address healthcare gaps, it wasn't until after years of shadowing physicians and conducting research that he decided to become a doctor. "My idea to merge being a great doctor with my wish to improve people's lives through research didn't happen until my junior year at The Ohio State University," he says.

After undergrad, Daniel recognized he would need protected research time along with ample opportunities to get involved in the community. Training at CCLCM would fulfill those needs.

"The unique thing about CCLCM is that its goals align with mine," he says. "CCLCM has allowed me to address healthcare gaps, pursue research and get involved with neighboring communities, while also allowing me to explore what was out there and where I could see myself."

At CCLCM, Daniel's eagerness for creating change has continued to flourish. Not only has he found his clinical niche, in OB/GYN, but he also has been able to hone in on his research, which will help him pursue his dream of becoming a physician investigator. "OB/GYN has the perfect mix of medical and surgical components, along with healthcare disparities I could work towards resolving as a physician investigator," he says.

Outside of OB/GYN, Daniel is involved in a number of other research projects, including the Hispanic Clinic Research Group. As a member of this group, he has focused on healthcare disparities, specifically relating to diabetes, associated with the Hispanic population on Cleveland's west side.

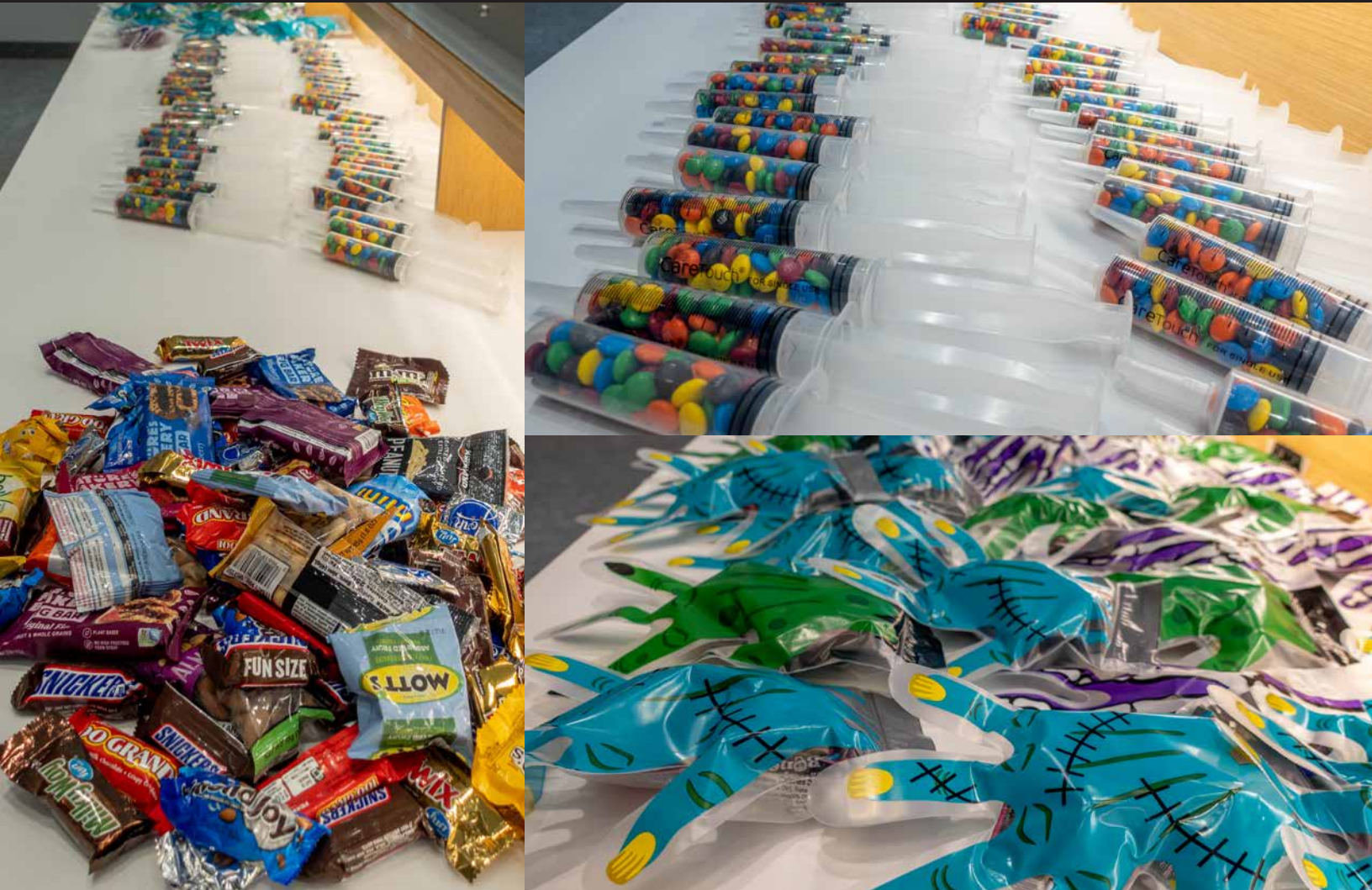
During his first year of medical school, Daniel took on a leadership role with the Peru Health Outreach Project (PHOP). In this role, he learned about the depth of culture, economics and ethics in healthcare, which further sparked his interest in global health.

Outside of medicine, Daniel enjoys immersing himself in cultural experiences, often through bike riding. "I love going on thirty- to forty-mile bike rides from the east to the west side," he says. "It's a great way to explore Cleveland and the rich culture and diversity that's sprinkled throughout the city."

His favorite bike route runs from Cleveland Clinic's main campus to Huntington Beach in Bay Village.

As Daniel gears up for graduation, he offers this advice to incoming medical school students: Take advantage of the opportunities CCLCM has to offer, even in the areas you think you may not be interested in. "From my experience, exploring your interests and non-interests helps you to see where you can best benefit your patients, along with the future of healthcare and medicine."

Trick or treat? 2020 played enough tricks on everyone, so this Halloween CCLCM students received only sweet treats to bring some joy to the season, courtesy of Student Affairs and the Student Social Wellness Committee. The students were pleasantly surprised by the gesture!



Advancing Our Mission

The Education Institute welcomes donations to advance its mission of educating those who serve. Individuals, families, foundations and corporations that believe in the value of education are making a difference in the future of patient care with their generosity. To learn how you can help, please contact Theresa Holthaus at 216.444.1839 or at holthat@ccf.org.

Alumni: Share Your News

We'd like to hear about what you've been doing since graduation. If you have news to share (maybe you're involved in an interesting research project or you recently returned from a global health mission), please email Laura Greenwald at greenwl@ccf.org.

InSight

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