

The summer of 2021 is my third summer working at the Margolis Center. I first connected with the center through the Huang Fellowship and worked in person at the JB Duke office over the summer after my freshman year. I worked with Dr. Gillian Sanders Schmidler on evaluating the perspectives in cost-effectiveness analysis and with Dr. Corinna Sorenson on looking at non-financial incentives to reduce low-value care. I spent my second summer working remotely from Ohio on building a modeling repository for COVID-19 modelling efforts and finding data points on the etiologies of hearing loss to incorporate into a Markov model. I spent my third summer working remotely from Salt Lake City, Utah, on two different projects. First, I am working with Drs. Osondu Ogbuaji and Gillian Sanders Schmidler to track the United States' contributions to hearing healthcare in low- and middle-income countries. Secondly, I am working under Dr. Mina Silberberg to develop a scoping review on the current state of research on meal delivery services and sustainable food sourcing practices. In addition to working as a summer intern for the past three years, I have continued my involvement at the Center as a research assistant during the school year, as part of a center-affiliated Bass Connections team, and as an Undergraduate Margolis Scholar.

Working at the center has been an integral part of my Duke experience. Before coming to Duke, I knew I wanted to be a physician, but I also knew I wanted to have an impact on patients' direct care. I decided to pursue research once I got to campus and began working in the Nowicki Lab running color categorization experiments with zebra finches. My first lab was an amazing experience, and I was fascinated by the development and implementation of an entire experiment. However, I wanted to explore research that had a more direct impact on patient care, closer to my long-term career goals. When I took the position at the Margolis Center as a summer intern, I found projects that excited my curiosity, had opportunities for greater ownership, and directly related to my goals in healthcare. Further, the opportunities to connect with researchers throughout the field of healthcare policy has given me a thorough perspective on the breadth of the field.

Hearing Loss

Last summer, I started working on a Bass Connections team project to evaluate the Global Burden of Hearing Loss as part of a Lancet Commission. I spent that summer looking at the different etiologies of hearing loss, their prevalences, and their incidences. Then, over the school year, I participated in the Bass class as a student where we worked on further developing the parameters for a Markov model. Throughout the current summer, I have worked on the team and led an inquiry into the US' funding for hearing healthcare in low- and middle-income countries. Our research question can be summarized: *what are the funding sources and totals for hearing healthcare to low- and middle-income countries?* Compiling these funds allows us to examine the US' prioritization of hearing healthcare. Further, the modeling effort will produce estimates of costs for various hearing interventions. An understanding of both how much money goes into hearing healthcare and what sources that money comes from will be vital for guiding future funding.

Hearing loss is often overlooked as a disability and dismissed as a sign of aging, yet it is the third leading cause of years lived with disability according to its global burden of disease.ⁱ We initially only searched for funding that originated in the United States using three different streams: government to government, charities, and research. We felt that these three streams

would cover most funds originating in the United States. As of right now, charity funding is the only stream uncompleted. However, the results we have found thus far have been dismal. In fiscal year 2020, USAID and the State Department had a budget of \$40 billion, with \$19.2 billion directly for USAID.ⁱⁱ Our search included any grants from 2016-2020, and only located \$799,985 over the course of five years.

With such small funds, we did not feel our results would be robust enough to publish and began expanding the search to other countries. To choose the other nations, we looked at which countries were the largest grantmakers in a combined search for the terms “hearing” and “deaf” in the Foundation Center Online Directory. Canada, England, Australia, and India had the largest number of grants. Given our time constraints, we have chosen to expand first to the United Kingdom and if time allows, then to Canada and Australia.

Currently, we are identifying the equivalent organizations to USAID and NIH in the United Kingdom. We will then replicate our methods in the UK to determine if low funding for hearing healthcare is the status quo or merely the trend in the United States. At the current pace, we hope to have a final estimate of the total spent by early August. I will continue working on the project over the next few weeks after the internship ends in order to meet our upcoming deadlines.

Sustainable Meal Delivery Service

The second project that I worked on this summer was under the direction of Dr. Mina Silberberg, an associate professor in family and community health with an affiliation to the Margolis Center. Prior to this summer, I had never worked with Dr. Silberberg or on food policy, but I have been grateful for the opportunity to do both.

Under Dr. Silberberg’s direction, I have been conducting preliminary research into the possibility of building a sustainable, locally sourced meal delivery system for Medicare Advantage enrollees. The service would be similar to Meals on Wheels but would source ingredients from local farmers and would be paid through Medicare Advantage plans.

Initially, we hoped to conduct a background search on the benefits of both meal delivery services and on eating local foods, to conduct a network analysis of the food systems in Durham, and to develop a sample meal plan that could serve nutritionally appropriate foods to Medicare Advantage enrollees with various conditions. However, the literature search has taken longer than expected due to the depth of research. We have decided to turn the background search into a scoping review and are aiming to make a publishable paper. For the time being, we have paused the network analysis and the menu design to focus on pulling together the scoping review. Thus far, the review articles have suggested that a meal delivery service could increase the nutritional quality of senior’s meals, reduce costs to the healthcare system, and increase opportunities for socialization. The articles focused on sustainable and local foods have suggested that local foods stimulate regional economies, reduce environmental impacts, and decrease the time between peak ripeness and consumption, which in turn increases the nutritional content of food.

Self-exploration

Having worked in person for one summer and from my childhood home the second summer, I used the opportunity of remote work to base myself somewhere new: Salt Lake City.

One of my roommates from Duke got an in-person job in the city, so we decided to come out together and explore as much of the area as possible. The summer has been filled with challenging hikes, pushing past my fears (particularly of heights), and coordinating logistics for our group. Throughout the summer, the beauty of the scenery has given me fresh perspective on the purpose of my career goals. In turn, this has re-emphasized my commitment to the mission of the center. Looking up at the stars in Colorado reminded me how limited time is. Hiking throughout the Teton Mountain Range reminded me how small I am. And patiently waiting for Old Faithful to burst reminded me how important it is to be intentional. Together, these experiences have reaffirmed to me the importance of human connection. Health policy research empowers human connections, by tackling the problems of the healthcare system so that everyone can live to their fullest potential.



Camping under the Stars in Fruita, Colorado



Cascade Canyon, Grand Teton National Park



Eruption of Old Faithful, Yellowstone National Park

ⁱ GBD 2019 Hearing Loss Collaborators (2021). Hearing loss prevalence and years lived with disability, 1990-2019: findings from the Global Burden of Disease Study 2019. *Lancet (London, England)*, 397(10278), 996–1009. [https://doi.org/10.1016/S0140-6736\(21\)00516-X](https://doi.org/10.1016/S0140-6736(21)00516-X)

ⁱⁱ *Fiscal Year 2020 Development and Humanitarian Assistance Budget Request: Fact Sheet*. U.S. Agency for International Development. (2020, February 10). <https://www.usaid.gov/news-information/fact-sheets/fiscal-year->

2020-development-and-humanitarian-assistance-budget-
request#:~:text=Highlights%20of%20the%20FY%202020%20Budget%20Request&text=The%20FY%202020%20President's%20Budget,USAID%20fully%20or%20partially%20manages.