



Yes, our students are hungry: Mitigating food insecurity among graduate-level health professional students during the COVID-19 Pandemic

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ABSTRACT

To address food insecurity at OHSU among Graduate-level health professional students (GHPS) during the COVID-19 pandemic, a program offering orders of grocery staples was designed. The program has served over 300 students with more than 1000 orders through partnership with OHSU, community organizations, and with support from student volunteers. We analyzed de-identified data to describe how students utilized the program and the supports required at OHSU to provide food resources to GHPS.

BACKGROUND

Food insecurity is inversely correlated with academic success, time to degree completion, graduation rates, and wellness. In 2018, 28.5% of GHPS (n=1,133) at Oregon Health & Science University (OHSU), reported food insecurity with 10.9% experiencing very-low food security and 21.3% reporting food access impacted academic performance. Barriers to food security included limited availability, high food costs on campus, and lack of time for preparation. Graduate students are in a unique position of food insecurity. On average, graduate students complete their programs with an average of \$54,200 in debt¹. Graduate students often do not meet eligibility requirements for federal food insecurity programs like SNAP. Therefore, they often rely on other methods of coping with food insecurity, including food pantries, on-campus food resources, student loan borrowing, and social supports. During the COVID-19 pandemic, many of these usual supports became unavailable, prompting our response through this program².

PURPOSE

To address the above causes of food insecurity on campus, we provided no-cost food options to students, delivery options to reduce barriers to access, and food choice to allow students access to foods they enjoy and know how to utilize. The goal of this report is to help others estimate the needs of GHPS and optimize program design using data collected from our students.

ACKNOWLEDGEMENTS

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METHODS

Order Form

Our order form was originally designed on Google Forms, which provided a streamlined data processing algorithm and cleanly collated orders. We switched to a Qualtrics order form when the program was official adopted by OHSU for increased security of student information and compliance with OHSU policies.

The order form asks students to specify whether they would prefer pick up at a central location on campus or if they are unable to get to campus and require delivery. It also asks students for their dietary restrictions. The form includes foods from a variety of food groups, including grains, proteins, canned and fresh produce, boxed and frozen meals, baking staples, and hygiene items.

Order Processing

A simple data processing program was written to convert an Excel spreadsheet into order tags that include a bag identifier that protects student identity, dietary information, delivery instructions, and items ordered. These tags are used each week by student workers and/or volunteers to pack orders.

Physical Space

Originally, orders were filled at a volunteer's home to avoid unnecessary trips to campus per OHSU's COVID-19 restrictions. When these restrictions were reassessed, space was graciously given at the Student Center for food storage, order assembly, and bag pickup.

Food Procurement

Early in the program, food was exclusively purchased each week at the grocery store due to space limitations. When a physical space was acquired, food procurement was expanded from grocery store purchasing to partnership with local organizations, the Oregon Food Bank (OFB), OHSU Food and Nutrition Services, and a local farm.

Volunteer Organization

Of our 55 volunteers, 53 are currently students who expressed interest through an interest form or word of mouth. Volunteers go through an initial training, including OFB's ServSafe certification and orientation to the FRC. They are then able to sign up for shifts assembling bags, delivering orders, assisting with administrative tasks, and staffing the FRC during pick up hours.

Marketing

Marketing was done through social media, OHSU communications, program directors, and word of mouth.

RESULTS

Program Utilization

Overall, the program has served **338 unique users** with **1045 orders** over the course of **43 weeks**. Program utilization has remained relatively consistent throughout the life of the program, with greatest utilization by dental students followed by medical students, nursing students, and PA students (Figure 1).

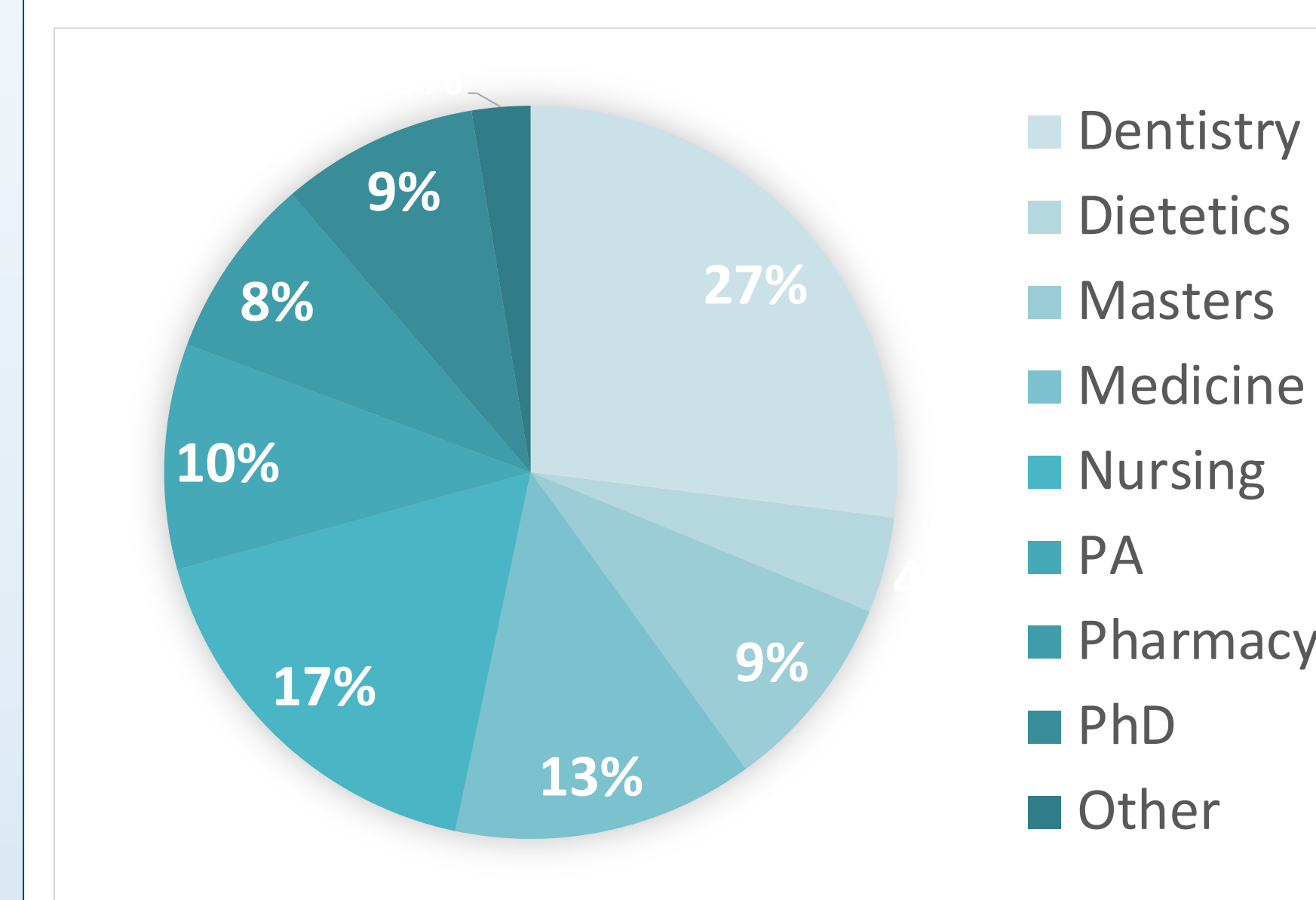


Figure 1: Utilization by Program

Ordering Patterns

Patterns of ordering varied through the seasons. The most ordered items included:

- Proteins: nut butter, canned tuna, canned beans
- Grains: brown rice, whole wheat pasta, cereal, oats, granola bars
- Canned produce: canned tomatoes, applesauce, canned corn
- Other items: boxed meals (ie hamburger helper, pasta meals), flour, oil
- Hygiene items: tampons, pads, hand sanitizer, toilet paper, paper towels
- Fresh produce
- Dessert items

Ordering patterns were also guided by dietary restrictions of participants (Table 1).

Dietary Restriction	# of Orders
Vegetarian	90 (8.6%)
Vegan	25 (2.4%)
Gluten Free	66 (6.3%)
Lactose Intolerant/ Dairy Free	99 (9.5%)
Nut Allergy	11 (1.1%)

Table 1: Dietary Restrictions

Volunteer Contributions

Volunteers made significant contributions of their time and allowed the program to functionally serve a high volume of students (Table 2).

Role	Hours
Delivery	108
Bag Assembly	51
Administrative Tasks	5
FRC Staffing	30
TOTAL	193

Table 2: Estimated Volunteer Hours

CONCLUSIONS

By allowing students to place orders for either pickup or delivery, choice was empowered and students were able to obtain staples they liked and knew how to use safely and in a way that was tailored to the many reasons students at OHSU experience food insecurity. Each facet of the program was designed to mitigate the most common causes of food insecurity at OHSU: financial constraints, lack of time for preparation, and limited availability of food on and around campus.

Since the program's inception, 55 volunteers gave 192 hours to serve over 330 students through 1045 orders and 441 deliveries. This program engaged a wide range of stakeholders to support student food security and ultimately resulted in the transition from a short-term solution to acute worsening of food insecurity during the COVID-19 pandemic into a sustainable food resource center at OHSU, an institution that serves primarily GHPS.

LIMITATIONS & FUTURE DIRECTIONS

Though we attempted to spread the word about this service broadly, there did seem to be limitations to the number of students reached in certain programs. There were also limitations to the number of volunteers engaged for similar reasons. We also recognize that there are significant limitations to what we can order based on the infrastructure of our FRC and policies and procedures in place through OHSU for COVID safety. We also recognize that, while we have tried to survey students about the foods they would most like to see offered, food pantries and shelf-stable foods often do not adequately serve all cultural groups or their culinary needs.

In the future, we hope to explore trends in ordering throughout seasons, additional items that can be offered to increase student food security and culinary diversity, utensils that may bolster self-efficacy in cooking at home and bringing food to campus, and the resources that most significantly affect students' ability to do so. Though offering packed orders is convenient and safe, we also want to explore the impact of shopping-style engagement with FRC and its impact on students' experience.

CITATIONS

1. Institute of Education Sciences NC for ES. Digest of Education Statistics. Washington DC; 2020.
2. Kalinich C. Assessing Food Insecurity in the OHSU Student Population during the COVID-19 Pandemic. [Portland, Oregon]: OHSU; 2020.