

Campus Food Shed: Student-led efforts at the University of Wisconsin-Madison to support food-insecure peers



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Introduction

Despite the ubiquity of campus food insecurity, it has often been an issue silent, faceless, and ignored. Only within the last decade has it received recognition as a national crisis (McCoy et al., 2022). Perhaps because college is widely regarded as a privileged endeavor, requiring substantial tuition dollars from students and their families, food insecurity has not received the attention or resources that it deserves. Although policy-level and administrative changes should take the lead in addressing

the issue, student-led groups have played a role in initiating action. Campus Food Shed (CFS), a University of Wisconsin-Madison student organization, seeks to address these concerns. Spearheaded by students, the organization partners with local grocery stores and research farms to distribute leftover food items, assisting peers across the UW-Madison campus with access to free, nutritious food. As UW-Madison alumni, our experiences through CFS have brought to our attention nationwide concerns regarding food insecurity (Goldrick-Rab et al.,

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2017). In addition, studies across the country over the last five years have demonstrated the severity of food insecurity for many college and university students (Baker-Smith et al., 2020; Broton & Cady, 2020; Broton & Goldrick-Rab, 2017; Laska et al., 2020; Watson et al., 2017).

Our research has led us to reach beyond the UW Madison community to spread awareness of the issue, as we seek to inspire other campuses and community groups to establish sustainable food distribution systems similar to the one run by CFS. In this practice brief, we describe the student-led creation and management of CFS, its daily operations, and challenges and opportunities for growth. We begin with a brief review of literature on student food insecurity and the cost of higher education to situate the need for initiatives like CFS.

The Challenge of Campus Food Insecurity

The Food and Agricultural Organization of the United Nations (FAO) defines a person as food insecure if they “lack regular access to enough safe and nutritious food for normal growth and development and an active and healthy life” (FAO, 2022, para. 4). Notably, this definition does not limit the scope of the issue to lacking food but specifies that food insecurity encompasses both lack of availability of foods with essential nutrient content for human health and lack of consistency in acquiring this food. Healthy, fresh produce options often are the most limited in institutional settings, yet research consistently shows that reduced access to healthy food negatively impacts physical and mental health as well as academic performance; student GPA, class attendance rate, and graduation rate are all at risk for poorer outcomes correlated with a lack of nutritious foods (Henry, 2017). Maroto et al. (2014) found that food-insecure students were more likely than food-secure students to have GPAs in the 2.0–2.49 range, compared to a GPA in the 3.5–4.0 range of the food secure students. Raskind et al. (2019) found that food insecurity was a major determinant of lower grade point averages among students in Georgia. Food insecurity exacerbates inequities found

throughout our campus and others, and puts the most vulnerable students at risk, contributing to poorer academic outcomes for them. Hunger and academic performance go hand in hand. Therefore, supplying healthy food to the campus community provides an opportunity to address multiple issues important to students and the university. As hunger undermines the educational success of students, it is urgent that action be taken, both at the national and community level, to ease the weight of the burden.

Availability of food resources is not the only factor in play: the cultural stigma surrounding the use of food assistance has been demonstrated to significantly impede food-insecure populations from accessing available and needed resources. While food banks are available on many campuses, accessibility and stigma remain an issue. For example, 64% of students reported negative stigma associated with use of food banks on campus according to Swipe Out Hunger (2020). Research conducted by El Zein et al. (2018) to determine why hungry college students were not seeking help concluded that most students (70%) were aware of the existing food pantry on their campus. Of the one-third of students that self-identified as food insecure, only 38% reported food pantry use. Food-insecure students reported feelings of awkwardness, embarrassment, negative self-worth, shame, and the desire to avoid conversations or interactions with their peers that involved purchasing food. Many stated that being a “broke” college student struggling to get by is perceived as normal, and stereotypical of the college experience, which contributes to the stigma of food assistance use. Food-insecure participants were quick to dismiss their struggles and shared the common view that others were worse off than they were since they had made the decision to go to college and spend money on tuition. In addition to the stigma, this shame kept them from utilizing resources they perceived to be intended for others in their community (El Zein et al., 2018).

According to the Hope Center,¹ an average of 43% of students attending two- and four-year insti-

¹ The Hope Center at Temple University is responsible for conducting the largest, longest-running annual assessment of basic needs insecurity among college students. This program was formerly located at the University of Wisconsin-Madison.

tutions reported food insecurity in 2015–2019 (Baker-Smith et al., 2020). This data is corroborated by a 2016 study coordinated by the Wisconsin Hope Lab, which surveyed students at 34 two- and four-year institutions in 12 states. The study found that 48% of the 3,765 respondents self-identified as having experienced food insecurity over the previous 30 days. Consistent with the knowledge of profound systemic inequities between white and non-white Americans, 57% of BIPOC students reported food insecurity compared to 40% of white students. Furthermore, 56% of first-generation students were food insecure. The students found to be primarily impacted included those who were employed (56%) and those who received financial assistance (75%) (Dubick et al., 2016).

Food insecurity was exacerbated during the COVID-19 pandemic. Students infected with COVID-19 were 1.7 times more likely to be food insecure than the non-infected (Goldrick-Rab et al., 2022). A survey of 1000 undergraduates during the early stages of the pandemic indicated that 52% reported using off-campus food banks occasionally, while 30% used them monthly or more frequently (Swipe Out Hunger, 2020). One-third of students in the survey reported knowing a student who had dropped out of college due to food accessibility issues (Swipe Out Hunger, 2020).

Government programs have offered some relief during the pandemic, but only for students meeting specific requirements. While the Supplemental Nutrition Assistance Program (SNAP) allows for assistance in food purchasing, students traditionally are ineligible for the program unless they meet a narrow set of exemptions. The Consolidated Appropriations Act of 2021 expanded exemptions to include students eligible for work study and students whose families do not contribute to the costs of their education. However, these two new exemptions are considered temporary, due to the pandemic (U.S. Department of Agriculture Food and Nutrition Service, 2021).

Cost of Higher Education

One of the most important considerations for food-insecure students is the high cost of college tuition, housing, and school-related expenses. Dur-

ing the 2018–19 academic year in the United States, undergraduate tuition, fees, room, and board were approximately US\$18,383 at public institutions, US\$47,419 at private nonprofit institutions, and US\$27,040 at private for-profit institutions. During the previous ten-year period, prices at public and private non-profit institutions increased 28% and 29%, respectively, when adjusted for inflation. Estimates suggest that college costs are three times what they were in 1980, while median incomes have hardly increased during that period when adjusted for inflation. The high cost of college is felt most acutely by those in the lowest quartile of median income. As income inequality continues to rise in the U.S., many economists predict even greater difficulty in affording college for those in lower levels of income (De Brey et al., 2021). Despite the sharply rising cost of college, there has been a marked increase in overall college enrollment, including students from historically underrepresented populations (Hussar et al., 2020). As a result, many students experience significant economic hardship and limited budgets that often do not permit adequate quality or quantities of food.

Wisconsin resident tuition at UW-Madison for the 2021–2022 school year was US\$10,766, with tuition remaining frozen since 2012 (University of Wisconsin-Madison, 2021a). While this may be a comparatively low tuition for a school of UW-Madison's caliber, the full cost to attend may approach US\$25,000 per year when housing, food, and school supplies are considered (University of Wisconsin Office of Student Financial Aid, 2022). This puts the cost of attendance at US\$100,000 for a four-year degree. Despite the cost, more than half of UW-Madison students did not take out student loans during their undergraduate degree (University of Wisconsin-Madison, 2021a). Furthermore, the number of UW-Madison undergraduates finishing school without loan debt has increased 10% over the last decade. For student borrowers, loan rates and debt are significantly below those of UW-Madison's peers (University of Wisconsin-Madison 2021b). Forty percent of students attending UW System schools come from families in the top 20% of family income, and the median annual income of families with students attending UW schools is above US\$90,000 ("Economic diversity and stu-

dent outcomes,” 2017). Thus, lower-income students and those without family resources to help with educational costs are likely in the minority at campuses like UW-Madison.

UW-Madison has recently implemented a program through which Wisconsin students with a family income of US\$56,000 or less who want to attend UW-Madison can obtain four years of tuition and fees covered by the university. Dubbed “Bucky’s Tuition Promise”² (after the university’s mascot, Bucky Badger), the program is also extended to in-state transfer students, who can receive two years of tuition and fees. The university is spending more than US\$3 million per year on this program to support students from lower-income families.

Creation of the Campus Food Shed

UW-Madison is part of the land grant system, established by the Morrill Act of 1862. The Act provided opportunities for education in agriculture and the mechanical arts and played a powerful role in democratizing and expanding post-secondary educational opportunities during the 19th and 20th centuries. Re-examination of the land grant mission’s origins and goals is an ongoing process that has received much attention in recent years, including the issue of food security on campuses such as UW-Madison.

Students, staff, and faculty in the land grant colleges conduct research and extension programs to serve the agricultural communities of their states, using research stations for crop and livestock production where new practices and techniques can be tested and

evaluated. For many years, researchers in field-based projects have harvested excess produce once experiments and test-plots were complete and made the produce available to the university community. However well-intentioned these efforts have been at UW-Madison, they were done on an ad hoc basis without any formal structure or way to reach students beyond those working in research labs. In 2016, Hayden DePorter, then an undergraduate at the university, observed this ineffective system of food distribution as an opportunity to redistribute excess produce in a more accessible manner to students. DePorter’s understanding of equity issues and food insecurity across campus underpinned the need for such an opportunity. From the knowledge of these social issues, coupled with awareness of available, otherwise wasted food, the idea for CFS was born (Figure 1). DePorter shared their ideas with Irwin Goldman, a faculty member in the Department of Horticulture, and they worked with a group of students to develop the concept of CFS on the UW-Madison campus. Students since then have led the development and



Figure 1. Hayden DePorter Welcoming Students at the Opening of Campus Food Shed, 2017, at the Student Activities Center on East Campus Mall, University of Wisconsin-Madison

This refrigerator filled with fresh produce was one of several available to UW-Madison students beginning in summer 2017.

Photo courtesy of Campus Food Shed.

² For more details, see <https://financialaid.wisc.edu/types-of-aid/badger-promise/>

maintenance of the CFS program, with Goldman providing guidance and help with logistics and administrative issues that required navigation among campus units. Student leaders associated with the program, along with Goldman, co-authored this practice brief.

After initial program development, the idea of CFS was brought to fruition in coordination with university faculty involved in plant breeding (many of whom were responsible for the field plots providing produce), attorneys at the Office of Administrative Legal Services, University Health Services, and building operations staff. To fund the program, DePorter received the Baldwin Wisconsin Idea Endowment from the university, which provided grant money to purchase refrigerators to house leftover produce. The refrigerators were placed in four accessible locations across campus. DePorter's idea began to gain attention across campus, and with the help of other students committed to combatting food insecurity and reducing waste, CFS was added to the Registered Student Organizations (RSOs) at UW-Madison, ensuring the program's longevity and sustainability. Students involved in developing and running CFS come from a variety of educational programs, from engineer-

ing to communications, and their diverse range of experiences afforded CFS different perspectives and connections to maximize the impact of CFS operations. Working on CFS has provided a unique educational opportunity for students to assess food security and equity issues on the UW-Madison campus.

In addition, students forged a partnership with a local grocery store, Fresh Madison Market. After students met with grocery store representatives to discuss CFS goals, Fresh Madison Market agreed to donate leftover food items to CFS. In addition to produce obtained at university research farms, these donations have allowed CFS to maintain a higher volume of food items and year-round distribution efforts.

Campus Food Shed Operations

In addition to excess produce yielded from University Research Stations, CFS has been able to recover hundreds of pounds of produce each week through near-daily recoveries from Fresh Madison Market during a typical semester (i.e., not impacted by the coronavirus pandemic). Throughout the day, the Market produce department manager sets aside produce that cannot be sold, predominantly be-

cause an excess was purchased, the sell by/use by/best by/expiration date is passing, and/or the produce is aesthetically or qualitatively imperfect. In the latter category, apples with small bruises, bananas that are beginning to brown, or containers of berries with a single fruit beginning to mold are some of the most common items set aside for CFS volunteers to recover. Much of the food is otherwise in prime condition, however, and remains edible (Figure 2).

In the evening, food recovery volunteer(s) cart



Figure 2. Boxes Filled with Produce from a Daily Recovery

Photo courtesy of Campus Food Shed.

the load from Fresh Madison Market to an American National Standards Institute (ANSI)-certified community refrigerator strategically located in UW-Madison's Student Activity Center, which is in the same building complex as the grocery store. ANSI certification allows the safe storage of items beyond whole produce, such as pre-cut produce, pre-made salads, juices, etc. The Student Activity Center is a central location on campus, close to downtown, that receives consistent student traffic throughout the day. Though the Center is the main site of operation, CFS occasionally stocks other refrigerators across campus when a CFS member or volunteer can access a personal vehicle to transport the food items.

A distinguishing feature of CFS is that food is distributed in well-known, highly trafficked, and safe areas with no check-in process required. Refrigerators are housed in public locations across campus and students are welcome to access food at any time when the buildings are open. This policy protects student identity and makes food assistance available to the entire campus community, which aims to eliminate the stigma barrier for food-insecure individuals.

In a typical recovery, volunteer(s) methodically sort through the food items recovered that day and that have been left in the refrigerator from the previous day to dispose of any spoiled or low-quality items (Figure 3). Under the protection of the Bill Emerson Good Samaritan Food Donation Act, which provides limited liability protection to persons donating food "in good faith" (Feeding America, 1996, para. 2), the produce is then made available.

Once the refrigerator is filled, volunteer(s) make posts on both Instagram and Facebook to notify CFS followers of the food items available that evening. After the notification, students typically empty the refrigerator within a few hours. Social media provides immediate, easy and accessible communication to students who are most in need of food. CFS also uses social media to recruit

volunteers: open positions and volunteer slots are advertised and interested students are encouraged to reach out. Those who have expressed interest receive weekly sign-up sheets from CFS, allowing CFS to maintain a large pool of volunteers to support near-daily recovery and distribution of a high volume of food items.

In addition to collecting excess produce from plant breeding research and Fresh Madison Market recoveries, CFS students have established connections with other community groups. These include occasional gleaning efforts at the Dane County Farmer's Market, which involve retrieval of produce that does not get sold in various vendors' stalls, and collecting donated bread and baked items from Madison Sourdough Company and *Collectivo Coffee*. These organizations and businesses became donation partners because UW students directly proposed the opportunity and coordinated recovery logistics.

The continued support from community partners has always been imperative to the success of CFS. When campus buildings closed at the beginning of the COVID-19 pandemic, CFS became unable to utilize its community refrigerators. The generosity and accommodation of a local campus ministry already dedicating space for other student-led food assistance and sustainability initiatives allowed CFS to reshape its operations in accordance with coronavirus-related health measures. Through partnerships with other food-related student organizations and the enduring commitment of dedicated volunteers, CFS was able to recover, transport, and store food in the ministry's kitchen on a daily basis. Produce distribution took place in coordination with UW Frozen Meals³ and Slow Food UW⁴ meal handouts twice weekly (Figure 4). During the pandemic, CFS was able to safely continue supporting the UW-Madison community by alleviating the financial burden of fresh food procurement.

³ The UW Frozen Meals is a student-run initiative that packages unserved dining hall food into individual meals that are frozen and available for students at no cost.

⁴ Slow Food UW produces weekly meals for the community using locally sourced food and a pay-what-you-can policy to make these meals financially accessible to everyone.

Challenges and Opportunities for Growth

Food Safety Concerns

The vast majority of the feedback CFS has received via social media and anonymous student surveys is positive; nevertheless, there have been a number of suggestions that have led to improved safety measures. After an anonymous safety complaint to

UW-Madison's Environment, Health & Safety Division, CFS student leaders met with the Division to discuss compliance with university food storage and distribution policies. Although CFS maintains a level of protection from liability under the Bill Emerson Act, all UW-Madison RSOs must operate in accordance with UW-Madison's own set of safety guidelines. As a result of the meeting, CFS



3A



3B

Figure 3A and B. (A) Raw Produce is Brought to a Central Location. (B) Produce is Methodically Sorted and Organized

Photo courtesy Campus Food Shed.

has made a continuous and rigorous effort to maintain safety protocols in food storage. Through funding from the Wisconsin Idea Fellowship, CFS leaders purchased the aforementioned ANSI-approved commercial refrigerator with an integral thermometer. Since the inception of CFS, the organization has observed no known reports of food-borne illness traced back to the items stocked in refrigerators.

Transportation

A significant expansion opportunity for CFS would be to place more refrigerators across the UW-Madison campus. This would allow food to become even more accessible within the large campus community, and would further normalize the utilization of food resources. The main challenge to placement of more refrigerators is transportation. While Fresh Madison Market is conveniently in the same building complex as the main site of CFS operations, eliminating the need for a vehicle to transport food, more sites of operation across campus would necessitate a vehicle to move recovered food. It has been difficult to recruit CFS members and volunteers on campus who have access to vehicles. This problem may be alleviated by utilizing rental vehicles or university-affiliated cars, but obtaining consistent funding to operate the vehicles remains challenging.

Collecting Data

Equity and justice are central to the CFS mission of nutritious, affordable, and culturally appropriate food for all. We aim for our work to contribute to food justice by providing universal access to nutritious, affordable food. Tracking and improving equitable out-

comes of our program has always been an area of great interest and discussion; however, we have not yet developed this aspect of our program. One reason is that we strive to protect the anonymity of students who utilize CFS, which we believe is critical to our success and our commitment to reducing stigma. However, this has made direct communication difficult with students who inequitably experience food insecurity. Although we rely heavily on social media comments, direct messages, and email inquiries for data about the populations we serve, we still do not have extensive information about which demographic groups benefit most from CFS, nor those whom CFS could better serve. Currently, representatives from CFS are working with other students and faculty members in a UW Office of Sustainability working group to create and disseminate a campus-wide food (in)security survey that will collect comprehensive, current information on the food (in)security status of the UW-Madison campus. It will include the complete definition of food insecurity, followed by careful questioning that allows



Figure 4. Socially Distanced Food Handouts Took Place at Designated Times Twice per Week During the First Stages of the COVID-19 Pandemic

Photo courtesy of Campus Food Shed.

us to fully understand the extent to which students are impacted by lack of food. This is an attempt to avoid conflating “hunger” with food insecurity, a stigmatized and oversimplified description. Questions regarding student demographics and their knowledge and use of various food resources on campus will also be included. This data will help us to understand which students need our resources the most so that we can tailor our program reach accordingly, potentially reserving portions of food for those who have the most need.

BIPOC Initiatives

Awareness of issues faced by BIPOC students is growing at UW-Madison, though the opportunity for addressing these issues is long overdue. Several recent observations have led us to conclude that our campus is trying to address longstanding bias and ignorance with respect to BIPOC students. In 2021, UW-Madison formally recognized the Ho Chunk Nation’s sovereignty over the land upon which our campus was built. The Ho Chunk were forcibly removed from the land following an 1832 treaty that was signed under duress and without informed consent.⁵ The university also established an Office of Tribal Relations to foster a relationship with the 12 First Nations of Wisconsin. In 2021, the university established its first Office of Diversity, Equity, and Inclusion and hired a cabinet-level director to oversee its efforts. The university has recently created the BIPOC Student Voices Reader, an anthology of BIPOC student essays that focus on their experiences as students at UW-Madison, and how these experiences are informed by their marginalized identities (Chen, 2021). The reader is used in courses on campus that address diversity, equity, and inclusion. We hope these efforts will make for a more welcoming campus for students from marginalized communities than in previous generations. However, more work needs to be done in terms of analyzing food equity issues within these communities at UW-Madison. We hope that CFS can one day begin to spearhead these efforts.

Miscellaneous Projects

In collaboration with the computer science student organization Coding for Good, we have attempted to develop a mobile device application for sending refrigerator status updates more efficiently to students’ devices, to allow for more effective immediate communication with students with the (self-identified) highest need. Progress was curbed during Covid-19, but we hope to bring these plans to fruition in the future.

Conclusion


Colleges and universities seeking to implement similar strategies to combat food insecurity may draw on lessons learned from CFS. These include:

1. Identify and reach out to sources of food that are willing to donate leftover items. Internal campus sources include university research farms or dining halls. Community sources may include local grocery stores, restaurants, and farmers’ markets
2. Reach out to risk management or environmental safety offices within the university before beginning to store food on campus to ensure compliance with any food safety guidelines. Some institutions may require a commercial-grade ANSI-approved refrigerator to store food items with expiration dates or pre-packaged/pre-made items
3. Use social media as a tool to keep students up-to-date about food availability and gain a greater presence and audience within the campus community
4. Students interested in engaging in a project similar to CFS long-term should consider establishing themselves as an official student organization in the eyes of their university. This ensures both recognition and longevity of the group and its efforts
5. Place food in accessible, yet inconspicuous locations. This allows for the destigmatization of those utilizing food resources by protecting anonymity
6. Carefully consider how data is to be collected. It is important to preserve anonym-

⁵ See <https://chancellor.wisc.edu/blog/recognizing-our-shared-history-with-the-ho-chunk-nation/> for more details.

ity, but it is still beneficial to collect demographic information to learn about which sub-populations of students inequitably experience food insecurity.

CFS was among the first efforts on the UW-Madison campus to address food insecurity. The project is attempting to improve an acute problem on our campus in ways that will allow for destigmatized, equitable student and community participation. It is crucial that CFS has always been student-led and student-managed, providing unique opportunities for student engagement and leadership. Funding for the project was obtained from

internal campus sources, but as the project matures there may be opportunities to expand funding opportunities beyond the campus and to partner with other campuses to form networks that can better support food-insecure students. The CFS project faces many challenges, not the least of which is maintaining partnerships with a variety of organizations against the backdrop of the constantly changing membership of student organizations. Regardless of these challenges, CFS demonstrates that the vision and energy of students can make a difference in addressing the critical issue of campus food insecurity. 

References

- Baker-Smith, C., Coca, V., Goldrick-Rab, S., Looker, E., Richardson, B., & Williams, T. (2020). *#RealCollege 2020: Five years of evidence on campus basic needs insecurity* [Report]. The Hope Center for College, Community, and Justice, Temple University. https://tacc.org/sites/default/files/documents/2020-02/2019_realcollege_survey_report.pdf
- Broton, K. M., & Cady, C. L. (Eds.) (2020). *Food insecurity on campus: Action and intervention*. Johns Hopkins University Press.
- Broton, K. M., & Goldrick-Rab, S. (2017). Going without: An exploration of food and housing insecurity among undergraduates. *Educational Researcher*, 47(2), 121–133. <https://doi.org/10.3102/0013189X17741303>
- Chen, C. (2021, April 2). UW libraries announce call for proposals for contributions of essays focused on students' experiences. *Badger Herald*. <https://badgerherald.com/tag/uw-bipoc-student-voices-reader/>
- De Brey, C., Snyder, T. D., Zhang, A., & Dillow, S. A. (2021). *Digest of education statistics 2019* (NCES 2021-009). National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education. <https://nces.ed.gov/pubs2021/2021009.pdf>
- Dubick, J., Mathews, B., & Cady, C. L. (2016). *Hunger on campus: The challenge of food insecurity for college students* [Report]. http://studentsagainsthunger.org/wp-content/uploads/2016/10/Hunger_On_Campus.pdf
- El Zein, A., Mathews, A. E., House, L., & Shelnett, K. P. (2018). Why are hungry college students not seeking help? Predictors of and barriers to using an on-campus food pantry. *Nutrients*, 10(9), Art. 1163. <https://doi.org/10.3390/nu10091163>
- Feeding America. (1996). *Bill Emerson Act*. <https://www.feedingamerica.org/ways-to-give/corporate-and-foundations/product-partner/bill-emerson>
- Food and Agriculture Organization of the United Nations [FAO]. (2022). *Hunger and food insecurity*. <https://www.fao.org/hunger/en/#:~:text=A%20person%20is%20food%20insecure,at%20different%20levels%20of%20severity>
- Goldrick-Rab, S., Coca, V., Gill, J., Clark, K., Looker, E., & Peele, M. (2022). Self-reported COVID-19 infection and implications for mental health and food insecurity among American college students. *Proceedings of the National Academy of Sciences USA*, 119(7), Art. e2111787119. <https://doi.org/10.1073/pnas.2111787119>
- Goldrick-Rab, S., Richardson, J., & Hernandez, A. (2017). *Hungry and homeless in college: Results from a national study of basic needs insecurity in higher education*. Wisconsin Hope Lab, Association of Community College Trustees. <https://www.luminafoundation.org/wp-content/uploads/2017/08/hungry-and-homeless-in-college.pdf>
- Henry, L. (2017). Understanding food insecurity among college students: Experience, motivation, and local solutions. *Annals of Anthropological Practice*, 41(1), 6–19. <https://doi.org/10.1111/napa.12108>

- Hussar, B., Zhang, J., Hein, S., Wang, K., Roberts, A., Cui, J., Smith, M., Bullock Mann, F., Barmer, A., & Dilig, R. (2020). *Condition of education: College enrollment rates*. National Center for Education Statistics, U.S. Department of Education. https://nces.ed.gov/programs/coe/pdf/coe_cpb.pdf
- Laska, M. N., Fleischhacker, S., Petsoulis, C., Bruning, M., & Stebleton, M. J. (2020). Addressing college food insecurity: An assessment of federal legislation before and during coronavirus disease-2019. *Journal of Nutrition Education and Behavior*, 52(10), 982–987. <https://doi.org/10.1016/j.jneb.2020.07.001>
- Maroto, M. E., Snelling, A., & Linck, H. (2014). Food insecurity among community college students: Prevalence and association with grade point average. *Community College Journal of Research and Practice*, 39(6), 515–526. <https://doi.org/10.1080/10668926.2013.850758>
- New York Times, The*. (2017). Economic diversity and student outcomes at University of Wisconsin. The Upshot. <https://www.nytimes.com/interactive/projects/college-mobility/university-of-wisconsin>
- Raskind, I., Haardorfer, R., & Berg, C. J. (2019). Food insecurity, psychosocial health, and academic performance among college and university students in Georgia, USA. *Public Health and Nutrition*, 22(3), 476–485. <https://doi.org/10.1017/S1368980018003439>
- Swipe Out Hunger. (2020, December 9). *New survey reveals one-third of college students have missed a meal at least once a week since the pandemic*. <https://www.swipehunger.org/chegg/>
- U.S. Department of Agriculture [USDA]. (2021). *Supplemental nutrition assistance program (SNAP)*. <https://www.fns.usda.gov/snap/students>
- USDA Food and Nutrition Service. (2021, March 25). *Supplemental Nutrition Assistance Program (SNAP): Students*. <https://www.fns.usda.gov/snap/students>
- University of Wisconsin Office of Student Financial Aid. (2022). *Cost of attendance*. <https://financialaid.wisc.edu/cost-of-attendance/>
- University of Wisconsin-Madison. (2021a). *Regents approve increase in nonresident undergraduate tuition*. News, University Communications. <https://news.wisc.edu/regents-approve-increase-in-nonresident-undergraduate-tuition/>
- University of Wisconsin-Madison. (2021b). *A positive pattern continues: More than half of UW–Madison seniors graduate with no debt*. News, University Communications. <https://news.wisc.edu/a-positive-pattern-continues-more-than-half-of-uw-madison-seniors-graduate-with-no-debt/>
- Watson, T. D., Malan, H., Glik, D., & Martinez, S. M. (2017). College students identify university support for basic needs and life skills as key ingredients in addressing food insecurity on campus. *California Agriculture*, 71(3), 130–138. <https://doi.org/10.3733/ca.2017a0023>