FOOD INSECURITY IN TENNESSEE HIGHER EDUCATION

THECTSAC

This report is pursuant to T.C.A. § 49-7-214, which mandates the Tennessee Higher Education Commission (THEC) to submit a report:

> *...that identifies issues of food insecurity among students at public institutions of higher education in this state and identifies and describes the efforts of the institutions to address issues of food insecurity among students.*

In pursuit of its mission to increase the number of Tennesseans with a postsecondary credential, THEC is committed to addressing barriers to postsecondary attainment. This report explores food insecurity across public institutions of higher education in Tennessee and the strategies and interventions used to mitigate student hunger on their campuses. To produce this report, THEC conducted a comprehensive literature review of peer-reviewed and non-peer-reviewed research; convened a statewide meeting of practitioners, researchers, and policy advocates to discuss the implications of food insecurity in higher education; and surveyed campus administrators across the state on food insecurity initiatives. This report summarizes the findings from THEC's year-long investigation into food insecurity and presents recommendations for policy and future research.

Acknowledgments

Introduction

The Food Insecurity in Tennessee Higher Education report comprises three sections:

1. The first section provides a **review of scholarly research on food insecurity** in postsecondary education and spotlights notable food insecurity-related initiatives and interventions across the nation. As a supplement to this report, a more holistic review of literature on food insecurity in higher education is available [online](#).

2. The second section summarizes the **results of the campus administrator food insecurity survey**, which was completed by all public universities, community colleges, and two Tennessee Colleges of Applied Technology (TCATs). The analysis gives insight into the extent of food insecurity and examines how colleges address food insecurity on their campuses. This section also highlights challenges to addressing food insecurity, including awareness of the Supplemental Nutrition Assistance Program (SNAP) as revealed by the campus administrator food insecurity survey.

3. The third section provides **recommendations for policy and research**.

Additional Resources on Food Insecurity

THEC launched the [Food Insecurity in Tennessee Higher Education webpage](#) to provide institutions, researchers, and stakeholders with access to and information about this report and food insecurity at Tennessee public institutions. The contents of the webpage include a comprehensive literature review on food insecurity in higher education and a summary of minutes from the 2022 Food Insecurity in Tennessee Higher Education Convening, in addition to a video archive and transcript. The webpage also contains links to food assistance resources such as Supplemental Nutrition Assistance Program (SNAP) and Women, Infants and Children (WIC) program information, a listing of food pantries at all Tennessee public colleges and universities, as well as local food banks and pantries.

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Executive Summary

This report explores food insecurity across public institutions of higher education in Tennessee and the strategies and interventions used to mitigate student hunger on their campuses. To produce this report, THEC conducted a **comprehensive literature review**; **convened a statewide meeting** of practitioners, researchers, and policy advocates on food insecurity in higher education; and **surveyed campus administrators** across the state on current initiatives. This report summarizes the findings from THEC's year-long investigation into food insecurity and presents recommendations for policy and future research.

The 2019-20 National Postsecondary Student Aid Study (NPSAS) provided the first national estimates of food insecurity in higher education, which confirmed that **postsecondary students experience food insecurity at twice the rate of the general population**. While a representative and reliable state estimate is not yet available, various sources indicate that **up to 30 percent** of Tennessee postsecondary students may experience some degree of food insecurity (including marginal food security). Food insecurity may be **disproportionately experienced across student subgroups and where they are enrolled**—especially first-generation students, low-income students, students of color, and adult students—and food insecurity can be acute (situational or circumstantial) or chronic (recurring since childhood). The exact effects of experiencing food insecurity on student performance in higher education are unknown, but food insecurity among students has been linked to **poorer academic performance**, **reduced credit hour accumulation**, and **increased mental health concerns**.

Coupled with federal resource expansions during the COVID-19 national health crisis, public institutions of higher education offer a range of services—directly or through a third-party partnership—to address food insecurity on their campuses. Not all institutions, however, offer the same services, and institutional efforts to address food insecurity may be compartmentalized and underutilized. Results from a statewide survey of college campus administrators revealed that **most institutions do not have an established, recurring budget for student basic needs support** and that **increased communication on federal and state resources** would help prepare staff and faculty to support students.

Extended from the findings and observations made in this report, THEC recommends:

- **Improving communication on existing resources,** such as**:**
  - Establishing recurring convenings of stakeholders to share best practices and connect resources.
  - Providing trainings on federal and state resources to campus personnel.
  - Promoting interagency partnerships.
- **Dedicating resources to support student basic needs security** by:
  - Assessing the financial needs of current interventions.
  - Determining how current interventions can be funded through existing institutional budgets or state allocations.
- **Exploring the adoption of a Tennessee *Hunger Free Campus* bill** for:
  - Identifying standard practices to promote food security and awareness on college campuses.
  - Allocating financial support to institutions.
- **Supporting research and evaluation**, such as:
  - Developing a statewide survey of students on basic needs security.
  - Incentivizing institutions to participate in existing research opportunities.
  - Generating research through a competitive Request for Proposals.

Section I:
Food Insecurity
in Higher Education

Food Insecurity in Higher Education

Postsecondary education provides an avenue for upward social and economic mobility, but food insecurity poses a barrier to students' access and success. Exacerbated by the COVID-19 pandemic, food insecurity in higher education has gained national attention through an expanded body of literature, as well as state-led initiatives to mitigate food insecurity. This report unpacks what the literature says about food insecurity in higher education and its effects on students and institutions. This section explores how food insecurity is defined in higher education, contributing factors to food insecurity, and the effects of food insecurity on student outcomes and wellbeing.

For additional information on food insecurity in higher education, see [THEC's comprehensive review of literature and of available resources](#).

What Is Food Insecurity?

The United States Department of Agriculture (USDA) defines food insecurity as "a household-level economic and social condition of limited or uncertain access to adequate food."[1] The USDA classifies food security into four categories, with the latter two categories used to classify those experiencing food insecurity:

- **High food security**: no reported indications of food-access problems or limitations.
- **Marginal food security**: one or two reported indications—typically of anxiety over food sufficiency or shortage of food in the house. Little or no indication of changes in diets or food intake.
- **Low food security:** reports of reduced quality, variety, or desirability of diet. Little or no indication of reduced food intake.
- **Very low food security**: reports of multiple indications of disrupted eating patterns and reduced food intake.

When measuring food insecurity in higher education, USDA survey tools, such as the Adult and Household Food Security Survey Modules, are commonly used for the general population. College students, however, may experience food insecurity at different rates than the general population. Creating a more representative measure of campus food insecurity would enable researchers to quantify the prevalence of food insecurity among students in higher education with greater accuracy when compared to the national rates of food insecurity.[2]

A study analyzing demographic characteristics of students experiencing food insecurity at one institution found statistically significant differences by race/ethnicity, age, and first-generation status.[3] When assessing the prevalence of food insecurity among undergraduate students, Willis (2019) found that low-income students and Pell-eligible students are also more likely to experience food insecurity.[4]

[1] USDA ERS - Definitions of Food Security. (2021). Retrieved from www.ers.usda.gov website: https://www.ers.usda.gov/topics/food-nutrition-assistance/food-security-in-the-u-s/definitions-of-food-security/
[2] Ellison, B., Bruening, M., Hruschka, D. J., Nikolaus, C. J., van Woerden, I., Rabbitt, M., & Nickols-Richardson, S. M. (2021). Viewpoint: Food insecurity among college students: A case for consistent and comparable measurement. Food Policy, 101(102031), 102031. https://doi.org/10.1016/j.foodpol.2021.102031
[3] Phillips, E., McDaniel, A., & Croft, A. (2018). Food Insecurity and Academic Disruption Among College Students. Journal of Student Affairs Research and Practice, 55(4), 353–372. https://doi.org/10.1080/19496591.2018.1470003
[4] Willis, D. E. (2019). Feeding the Student Body: Unequal Food Insecurity Among College Students. American Journal of Health Education, 50(3), 167–175. https://doi.org/10.1080/19325037.2019.1590261

Based on the results from 2019-20 National Postsecondary Student Aid Survey (NPSAS), approximately 23% (double that of the general population) of all undergraduate students in the United States reported experiencing low or very low food security, with another 12% reporting marginal food security. Twelve percent of graduate students, too, reported low or very low food security in the recent NPSAS data. Even though the NPSAS provided the first national estimates of food insecurity in higher education, the data do not provide representative estimates at the state level.

What Contributes to Students Experiencing Food Insecurity?

Cost of Higher Education

The reduction in purchasing power of financial aid has shifted a larger portion of the cost of college onto students and families.[5] For example, the 2020-21 maximum Pell Grant of $6,495 covered 26% of the average cost of attendance at a public four-year institution, while the maximum grant in 1975-76 covered more than three-quarters of the cost of attending a public four-year institution.[6] In addition to tuition increases, supplementary costs, such as housing, textbooks, and transportation, also contribute to the financial strain placed on students.[7] After major financial expenses are paid, a student may not have enough money to cover the essentials, including food.[8] At the time of this report, THEC is actively investigating the intersection of student basic needs insecurity with the agency's goal to become the most affordable state for higher education in the Southern region.

Unused Supplemental Nutrition Assistance Program (SNAP) Eligibility and Limited Awareness

SNAP is the largest domestic nutrition assistance program administered by the USDA's Food and Nutrition Service (FNS).[9] A 2018 Government Accountability Office (GAO) report found that of the 3.3 million students who were potentially eligible for SNAP in 2016, less than half said they participated.[10] Students who are potentially eligible for SNAP experience difficulty when applying, including a lack of program knowledge, requirements, stigma and minimal application assistance.[11] The GAO report found that officials at institutions also had difficulty understanding SNAP rules, with some institutions misinforming students about their potential eligibility.

Childhood Food Insecurity and Normalization

Experiencing food insecurity prior to attending college, particularly in childhood, may be associated with a greater risk of food insecurity in adulthood.[12]

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[5] McKibben, B., Wu, J., & Abelson, S. (2023). New Federal Data Confirm that College Students Face Significant—and Unacceptable—Basic Needs Insecurity. The Hope Center. https://hope.temple.edu/npsas.
[6] Lumina Foundation. (2019). Today's Student. Retrieved from Lumina Foundation website: https://www.luminafoundation.org/campaign/todays-student/
[7] National Association of Student Financial Aid. "Issue Brief: Doubling the Maximum Pell Grant." www.nasfaa.org, 2022. https://www.nasfaa.org/issue_brief_double_pell
[8] Goldrick-Rab, S. (2019, September). Paying the Price. Retrieved November 19, 2019, from University of Chicago Press website: https://press.uchicago.edu/ucp/books/book/chicago/P/bo24663096.html
[9] Ferone, J. (2021). Food Insecurity in College: Fighting Student Hunger on Campus. Retrieved from EduMed website: https://www.edumed.org/resources/food-insecurity-in-college/
[10] To learn more about SNAP and eligibility requirements (including expansions during the COVID-19 public health emergency), visit https://www.fns.usda.gov/snap/supplemental-nutrition-assistance-program
[11] U.S. Government Accountability Office. (2018). FOOD INSECURITY Better Information Could Help Eligible College Students Access Federal Food Assistance Benefits Report to Congressional Requesters United States Government Accountability Office. Retrieved from https://www.gao.gov/assets/gao-19-95.pdf
[12] Meza, A., Altman, E., Martinez, S., & Leung, C. W. (2019). "It's a Feeling That One Is Not Worth Food": A Qualitative Study Exploring the Psychosocial Experience and Academic Consequences of Food Insecurity Among College Students. Journal of the Academy of Nutrition and Dietetics, 119(10), 1713-1721.e1. https://doi.org/10.1016/j.jand.2018.09.006

The stigmatization of being food insecure leads many students to hide their food and basic needs insecurities. Students may also be unwilling to discuss their circumstances with others, particularly those with resources, due to feelings of shame and self-doubt.[13]

On- and Off-Campus Food Options

At many institutions, residential students may be required to participate in a meal plan,[14] or pre-paid accounts to provide students with access to dining services on campus. Depending on the type of plan selected, students are given a set number of *swipes* or meals to use at dining halls or other food options on campus. Despite the intent, meal plans are not a foolproof method of providing food security, as one study found students with unlimited meal plans still experienced food insecurity.[15] Students working while enrolled, too, may have limited access to on-campus food options during normal business hours. Institutions located in food deserts[16] may also contribute to student food insecurity.[17]

COVID-19 Context

As institutions transitioned from in-person activities to remote or distance learning, students living on campus were sent home. When institutions remained closed, so did access to on-campus resources and meal plans, exacerbating food insecurity among students.

In response to the COVID-19 pandemic, the federal government released a series of monetary relief funds to support higher education institutions. Higher Education Emergency Relief fund (HEERF) funds could be used by institutions to provide meal vouchers, expand campus-based food pantries, create universal meal programs, and any other strategies to reduce food insecurity as a result of the pandemic.[18]

What Are the Effects of Food Insecurity on Students?

Academic Success, Persistence and Degree Completion

Students experiencing food insecurity are less likely than their food-secure peers to excel academically. Research has found that food-insecure students had a slightly lower GPA than food-secure students and were less likely to remain enrolled.[19]

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[13] Crutchfield, R. M., Carpena, A., McCloyn, T. N., & Maguire, J. (2020). The Starving Student Narrative: How Normalizing Deprivation Reinforces Basic Need Insecurity in Higher Education. Families in Society: The Journal of Contemporary Social Services, 101(3), 104438941989852. https://doi.org/10.1177/1044389419889525

[14] Ellison, B., Bruening, M., Hruschka, D. J., Nikolaus, C. J., van Woerden, I., Rabbitt, M., & Nickols-Richardson, S. M. (2021)

[15] Mei, J., Fulay, A. P., Wolfson, J. A., & Leung, C. W. (2021). Food Insecurity and Dietary Intake among College Students with Unlimited Meal Plans at a Large, Midwestern University. Journal of the Academy of Nutrition and Dietetics, 121(11). https://doi.org/10.1016/j.jand.2021.04.009

[16] A food desert is an urban area where at least 33% of its residents are located more than a mile away from a venue offering nutritious food (e.g., supermarkets). For more information on food access classifications and food deserts, see USDA's Food Access Research Atlas webpage: https://www.ers.usda.gov/data-products/food-access-research-atlas/.

[17] Dhillon, J., Diaz Rios, L. K., Aldaz, K., De La Cruz, N., Vu, E., Asad Asghar, S., … Ortiz, R. (2019). We Don't Have a Lot of Healthy Options: Food Environment Perceptions of First-Year, Minority College Students Attending a Food Desert Campus. Nutrients, 11(4), 816. https://doi.org/10.3390/nu11040816

[18] U.S. Department of Education. (2022). Using Higher Education Emergency Relief Fund (HEERF) Institutional Portion Grant Funds to Meet the Basic Needs of Students 1,2 Frequently Asked Questions (FAQ). Retrieved from https://www2.ed.gov/about/offices/list/ope/heerf-support-basic-needs-final.pdf

[19] van Woerden, I., Hruschka, D., & Bruening, M. (2018). Food insecurity negatively impacts academic performance. Journal of Public Affairs, 19(3), e1864. https://doi.org/10.1002/pa.1864

Physical and Mental Health Effects

Mental and physical health have been linked with experiencing food insecurity.[20] Food-insecure diets are less likely to be healthy and more likely to contain higher intakes of added sugars and fast foods.[21] When compared to their food-secure counterparts, students experiencing food insecurity have significantly higher levels of psychological distress and are more likely to self-report an average or poor mental health status.[22]

Summary

Given the negative implications food insecurity has on college access, retention, and completion, understanding the factors that result in food insecurity and methods to mitigate food insecurity are necessary. As a supplement to this report, a comprehensive literature review is available on THEC's Food Insecurity in Tennessee Higher Education webpage.

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[20] Martinez, S. M., Frongillo, E. A., Leung, C., & Ritchie, L. (2018). No food for thought: Food insecurity is related to poor mental health and lower academic performance among students in California's public university system. Journal of Health Psychology, 25(12), 135910531878302. https://doi.org/10.1177/1359105318783028

[21] Leung, C. W., Wolfson, J. A., Lahne, J., Barry, M. R., Kasper, N., & Cohen, A. J. (2019). Associations between Food Security Status and Diet-Related Outcomes among Students at a Large, Public Midwestern University. Journal of the Academy of Nutrition and Dietetics, 119(10), 1623–1631. https://doi.org/10.1016/j.jand.2019.06.251

[22] Becerra, M. B., & Becerra, B. J. (2020). Psychological Distress among College Students: Role of Food Insecurity and Other Social Determinants of Mental Health. International Journal of Environmental Research and Public Health, 17(11), 4118. https://doi.org/10.3390/ijerph17114118

Section II:
Campus Administrator Survey Results

About the Campus Administrator Food Insecurity Survey

In October 2022, THEC administered a survey to campus administrators at all public community college and universities, as well as select Tennessee Colleges of Applied Technology (TCATs)[23], to ascertain the scope of and needs for food insecurity interventions. To recruit recipients for the survey, web searches were used to identify campus administrators most familiar with food insecurity initiatives on their campuses. Snowball sampling (i.e., initial survey respondents identifying other potential survey respondents) was also used to locate additional personnel based on their roles administrating basic needs services. All institutions invited to participate (n = 29) responded (100% response rate). Among the 29 total responses received, three institutions, Chattanooga State Community College, TCAT Jacksboro, and University of Tennessee – Knoxville are represented more than once within the data set, with a total of two responses per institution. For a complete listing of the questions included on the survey, readers should refer to **Appendix A.**

Summary statistics highlighted in this section represent the total valid responses to any given question. While all institutions invited to participate are represented in the dataset, not all campus administrators answered all questions on the survey.

To develop the survey, THEC staff reviewed previously administered surveys pertaining to food and basic needs insecurity interventions administered to higher education campus administrators. THEC's survey was informed by instruments used for the following reports: *Moving the Needle on College Student Basic Needs: National Community College Provost Perspectives*; *Qualitative and Quantitative Instruments to Explore a Holistic Understanding of Food and Housing Insecurity*; and *College Student Food Insecurity: How to Make Real Change*.

THEC's Research and Strategy Division developed the survey to address three research questions:

1. How are institutions of higher education in Tennessee addressing food insecurity on their campuses?
2. Do institutions of higher education in Tennessee identify and collect data on food insecurity?
3. Do Tennessee institutions of higher education assist students with or make them aware of Supplemental Nutritional Assistance Program (SNAP) eligibility?

The instrument was content validated internally by THEC's Research and Strategy Division and was informed by external expert feedback prior to administration.

Food Insecurity at Tennessee Institutions

Campus administrators were asked to estimate what percentage of students experience food insecurity on their campuses. On average, campus administrators estimated 30% of students experience food insecurity.[24]

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[23] TCAT-Jacksboro and TCAT-Elizabethton were surveyed because they were awardees of the Tennessee Department of Economic Development 2021 Campus Food Pantry Grant.

[24] For institutions with multiple responses, one average estimated rate was calculated among all responses. Individual responses varied between 2% (The University of Tennessee Southern) and 75% (Volunteer State Community College). Percentages may vary based on factors considered by each institution used to provide an estimate.

Figure 1: Estimated Average Rate of Food Insecurity

≈ 30%

Tennessee

≈ 23-34%

United States
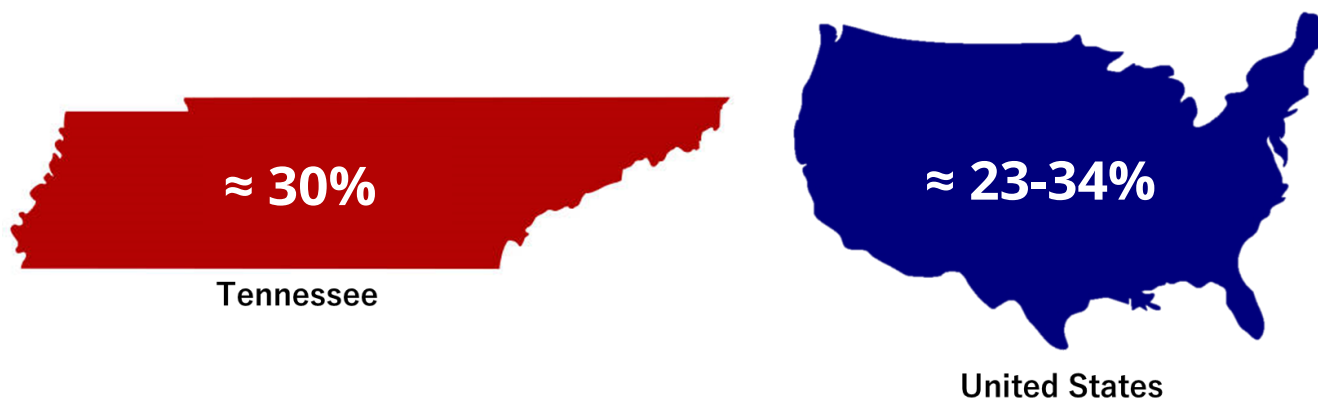
Notes: State estimates and national estimates are not wholly comparable, as they are derived through entirely different means. Tennessee estimate based on responses from campus administrators (n=19). For institutions with multiple responses, an average institution rate was calculated among all responses. National estimates based on 19:20 NPSAS results for undergraduate students reporting marginal food security, low food security, and very low food security.

The average estimated rates are in range of the national estimates provided by the 2019-20 NPSAS results for undergraduate students (including those who reported marginal food security). Readers should note that NPSAS results do not allow for representative state-level estimates and that no exact measure of food insecurity among Tennessee students exists. Of the nine community colleges that provided a response, the average estimated rate of food insecurity was 33.0%.[25] Among three Locally Governed Institutions (LGI), the average estimated rate of food insecurity was 31.0%[26] and among four University of Tennessee system institutions, the average estimated rate was estimated 23.6%.[27]

Campus administrators were also asked whether their institution's main campus was located within a food desert. A food desert is defined as an urban area where at least 33% of its residents are located more than a mile away from a venue offering nutritious food (e.g., supermarkets) or a rural area where residents are more than 10 miles away from the nearest supermarket or large grocery store.[28] Of all recorded responses (n = 29), 27.6% selected "Yes" (n = 8), 58.6% selected "No" (n = 17), and 13.8% selected "I don't know" (n = 4), which indicated that over half of main campuses are not located in areas defined as food deserts.[29] **Figure 2** highlights the food deserts across the state in relation to the location of postsecondary institutions.

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[25] Institutions not reflected in this response include, Cleveland State Community College, Dyersburg State Community College, Southwest Tennessee Community College, and Walters State Community College.

[26] Institutions not reflected in this response include Tennessee State University, Tennessee Tech University, and Middle Tennessee State University.

[27] University of Tennessee, Health Science Center is not included in this response.

[28] Dutko, P., Ploeg, M., & Farrigan, T. (2012). Characteristics and Influential Factors of Food Deserts. Retrieved from https://www.ers.usda.gov/webdocs/publications/45014/30940_err140.pdf

[29] Administrators from the following institutions indicated that the main campus **was** located in a food desert: Chattanooga State Community College; Motlow State Community College; Northeast State Community College; Austin Peay State University; TCAT Jacksboro; University of Tennessee, Chattanooga; and the University of Tennessee Health Science Center.

Figure 2: Tennessee Food Desert Map

COLLEGE/UNIVERSITY KEY

○ FOUR-YEAR PUBLIC   ● COMMUNITY COLLEGE

● TENNESSEE COLLEGE OF APPLIED TECHNOLOGY

■ Indicates where a significant number or share of residents is more than 1 mile (urban) or 10 miles (rural) from the nearest supermarket.
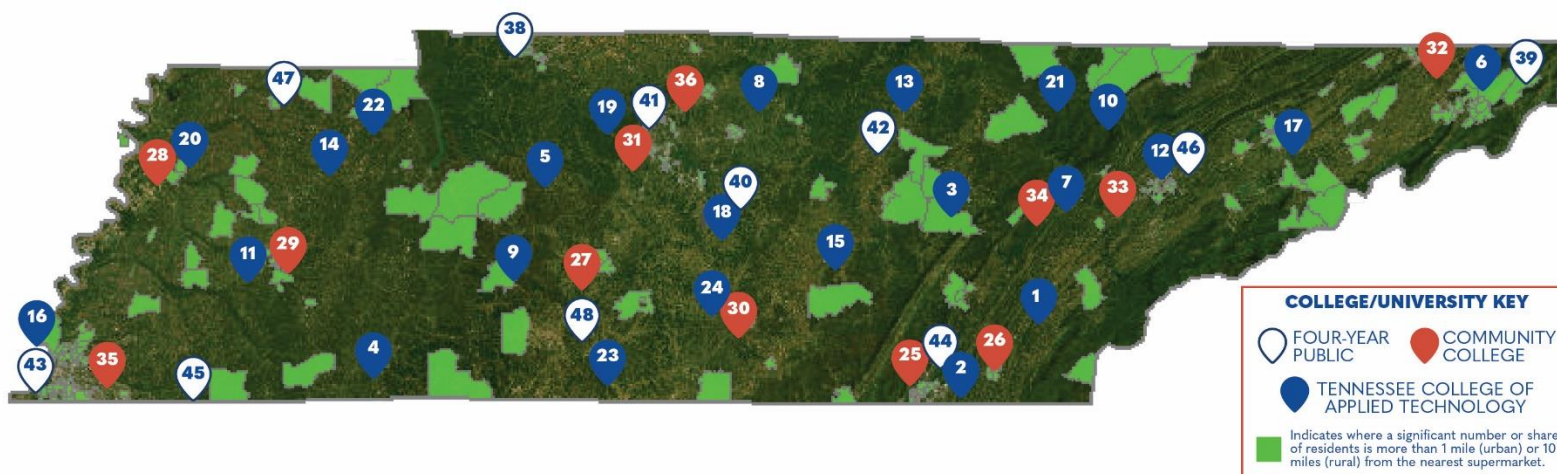
TENNESSEE COLLEGES OF APPLIED TECHNOLOGY (TCAT)

1 TCAT Athens
2 TCAT Chattanooga
3 TCAT Crossville
4 TCAT Crump
5 TCAT Dickson
6 TCAT Elizabethton
7 TCAT Harriman
8 TCAT Hartsville
9 TCAT Hohenwald
10 TCAT Jacksboro
11 TCAT Jackson
12 TCAT Knoxville
13 TCAT Livingston
14 TCAT McKenzie
15 TCAT McMinnville
16 TCAT Memphis
17 TCAT Morristown
18 TCAT Murfreesboro
19 TCAT Nashville
20 TCAT Northwest
21 TCAT Oneida
22 TCAT Paris
23 TCAT Pulaski
24 TCAT Shelbyville

COMMUNITY COLLEGES

25 Chattanooga State Community College
26 Cleveland State Community College
27 Columbia State Community College
28 Dyersburg State Community College
29 Jackson State Community College
30 Motlow State Community College
31 Nashville State Community College
32 Northeast State Community College
33 Pellissippi State Community College
34 Roane State Community College
35 Southwest Tennessee Community College
36 Volunteer State Community College
37 Walters State Community College

FOUR-YEAR PUBLIC UNIVERSITIES

38 Austin Peay State University
39 East Tennessee State University
40 Middle Tennessee State University
41 Tennessee State University
42 Tennessee Tech University
43 University of Memphis
44 University of Tennessee Chattanooga
45 University of Tennessee Health Science Center
46 University of Tennessee Knoxville
47 University of Tennessee Martin
48 University of Tennessee Southern

Source: Economic Research Service (ERS), U.S. Department of Agriculture (USDA). Food Access Research Atlas.

Notes: The Food Access Research Atlas maps food access indicators for census tracts using ½-mile and 1-mile distances to the nearest supermarket for urban areas and 10-miles and 20-miles to the nearest supermarket for rural areas. The map includes updated estimates using 2019 data.

TCAT Northwest captures TCAT Newbern, TCAT Covington, and TCAT Ripley. TCAT Jackson includes TCAT Whiteville.

When asked how COVID-19 impacted campus-based food assistance programs, the most common responses included modified operations and schedules (72%, n = 21), increased need for programming (66%, n = 19), and temporary pause of services (35%, n = 10) **(See Table 1)**. One institution provided additional comment citing that, "there was an increase of orders being delivered on and off campus. For a period of time students were not allowed to work and the pantry relied on staff to manage." Only 14% (n = 4) indicated that services completely closed, which suggests that most institutions adapted and continued to provide resources to their students.

Table 1: Impact of COVID-19 on Food Insecurity Program Administration

Modified Operations and Schedules	72.4%
Increased Need for Programming	65.5%
Temporary Pause of Services	34.5%
Opening of New Services	31.0%
Closure of Services	13.8%
Other	6.9%
None of the Above	3.4%

Note: Respondents were asked to select all that apply

Respondents were asked if their institutions partner with local anti-hunger organizations to provide food insecurity relief programming and resources for their students and with which organizations. Nearly 60% (n = 17) of respondents indicated that they partnered with an external organization (such as the Greater Chattanooga Area Food Bank or Second Harvest Food Bank).

How are Tennessee Institutions Addressing Food Insecurity?

Figure 3: Food Insecurity as an Institutional Priority

"In the past year, has your institution taken explicit action to address food insecurity or basic needs on your campus?"

3.4%

34.5%

62.1%
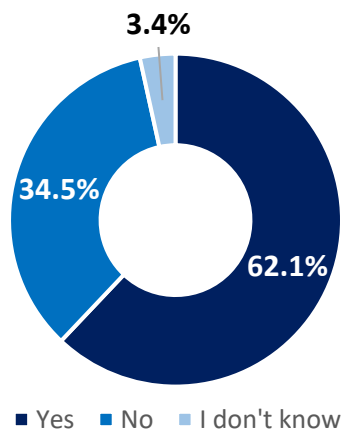
■ Yes ■ No ■ I don't know

Note: Yes (n=18), No (n=10), I don't know (n=1)

Administrators were asked, "In the past year, has your institution taken explicit action to address food insecurity or basic needs on your campus?" For this question, "explicit action" was operationalized as the establishment of a food insecurity task force, food insecurity strategic action plan, or institutional

priority designation. Of all responses, 62% (n = 18) selected "yes." When asked if institutions offer student food insecurity relief programs, all campus administrators indicated that their institutions either actively offer or were preparing to offer food insecurity relief programs.

Administrators indicated whether items on a list of services were available through their institution, through an external or third-party organization, through both the institution and an external organization, or through neither their institution nor an external partnership **(Table 2)**. Overall, the most the common initiatives provided by campuses are food pantries (n = 29), access to Emergency Grant Funding (n = 27), and mental health services (n = 26). Of services available directly through institutions, the most common services provided include food pantries (69%, n = 20), information on school web directories or content (87%, n = 20), and non-tuition dollar grants/scholarships (64%, n = 18).

The most common services provided by external organizations include SNAP enrollment services (45%, n = 13), free/reduced housing (37%, n = 10), and subsidized public transportation (e.g., bus passes; 31%, n = 9). Mental health services (35%, n = 10), access to emergency funding (31%, n = 9) and food pantries (24%, n = 7) are commonly provided by both institutions and external organizations. Anti-hunger student organizations (50%, n = 13) and meal swipe donation programs (48%, n = 13) are among the programs frequently identified as unavailable through institutions or an external organization. See **Appendix B** for services available through institutions at the time of the survey.

Table 2: Most Common Food Insecurity Services at TN Institutions

Locus of Services	Type of Services
Overall Services Provided	Food Pantries (n = 29)
	Access to Emergency Grant Funding (n = 27)
	Mental health services (n = 26)
Provided by the Institution	Food Pantries (n = 20)
	Information on Services on Website (n = 20)
	Non-tuition dollar grants/scholarships (n = 18)
Provided by an External Organization	SNAP enrollment services (n = 13)
	Subsidized public transportation (n = 9)

Note: Respondents were asked to select all that apply

At Tennessee institutions, only 10 administrators noted that faculty and staff receive training on student basic needs, including food insecurity.

At Tennessee institutions, students are made aware of food insecurity resources in a variety of ways, most commonly utilizing email (76%, n = 22) and orientation (72%, n = 21) **(Figure 6)**. Additional methods cited from an open-ended question include word of mouth, staff referrals, and institutional web pages.

Figure 4: Food Insecurity Programming Outreach

"How are students made aware of food insecurity resources?"

Category	Percentage
Email	75.9%
Orientation	72.4%
Social Media	69.0%
Centralized office services	58.6%
Non-electronic outreach (tabling, flyers and pamphlets)	55.2%
Information is included in class syllabi	34.5%
Other	27.6%
Text Messaging	20.7%
There is no active outreach	3.4%
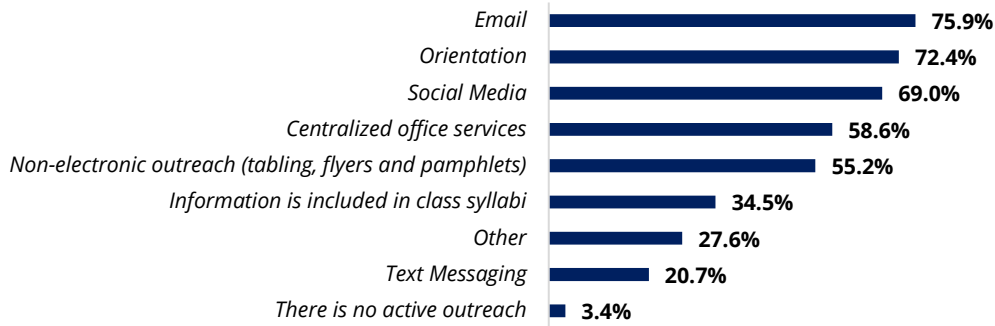
Note: Respondents were asked to select all that apply.

To discern what existing food insecurity research has been conducted at Tennessee institutions, campus administrators were asked, "Has your institution, or any external researchers, ever conducted food insecurity research on your campus?" Of all responses, 55.2% selected "yes" (n = 16), 28% selected "no" (n = 8), and 17% (n = 5) selected "I don't know."

Some respondents indicated that allocated budgets were provided for food insecurity initiatives at their institutions (46%, n = 12). More than half, 52% (n = 15) of respondents, however, stated that there was no allocated budget. Through an open-ended question, respondents noted that common funding sources include grants, temporary and emergency funds, donations, funds from external organizations and fundraising, and foundation gifts.

Table 3 describes additional resources identified by survey respondents that could help alleviate barriers to addressing food insecurity at Tennessee institutions. Common responses included allocated funds (79%, n = 23), committed space on campus (55%, n = 16), and increased education about food insecurity among the campus and greater community (31%, n = 9).

Table 3: Additional Resources to Alleviate Barriers to Addressing Food Insecurity

Allocated funds	79.3%
Committed space on campus	55.2%
Increased education about food insecurity among the campus and greater community	31.0%
Increased community support	27.6%
Increased institutional buy-in	20.7%
Other	13.8%

Note: Respondents were asked to select all that apply

Identifying Students Experiencing Food Insecurity

At Tennessee institutions, students experiencing food insecurity are commonly identified by campus administrators via referral from counseling and psychological services (17%, n = 5), contact with faculty, staff or administrators (17%, n = 5), or self-identification (17%, n = 5), suggesting that students are most commonly identified via one-on-one and confidential interactions **(Figure 5)**.

Figure 5: Methods to Identify Food Insecure Students

"How Does Your Campus Identify Students Experiencing Food Insecurity?"

Referral from Counseling and Psychological Services	17.2%
Contact with faculty	17.2%
Contact with staff or administrators	17.2%
Students self-identify	17.2%
Outreach or special programs that provide assistance	13.8%
Existing food pantry data collection	13.8%
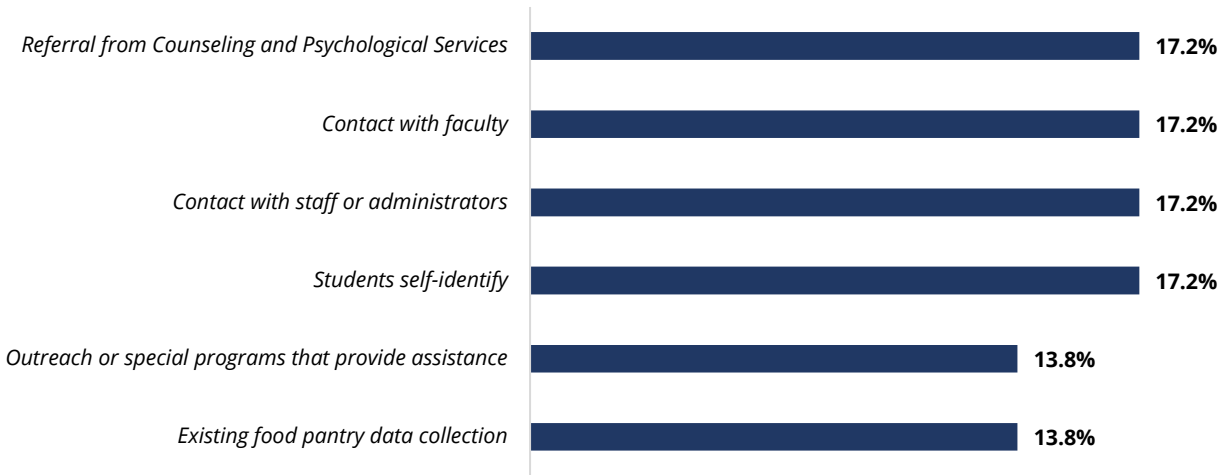
Note: Respondents were asked to select all that apply.

Over half (66%, n = 19) of responding institutions currently collect student data on food insecurity. Data collection methods varied across institutions, with most collecting data via usage frequency of food pantry or other on-campus basic needs services (55%, n = 16) and enrollment information such as student level and major (41%, n = 12). Few institutions collect data on SNAP eligibility information (10%, n = 3) or other enrollment in other federal assistance programs (e.g., TANF, WIC; 7%, n = 2).

To help expand current data collection on food insecurity at institutions, 66% (n = 19) of respondents indicated a need for additional staff dedicated to data collection and analysis with 48% (n = 14) indicating a need for better software to collect and analyze the data.

Table 4: Additional Resources to Expand Current Data Collection on Food Insecurity

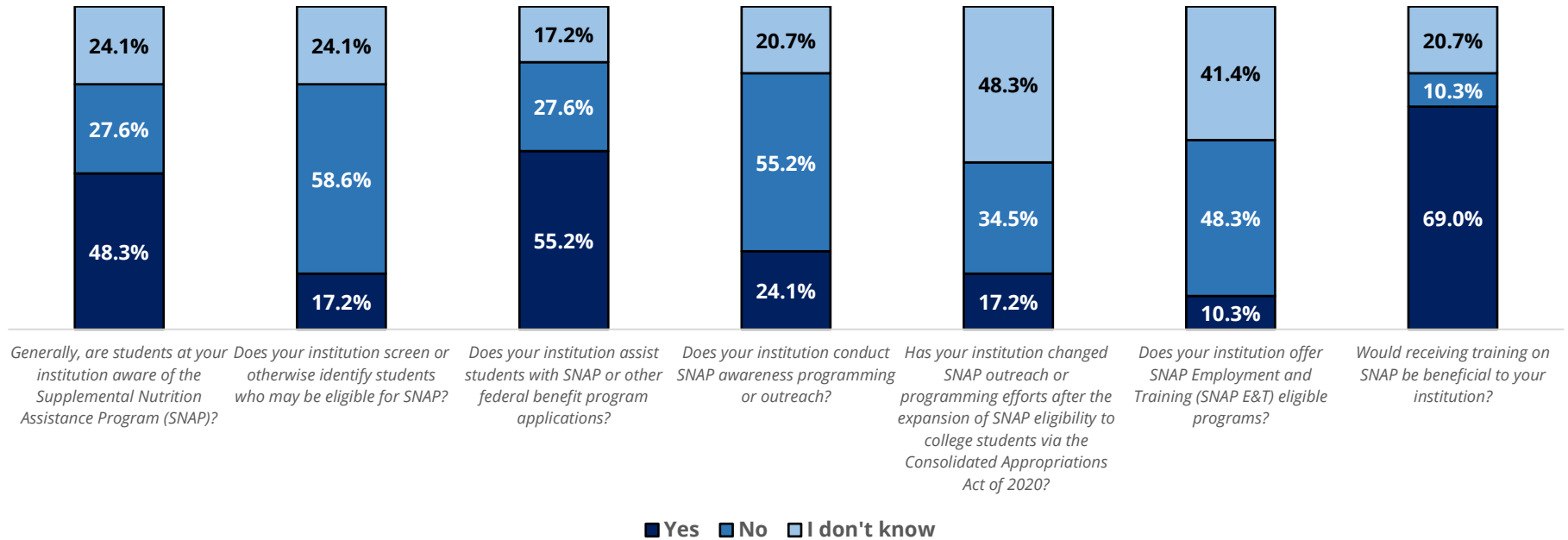|	
Additional staff dedicated to data collection/analysis	65.5%
Better software for data collection/analysis	48.3%
Capacity to determine which holistic metrics to use	31.0%
Cross-institutional collaboration	31.0%
Capacity to incorporate and analyze new metrics	27.6%
Buy-in among institutional leadership	27.6%
Buy-in among faculty / staff	24.1%
Employee skills and / or professional development opportunities in key areas (i.e., data collection, analysis, etc.)	24.1%
Other	3.4%

Note: Respondents were asked to select all that apply.

SNAP Access and Awareness

Most administrators indicated that their institutions assist students with SNAP or other federal benefit program applications (55%, n = 16); however, when asked if students are generally aware of SNAP, 48% (n = 14) of respondents, just under half, indicated "yes" **(Figure 6)**.

Figure 6: SNAP Access and Awareness at Tennessee Post-Secondary Institutions

"Do TN institutions of higher education assist students with or make them aware of Supplemental Nutrition Assistance Program (SNAP) eligibility?"

24.1%	24.1%	17.2%	20.7%	48.3%	41.4%	20.7%
27.6%	58.6%	27.6%	55.2%	34.5%	48.3%	10.3%
48.3%	17.2%	55.2%	24.1%	17.2%	10.3%	69.0%

Generally, are students at your institution aware of the Supplemental Nutrition Assistance Program (SNAP)? | Does your institution screen or otherwise identify students who may be eligible for SNAP? | Does your institution assist students with SNAP or other federal benefit program applications? | Does your institution conduct SNAP awareness programming or outreach? | Has your institution changed SNAP outreach or programming efforts after the expansion of SNAP eligibility to college students via the Consolidated Appropriations Act of 2020? | Does your institution offer SNAP Employment and Training (SNAP E&T) eligible programs? | Would receiving training on SNAP be beneficial to your institution?

■ Yes ■ No □ I don't know

Additionally, when asked if students are screened or otherwise identified for SNAP, 59% (n = 17) indicated they do not and only 24% (n = 7) conduct SNAP awareness programming and outreach. Just as students are not very aware of SNAP and the program resources available to them, institutions are not actively screening or conducting outreach. Institutions continue to put efforts in place to assist students with applications when cases arise.

Regarding pandemic-related effects, only 17% (n = 5) of respondents indicated a change in their SNAP outreach or programming efforts after the expansion of SNAP eligibility to college students via the Consolidated Appropriations Act of 2020. Few respondents indicated that their institutions offer SNAP Employment and Training (SNAP E&T) at their institution with only 10% (n = 3) offering programs on their campuses. Importantly, most respondents (69%, n = 20) indicated that additional training on SNAP would be beneficial to their institution. Multiple comments regarding SNAP were raised during the food insecurity convening, including a statewide notification system for SNAP eligibility, statewide expansion of SNAP programming, and permanent expansion of SNAP eligibility to college students.

Summary

Food insecurity is a concern among institutions of higher education in Tennessee. Among the responses analyzed from the campus administrator food insecurity survey, there are five key takeaways:

1. Estimated rates of food insecurity in Tennessee higher education are similar to nationally estimated rates.
2. The COVID-19 pandemic affected or changed institutional operations for food insecurity programming; however, despite the pandemic, most institutions continued to provide food insecurity resources to their students.
3. Tennessee public institutions are actively working to address food insecurity and utilize common food insecurity strategies including food pantries, completion grants, and access to emergency funding.
4. Allocated funds and increased education about food insecurity across the campus and greater community are cited as the most needed resources to alleviate food insecurity.
5. SNAP services and assistance with applications are widely offered, though few institutions report that students are aware of SNAP or that they conduct SNAP outreach or eligibility screening.

Section III:
Recommendations and Conclusion

Recommendations and Conclusion

This section outlines THEC's four recommendations for policy and research to address food insecurity in higher education: ***Improving communication*** on existing resources; ***dedicating resources*** to support student basic needs security; exploring the adoption of ***the Hunger Free Campus bill*** in Tennessee; and ***supporting research*** and evaluation.

Recommendations outlined in this section are informed by survey results presented in the previous section and from insights shared with THEC during a statewide convening of stakeholders on food insecurity in higher education.[30]

Improve Communication on and Understanding of Existing Resources

The most readily actionable recommendation to address food insecurity in Tennessee higher education is to improve communication and promote information sharing among practitioners, researchers, and policymakers. This can be actualized by establishing recurring convenings of stakeholders, providing trainings on federal and state resources to campus personnel, and promoting interagency partnerships.

Establishing recurring convenings

While many exceptional resources dedicated to food security or anti-hunger exist or operate across the state—such as the Tennessee Justice Center, Student Basic Needs Coalition, and Second Harvest Food Bank—Tennessee lacks a unifying body that brings together stakeholders on a regular basis to share best practices and to connect resources where they are needed most in postsecondary education. THEC is well positioned to fill this gap by creating an environment and facilitating a professional network to share ideas on intervention strategies (such as those highlighted in **Appendix C**) and to form partnerships.

By building from THEC's convening in November 2022, THEC could establish recurring gatherings—virtual or in person—and build a professional network of stakeholders focused on reducing food insecurity on college campuses. To ensure the longevity and to maximize the effectiveness of such convenings, THEC will need to dedicate both staff hours and funding to coordinate efforts and to create public-facing resources.

Providing trainings on federal and state resources to campus personnel

With over two-thirds of campus administrators surveyed (**Figure 6** in the previous section) agreeing that training on SNAP would be beneficial to their institution, an actionable recommendation to support food insecurity initiatives across the state is to provide training opportunities on federal and state programs and resources. Such trainings may be in conjunction with or separately from the previously recommended regular convenings of stakeholders. Such trainings can spotlight program eligibility requirements, as well as existing services that help connect students to services that they may need or qualify for (such as the Tennessee Reconnect Quick Screener). THEC's webpage on food

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[30] A recording and complete summary of the convening discussion are available at https://www.tn.gov/thec/learn-about/task-forces/food-insecurity.html.

insecurity in higher education can serve as an easily accessible repository of resources and training materials for campus personnel and students alike.

Promoting interagency partnerships

Extending from the recommendations to convene stakeholders and to provide training opportunities, another actionable recommendation is to form interagency partnerships that address food insecurity but also promote successful student outcomes. A prime example is the SNAP Employment and Training (E&T) program, which helps SNAP participants gain skills, training, or work experience to improve their employability and increase self-sufficiency. SNAP E&T programming includes a participant assessment, employment and training activities, and supportive services.[31] In Tennessee, SNAP E&T is a combined effort between the USDA, Tennessee Department of Human Services (TDHS), Tennessee Department of Labor and Workforce Development (TDLWD), and community partners.

For eligible students, SNAP E&T provides for a variety of program costs, including administrative, direct program costs, and supportive services for participants such as tuition and training services, textbooks, uniforms, tools & supplies, transportation assistance, childcare, training for successful job search and job retention services.[32]

There are few SNAP E&T third-party partnerships between TDHS, TDLWD and Tennessee institutions of higher education. An interagency partnership could be formed in combination with a postsecondary system to pilot a SNAP E&T third-party partnership program. Similar pilot programs in other states—which were aimed at introducing and testing innovative strategies to increase employment and reduce dependency on SNAP—have exhibited promising results.[33] To provide the level of support and case management required for SNAP E&T participants and to ensure existing resources at institutions are not exhausted, additional SNAP E&T case managers would be needed to alleviate basic needs insecurities such as transportation, childcare, or training, work supplies, housing assistance, or mental health services.

Dedicate Resources to Support Student Basic Needs Security

Because T.C.A. 49-7-214 did not establish or allocate resources to the administration of intervention programs, consideration is needed toward how campuses can be supported in establishing, offering, expanding, and improving food insecurity interventions. Over three-quarters of campus administrators surveyed indicated that allocated funds would help alleviate barriers to addressing food insecurity on their campuses. Commonly reported by campus administrators, most support for food insecurity interventions comes from in-kind donations, gifts from foundations, and fundraising efforts. Institutions should conduct an assessment to determine the financial needs of current interventions and whether institutional budgets can accommodate the effective administration of those initiatives. Additional consideration may be given to state allocations to support best practices in food insecurity interventions. Emerging research from Southern New Hampshire University

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[31] United States Department of Agriculture (USDA). What is SNAP E&T? SNAP to Skills. https://snaptoskills.fns.usda.gov/about-snap-skills/what-is-snap-et (accessed May 3, 2023).

[32] https://www.tn.gov/workforce/jobs-and-education/services-by-group/services-by-group-redirect/snapet.html

[33] In 2015, the USDA awarded pilot grants to 10 states to administer SNAP E&T. Across all pilot grants, thousands of individuals accessed services through the community colleges during a three-year period. In Mississippi, a one stop model is attributed to the almost doubled rate of participant retention, participation and activity completion, and training certifications compared to those who were not offered pilot services.

established a direct linkage between food insecurity relief programming and educational outcomes.[34] Dedicating support to effective intervention programs may help students stay enrolled and progress toward earning a credential; therefore, food insecurity (and other basic needs) intervention programs should receive comparative funding and staffing in alignment with other student success initiatives.

Explore the Adoption of a Tennessee Hunger Free Campus Bill

Several states across the nation have adopted legislation to support food insecurity interventions on college campuses. At the time of this report, Louisiana, California, New Jersey, Maryland, Minnesota, and Pennsylvania have adopted a version of the *Hunger Free Campus* bill,[35] and several other states have introduced similar legislation. Tennessee should explore the adoption of a Hunger Free Campus bill to designate institutions as *Hunger Free Campuses* and to allocate funds to public colleges addressing student hunger on campus. The bill template contains three components: the establishment of food pantries at institutions through on-campus programming or partnerships with local food banks; the enablement of colleges to begin a Swipe Out Hunger program, which allows students to donate unused meal swipes to their peers experiencing food insecurity; and the creation of SNAP enrollment opportunities on campuses designating an individual at the institution to coordinate access to accurate information regarding the SNAP application and program.

Each state to adopt the bill has customized it to meet the needs of their students and state. For example, in New Jersey institutions must meet specified criteria—including establishing a taskforce, designating a staff coordinator, providing at least one food pantry, surveying students annually, providing options to use SNAP benefits on campus, and others—to qualify as a *Hunger Free Campus*.

In Tennessee, almost all public colleges and universities are addressing food insecurity in some form, but every institution does so differently. Implementing a Tennessee Hunger Free Campus Bill can establish formal, cohesive institutional activities and resources to support food insecure students. Tennessee's hunger free campus designation criterion should be determined through a collaborative process, incorporating institutional perspectives and stakeholder expertise.

Related to the previous recommendation to dedicate resources to support student basic needs security, a Tennessee Hunger Free Campus bill could also direct funds to Tennessee public colleges and universities to create and expand food insecurity programming and initiatives on campus. State allocations to hunger free campus bills have differed across states.[36] If a bill includes financial support, institutional allocations should consider institution size, student population, and student demographics. In addition to the programmatic, symbolic, and financial considerations involved in being a *Hunger Free Campus*, the bill could also leverage existing programs by addressing awareness issues with SNAP.

Support Research and Evaluation

At the time of this report, there is no single, definitive data source on food insecurity across Tennessee higher education institutions. While various sources provide insight into food insecurity in higher education—such as NPSAS, the Community College Survey of Student Engagement's *Students in Need*

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[34] The study of how the administration of Higher Education Emergency Relief Funds (HEERF) related to student persistence revealed that HEERF recipients were 15.5% more likely to remain enrolled when compared to the control group (students who did not receive funding but shared similar characteristics to funded students). https://www.chepp.org/wp-content/uploads/2023/10/Basic-Needs-II_10_02_2023.pdf

[35] https://www.swipehunger.org/hungerfree/

[36] Hunger Free Campus fiscal allocations have varied across states. For example: Pennsylvania, $1,000,000; Maryland, $150,000; New Jersey, $1,500,000; California, $7,500,000; Minnesota, $307,000.

itemset, and the Trellis Student Financial Wellness Survey—determining how many students experience food insecurity at any point in their postsecondary education is not yet quantifiable across all Tennessee institutions. To understand how pervasive food insecurity is across Tennessee higher education, Tennessee policymakers should invest in the timely generation of knowledge about the pervasiveness of food insecurity on college campuses.

One solution is for THEC to create and administer—in partnership with a research-intensive university or other external research center—a survey that would generate a reliable and representative estimate of food insecurity among Tennessee students. Developing a survey instrument would be a multi-year effort involving several cost considerations—such as survey design and validation, sampling, Institutional Review Board approvals, administration, analysis, and reporting.

Another solution is to incentivize institutions to participate in existing national surveys and to share results with THEC. For example, the Community College Survey of Student Engagement (CCSSE) included an optional *Students in Need* itemset to capture data on student food and housing insecurity beginning with the 2021 administration. Eight Tennessee community colleges participated in the optional *Students in Need* itemset in 2021 and one in the 2022 administration. Relative to food insecurity specifically, the combined 2021 and 2022 CCSSE results indicated that 24% of Tennessee respondents *often* or *sometimes* depleted their supply of food and were not able to afford more (compared to 30% of all respondents nationwide), with around 27% of Tennessee respondents *often* or *sometimes* not able to afford to eat balanced meals (compared to 31% of all respondents nationwide).[37]

Outside of primary data collection and incentivizing institutions to participate in existing research efforts, another solution to generating insight into food insecurity across Tennessee higher education is to support independent researchers via a competitive Request for Proposals (RFP) for THEC to coordinate, not dissimilar from research and information generated through RFPs for the Tennessee Veteran Reconnect Grant.[38]

Conclusion

THEC is committed to addressing barriers to higher education enrollment and on-time completion. This report summarized the relevant literature about food insecurity in higher education; discussed the findings of a statewide survey of campus administrators; and presented a slate of recommendations to improve practice, inform policy, and to advance research. Because food insecurity may be acute (situational) or chronic (lifelong) for students and because students may not make use of program eligibility or campus-based resources, there is no definitive answer to how many students in Tennessee higher education experience food insecurity. While all institutions of higher education take steps to mitigate food insecurity, efforts may be compartmentalized within institutional divisions and are not uniformly employed across the state. THEC will continue to collaborate with Tennessee institutions and food insecurity stakeholders to learn more about student experiences and the mechanisms used to address food insecurity.

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[37] The data were weighted to account for both full-time and female students being more likely complete online surveys than part-timers and men.
[38] https://www.tn.gov/thec/for-institutions/grant-programs-for-institutions/veteran-reconnect-grant.html

Appendix A

Campus Administrator Food Insecurity Survey

1. How long have you worked with food insecurity initiatives on your campus?
    a. 0-2 Years
    b. 3-5 Years
    c. 6-8 Years
    d. 8+ Years
2. How does your institution define food insecurity experienced by students? If your institution has and uses a specific definition of food insecurity, please note it in the space below. If your institution does not have a specific definition of food insecurity, please describe how you or your staff would define food insecurity in the space below.
    a. _____
3. Relative to any other administrative duties and responsibilities you have in your current position, how much of your time (on a scale of 0% to 100%) is dedicated to food-insecurity initiatives on campus?
    a. Sliding scale 0%-100%
4. In the past year, has your institution taken explicit action to address food insecurity or basic needs on your campus? (E.g., establishment of a food insecurity task force, food insecurity strategic action plan, institutional priority designation).
    a. Yes
    b. No
    c. I don't know
5. Does your institution currently collect student data on food insecurity?
    a. Yes
    b. No
    c. I don't know
6. What data are collected? (Select all that apply).
    a. Enrollment information (e.g., student level, major)
    b. Demographic information (e.g., gender, race/ethnicity)
    c. Academic information (e.g., grade point average)
    d. Usage frequency of food pantry or other on-campus basic needs services
    e. Supplemental Nutrition Assistance Program (SNAP) eligibility
    f. Enrollment in other federal assistance programs (ex. TANF, WIC)
    g. Usage of centralized office/services use (e.g., single- or one-stop offices)
    h. Other _____
7. Does your institution identify food-insecure students?
    a. Yes
    b. No
    c. I don't know
8. How does your campus identify students experiencing food insecurity? (Select all that apply).
    a. Financial Aid Applications (e.g., scholarships, grants)
    b. Referral from Counseling and Psychological Services
    c. Outreach or special programs that provide assistance

      d. Contact with faculty

      e. Contact with staff or administrators

      f. Students self-identify

      g. Existing food pantry data collection

      h. I am not certain

      i. Other _____

9. Are students referred to you or your department if they are identified as experiencing food insecurity?

      a. Yes

      b. No

      c. I don't know

10. In your opinion, what percentage of students experience food insecurity at your institution? If a precise value is not known, please provide an estimate.

      a. _____

11. Has your institution, or any external researchers, ever conducted food insecurity research on your campus?

      a. Yes

      b. No

      c. I don't know

12. Please describe the research conducted.

      a. _____

13. What additional resources could help expand current data collection on food insecurity at your institution? (Select all that apply).

      a. Additional staff dedicated to data collection/analysis

      b. Better software for data collection/analysis

      c. Capacity to incorporate and analyze new metrics

      d. Capacity to determine which holistic metrics to use

      e. Employee skills and / or professional development opportunities in key areas (i.e., data collection, analysis, etc.)

      f. Buy-in among faculty / staff

      g. Buy-in among institutional leadership

      h. Cross-institutional collaboration

      i. Other _____

14. What additional resources could help alleviate barriers to addressing food insecurity at your institution? (Select all that apply).

      a. Allocated funds

      b. Committed space on campus

      c. Increased education about food insecurity among the campus and greater community

      d. Increased community support

      e. Increased institutional buy-in

      f. Other _____

15. Is your institution's main campus located within a food desert? Food desert is defined as at least 500 people or 33 percent of the population located more than 1 mile (urban) or 10 miles (rural) from the nearest supermarket or large grocery store.
    a. Yes
    b. No
    c. I don't know
16. What food resources are available around your institution's main campus? Please refer to the following definitions when considering your response (Select all that apply). Urban Institutions: Available food resources within 1 mile of the institution. Rural Institutions: Available food resources within 10 miles of the institution.
    a. Supermarket / Grocery Store (Having two full services such as a butcher, deli and/or bakery, 20 or more fruits and vegetables available, fresh meats, milk, and produce section available)
    b. Neighborhood/mom-and-pop grocery (Small, independent business usually owned by local members of the community, may have a selection of fresh produce, a local butcher or bakery)
    c. Convenience store (Retail store that carries a limited selection of basic items, such as packaged foods and drugstore items, and is open long hours for the convenience of shoppers)
    d. Non-profit or community food pantry (Non-profit organization that collects and distributes food)
    e. Wholesale Supermarket (Retail store where products can be bought in bulk)
    f. Other _____
17. Does your institution have off-site campuses (e.g., branch campus locations) where students are exclusively enrolled?
    a. Yes
    b. No
    c. I don't know
18. In general, what food resources are available around your off-site campuses (e.g., branch campus locations)? Please refer to the following definitions when considering your response (Select all that apply). Urban Institutions: Available food resources within 1 mile of the institution. Rural Institutions: Available food resources within 10 miles of the institution.
    a. Supermarket / Grocery Store (Having two full services such as a butcher, deli and/or bakery, 20 or more fruits and vegetables available, fresh meats, milk, and produce section available)
    b. Neighborhood/mom-and-pop grocery (Small, independent business usually owned by local members of the community, may have a selection of fresh produce, a local butcher or bakery)
    c. Convenience store (Retail store that carries a limited selection of basic items, such as packaged foods and drugstore items, and is open long hours for the convenience of shoppers)
    d. Non-profit or community food pantry (Non-profit organization that collects and distributes food)
    e. Wholesale Supermarket (Retail store where products can be bought in bulk)

f. Other _____

19. Does your institution offer student food-insecurity relief programs (E.g., food pantry, emergency aid grants) on campus?
    a. Yes
    b. No
    c. I don't know
20. Does your institution partner with an external organization(s) to provide food insecurity relief programs to students at your institution?
    a. Yes
    b. No
    c. I don't know
21. Please list the organization(s) name and food insecurity relief program provided.
    a. _____
22. Which of the following services/programs exist for students enrolled at your institution? Please indicate if services are made available through the institution, external organization(s), both or neither.

	Available through my institution	Available through an external organization (i.e., not my institution)	Available through both my institution and an external organization	Not available through either my institution or an external organization	I don't know
Food Pantry	❑	❑	❑	❑	❑
Community garden	❑	❑	❑	❑	❑
On-campus EBT accessibility (Electronic Benefits Transfer (EBT) is an electronic system that allows a SNAP participant to pay for food using SNAP benefits).	❑	❑	❑	❑	❑
Meal swipe donation program	❑	❑	❑	❑	❑
Cooking, nutrition, and budgeting for and not for credit classes	❑	❑	❑	❑	❑
Free/Reduced housing	❑	❑	❑	❑	❑
Access to emergency funding	❑	❑	❑	❑	❑
Non-tuition dollar grants/scholarships	❑	❑	❑	❑	❑
Subsidized public transportation (ex. Bus passes)	❑	❑	❑	❑	❑
Mental health services	❑	❑	❑	❑	❑
SNAP enrollment services	❑	❑	❑	❑	❑
Centralized services/ office for benefits and assistance (ex. Single Stop)	❑	❑	❑	❑	❑
Dedicated benefits coordinator	❑	❑	❑	❑	❑
First-year workshops/ seminars	❑	❑	❑	❑	❑

Anti-hunger student organizations	❏	❏	❏	❏	❏
Campus educational programs to increase food insecurity awareness	❏	❏	❏	❏	❏
Information about food assistance on school website	❏	❏	❏	❏	❏

23. Are there services available to students not listed in the previous question? If so, please describe.
    a. _____
24. Does your institution provide faculty and staff training on basic needs, including food insecurity?
    a. Yes
    b. No
    c. I don't know
25. How are students made aware of food insecurity resources? (Select all that apply).
    a. Email
    b. Text messaging
    c. Information is included in class syllabi
    d. Orientation
    e. Centralized office services (e.g., single-stop or one-stop offices)
    f. Non-electronic outreach (tabling, flyers, and pamphlets)
    g. Social media
    h. Other _____
    i. There is no active outreach to students
26. Is there an allocated budget for food insecurity programs on your campus?
    a. Yes
    b. No
    c. I don't know
27. If there is not an allocated budget, how are food insecurity programs funded?
    a. _____
28. Does your institution evaluate the impact of any of the food insecurity programs on your campus?
    a. Yes
    b. No
    c. I don't know
29. Please describe how your institution evaluates the impact of food insecurity programs on your campus.
    a. _____
30. In which of the following ways did COVID-19 affect administration of food insecurity programs at your institution? (Select all that apply).
    a. Increased need for programming
    b. Temporary pause of services
    c. Modified operations and schedules
    d. Closure of services

e. Opening of new services

f. Other _____

g. None of the above

31. Generally, are students at your institution aware of the Supplemental Nutrition Assistance Program (SNAP)?

   a. Yes

   b. No

   c. I don't know

32. Does your institution screen or otherwise identify students who may be eligible for SNAP?

   a. Yes

   b. No

   c. I don't know

33. Does your institution assist students with SNAP or other federal benefit program applications?

   a. Yes

   b. No

   c. I don't know

34. Does your institution conduct SNAP awareness programming or outreach?

   a. Yes

   b. No

   c. I don't know

35. Has your institution changed SNAP outreach or programming efforts after the expansion of SNAP eligibility to college students via the Coronavirus Aid, Relief, and Economic Security (CARES) Act of 2020?

   a. Yes

   b. No

   c. I don't know

36. Does your institution offer SNAP Employment and Training (SNAP E&T) eligible programs?

   a. Yes

   b. No

   c. I don't know

37. Would receiving training on SNAP be beneficial to your institution?

   a. Yes

   b. No

   c. I don't know

Appendix B

Food Insecurity Services/Programs Available at Institutions

"Which of the following services/programs exist for students enrolled at your institution? Please indicate if services are made available through the institution, external organization(s), both or neither."

TBR Community Colleges

Chattanooga State Community College

Available through my institution	Available through an external organization (i.e., not my institution)	Available through both my institution and an external organization
Information about food assistance on school website		*SNAP enrollment services*
Campus educational programs to increase food insecurity awareness		
First-year workshops/ seminars		
Dedicated benefits coordinator		
Mental health services		
Subsidized public transportation (ex. Bus passes)		
Non-tuition dollar grants/scholarships		
Access to emergency funding		
Cooking, nutrition, and budgeting for and not for credit classes		
Community garden		
Food Pantry		

Cleveland State Community College

Available through my institution	Available through an external organization (i.e., not my institution)	Available through both my institution and an external organization
Food Pantry	*Free/Reduced housing*	
Access to emergency funding	*Subsidized public transportation (ex. Bus passes)*	
Non-tuition dollar grants/scholarships	*SNAP enrollment services*	
Mental health services	*Centralized services/ office for benefits and assistance (ex. Single Stop)*	
First-year workshops/ seminars	*Dedicated benefits coordinator*	
Information about food assistance on school website		

Other Comments: Free breakfast in the bookstore for students, and free lunch at the Baptist Campus Ministry across the street from campus.

Columbia State Community College

Available through my institution	Available through an external organization (i.e., not my institution)	Available through both my institution and an external organization
First-year workshops/ seminars *SNAP enrollment services* *Mental health services* *Non-tuition dollar grants/scholarships* *Access to emergency funding*	*Subsidized public transportation (ex. Bus passes)* *Food Pantry*	

Dyersburg State Community College

Available through my institution	Available through an external organization (i.e., not my institution)	Available through both my institution and an external organization
Food Pantry *Access to emergency funding* *Non-tuition dollar grants/scholarships* *Mental health services* *First-year workshops/ seminars* *Information about food assistance on school website*	*On-campus EBT accessibility* *SNAP enrollment services* *Centralized services/ office for benefits and assistance (ex. Single Stop)* *Dedicated benefits coordinator*	

Jackson State Community College

Available through my institution	Available through an external organization (i.e., not my institution)	Available through both my institution and an external organization
Food Pantry *Non-tuition dollar grants/scholarships* *First-year workshops/ seminars* *Information about food assistance on school website*	*Community garden* *Subsidized public transportation (ex. Bus passes)* *SNAP enrollment services* *Centralized services/ office for benefits and assistance (ex. Single Stop)* *Dedicated benefits coordinator* *Campus educational programs to increase food insecurity awareness*	*Non-tuition dollar grants/scholarships* *Mental health services*

Motlow State Community College

Available through my institution	Available through an external organization (i.e., not my institution)	Available through both my institution and an external organization
Food Pantry *Access to emergency funding* *Non-tuition dollar grants/scholarships*		*Mental health services*

Nashville State Community College

Available through my institution	Available through an external organization (i.e., not my institution)	Available through both my institution and an external organization
Information about food assistance on school website *Campus educational programs to increase food insecurity awareness* *First-year workshops/ seminars* *Centralized services/ office for benefits and assistance (ex. Single Stop)* *SNAP enrollment services* *Mental health services* *Subsidized public transportation (ex. Bus passes)* *Non-tuition dollar grants/scholarships* *Access to emergency funding* *Food Pantry*		

Northeast State Community College

Available through my institution	Available through an external organization (i.e., not my institution)	Available through both my institution and an external organization
Food Pantry *Community garden* *Subsidized public transportation (ex. Bus passes)* *Mental health services* *Centralized services/ office for benefits and assistance (ex. Single Stop)*	*On-campus EBT accessibility* *SNAP enrollment services*	*Access to emergency funding* *Non-tuition dollar grants/scholarships*

Dedicated benefits coordinator
First-year workshops/ seminars
Campus educational programs to
increase food insecurity awareness
Information about food assistance
on school website

Pellissippi State Community College

Available through my institution	Available through an external organization (i.e., not my institution)	Available through both my institution and an external organization
Information about food assistance on school website	*Free/Reduced housing*	*Anti-hunger student organizations*
Campus educational programs to increase food insecurity awareness	*On-campus EBT accessibility*	*SNAP enrollment services*
Dedicated benefits coordinator		*Mental health services*
Centralized services/ office for benefits and assistance (ex. Single Stop)		*Access to emergency funding*
Subsidized public transportation (ex. Bus passes)		*Food Pantry*
Non-tuition dollar grants/scholarships		
Cooking, nutrition, and budgeting for and not for credit classes		
Community garden		

Roane State Community College

Available through my institution	Available through an external organization (i.e., not my institution)	Available through both my institution and an external organization
Information about food assistance on school website	*Free/Reduced housing*	*Anti-hunger student organizations*
Campus educational programs to increase food insecurity awareness	*On-campus EBT accessibility*	*SNAP enrollment services*
Dedicated benefits coordinator	Subsidized public transportation (ex. Bus passes)	*Mental health services*
Centralized services/ office for benefits and assistance (ex. Single Stop)		*Access to emergency funding*
Non-tuition dollar grants/scholarships		*Food Pantry*

Cooking, nutrition, and budgeting for and not for credit classes		

Southwest Tennessee Community College

Available through my institution	Available through an external organization (i.e., not my institution)	Available through both my institution and an external organization
Information about food assistance on school website	*SNAP enrollment services*	*Mental health services*
Subsidized public transportation (ex. Bus passes)	*Free/Reduced housing*	*Access to emergency funding*
Food Pantry		

Other Comments: Prenatal and Postnatal assistance

Volunteer State Community College

Available through my institution	Available through an external organization (i.e., not my institution)	Available through both my institution and an external organization
Food Pantry	*Cooking, nutrition, and budgeting for and not for credit classes*	
Community garden	*SNAP enrollment services*	
Access to emergency funding	*Dedicated benefits coordinator*	
Non-tuition dollar grants/scholarships	*First-year workshops/ seminars*	
Campus educational programs to increase food insecurity awareness	*Anti-hunger student organizations*	
Information about food assistance on school website		

Walters State Community College

Available through my institution	Available through an external organization (i.e., not my institution)	Available through both my institution and an external organization
First-year workshops/ seminars	*Dedicated benefits coordinator*	*Mental health services*
Food Pantry	*Centralized services/ office for benefits and assistance (ex. Single Stop)*	
	SNAP enrollment services	
	Subsidized public transportation (ex. Bus passes)	
	Access to emergency funding	
	Free/Reduced housing	

Locally Governed Institutions

Austin Peay State University

Available through my institution	Available through an external organization (i.e., not my institution)	Available through both my institution and an external organization
Food Pantry Community garden Meal swipe donation program Cooking, nutrition, and budgeting for and not for credit classes Access to emergency funding Non-tuition dollar grants/scholarships Subsidized public transportation (ex. Bus passes) Centralized services/ office for benefits and assistance (ex. Single Stop) First-year workshops/ seminars Campus educational programs to increase food insecurity awareness Information about food assistance on school website		Mental health services SNAP enrollment services

Other Comments: Students have access to thanksgiving meal boxes that include food items needed for a traditional meal.

East Tennessee State University

Available through my institution	Available through an external organization (i.e., not my institution)	Available through both my institution and an external organization
Campus educational programs to increase food insecurity awareness First-year workshops/ seminars Subsidized public transportation (ex. Bus passes) Non-tuition dollar grants/scholarships Access to emergency funding Cooking, nutrition, and budgeting for and not for credit classes Meal swipe donation program Community garden	Dedicated benefits coordinator SNAP enrollment services On-campus EBT accessibility	Information about food assistance on school website Anti-hunger student organizations Centralized services/ office for benefits and assistance (ex. Single Stop) Mental health services Food Pantry

Other Comments: For housing: ETSU has scholarship and grants available for students that are in need as well as external organizations that can help with housing. For anti-hunger student organizations, referring to Student Government Association.

Middle Tennessee State University

Available through my institution	Available through an external organization (i.e., not my institution)	Available through both my institution and an external organization
Meal swipe donation program	*Free/Reduced housing*	*Information about food assistance on school website*
Food Pantry	*Community garden*	*Campus educational programs to increase food insecurity awareness*
		Anti-hunger student organizations
		First-year workshops/ seminars
		Dedicated benefits coordinator
		Centralized services/ office for benefits and assistance (ex. Single Stop)
		SNAP enrollment services
		Mental health services
		Subsidized public transportation (ex. Bus passes)
		Non-tuition dollar grants/scholarships
		Access to emergency funding
		Cooking, nutrition, and budgeting for and not for credit classes
		On-campus EBT accessibility

Other Comments: Single point of contact for food pantry and community outreach to include pantries, housing, and funding.

Tennessee State University

Available through my institution	Available through an external organization (i.e., not my institution)	Available through both my institution and an external organization
Food Pantry *Cooking, nutrition, and budgeting for and not for credit classes* *Access to emergency funding* *Non-tuition dollar grants/scholarships* *Mental health services* *First-year workshops/ seminars* *Information about food assistance on school website*	*On-campus EBT accessibility*	

Tennessee Tech University

Available through my institution	Available through an external organization (i.e., not my institution)	Available through both my institution and an external organization
Information about food assistance on school website	Dedicated benefits coordinator	Subsidized public transportation (ex. Bus passes)
First-year workshops/ seminars	Centralized services/ office for benefits and assistance (ex. Single Stop)	Access to emergency funding
Mental health services	SNAP enrollment services	Food Pantry
Non-tuition dollar grants/scholarships	Free/Reduced housing	
	Cooking, nutrition, and budgeting for and not for credit classes	
	On-campus EBT accessibility	
	Community garden	

Other Comments: Aside from the Main Campus Food Pantry, we have an auxiliary pantry in the library that is open extended hours for better access. It is also non-perishable foods that someone could eat if they lived in their vehicle.

University of Memphis

Available through my institution	Available through an external organization (i.e., not my institution)	Available through both my institution and an external organization
Community garden	Free/Reduced housing	Food Pantry
Meal swipe donation program	Subsidized public transportation (ex. Bus passes)	Access to emergency funding
Cooking, nutrition, and budgeting for and not for credit classes		Mental health services
Non-tuition dollar grants/scholarships		SNAP enrollment services
Campus educational programs to increase food insecurity awareness		Centralized services/ office for benefits and assistance (ex. Single Stop)
Information about food assistance on school website		Dedicated benefits coordinator
		Anti-hunger student organizations

Other Comments: Parenting and Child supportive Services, Tabling Events for Tiger Swipes, SNAP, and Food Insecurity, E-News outreach to students monthly to increase visibility of SNAP and Tiger Pantry.

University of Tennessee

University of Tennessee – Chattanooga

Available through my institution	Available through an external organization (i.e., not my institution)	Available through both my institution and an external organization
Information about food assistance on school website *First-year workshops/ seminars* *Centralized services/ office for benefits and assistance (ex. Single Stop)* *SNAP enrollment services* *Subsidized public transportation (ex. Bus passes)* *Access to emergency funding* *Cooking, nutrition, and budgeting for and not for credit classes* *Meal swipe donation program* *Food Pantry*	*Campus educational programs to increase food insecurity awareness* *Anti-hunger student organizations* *Non-tuition dollar grants/scholarships*	*Community garden*

University of Tennessee – Knoxville

Available through my institution	Available through an external organization (i.e., not my institution)	Available through both my institution and an external organization
Community garden *On-campus EBT accessibility* *Meal swipe donation program* *Cooking, nutrition, and budgeting for and not for credit classes* *Access to emergency funding* *Non-tuition dollar grants/scholarships* *Mental health services* *Centralized services/ office for benefits and assistance (ex. Single Stop)* *Dedicated benefits coordinator* *First-year workshops/ seminars* *Anti-hunger student organizations* *Campus educational programs to increase food insecurity awareness* *Information about food assistance on school website*	*Free/Reduced housing* *SNAP enrollment services*	*Community garden*

University of Tennessee – Martin

Available through my institution	Available through an external organization (i.e., not my institution)	Available through both my institution and an external organization
Meal swipe donation program *Non-tuition dollar grants/scholarships* *Subsidized public transportation (ex. Bus passes)* *Mental health services* *First-year workshops/ seminars* *Information about food assistance on school website*	*Free/Reduced housing* *SNAP enrollment services*	*Food Pantry* *Access to emergency funding*

University of Tennessee Southern

Available through my institution	Available through an external organization (i.e., not my institution)	Available through both my institution and an external organization
Information about food assistance on school website *First-year workshops/ seminars* *Mental health services* *Non-tuition dollar grants/scholarships* *Access to emergency funding* *Meal swipe donation program* *Food Pantry*		

University of Tennessee Health Science Center

Available through my institution	Available through an external organization (i.e., not my institution)	Available through both my institution and an external organization
Food Pantry *Access to emergency funding* *Mental health services* *Information about food assistance on school website*	*Community garden* *Subsidized public transportation (ex. Bus passes)*	

Appendix C

Examples of Food Insecurity Interventions

Community and Shared Gardens

Community gardens or shared gardening is another method to combat food insecurity. Food pantries may be unable to provide students with fresh fruits and vegetables, however, community gardens can provide a source of fresh produce.

Cooking and Meal Preparation Demonstrations

Many college students may have inadequate cooking skills or lack nutrition literacy.[39] Cooking demonstrations serve as an opportunity for students to learn basic cooking skills, to prepare meals on a budget, and to improve their nutritional education.[40]

Food Pantries

The most common form of food insecurity intervention, food pantries are community- or campus-based initiatives that distribute food and other provisions to those in need.

Mental Health Programming

Access to mental health services in a variety of platforms and environments, such as online or group counseling, in addition to wrap-around services that provide students with tools to eat healthily and to practice financially sound habits are utilized to combat food insecurity.[41]

Centralizing Campus Offices

Single Stop partners with community colleges and other organizations that serve low-income families and implements a one-stop method, which serves as a central on-campus hub where students can find a designated staff member to create a plan to meet the student's basic and educational needs.[42] Single Stop uses technology to provide their partner institutions with a computer software to screen students for eligible public assistance and benefits, a case management tool, expertise in benefits and wraparound services (e.g., tax, legal, and financial counseling), and tools for collecting and analyzing data. In addition to their core services, institution partners often include campus services, such as emergency grant funding and food pantries, as part of their Single Stop office.

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[41] Hagedorn, R. L., Walker, A. E., Wattick, R. A., & Olfert, M. D. (2022). Newly Food-Insecure College Students in Appalachia During the COVID-19 Pandemic. Journal of Nutrition Education and Behavior, 54(3), 202–210. https://doi.org/10.1016/j.jneb.2021.08.010

[42] Crawford, S., & Hindes, N. (2020). The Trampoline of Public Benefits: Using Existing Resources to Fight Food Insecurity. Baltimore: Johns Hopkins University Press.