



Supporting the Lion's Pantry:

Combating Food Insecurity at Penn State University



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EXECUTIVE SUMMARY:

Food insecurity is a persistent issue within the global community, exemplified as the United Nations Sustainable Development Goal #2 of "Zero Hunger." Food insecurity, a lack of sufficient, safe, and nutritious food, is often overlooked at college campuses, and is primarily discussed through the lens of a global development issue. While this is quite true, food insecurity is prevalent among college students with over 11% of US households with a student enrolled in a four year educational institution facing some form of this issue (USDA Fact Sheet, 2015). This number only increases in student populations that are low income, minorities, enrolled in two-year or community college, and those who lack family support systems. At a large university such as Penn State, with over 40,000 students at University Park and over 100,000 students total, the magnitude of this overarching problem is likely to be large. As an educational institution, the success of Penn State is rooted in the educational success and livelihood of its students. Previous research has shown that food insecurity affects not only a students physical well being, but also their mental health and academic success making this issue an issue greatly pertaining to the university.

As a global leader in education and innovation, Penn State has made some strides towards addressing food insecurity, but not nearly enough. Our area of focus, The Lions Pantry at Penn State, is a student run food pantry organization that aims to provide food to all Penn State students that face food insecurity. In order to continue the path towards eradicating food insecurity on and off campus, it is vital that the organizations that focus on combating welfare

issues are as well equipped as possible. Because of this need, we propose a 6-step action plan consisting of both internal recommendations that the Lion's Pantry can work towards and implement, as well as university-supported solutions that can be done to administratively bolster the efforts of the pantry. These recommendations consist of internal demographic data collection, volunteer outreach and logistics improvements, financial management of the pantry endowment, a "produce program" and partnership with Housing and Food Services, the implementation of a Food Recovery Network and dining department, as well as a University-Sanctioned location that is more accessible to students.

After speaking with university representatives, dining staff, and connecting with the Lion's Pantry itself, we found that it would be the most practical and feasible to build off of the existing organization and system already in place here at Penn State, rather than hurdling the difficult barriers within the PSU bureaucracy to installing completely new policies and reformations. It is important for the services that exist already to become as efficient as possible and be supported by both the Penn State administration and community, which is an approach that this policy aims to implement.

This paper details the state of food insecurity on college campuses in our country, a overview of the importance of tackling this issue, as well as each step of the action plan, with proposals for implementation and benefits and barriers to each, as well as the policy alternatives we considered during our project process.

INTRODUCTION

1.1 Current State of Food Security in the U.S. and on College Campuses

Food security, as defined by the United Nations' Committee on World Food Security, indicates that "all people, at all times, have physical, social, and economic access to sufficient, safe, and nutritious food that meets their food preferences and dietary needs for an active and healthy life" ("Food Security"). While global hunger is indeed pervasive across the globe in developing or low income nations, food insecurity manifests itself in every community, often through varying mechanisms that are unique to that community or household. These mechanisms of disadvantage can arise from unemployment and lack of income, information asymmetries regarding access or assistance programs, lack of physical storage or preparation materials, gender, age, and sociocultural dynamics, climate shocks, physical barriers or disability, disease, or homelessness. The root causes of food insecurity tend to lie on the "demand side" of food consumption, that is, physical food shortages are not typically the perpetrators of stunted growth, micronutrient deficiencies, or obesity. Rather, it is the distribution and indirect spatial and economic conditions that underlie most instances of food security. In the United States in both rural and urban centers, in particular, nutritional distribution and economic access to such goods and nutrients create an extreme issue for at least 40 million Americans. Food security tends to be explored, researched, and described in institutions across four pillars of causality; access, utilization, stability, and availability (Barrett, 2010).

Component	Access	Availability	Utilization
Description	Access refers to the ability to obtain food that meets the quality and quantity-based needs of an individual. This ability may arise through sufficient income, prices, social programs in a community, and household dynamics of food distribution.	This refers to the physical presence of food to consume. At the global level, there is not necessarily an availability deficit; unequal distribution and fluctuations in the other components of food security exacerbate availability issues in regions.	Utilization is the ways in which an individual consumes, stores, and prepares food. This incorporates cooking and feeding practices, as well as the nutritional processing of food within the body.
Stability	This refers to the consistency and resiliency of each of these pillars across fluctuations in income, seasonal and temporal changes, employment, household dynamics, etc. Food insecurity may be transient in this way; one may be relatively food secure throughout the year, with the exception of the condition of being in between jobs, and thus lacking income and thus purchasing power on food for that duration of time.		

FIGURE 1. The Four Pillars of Causality for Food Security

Access to food and utilization of food is the crux of combating food security in communities that do not generally experience severe food insecurity, such as countries in extreme poverty or agricultural climate shortages often exemplified in Sub Saharan Africa or conflict-ridden zones in the Middle East. In industrialized nations with metropolitan areas or campus settings such as the U.S, and most specifically, State College in our case study, the issue is frequently rooted in low incomes and measures of minority status. This should not be the case in such innovative and developed communities, given our capabilities for wealth, welfare, and governance as a society. According to a recent report on food security among college populations by the U.S. Government Accountability Office, over 11% of households with a student enrolled in a four

year educational institution experience food insecurity. The implications of this student acquiring more debt by pursuing an education, compounded by the possibility of living on their own with additional expenses, consumption responsibilities, lack of parental guidance or assistance, and the general stress of a college transition and academic lifestyle, this issue may only worsen for the student. Not only are these households suffering from lack of reliable and nutritious food, but students who may have been receiving federal food aid programs such as a free lunch in their elementary school no longer have access to a university-equivalent program, as there are very little federal or state programs like these at the university level, particularly due to the qualification barriers that a college students must hurdle to be eligible for and receive Supplemental Nutrition Assistance Program (SNAP) benefits, as well as a lack of information surrounding these benefits (Food Insecurity, 2018).

Most students are ineligible for SNAP benefits, as it is based on monthly income and requires students to meet threshold requirements such as working at least 20 hours per week or raising a child under the age of six. It is quite difficult to be enrolled as a full time or even part time student with such capacity constraints and thus it is unlikely that many students facing these conditions are able to succeed academically or reach their full potential at high margins across academic performance, physical and mental health, job performance, or financial capabilities. The Government Accountability Office (GAO) has been investigating ways as to make SNAP benefits more accessible to students without such stringent eligibility requirements, however the legal and policy processes that would need to change are substantial. Schools and universities, particularly state-funded institutions should increase their outreach and communications efforts

to better inform students that may be eligible for SNAP benefits or other federal assistance programs.

Supplemental Nutrition Assistance Program (SNAP): Student Eligibility

- → Receive public assistance benefits under a Title IV-A program of the Social Security Act
- → Take part in a State or Federally financed work study program
- → Work at least 20 hours a week
- → Are taking care of a dependent household member under the age of 6
- → Are taking care of a dependent household member over the age of 5 but under 12 AND do not have adequate child care to enable them to attend school and work a minimum of 20 hours, or to take part in a State or federally financed work study program

United States Department of Agriculture, Food and Nutrition Service (https://www.fns.usda.gov/snap/students)

FIGURE 2. Snap Student Eligibility Guidelines

Furthermore, a lack of substantial personal income among college students, particularly at Penn State, creates difficulty in paying for basic needs, such as rent, food, clothing, health costs, and other incidental costs. In State College, housing prices are exceptionally inflated due to high demand and relatively crowded supply, as the large majority of students are required to find off-campus housing due to demand from underclassmen for dormitories. Thus, Bureau housing prices reflect this scarcity and are unjustly high; prices are, on average, 48% higher than the Pennsylvania average and 35% higher than the national average for relative housing costs. (State College Cost of Living) There is a correlation between instances of food insecurity occurring

simultaneously in students who are housing insecure or homeless. According to a 2016 study "Hunger on Campus," of those who responded that they experienced food insecurity, 64% also reported experiencing some form of housing insecurity, of which 15% reported experiencing homelessness. It is important to keep in mind that food insecurity is clearly rooted in and coupled by other experiences of disadvantage and poverty, such as low incomes and housing insecurity (Dubick *et al, 2016*). Therefore, if Penn State can help alleviate some of the barriers to receiving food and daily sustenance, perhaps food insecure students can become better suited to grapple with the other stressors, both need based and as they relate to life as a young adult in an independent college setting.

The following anecdote describe some student statements that were made during the GAO study regarding food insecurity and desire for more accessible SNAP benefits and federal resources for food insecurity, clearly exemplifying some of the deeper and more underlying aspects of poverty or disadvantage that food security comes alongside, such as choosing academic expenses over food costs and a lack of family financial networks for support.

Student Statements from GAO Site Visits at Selected Colleges

The reality is that I skip meals, often I don't eat lunch. I don't want to get lunch here on campus because it's too expensive. I get headaches, have trouble concentrating. I also have a disability that is worse if I don't eat.

My parents stopped supporting me once I left for college, so I'm on my own. So the amount of food I'm able to buy is less.

I did not have much money when I started school, and immediately had to choose whether to buy food or a \$200 book for class. I chose to buy the book.

Sometimes I get home at the end of the day and I realize I haven't eaten all day. And then I realize my school work is not up to my actual ability—I definitely think not eating affects my grades. You can tell when you don't feel good that you can't do your best work.

Source: GAO discussion groups with students at selected colleges taking steps to address food insecurity among students. | GAO-19-95

FIGURE 3. Student testimony during GAO discussion groups

Evidently, if a basic necessity such as food is too expensive for a student, and they are sacrificing their health to buy the materials needed, the educational community is doing a disservice to students. Spending money on a textbook to succeed in class rather than food and skipping meals often is a clear and common measure of food insecurity on college campuses, as students are making tradeoffs at the expense of nutrition and sustenance.

1.2 SDG Goal Incorporation: Zero Hunger and Beyond

As our world continues to grow and more people are increasingly left without adequate food to maintain their day-to-day lives, food insecurity is a pressing global issue. With one out of every nine individuals experiencing malnutrition across the globe, the United Nations identified hunger as a primary problem, or "Sustainable Development Goal" that must be addressed by the global community at the Sustainable Development Summit in September 2015 (SDG Report, 2016). The United Nations developed SDG #2: "Zero Hunger", striving to achieve efficient, equitable, and sustainable food systems that nourish all people. However, isolation of the topic of food security to the realm of just one goal would be narrow-minded. The issue of food security extends into many other disciplines that the UN has identified including: #1: "No Poverty", #3: "Good Health and Well Being", and #12: "Responsible Consumption and Production"









FIGURE 4. United Nations goals pertaining to Food Security

At the root of most issues, societal oppressions, and disadvantages lies poverty. Due to this system of poverty and its tendrils of disadvantage, food security is a function of wealth and income, and it's foundational implications for basic needs, employment, and general capacity to live safely and comfortably. Therefore, eliminating poverty through SDG #1 is an imperative for achieving SDG #2 of Zero Hunger. When you consider SDG #3 of Good Health and Wellbeing, we see that people are more likely to maintain positive health outcomes and well-being when they are food secure. Healthy individuals must have access to nutritious foods to help them avoid the effects of malnutrition, like vitamin and nutrient deficiencies and even obesity, and to serve in their daily roles. Food insecurity in children can cause stunting and wasting in their growth and development patterns, not only having physical health implications throughout their life, but mental deficiencies as well (State of Food Insecurity, 2018). With regard to SDG #10, we see that the most impoverished nations in the world today experience the most food insecurity across their populations as compared to nations with higher income distributions. When these societies, particularly those with underdeveloped economies and extreme poverty, have a system for reliable access to nutritious foods, they can focus more of their time on activities and engagements that are productive to their empowerment, such as education. Additionally, when examining intra-society distributional effects of food insecurity, in the U.S, food insecurity is often disproportionate among differences in race, sexual orientation, gender, and age. There are disparities among white and nonwhite populations; 21.8% of Black households experience food insecurity, along with 19.5% of Hispanic households. This is nearly three times the prevalence of food insecurity as compared to White households, of which about 7.8% report being food

insecure (Key Statistics & Graphics). Members of the LGBTQ community also experience disproportionately high rates of food insecurity, at about 29% of LGBTQ adults (Gates, 2014).

While food security is a very optimistic goal, we need to see that we have responsible consumption of these foods and plentiful production to support the growing population. Right now in the world today, we have the infrastructure and the means to provide everyone with adequate food each day. However, with food waste patterns in developing countries and lack of education to have production of these foods in food insecure areas, the UN is left with the food insecurity issue. With production of foods and networks to get food insecure people access to this food, we would be able to have people consume foods that need it and won't waste this privilege. All in all, we can see that all of these UN goals need to come together in order to achieve global food security or else, we will not be able to solve this global issue.

1.3 Significance: Healthy Lifestyle and Academic Impact

Food insecurity impacts more than just a person's acute hunger. According to a study done by the University of Florida and University of Maryland in 2017, food insecurity increases mental hardships on a student, with their grades and mental health deteriorating. In this study at University of Maryland, food insecure students were more likely to report their own health as being fair, poor, or very poor when asked by university health officials. On the contrary, none of the food secure students answered very poor and a majority stayed in the great health range. While this survey was a self-evaluation, this reveals how food insecure people think about their health and they are often right on point when it comes to self-diagnosing their conditions. At the

end of the day, nobody knows more about your health than yourself. Additionally, when these people were tested, the food insecure people were often overestimating the state of their own health and needed more assistance to become more food secure (College student hunger: How access to food can impact grades, health, 2019)

As a continuation of this study, there was a correlation between the food insecurity of a person and their grades. According to the University of Maryland study, food insecure students work just as hard when studying as a normal student, but end up with an average 0.9 GPA difference from their counterpart. This is due to the extensive work that this student would have to put in outside of the classroom to work jobs, take care of costs, and even take care of children in some cases. Food insecure people often deal with housing insecurity as well, which would be hard to deal with considering that they have to study for the next exam as well. These students often were reported to be late to exams because they were late working a shift or could not focus during the exam time because they were not operating on a full stomach.

Even in a study done at Temple University and the University of Wisconsin HOPE lab, we see that these students are more likely to drop out because of these external factors outside of the classroom. Skipped meals leading to weight loss, limited access to nutritious foods because of the cost, and resorting to eating lower priced junk foods are all things that these food insecure students have to deal with. Of course, these are large reasons why food insecurity impacts your health and academic performance. Even in regards to mental health, food insecure students are four times more likely to visit some type of mental health institution during their time at the

university compared to a food secure person, and experience higher instances of mental health issues. While the state of being food insecure will of course cause hunger, these other types of unintended health consequences are notable for full time students at universities around the nation today. To further briefly discuss health impacts, high rates of food insecurity are likely to cause poor health outcomes later in life due to reliance on often fatty, sugary, low nutrient food intake that can cause conditions such as diabetes, heart disease, or obesity.

Student Statements from GAO Site Visits at Selected Colleges

I don't tell my family that I'm struggling with food because everyone I know is struggling with money—I don't want to stress them out. It's not a comfortable conversation to have. I haven't lived with my parents in years, I wouldn't even know how to ask them for help.

In the academic community, there's a normalization that you provide food at events to get students to come because they're hungry—one professor said 'starving is part of grad school.' One student responded to that by saying 'Isn't it odd that we're using students' hunger to get them in the door? Why should this even be an issue?'

I didn't recognize the physical impact of eating breakfast until I took Physical Education here, where the coach said we couldn't come to class unless we ate breakfast. I realized that eating breakfast makes me much more clearheaded and focused in my morning classes.

Source: GAO discussion groups with students at selected colleges taking steps to address food insecurity among students. | GAO-19-95

FIGURE 5. Student testimony during GAO discussion groups

1.4 Stakeholders

When designing and implementing an overarching policy regarding food security on such a large campus such as Penn State University, this plan has the potential to affect and involve numerous people and stakeholders. Throughout our research for this project, we made an effort to interview the people who knew the most about the issue of food insecurity on the campus and in the community, and gained valuable knowledge from them for this policy paper. For instance, we identified that the key stakeholders in this cause would be the Lion's Pantry personnel and their contributors, the beneficiaries of the Lion's Pantry's services, Housing & Food Services staff,

Student Farm and other sustainability and food systems-oriented organizations, all Penn State undergraduate and graduate students, the administration, and the volunteers for the Lion's Pantry. All of these stakeholders are instrumental to this conversation and planning process in order to ensure every Penn State student is food secure and has the resources they need.

1.5 Overview of the Lion's Pantry

The Lion's Pantry is a student-run, university-affiliated organization. It is a food pantry that stores and provides non perishable food items, accessible to all Penn State students. The pantry was established in 2014 by students with the mission of providing sustenance to Penn State students experiencing food insecurity. The Lion's Pantry serves approximately 25-40 students per week, and is open just four hours per week. The location of the pantry is quite removed from central campus, and is situated in northeast campus, far past Park Avenue behind the Penn State Katz Law Building. The Lion's Pantry received an \$80,000 endowment as a class gift in 2017, generating about \$3,520 annually for pantry resources. The goal of this paper is assess areas in which the Lion's Pantry can benefit from university and community-led support, in order to ensure it is accessible to more students, is supported by the community.

2. The Policy

Food insecurity on college campuses is a nationwide issue that has significant impacts on the academic success and mental health of students. At Penn State, various initiatives have already been implemented to combat food insecurity, including the Lion's Pantry, which was established in 2014 ("The Lion's Pantry needs", 2018). However, Penn State has not yet achieved a state of complete food security, and more work can be done to ensure affordable and nutritious food for all Penn State students. Rather than create entirely new initiatives to address this problem, this policy paper focuses on building upon the existing infrastructure of the Lion's Pantry. We propose a six-step action plan, detailed in the following section, to increase accessibility, maximize efficiency, and further support the mission of the Lion's Pantry.

3. Implementation: 6 Step Action Plan to Reform Lion's Pantry

3.1 Demographic Data Collection

Without tracking important metrics, an organization has no way of knowing if progress is being made toward their goals and no basis off of which to make improvements. At this time, the Lion's Pantry does not gather any information about the clients that it serves and thus, is failing to take advantage of the valuable insights that this data could provide to further the pantry's mission. In order to better understand and serve the Penn State community, we recommend that the Lion's Pantry begins collecting demographic data from its clients.

3.1.1 Implementation

We suggest that the Lion's Pantry has clients fill out a survey upon their first visit to the pantry. The survey can ask questions regarding age, ethnicity, gender, student status, employment status, housing status, allergens, and more. In order to maintain a welcoming environment for students, the survey and all questions on the survey should be completely optional. A sample survey, modeled from College & University Food Bank Alliance's Campus Pantry Toolkit, can be found in Figure 6. The survey could be a paper hard copy, or it could be administered online, which would eliminate a data entry process and enable fast, easy analysis. The questions on the survey should be aligned with the Lion's Pantry's mission and values and should be revisited and reevaluated periodically. Executives should consider removing any questions that are not providing significant value.

Additionally, the Lion's Pantry has an obligation to protect the privacy and anonymity of its users. The confidentiality of clients should be a priority, and any personal data collected should never be discussed or distributed without consent. The executive board should be aware of this policy, and this should be emphasized in volunteer training.

3.1.2 Benefits

Collecting data from the users of the Lion's Pantry will benefit the pantry in numerous ways. It will help the pantry to better understand and serve its clients, further the pantry's knowledge of food insecurity within the Penn State community, facilitate the evaluation of outreach methods, and emphasize the pantry's positive impact to potential donors.

First and foremost, information about users can help the Lion's Pantry to better understand the students that it serves. It is crucial for any organization to have a strong awareness of its clients, as well as their needs and pain points. Demographic data will create a more detailed picture of who is served by the Lion's Pantry, and as a result, will better equip the pantry's leaders to create programs and services that are aligned with their needs. For instance, an important question for new visitors is what food allergens they have, if any. Understanding the proportion of clients that have specific allergens will allow the pantry to stock its shelves appropriately, ensuring that all students who come to the pantry can access food that fits their dietary needs.

Further, this data can educate the Lion's Pantry's leaders on the state of food insecurity within the Penn State community. Information about what populations within the larger student body find themselves in need of the pantry's services can help the Lion's Pantry, and the university as a whole, in determining the root causes of food insecurity on this campus.

User data can also facilitate a better knowledge of effective outreach methods. The Lion's Pantry organizes various events and promotions throughout the year to spread awareness about food insecurity and the services that the pantry provides. However, the executive team has no way to tell which programs and practices are working best to generate awareness about the pantry and encourage food insecure students to take advantage of its services. By learning which student segments are using the pantry and how they found out about it, the Lion's Pantry can assess its outreach methods, identify gaps and overlaps, and take steps to ensure that all students are aware of this valuable resource.

Lastly, general demographic information about the Lion's Pantry's user base may also be of interest to individuals and organizations whose donations help support the pantry. Measurable statistics provide a means of quantifying the impact that the Lion's Pantry has on the Penn State community. Providing facts and figures to donors may be a way to further promote the organization's credibility and emphasize its importance. In combination with emotional appeals, statistics can help the Lion's Pantry to communicate both its mission and impact to the community.

3.1.3 Barriers

Currently, the Lion's Pantry has a simple, no-questions-asked intake process to create a friendly environment and to reduce barriers to student use of the pantry. The completion of a survey will lengthen and complicate the intake process. Because it is important for the Lion's Pantry to maintain this welcoming atmosphere and keep barriers as low as possible, students should never be required to complete the survey or respond to any question on the survey if they feel uncomfortable doing so or simply do not want to. However, making the survey optional does not entirely resolve this drawback. If the leaders of the pantry believe that administering the survey to students on their very first visit is the main source of risk, they could also consider having students fill it out another time, potentially on a subsequent visit.

Furthermore, collecting this personal data puts the privacy and anonymity of Lion's Pantry clients at risk. While the surveys have no identification information and the data would only be used internally by trained pantry leadership, there is always a chance for human error. Additionally, simply asking these questions on the survey has the potential to make students feel concerned about their privacy. Overall, the pantry executive team must weigh the benefits and trade-offs of data collection with respect to their mission.

FIRST TIME USER SURVEY



Welcome to the Lion's Pantry!

To help us serve you and the Penn State community better, please provide the following information.

Please note: This survey and all questions on this survey are optional.

Age: _____ ■ Male Gender: Female Prefer to self-describe: _____ Position: ☐ Staff ☐ Faculty ☐ Student Status: Part-Time ☐ Full-Time Class Standing: Freshman ☐ Sophomore Junior ■ Senior ☐ Graduate Ethnicity (Choose all that apply): Caucasian ■ African American/Black Asian ☐ Latino ☐ Middle Eastern ■ Native American ☐ Pacific Islander □ Other Are you an international student? Yes ■ No Do you have personal transportation? Yes □ No Are you employed? ☐ Yes ☐ No If Yes: ■ Full-Time ☐ Part-Time What type of housing do you have? ☐ On-Campus ☐ Off-Campus ☐ Other _____ How did you find out about the Lion's Pantry? _____ Please list any food allergens that you have:

FIGURE 6. Sample Lion's Pantry survey for first time users

3.2 Product Plan & HFS Partnership

Fresh and affordable food products for those who are food insecure in State College has shown to be hard to come by especially due to the lack of infrastructure capabilities in nearby food banks and pantries. The lack of affordable perishable items, such as fruits or vegetables, is disproportionately of greater concern for low-income students. In light of looking to better food pantries in its entirety, with resources such as the Student farm and *Housing & Food Services* (HFS), Lion's Pantry can provide perishable items like fruits, vegetables, milk, and eggs, to the students of Penn State. According to the *United States Department of Agriculture*, including fruits and vegetables into one's diet is essential to having a healthy diet and in decreasing one's risk for chronic diseases such as heart diseases and type II diabetes (*Nutrients and Health Benefits*, 2016). Creating a Produce Plan as well as a partnership between Lion's Pantry and HFS will help to provide fresh produce to the population of those who are food insecure on campus and promote a healthier diet and lifestyle for students.

3.2.1 Implementation

Due to a lack of large-scale regeneration and storage mechanisms in the Lion's Pantry, the use of the Vegetable Cellar on Shortlidge Road in State College would be a great resource to hold perishable items. The process would begin with having a pilot study in which the Produce Program would be tested for eight weeks. In this program, students will be able to enter the vegetable cellar, which currently has the proper infrastructure and refrigeration to hold perishable items. In order to fund this program, which would include clearing the space in the

cellar, cleaning it adequately to create an environment welcoming to students and paying for a facilitator or director to run the program, grants can be applied for and possibly funded by Penn State or external donors. While this program can take anywhere from six to eight months to launch, another solution to providing fresh produce to students would be to take on a Mobile Food Pantry model. The Connecticut Food Bank has also opted to take such a route using a custom-made refrigerated truck which allows them to not only reach individuals faster but to also acquire things not found in a traditional food pantry (The Connecticut Food Bank). Creating a mobile version of Lion's Pantry would only require the purchase of a refrigerated food truck. A similar Penn State-themed food truck can be seen on campus in the Pollock Residence area. The food truck is currently providing made-to-order grilled food options since the store that once provided students in the Pollock living residence area is being renovated. Having a similar truck for Lion's Pantry is a fast solution since these trucks are equipped with refrigeration and ways to hold perishable food. This mobile food pantry can be placed closer to students in places like the HUB lawn or other residence areas twice a week. The source of this fresh produce will come from many places like the student farm on campus as well as donations. A supporting partner in this plan would be HFS in creating a *Housing & Food Services-Lion's Pantry Partnership*. The partnership would be between John Papazoglou, the Associate Vice President of Auxiliary and Business Services, and the current President within Lion's Pantry. Once this formal connection is made, further analysis of partnership logistics can be made. Logistics include the packing of food items from dining buffets as well as distribution and expansion.

3.2.2 Benefits

This new resource on campus will allow students to have a wider array of options compared to the previous non-perishable food items already available. Communities will be able to access fruits and vegetables, as well as other perishable foods that need refrigeration. This partnership would aid in catalyzing community benefits which would be an investment for Penn State and State College to improve the availability and access to healthy food as well as strengthen the food support available. Similar to models used by mobile food banks, it is particularly useful to invest in refrigerated mobile food trucks to not only allow students to use the services from the truck but to also transport the fresh produce to the proposed vegetable cellar. Having the Lion's Pantry truck closer to campus will also aid to reduce the social stigma that is currently associated with receiving services from this organization, since the pantry is located in a more isolated area.

3.2.3 Barriers

Current setbacks include the lack of volunteers and staff that would be of great benefit to running such a program. Creating the pilot study and launching for only eight weeks, would help to assess the feasibility of maintaining the program. In this pilot study, demographics, as well as barriers and setbacks can be assessed and evaluated for full-term implementation.

3.3 Food Recovery Network Protocol/Department

In the past, attempts to create a food recovery network at Penn State have been done successfully but its lack of permanence is what catalyzed the proposal to create a permanent department within HFS. The risk that is taken when implementing programs that are student-run is that they tend to do well at first due to a student's passion and determination, but despite its convenience, they have proven to plummet once the student and the excitement that comes with such a program is depleted. Although the Food Recovery Network is a non-profit organization which once had a chapter at Penn State, a similar model that is faculty-run can aid in assuring permanence and longevity. According to Lisa Wandel, Director of Dining Services at Penn State, the most amount of food wasted in the dining commons' on campus is on the buffet serving lines. Therefore, making it protocol in the buffets at Penn State during closing to recover the food safely and properly can help to provide more food to students but also help reduce food waste. The food recovered can be donated to Lion's Pantry where perishable food items can be delivered.

3.3.1 Implementation

Due to the dining service protocols, the food that is already at serving line temperatures cannot be redistributed on the serving line again, but proper food recovery has been carried out in the past, such as packing and freezing the food to specific temperatures. In creating a department within HFS for food recovery, the proper protocol of how to pack food that is leftover from buffet lines can be implemented into the closing protocol of the employees at the dining commons; in order for the employees to know how to safely pack and prepare the food for transfer to Lion's Pantry. It would be implemented in only one of the dining commons on campus in order to trial-run and understand the logistics. The feasibility of this department may seem grand but the pilot research can be conducted prior to the creation of this department.

Given the novelty of this proposal, the food recovery protocol would only be implemented two days of the week in only one for the dining commons on campus in order to assure safe transfer and feasibility of this project. This will also aid in determining the success of the program based off of who utilizes the vegetable cellar as well as the mobile food pantry as an additional resource. The separation of roles for this new department can be seen in Figure 7. Four people are needed to help oversee this department. Volunteers would be needed in order to commence such a department and help promote it but further logistics as to how to pay for future employees would be of interest.

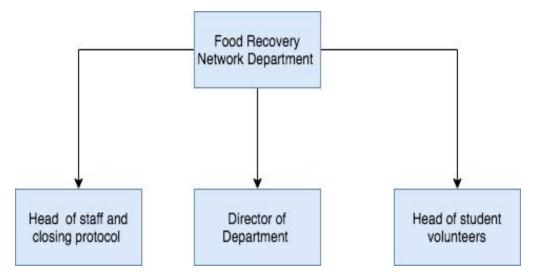


FIGURE 7. Hierarchy of Food Recovery Network Department creation

After the food is packed and chilled, it can then be transferred to a mobile food truck or freezers in the vegetable cellar, for later distribution.

3.3.2 Benefits

The promotion of these practices, such as the Produce Program along with Lion's Pantry-HFS partnership is crucial as a part of a multi-pronged effort to make nutritious and affordable food more readily available to all students. This liaison with HFS can also be useful for Lion's Pantry to increase the amount of food they have to distribute as well as in HFS being a supplier for post-prandial food items that are fresh and safe to consume from the dining buffet areas on campus. Turning the food recovery network into a department as Penn State will also help to create longevity in programs that were formerly run by students. Student aid would be appreciated as well as an asset to a program that serves other students, but there needs to be a mandated protocol in place to keep the program running.

3.3.3 Barriers

With the creation of this new department comes new roles and jobs needed to be filled. Current barriers include the lack of staff and funding to help make a department. In hopes to decrease certain barriers, a decreased staff but increased volunteer basis would be needed to commence the department. Space and offices needed for the department is another setback, but since this program would be set in only one of five the dining commons available to students the likelihood of finding space may be higher.

3.4 Volunteer Outreach and Logistics

With the ultimate aim of a food pantry to be to provide accessible food to those who are unable to arrange for it on their own. With that comes the importance of physical accessibility of the pantry itself. For a pantry like the Lions Pantry which is geared towards college students, it is

vital to also gear the panty's hour to accommodate to the schedules and needs of college students.

Currently, the Lions Pantry has the following limited hours: Tuesdays and Fridays from 3-5 pm. The Lions Pantry is located far north of campus, near the Blue Band Building, creating approximately a 24 minute walk from the HUB, a central location at the University Park campus. This not only makes Lions Pantry inaccessible, but also quite inconvenient for students to go to given the location of a majority of residence halls on campus and downtown housing options and class/job schedules. While the Lions Pantry partners with Abba Java, orders must be placed by midnight on Wednesday in order to be able to be picked up on Friday mornings according to the timings of Abba Java.

After speaking with representatives from the Lions Pantry, we found that a primary reason for limited hours comes from the lack of manpower that is necessary to keep it open for longer. A concept to consider implementing is that those helping out at the pantry to extend its hours do not need to be the same people every time. Since the physical location of the Lions Pantry cannot relocate feasibly and realistically as of now, involving student groups can be a way to increase its accessibility. It is often easy to make the assumption that student volunteers will just be there to help, that is not always the case. Several programs have showcased different tactics to increase and work towards ensuring student involvement.

3.4.1 Implementation

In order to develop a sustainable system, we recommend that the Lions Pantry looks to partner with different organizations whether it be the State College community, Penn State University, or student groups to be able to implement and sustain a volunteer system that meets their needs.

3.4.1.1 Incentive-Oriented Programs

Incentivizing student organizations with a cash gift for volunteering has proven to be successful. At Penn State itself, the Tailgate Ambassadors and the Stadium Cleanup programs use this method. Tailgate Ambassadors, a program which focuses on recycling and no littering at tailgates during Penn State Football Season, uses approximately 6-7 groups of 10 student volunteers from their respective organizations to be present at the tailgate lots for four hours and help hand out trash and recycling bags. At the end of the season, the students are given \$400 into their organizations ASA accounts. This incentive has led several student organizations to get involved in the program; the program has now reached a competitive level where every organization is not guaranteed a spot. Training for the job is done on the day of right before the shift begins. This tactic could be implemented into volunteering for the Lions Pantry as well. After data collection to assess the pantry's audience and find the optimal additional times that the pantry should be open, those additional slots can be open for organizations to sign up for. If any training is required, students can be trained right before their shift starts, or a video could be sent out the registered volunteers for their preparation. Funding for the money that would be given to the organizations has the potential to come from the recent endorsement to the Lions Pantry. Spending some of that money on increasing student involvement will not only increase accessibility, but increase awareness about the Lions Pantry as well. In order the test the

program, it can start out on a small scale like once a week on a biweekly schedule and gradually increase as it becomes well known in the Penn State community. In an environment with extreme competition for organizations to get funding, any reasonable amount is of value to small student organizations.

3.4.1.2 Non-incentive Alternatives

Another riskier route to take that has been done by the Sustainability Institute at Penn State as well is student volunteering without incentives. Several programs like Green Teams, Friday Night Lights Out, and Water Bottle Refill Data Collection encourage students to take part in sustainable actions and receive no tangible reward in the end. Components of these programs that seem to work is the team environment, students on teams motivate each other to keep it going. The lights out program and water bottle refill programs both use sheer convenience. The task is very simple and reporting it is made simple as well. This could be a method to use to get students to voluntarily advertise the Lions Pantry.

3.4.1.3 Student Organization Partnership Options

Another tactic is to partner with student groups on campus to help satisfy their philanthropic requirements. These groups could be honors groups like the Schreyer Honors College, Presidential Leadership Academy, Millennium Scholars, Pattee Paterno Fellows, etc. Groups like these are often encouraged to contribute to the community and make a difference in the world. Reaching out and partnering with Greek Life could also be a way to increase student involvement at the pantry since Greek organizations have philanthropic causes associated with them as well. Several student groups like to volunteer for a specific cause consistently; the

Women in Engineering Programs partners with Girls Scouts to host seminars for them. If the Lions Pantry were to reach out to student groups and find one to partner with, they could have the potential of receiving a constant flow of volunteers.

3.4.1.4 Course Requirement Options

For students, exposure is important. If a student likes the experience of volunteering, they are more likely to come back even if they are not required or obligated to do so. This exposure can come from a first year seminar - a 1-credit required course at Penn State that every incoming student is required take within their first year. It is not uncommon for a course of have an out-of-class requirement associated with it. A section of EDSGN requires students to attend three outside lectures during the semester and ENGR 407 requires students to attend three events during Startup Week. A similar concept could be implemented into first year seminars requiring students to volunteer at the Lions Pantry at least once. This could help create both the increase in awareness that the pantry needs and consisty when it comes to volunteers.

3.4.1.5 State College Community Outreach

While State College itself has its own Food Bank, State College citizens may have niche groups within them that are looking for volunteer opportunities. We recommend reaching out to high school students as they may have to meet volunteer hour requirements (ex. For National Honors Society) and/or the senior citizen community as they may be looking for outlets to get more involved in the community. While this may not be the most reliable source of manpower, it could serve as a filler for times during the year that the flow Penn State students is at a lull.

3.4.2 Benefits

Reaching out to the student body in more prominent means offers the Lions Pantry the potential benefit of over 40,000 individuals. However, college students often spread themselves quite thin and it can be hard to find students who will be dedicated. Therefore, looking to find a more niche student audience can be the key to getting more consistent volunteers. Opting for a tactic recommended above could be instrumental to helping the pantry reach its goal of being open for regular business hours, daily. Not only will implementing aspects of this step increase the volunteers needed for the Lions Pantry to stay open longer and help them better serve their customers, it will also raise awareness for the pantry, what it does, and its mission regarding food insecurity overall. A major obstacle for any food pantry to overcome, especially one targeted towards college students, is getting over the social stigma that is associated with using a food pantry. Introducing as many students as possible to service can potentially be one way to combat the stigma since judgements won't be made without knowledge.

3.4.3 Barriers

With required volunteering may come some resentment from the students regarding how they are being forced to spend their little free time. Emphasizing the greater problem of food insecurity at hand during the training sessions and educating students across the campus can be a way to help students realize the importance of what they are doing. In the grand scheme of things, a tradeoff of temporary resentment should be acceptable if it means a more accessible food pantry to those who really need it.

3.4.3.1 Volunteer Training

After speaking with the board of the Lions Pantry club, our team found that some volunteer training would be required. If the pantry were to be able to partner and work with a set group whether that be first year seminars or a student organization, one volunteer training session once a semester could suffice and offer the pantry the manpower it needs. Alternatively, the pantry could conduct a brief 1-hour, mandatory training session before the volunteering shift begins depending on the nature of the volunteer tasks. While this adds an extra task on the plate of the Lions Pantry, given their ultimate goal of being open for business hours everyday, this could be the tradeoff to a step closer to their goal.

3.5 Endowment Management

Upon consulting with the Lion's Pantry executive board and organization adviser, it was apparent that the organization did not have a firm understanding of how to effectively manage their funds, or even what an endowment was. In the spring of 2017, the graduating class of Penn State created an endowment for the Lion's Pantry of \$80,000, that will generate a 4.4% income annually of \$3,520. There is currently no budget or focused use of these funds within Lion's Pantry leadership, and there are is little knowledge of best practices for pointed management of their financial resources.

3.5.1 Implementation

This policy section aims to suggest that the University commit funds or services to, and provide assistance in preparing a detailed and itemized budget for the Lion's Pantry that their leadership can understand and utilize. Due to the Lion's Pantry's status as an affiliate organization, Penn State University has committed to its maintenance and upholding of operation, regardless of the student body leadership or management capacity. Therefore, we believe that it is the obligation of the university to assist in providing budgeting and endowment management guidance to the organization in order to ensure it is most efficiently and equitably managed. This may occur via workshops or training from the Office of Student Affairs or university provided budgeting templates, as their advice and resources regarding student organization budgeting and funding is quite limited.

3.5.2 Benefits

Endowment funds could be used to fund wage payments for a part time student, graduate student, or employee to complete daily operations for the pantry. This would benefit both the pantry and the community it serves, as compensating personnel would allow for longer hours on the days that is it open, as well as provide capability for the pantry to remain open across more days of the week. Alternatively, the funds can be used to provide infrastructure or remodel the space, such as purchasing a commercial refrigerator to improve capacity to store perishable items, including produce, dairy items, or protein options. For example, standard commercial refrigerators tend to cost around \$3,000. Funds might also be used to host events and improve outreach quality, such as promotional materials or reserving accessible spaces for events to further the knowledge and awareness about the Lion's Pantry. Other funding uses might include

attending conferences or networking events to strengthen support and knowledge surrounding campus food insecurity, or purchasing additional infrastructure such as vehicles to transport goods.

Barriers

An endowment of \$80,000 is, in practice, not very large for an organization seeking to impact the lives of thousands of students. Management of just annual return revenue of \$3,520 is difficult when managing larger scale infrastructural and organizational change and funds can become depleted rather quickly if mismanaged. The requests for financial guidance from PSU Student Affairs may receive pushback and bureaucratic processes surrounding this guidance, leading to difficulties in mobility and implementation of these resources. There is also concern regarding student time, knowledge, and resources in capacity to manage budgeting.

3.6 University-Sanctioned Accessible Location

Furthermore, it is evident that the Lion's Pantry is not an easily accessible location for both its volunteers and leadership, or it's beneficiaries. Due to its long distance from central campus and even lengthier trek from off campus housing downtown in the Bureau, it can be very difficult for students to reach the pantry during its limited hours of operation when in class or at work. Although the existing partnership with the St. Paul's church downtown at Abba Java allows for easier packaged food pickup on Fridays, it is limited in its storage capacity, requests are required by the Wednesday prior, and there is a lack of knowledge about the existence of the program. Since the physical location is operated by the Office of Physical Plant, the Lion's Pantry does not

have to internally pay for the utilities or operation of the building. Thus, the University should prioritize relocation of the Lion's Pantry to a more central location downtown or on campus.

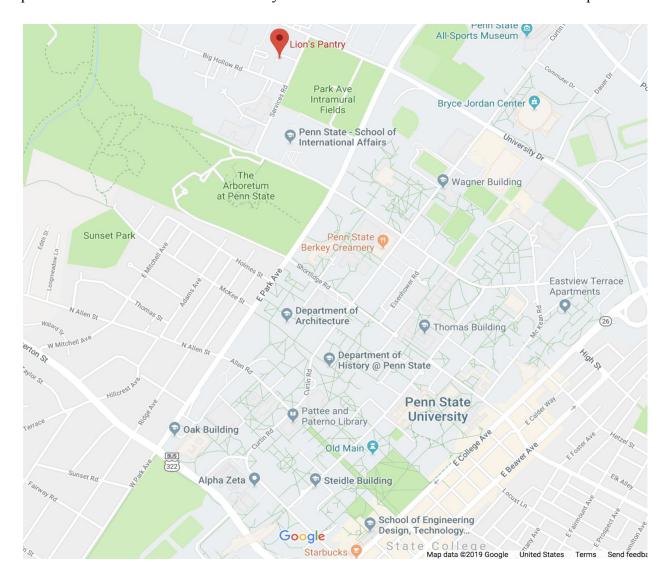


FIGURE 8. Current Location of the Lion's Pantry (Google Maps)

3.6.1 Implementation

Penn State is no stranger to building or renovating physical spaces; we believe that one more endeavor that is much smaller and cheaper than its counterparts, and dedicated to student welfare should be no exception. There are many spaces that might be employed, even through the

process of retrofitting and renovations, such as basement levels of existing buildings on campus or converted office spaces or internal renovations such as Boucke that could be considered suitable and central to student resources; these would likely ultimately be more cost effective to implement and manage. Alternatively, amid many upcoming construction plans for the university, it is recommended that the Lion's Pantry and supporting administration create implementation proposals for a new location to be included in building renovation plans, such as Hammond, which is a massive structure soon to be rebuilt and central to the downtown location. In summary, the Lion's Pantry is not a privately or independently operated entity, and thus the cost of relocating or rebuilding elsewhere would likely fall under the costs of the Office of Physical Plant, upheld by the University's commitment to the organization as an affiliate organization and central to its mission of student wellness and success. If relocation is not feasible due to administrative barriers or funding, focused use of the Lion's Pantry endowment might be used to make in-house renovations and restorations to improve infrastructure and storage for the pantry, despite its distance from students.

3.6.2 Benefits

Having an accessible and central location can allow the services to reach many more students, as the accessibility of the current location hinders the ability of students who work and take classes to reach their services during the school and work day. A location more central to campus can also enhance visibility of the pantry to those who may not know it exists or have the capacity to reach it, as well as allowing easier food donations from downtown food providers.

3.6.3 Barriers

In issues surrounding student welfare and seeking resources, there is a concern of protecting student dignity and navigating the stigmas associated with food insecurity when utilizing options such as a food pantry, mental health facility, or financial aid facility. Moving the Lion's Pantry to a more central location may bring with it more public visibility of those using the food resources, and this can be difficult for students who wish to remain anonymous or do not wish to be seen entering and exiting the facility. One solution for this may be to situate the Lion's Pantry in a location along with other student resources, such as a financial aid office, counseling, student club resources, etc, so that the entire location is dedicated to student advocacy and resources. An example of this is Boucke building, where there are both classes and offices for student needs. This may create an aggregate atmosphere of resources, intermingled with normal academic operations on the lower floors, so that entering such a building is not immediately associated with seeking help for food insecurity, but is also centered around a large variety of needs that any student could be utilizing. Other barriers include financial and administrative viability of integrating a renovation or location move.

CONCLUSION

4.1 Policy Alternatives Considered

When starting out this project, our group policy-makers generated many different ideas on how to combat food insecurity on the Penn State campus. Food security is such an umbrella term that there are so many different avenues to hit on it. Through talking to the experts in the field of food at Penn State, including the head of residential dining, the panel of the Lions Pantry, and the organizer of the food recovery network, our policy alternatives became more and less viable when given more information. Honing on on this research, it seemed as though a narrow topic to focus on the Lion's Pantry would be the most feasible in the time that we had available to us.

That being said, we considered the drawbacks and positives of five different policies. While these are all distinct in nature, we were able to combine a good amount of these policies to relate to the Penn State Lion's Pantry including the Lion's Pantry Data Collection, the dining dollar donation system, and an education campaign for the people on the University Park campus that need lack assistance. Thoroughly looking at the methods, barriers, and justification for implementation for each of these ideas, it made it easier to see which policy would be most influential in helping the food insecure students.

When considering the data collection of the Lions Pantry, we based this off of other universities in the BIG 10 employing this method in their food pantries. While this would be a simple form

and easy to implement, we considered the approval process for collecting data from students from the Institutional Review Board because the Lion's Pantry is associated with the Penn State institution. Once this is approved, we would be able to have more awareness on what communities need the most help from the Lion's Pantry to help adjust future targeting strategies. With different statistics that would come from these results, we would have more transparency for the community to get involved and manage this problem.

Another alternative considered was the dining dollar contribution system where meal vouchers can be donated to the Lion's Pantry from dining dollars that the students are willing to donate. This would be a way to fund the pantry and allow them to purchase more nutritious foods for the people that visit the pantry. Also, this would be one of the first donation systems of dining dollars at Penn State's campus, so it would take a lot of infrastructure and software development of the cash registers in the dining commons. However, once it is implemented, it would be able to be adapted all throughout campus common areas. In addition to this system, we considered having incentives for students to donate these gift cards. They could be able to get a certain reward which is low cost to the campus dining system and this would make the students more inclined to donating and making this program work.

With regard the mobile food pantry, we considered having a mobile truck or space on campus that would be able to set up and have free food for everyone who would need it. This would be open to any student to eliminate any of the stigmas surrounding food insecure people getting free food. This would be easy to access at a central place on campus and could even promote the

Lion's Pantry by adding promotional flyers at this space. Hitting on education is a huge part of food security and this alone could have been an alternative policy because people are not informed about this issue. With all of these resources available on campus, some people still do not know about food insecurity. We thought of ways to introduce this topic whether it be in a new student orientation play, a HUB poster, or marketing through emails when people get to the university. Overall, we considered many different policies and practices when our project was in its infancy, but our current six-step plan is what we decided on because we thought it would be the most effective to implement to an already existing organization that can be fortified. Through careful consideration, we worked to add as many of our ideas into our actual policy so we can help ensure Penn State students on and off campus have access to safe and sufficient foods.

4.3 Impact Analysis

While the implementation of these policies will not completely solve the problem of food insecurity on Penn State's campus, incremental changes are the key to creating a sustainable Penn State. The Lion's Pantry is an existing resource that provides valuable services to students struggling with food insecurity, and this six-step action plan will help the pantry to become even more accessible and effective. As a result, this policy will increase the number of students who have access to affordable and nutritious food, creating a healthier and more equitable Penn State.

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Lion's Pantry Student Executive Board

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