**Food Insecurity at America’s Happiest University**

Philip Goodwin

March 2018

Abstract: Food insecurity is most often described as “the limited or uncertain availability of nutritionally adequate and safe foods or limited or uncertain ability to acquire acceptable foods in socially acceptable ways” (Anderson, 1990, p. 1557S). On February 7, 2018, the California State University Chancellor’s Office released the findings of a system wide study on basic needs at each of the 23 campuses. This study found that nearly 53.1% of Cal Poly, San Luis Obispo students experience some sort of food insecurity (Crutchfield & Maguire, 2018). If this statistic is accurate, then roughly 11,304 of the 21,288 students at Cal Poly are food insecure (Cal Poly Admissions, 2017). Universities throughout the United States, including California Polytechnic State University, San Luis Obispo, are enacting programs in an effort to reduce the number of food insecure students on their campuses. However, students and university officials often face numerous hurdles when drafting policies regarding food insecurity.

**INTRODUCTION**

In February of 2015, California State University Chancellor Timothy White authorized a study to determine the current status of students experiencing food and housing insecurity throughout the CSU system (The California State University, 2018). In effect, this study was created to examine the various ways that campuses respond to these issues and to better address their root causes. According to the United States Department of Agriculture, 12.3% of all households in the United States were considered food insecure in 2016 (USDA, 2016).  However, most of the current research regarding food insecurity fails to examine the magnitude and impact on students attending two or four-year colleges or universities, including the negative effects on a student’s overall health, academic performance, and social life (National Student Campaign Against Hunger and Homelessness, 2016).   When considering the rising costs of tuition, housing, and textbooks, researchers often forget about one other enormous expense for a college student:  food.

Universities throughout the United States, including California Polytechnic State University, San Luis Obispo, are enacting programs in an effort to reduce the number of food insecure students on their campuses (University of California, Berkeley, 2017). However, students and university officials often face numerous hurdles when drafting policies regarding food insecurity. Food pantries and food stamp programs are often the most common responses on-campus (National Student Campaign Against Hunger and Homelessness, 2016). However, such programs fail to reach many students who are often unable to access healthy, affordable food. Typically, there are few options for students who face this issue on an everyday basis.

 This policy analysis explores the recent California State University system wide study on food insecurity, while solely focusing on the current available information about Cal Poly, San Luis Obispo. After examining the various drivers of food insecurity, the analysis discusses the numerous limitations of studies on the issue, explaining the restrictions that current researchers face when defining food insecurity and the effectiveness of policies to address to address the overall issue. Additionally, I critique the available resources to students at Cal Poly and make policy recommendations for administration and state officials based on the assessment of current programs.

**BACKGROUND OF FOOD INSECURITY ON COLLEGE CAMPUSES**

**Introduction**

 When examining how food insecurity affects college students, I analyze the numerous intricacies of this particular issue. I am primarily focused on the current numbers of students experiencing food insecurity, the drivers of food insecurity, the effects on the student, and how university officials and administration typically respond. As a result, these four key points help to provide a comprehensive view of the overall problem.

**How many students experience food insecurity?**

Researchers know very little about the number of college students experiencing food insecurity or the impacts and severity of such challenges for this population. Food insecurity is most often described as “the limited or uncertain availability of nutritionally adequate and safe foods or limited or uncertain ability to acquire acceptable foods in socially acceptable ways”[[1]](#footnote-1) (Anderson, 1990, p. 1557S).  It is important to note that I am relying on the ranges of food security are often defined using the parameters from the United States Department of Agriculture[[2]](#footnote-2):

|  |
| --- |
| Definitions of Food Security |
| High food insecurity | 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. |

(Coleman-Jensen, Rabbitt, Gregory, & Singh, 2017)

 Nationwide, there are no good estimates of exact number of college students facing food insecurity. Only a small number of universities across the country actually know their own population demographics regarding food insecure students because they have already conducted campus-wide studies. However, most of the current research provided regarding collegiate food insecurity places the number anywhere between **10% - 60%** of college students at a given time (Morris, Smith, Davis, & Null, 2016).

For example:

* In 2009, the University of Hawaii, Manoa found that **21%** of its students were found to be food insecure (Chaparro, Zaghloul, Holck, & Dobbs, 2009).
* In 2013, **35%** of students experienced food insecurity at the four main public universities in Illinois (Morris et al., 2016).
* In 2011, the Queensland University of Australia discovered that food insecurity affected **46.5%** of the student body (Hughes et al., 2011).
* Another study at a university in Oregon found that nearly **60%** of students battled this issue at some point during the school year (Patton-López, López-Cevallos, Cancel-Tirado, & Vazquez, 2014).
* For students within the California State University system, **41.6%** are currently food insecure (Crutchfield & Maguire, 2018).
* Another study conducted by the University of California Global Food Initiative discovered nearly **20%** of its students experienced *very low* food insecurity (UC Global Food Initiative, 2016).

University rates of and knowledge pertaining to food insecurity vary tremendously. While there is not necessarily one particular sociodemographic characteristic that defines a food insecure student, there are a number of categories that can affect one’s ability to eat healthy, affordable food regularly. Generally, the overall research regarding food insecurity on college campuses has linked factors such as one’s race, academic level, grade point average, geography, living situation, or income level to this overall crisis (Morris et al., 2016; Hughes at al., 2011; Gaines, Robb, Knol, & Sickler, 2014; Blagg, Gundersen, Schanzenbach, & Ziliak, 2017; Wisconsin HOPE Lab, 2017; National Student Campaign Against Hunger and Homelessness, 2016; Patton-López et al., 2014). There is simply not enough robust information to definitively determine an overarching sense of the numbers or identities of students who deal with this issue. And although university campuses are unclear of these specifics, there is a certain amount of research which does make an attempt to shed light on the various factors which often lead to a student becoming food insecure. Information like financial aid, geographical location, race, and first-generation status all affect a student’s collegiate experience, including instances dealing with food security.

**Academic Impacts**

Similarly, there is relatively little research that focuses on the effects of food insecurity and its impacts on a student’s academic success once in college. However, Maroto, Snelling, & Linck (2015) did find that students who do not get enough food to eat are roughly 22% less likely to attain a 3.5 – 4.0 grade point average, controlling for other factors. At the University of Massachusetts in Boston, 80% of food insecure students believed that food insecurity had affected their academic performance (Silva et al., 2015). Food insecure students find it is difficult to focus on the material being presented, let alone the copious amounts of reading, writing, and research that they must also finish.

One student from a New York University discusses their struggle to eat each day while trying to succeed in class:

I live on $2.00 to $5.00 dollars a day. That means two meals a day, and incredibly unhealthy food. I’m hungry all the time. Being so hungry while you’re trying to work two jobs to pay your rent and still keep up with your coursework is practically impossible—and more common than you would ever think at a university like this.

(NYU Faculty, 2015, p. 1)

If students have to constantly consider where their next meal is coming from, they will not be able to succeed in college. Their entire college experience will be plagued with a reminder of a constant state of rumbling hunger. Between March and May of 2016, four organizations – the College and University Food Bank Alliance, the National Student Campaign Against Hunger and Homelessness, the Student Government Resource Center, and the Student Public Interest Research Groups – discovered the following of the food insecure students:

* 55% reported not buying a required textbook;
* 53% reported that they had missed a class;
* 25% reported that they had dropped a class

(Wisconsin HOPE Lab, 2017).

Food does have an impact that can affect a student’s ability to focus in and out of the classroom. Students should not have to decide between buying a textbook for the class or purchasing a meal at the dining hall. For some students, they may be experiencing a combination of these effects and impacts. It is difficult to definitively state that every student experiencing food insecurity is impacted by each of these challenges. Additionally, each campus is unique in the way that this issue affects its students. While certain effects may overlap from campus to campus, researchers cannot necessarily determine what the challenges are until a comprehensive study is conducted and analyzed, shedding light on the specifics of each campus.

**DRIVERS OF FOOD INSECURITY**

**Financial Drivers**

 At first glance, it may seem obvious that a lack of financial assistance would be the most frequently cited cause of food insecurity for college students. However, the issue is much more complex than that. The rising costs of college prevent numerous students from being able to purchase and consume healthy food on a regular basis. According to one study, the average annual cost of a public university increased from roughly $14,000 in 1996 to almost $20,000 in 2012 (Goldrick-Rab, 2016). This number does not account for the financial aid packages that students receive to help offset the costs, and frequently do not factor food into the equation. Experts argue that as tuition rises, financial aid packages for students are simply not enough to pay for necessary educational expenses, such as tuition, room and board, books, school supplies, etc. (Meldrum, & Willows, 2006). When examining the financial demographics of food insecure, the National Student Campaign Against Hunger and Homelessness (2016) found that:

* 75% of students who are food insecure do receive financial aid;
* 52% receive Pell grants;
* 37% taking out student loans to balance the overall cost of attending college

Financial aid seems to be a quick response to most crises involving costs of attending college. Yet, researchers do not know how financial aid that does not cover all the costs of attaining a higher education actually impacts or plays into food insecurity because it is not commonly included in financial aid calculations. Hughes et al. (2011) reports that almost 22% of students have to borrow money in order to pay for food on a regular basis. These students have to borrow more money, on top of what they already borrowed to pay for tuition, to simply pay for food. However, studies have shown that even if a student subscribes to a meal plan, they can still be at risk for food insecurity (National Student Campaign Against Hunger and Homelessness, 2016). This is a striking contradiction to what one might think; if students enroll in a meal plan, they may often choose the cheapest meal plan with the fewest amount of meals possible. A meal plan does not necessarily equate to total food security for a college student. In an effort to reduce costs, students may be, in effect, neglecting their dietary needs. Finances drive a never-ending cycle of despair for students who are also food insecure. Further, most financial aid packages do not mention or specifically include money for “food aid” through the four-plus years of a student’s college education.

Even those enrolled in a meal plan at a campus dining facility reported that 43% still experienced food insecurity (Wisconsin HOPE Lab, 2017). The issues surrounding collegiate food insecurity are much more complex than one might initially think.

**Geographical Drivers**

When examining a student’s geographic location in context of the overall campus, policy makers need to consider not only with whom the student lives with but also the actual location of their residence. Hughes et al. (2011) discovered a correlation between a student’s living accommodations and food insecurity; nearly 40% of students sampled lived with their parents and were also less likely to experience food insecurity. Furthermore, almost 40% of the overall population sampled also mentioned that they had in fact borrowed money in order to pay for personal expenses, such as food (Hughes et al., 2011). Similarly, Chaparro et al. (2009) found that students who live on-campus or who live off-campus with roommates were also more likely to be food insecure than students who live with their parents or other relatives. It is important to consider that this may be the first time many students live independently from their parents, unaware of the actual costs of attending college or providing from themselves. For students who live at home, it is implied that parents often help with the overall cost of food, although this is not always the case (Morris et al., 2016).

**Race/Ethnicity Correlates**

 Several studies find an association with food insecurity and a student’s racial identity (eg., Morris et al., 2016; Blagg et al., 2017; National Student Campaign Against Hunger and Homelessness, 2016; Chaparro et al., 2009; The Campaign for a Healthy CUNY, 2011). Overall, students who identify as white/Caucasian are typically more likely to be considered food secure, while African American students are often most at risk for food insecurity (Morris et al., 2016; National Student Campaign Against Hunger and Homelessness, 2016). A majority of studies on food insecurity at college campuses tend to find that food insecurity is most commonly found amongst students of color. Another study conducted at the University of Hawaii at Manoa discovered that Filipino students tend to have a higher risk for food insecurity when compared to Japanese, Hawaiians, and Pacific Islanders (Chaparro et al., 2009). It is important to note that such conclusions are context dependent, meaning that this evidence exists as the result of a general campus-wide study of food insecurity. Generally speaking, students of color are often at a greater risk for experiencing food insecurity than white/Caucasian students.

**First-Generation Status**

Almost one-third of all college students are considered first-generation, meaning that one or both parents never graduated from college (Morris et al., 2016). While there has been little research on food insecurity for first-generation students, experts have found that attaining a college degree may be more difficult than someone whose parent(s) graduated from college (Goldrick-Rab, 2016). This too, would take into consideration issues surrounding financial assistance, social capital, and general knowledge of the collegiate process (i.e. applying for the Free Application for Federal Student Aid, registering for classes, paying for a tutor, etc.). Further research would need to be done analyzing this unique demographic of the college campus population.

 While finances are most often considered the main driver of food insecure students, there are also several other correlates that need to be further examined to determine their impact. A student’s race and first-generation status, although important to consider, do not determine whether or not a student is also food insecure. However, of the studies mentioned, race and first-generation status are unique when examining the demographics surrounding the overall issue.

**ADDITIONAL CHALLENGES LACKING TRANSPARENCY**

 The overall research regarding food insecurity on college campuses can only capture a certain amount of the countless factors that affect whether or not a student is food secure. Further, several institutions cannot definitively state whether or not their campus programs targeting food insecurity are actually effective at decreasing the number of food insecure students on their campus. While current research tends to focus on the magnitude of food insecurity on their campus, trying to determine the students’ overall backgrounds and factors that affect their level of food insecurity, there is not an assessment tool that can ultimately determine if these types of programs are working. Administration officials can measure how many students use their services, but once again, they cannot determine if one specific program is better at addressing the issue than another. Of the additional factors, both researchers and administration officials should consider the following issues, not only when conducting the actual research but also when determining the proper response and allocation of resources to address the issue.

**Point in time**

 Studies like those cited above are unable to fully capture the extent of the issue because the research only represents a specific point in time. These results could legitimately fluctuate day by day or even change at certain parts of a quarter or a semester. For example, a student may be less food insecure after a pay-day and far more food insecure a few days or weeks later. Additionally, a student may also be waiting several weeks before receiving a financial aid disbursement, possibly causing that student to be food insecure for a period of time before the aid arrives. As a result, researchers are unable to fully understand the effects of food insecurity on a college population. Although universities use these percentages as staring points for response, officials must consider that the data is a mere estimate of the overall target population.

**Anonymity**

Almost each resource available to students on-campus typically captures the student’s personal demographic information each time they swipe their identification to verify that they are a current study. Although names are often withheld, students often unknowingly consent to having their personal information utilized. Anonymity is widely publicized when frequenting basic needs’ resources, however, students ultimately have to sacrifice their privacy in exchange for help. For some students, this loss of anonymity itself is enough of a deterrent to keep them from utilizing services. This could be particularly acute for specific populations, like undocumented students, for example, who have restricted access to other state and federal resources. Studies could potentially underestimate the full magnitude of the actual problem, particularly for vulnerable populations.

**Lack of Accurate Measures of the Cost of Attendance**

Of the information that is typically gathered when a student checks in for resources, their Expected Family Contribution (EFC) is just one of the main quantifiers used in reporting data. If a student exhibits a low EFC, this may provide additional background as to why they might be experiencing food insecurity. However, if a student demonstrates a high EFC and is experiencing food insecurity, researchers may look into other possible factors that contribute to their lack of food security. When examining the current research, studies often do not analyze a student’s EFC and how it impacts their level of food security. This type of data may give researchers additional insight to the overall picture of student’s background, better examining the root causes of the problem. Combine the rising cost of attendance with a university’s level of food insecurity on their campus. If college campuses compared such data from year to year, it would be possible to draw conclusions about how the cost of college education impacts whether or not a student has enough to eat. Typically, financial aid packages are primarily geared towards paying for a student’s tuition; food is not necessarily included in the overall package deal.

**Long-term solutions**

 Lastly, much of the available research and programs often focus on short-term solutions, in part, because these are the types of solutions universities are implementing. For example, if a student is hungry, the university provides them food or a food/meal voucher. However, if a student has just lost their job or their parent just died and as a result, the student has no money or zero EFC to buy food, the university is frequently oblivious to bigger factors affecting the student’s ability to succeed or can do little to holistically support the student. While there are several different scenarios similar to this one, these quick, short-term solutions do not affectively address the root cause (or causes) of the problem. Furthermore, each student’s situation is unique; a blanket approach will not necessarily be the most effective response either. Long-term solutions must be further explored and analyzed to determine how to stop the problem before it further hinders the student’s collegiate experience. For some campuses, like Cal Poly, San Luis Obispo, a middle-of-the-road approach is often applied to address this issue, implementing programs that do not necessarily address the root causes.

**FOOD INSECURITY AT CAL POLY, SAN LUIS OBISPO**

On February 7, 2018, the California State University Chancellor’s Office released the findings of a system wide study on basic needs at each of the 23 campuses. According to the report, 41.6% of CSU students experience food insecurity, with 20% experiencing low food security and 21.6% experiencing very low food security.

This study also found that nearly 53.1% of Cal Poly, San Luis Obispo students experience some sort of food insecurity (Crutchfield & Maguire, 2018). If this statistic is accurate, then roughly 11,304 of the 21,288 students at Cal Poly are food insecure (Cal Poly Admissions, 2017). However, Cal Poly is ranked 22 out of 23 universities within the CSU in regards to food insecurity, meaning that our students are relative food secure when compared to the other 21 campuses ranked above. Given that more than one-half of all students at Cal Poly do not necessarily know where their next meal is coming from, or if they do, it is of relatively no nutritional value, it is clear that a ranking of campuses is not the most effective way to understand campus performance or improve policy. Although the 53.1% of students experiencing food insecurity includes those who experience *marginal food security*, these students are still, to a certain degree, struggling to be fully food secure. Nevertheless, it is also important to consider that of the overall percentage of students who experience some sort of food insecurity, 26.9% of students experience low to very low food security.

|  |
| --- |
| Food Security at Cal Poly |
| High food security | 46.9% |
| Marginal food security | 26.2% |
| Low food security | 14.9% |
| Very low food security | 12% |

(Crutchfield & Maguire, 2018).

 As discussed in the previous section, there are limitations to every study of food insecurity on a college campus. Certainly, the CSU study suffers from most of these. However, the Cal Poly results are potentially problematic in other, important ways. For example, certain demographic categories were overrepresented in the study compared to the overall population of Cal Poly. When examining racial and ethnic groups, Asian/Other Pacific Islander, Black/African American and White students were all overrepresented in each of their categories compared to the overall campus population (Crutchfield & Maguire, 2018). The largest difference in representation existed amongst genders, where females represented 66.5% of the sample, whereas they only represent 47.2% of the actual student body at Cal Poly (Crutchfield & Maguire, 2018). Each of these categories could have skewed the data, possibly resulting in overrepresentation percentages of food insecure or food secure students. Again, while this study provides a starting point for developing policies, practices, and understandings about food insecurity at Cal Poly, it is important to be attentive to how the study may provide an incomplete picture of the magnitude of the problem.

**CURRENT CAL POLY RESOURCES AVAILABLE & PRACTICES**

 There are currently three different types of resources available to students experiencing food insecurity at Cal Poly. When examining other CSU responses to this issue, Cal Poly takes a middle-of-the-road approach in providing necessary resources to students to alleviate the difficulties of food insecurity. Additional effective and efficient responses that other CSU campuses have enacted and utilized are suggested for implementation in the ‘Policy Recommendations’ of this report.

**FOOD PANTRY**

Opened during winter quarter of 2014, Cal Poly’s Food Pantry is physically housed within the Campus Health and Well-Being building. Additionally, Campus Health and Well-Being also oversees its day-to-day operations. The idea for a food pantry was formed after a student in class heard that one of his fellow classmates was not eating regularly because he could not afford it. When the parent of this student heard the troubling news, he reached out to Cal Poly administration officials to determine what he could do. This parent still remains as the sole outside donor of the food pantry. Although Campus Health and Well-Being is provided with a budget for the food pantry from the university, a majority of its funding comes from this singular donor.

When students arrive at the food pantry, they swipe their I.D. cards to verify that they are a current Cal Poly student. After that, each student is shown the various items in the pantry, ranging from grains to canned goods to frozen vegetables and dairy products. Once students are given a brief tour, they are free to “shop” for their groceries by themselves, completely free of charge. Unlike some other campus resources, the food pantry is also open to undocumented students and out-of-state students as well. All current students (including graduate students) are free to use the food pantry as often as they would like throughout the school year. There is no charge associated with using the food pantry, and there is no “means-testing” for access. However, staff members do provide students with other, more long-term resources, such as the ones mentioned below. During the 2014 – 2015 academic year, the food pantry had 83 unique visits from students and 566 unique visits during the 2016 – 2017 academic year[[3]](#footnote-3) (Cal Poly, 2018). Since the three years of its opening, the food pantry has witnessed a nearly 600% increase in the overall utilization.

This past fall, the Cal Poly Food Pantry began partnering with the San Luis County Food Bank Coalition as a way to provide goods to stock the shelves of the pantry in a more efficient and cost-effective manner. Campus Health and Well-Being is solely responsible for purchasing the food that goes into the food pantry. Genie Kim, the current Director of Campus Health and Well-Being, said that prior to her arrival, the food pantry purchased its goods from the Cal Poly Corporation at retail cost, noting that a box of cereal would cost anywhere between five and seven dollars (G. Kim, personal communication, January 12, 2018). Kim said since the partnership, the food pantry has been able to save a substantial amount of money, highlighting this cost-effective way to provide even more food for students at Cal Poly.

At this time, the Cal Poly Food Pantry is unable to assess its effectiveness in alleviating food insecurity on-campus. Although the pantry does track student information, such as Pell grant eligibility, age, gender, or any other information disclosed on the master Cal Poly database, officials are unable to determine whether or not the food pantry is successful in relieving the overall stress from experiencing food insecurity while in college. It is difficult to accurately assess the effectiveness of these programs in relation to their ability in decreasing the number of students experiencing food insecurity. For some students, food insecurity may be a short-term or a long-term challenge. Currently, there are no assessment tools that properly determine whether or not the food pantry (or additional programs and resources) alleviated these challenges. Such assessment could prove useful to both researchers and campus officials in an effort to decide if one program is more successful than another at reducing food insecurity. This would also be beneficial to administrators when examining the proper allocation of resources for upcoming academic years.

**MEAL VOUCHER PROGRAM**

Since its enactment in 2015, the meal voucher program has provided meals to over 1,000 unique Cal Poly students (Cal Poly, 2018). It is important to note that the same donor who fully funds the food pantry also fully funds the meal voucher program.

When the program first started, there were no criteria for students to utilize this service. Any student could come to a variety of locations throughout campus and receive a voucher to be redeemed for one meal at a campus dining venue (J. Pedersen, personal communication, January 18, 2018). They could obtain a voucher anonymously at many on-campus locations. However, this last fall, the Dean of Students Office determined that this “no questions asked” policy would no longer be effective, in part because of increasing demand. During the fall of 2017, the program provided more meal vouchers in one quarter than they had during the entire course of the previous academic year (J. Pedersen, personal communication, January 18, 2018). Questions regarding abuse of the program are certainly taken into consideration when examining the success of the program; some students may view this program as a quick way to get a free meal, regardless of actual need. If this truly was the case, then administrators began wondering how they could better target students in dire need. The Dean of Students Office has created criteria that students must meet in order to receive a meal voucher. According to Joy Pedersen, the Associate Dean of Students, students are now required to visit the food pantry and verify that they have been there prior to receiving a meal voucher. If the student is also a resident of California, then they must also meet with a CalFresh Outreach Coordinator to determine if they are eligible to utilize CalFresh (formerly known as food stamps). Once these items are confirmed, then the student is allowed to receive up to 6 meal vouchers. If they are in need of more, then they must schedule an appointment to meet with an official from the Dean of Students. If the student demonstrates further need, they can receive up to 20 vouchers per quarter. However, this, too, can be quite controversial, given that students have to self-identify to an administrator that they are struggling to be food secure and potentially have subsequent meetings with the administrator to identify some of the root causes of their food insecurity.

Pedersen noted that the funding for the meal voucher program comes from an annual donation of funds from a singular donor. Pedersen also highlighted that because the funding source is not endowed, this becomes a non-sustainable source of funding for a program utilized each academic year. Currently, the school’s budget for meal vouchers is close to $50,000; previous years, the Dean of Students Office has spent over $100,000 on the program (J. Pedersen, personal communication, January 18, 2018).

Like the food pantry, the meal voucher program is also currently unable to assess its effectiveness in the overall issue of food insecurity on-campus. Although the Dean of Students is able to track information similarly to that of the food pantry, they are still unable to determine whether or not a student’s individual situation is actually improving. One might be able to assume that a meal voucher does, in fact, assist with a student’s immediate food needs; however, they are unable to further assess the program’s ability to provide a long-term solution to the problem.

**CALFRESH OUTREACH PROGRAM**

 In 2016, California State University, Chico, became the lead contractor for the first ever CSU-wide effort to offer CalFresh Outreach programs at 11 of the CSU campuses, including: Cal Poly, San Luis Obispo; Cal State LA; CSU Chico; CSU Dominguez Hills; CSU East Bay; CSU Long Beach; CSU Northridge; CSU San Bernardino; Fresno State; Humboldt State; and Sacramento State (Bedore, Aiang, Stamper, Breed, Paiva, & Abbiati, 2016). For academic years 2016 – 2018, each of these campuses created a CalFresh Outreach team, funded by the California Department of Social Services. This pilot program allows CSU campuses to not only create awareness of CalFresh resources but also gives outreach coordinators the opportunity to assist students in order to determine if they are eligible to receive food assistance.

 CalFresh is the California term used to describe the federal Supplemental Nutrition Assistance Program or SNAP. This program, funded by the USDA’s Farm Bill, gives eligible recipients money specifically allocated to purchase food, such as meat, produce, or dairy products. The State of California is especially unique regarding the redemption of benefits; California is ranked second to last among the United States for SNAP participation (Breed, Riesen, & Bianco). According to some estimates, nearly 3 million people in California are eligible for CalFresh but do not actually participate (Breed, Riesen, & Bianco). That equates to a $2.9 billion/year loss in federal benefits and a $5.2 billion/year loss in economic activity; according to one study, for every dollar spent in CalFresh benefits, generates $1.79 in overall economic activity (Breed, Riesen, & Bianco).

Applying this measure of loss of economic activity to San Luis Obispo County, the impact is extremely significant, especially given the fact that potentially thousands of students at Cal Poly are eligible to receive these benefits but are possibly unaware of the program. The Cal Fresh Outreach teams on each campus aim to alleviate this loss on CSU campuses by educating more students about their potential eligibility to receive monthly food aid from the government. According to Dr. Aydin Nazmi, an associate professor in Food Science and Nutrition at Cal Poly and also the CalFresh Outreach Coordinator, students receive, on average, about $150 a month in CalFresh benefits (A. Nazmi, personal communication, January 22, 2018). However, there are numerous restrictions in place which prevent students from becoming eligible to receive benefits. Students must qualify for one of the following exemptions in order to be eligible:

* Work at least 20 hours per week, on average, OR
* Are approved for state or federal work-study money and anticipate working during the term, OR
* Are a full-time student with a child under age 12, OR
* A part-time student with a child under age 6, OR
* A part-time student with a child age 6-11 without adequate child care, OR
* Are receiving CalWORKs, OR
* Are enrolled in CalFresh employment and training or another job training program accepted by CalFresh, OR
* Do not plan to register for the next school term.

(California Department of Social Services).

Since September 2017, the Cal Poly CalFresh Outreach Program has signed up roughly 150 - 160 students. Once students fill out the CalFresh application under the guidance of the Outreach Program, they then must schedule an appointment with the DSS to determine approval. Students signed up through the Cal Poly CalFresh Outreach program have a 40% – 50% approval rating from the Department of Social Services, meaning that of the students who are eligible and apply for CalFresh benefits, 40% - 50% of them are approved to receive the actual benefits. If a student does not get approved for benefits, the program team refers the student to other resources on-campus such as the food pantry or meal voucher program.

Currently, although Cal Poly has this program, the campus does not have any EBT readers that allow them to use CalFresh benefits. If students do get approved for CalFresh, they are unable to use their benefits at any of the 22 advertised dining venues on-campus.

**CSU BASIC NEEDS INITIATIVE PROPOSAL**

 On June 25, 2017, Governor Jerry Brown signed State Senate Bill Number 85, which would allow for the California State University, University of California, and California Community College systems to “designate as a “hunger free campus” each of its respective campuses that meet specified criteria” (Cal. S.B. 85, 2017). In order to qualify for funding, college campuses are required to create a proposal detailing the amount of funding desired and a brief description of programs the campuses would like to implement. Once approved, the funding is then distributed to each of the campuses by their respective governing bodies, beginning with the 2018-2019 academic year. Cal Poly applied and was approved for funding from the CSU to help address both food and housing insecurity on its campus. Within the proposal, Cal Poly is required to implement the following three strategies, a food distribution

|  |
| --- |
| CSU Request for Proposals |
| Create a food distribution program | * Campus Health and Well-Being is establishing an on-campus food bank distribution site.
* Open to both students, staff and faculty as well as members of the local community.
* Scheduled to open in April 2018.
 |
| Implement a meal sharing/meal swiping program | * First-year students can donate up to 10 meals per academic year
* Requires students to self-identify as food insecure for eligibility
 |
| Enact/maintain a CalFresh Outreach enrollment program | * Currently in place on campus.
* Funding set to expire at the end of the academic year; reapplying for additional funding.
* Request further funding specifically allocated toward to bring more awareness and outreach of the program in an effort to sign more students up for CalFresh benefits.
 |

program, a meal sharing program[[4]](#footnote-4) and a Cal Fresh Outreach program in order to be eligible to

apply for funding from the CSU:

As of February 7, 2018, Cal Poly was approved to receive $130,000 of that funding and was only one of 12 campuses in the CSU system to receive innovation funds (K. Humphrey, personal communication, February 17, 2018). The breakdown of funding is as follows:

**Encouraged Category: (Received $40,000)**

* Education & Training program on Basic Needs - $15,000
* Website development for Basic Needs - $10,000
* Basic Needs Emergency Kits for students - $5,000

**Required Category: (Received $40,000)**

* Food Pantry Facility Improvements - $20,000
* Supplies and Marketing Materials for Food Pantry - $6,500
* Satellite Food Pantry - $6,500
* Meal Sharing Marketing - $3,000
* CalFresh Marketing - $3,000

**Innovation: (Proposed $75,000, Received $50,000)**

The Cal Poly Food Hub

* Development of Technology App - $30,000
* Community Kitchen - $18,000
* Community Garden - $10,000
* Farmers Market Materials - $5,000
* Education, Outreach, & Marketing - $4,500
* Research & Evaluation - $5,000
* Other Supplies & Expenses - $2,500

(K. Humphrey, personal communication, February 17, 2018)

 Although this funding will be helpful in providing additional resources to combat the issue, Cal Poly is still unable to determine the exact target population of those they intend to help and support. The university cannot clearly determine and define those students experiencing food insecurity on its campus.

**Critique of the Cal Poly Approach**

 Cal Poly and the entire CSU system is quite progressive in responding to issues surrounding basic needs, when compared to other universities nationwide. However, there are numerous additional alternatives that other CSU campuses are implementing to better address and mitigate food insecurity. And although Cal Poly has three primary responses, the university could utilize resources, funding, and ideas in a to better address food insecurity.

**Food Pantry**

The Cal Poly Food Pantry has made numerous improvements over the course of its opening, particularly in regards to the ways in which it actually purchases food for the pantry. However, like most food pantries, the demand is much greater than the supply. There is limited space for the food that does get delivered, but there is simply not enough food, given the current demand. Additionally, there are limited amounts of fresh and frozen goods, such as milk, yogurt, cheese, fruits, vegetables, meats, eggs, etc. It is problematic to say that food insecure students would accept anything placed before them. In order to effectively address food insecurity, students must have consistent access to healthy *and* affordable fresh fruits, vegetables, meats, etc. Processed and pre-packaged items with little to no actual nutritional value are ineffective and may not adequately address the issue. It would also be helpful to provide an educational component for interested students, learning how to use and cook the various items that they have picked up at the food pantry. Although the food pantry does offer a cookbook created by Campus Health and Well-Being, it is not necessarily tailored to the items distributed at the food pantry. Lastly, the food pantry is, by no means, a long-term solution for a student experiencing food insecurity. If a student is struggling with this issue, they would have to possibly visit the food pantry each week in order to survive, given the current lack of access and availability to healthy, affordable food.

**Meal Voucher Program**

The current Meal Voucher Program is problematic for a variety of different reasons. First and foremost, there are only two locations on-campus where students can receive meal vouchers, the Dean of Students Office or Student Academic Services. It is important to note that the latter location was recently added, particularly useful given its more centralized location on-campus than the Dean of Students Office. Secondly, the funding for the current program is not sustainable. The singular donor could choose to withhold funding for future years or stop funding altogether, with little notice. The new Mustang Meal Sharing program, which allows students to donate 10 meals each academic year, will help to contribute meals for the voucher program. However, the consistency in student donations is uncertain and also not sustainable. Administration officials must consider the possibility that only a small percentage of students will actually donate toward the program. Should this occur and should the donor stop funding, officials will have to provide financial support for the program from other revenue streams or lose the program altogether. Students should also have the right to choose the amount of meals they would like to donate each academic year, removing the current restriction of just 10 meals per academic year.

 During its peak, the Meal Voucher Program distributed more meal vouchers in one quarter than during the entire course of the previous academic year (J. Pedersen, personal communication, January 18, 2018). As a result, the Vice President of Student Affairs determined that restrictions needed to be put in place to decrease this number, citing possible abuse of the program or its unexpected cost due to increased usage (J. Pedersen, personal communication, January 18, 2018). One argument might be made that the increased usage in the fall of 2017 might have signaled that there is a real problem of food insecurity on-campus, and students need meal vouchers in order to receive a meal. However, it appears that administration officials would rather increase restrictions in an effort to appropriately allocate services and cut costs as opposed to increasing its resources to better serve students.

 The Meal Voucher Program does not guarantee anonymity for students who frequently use the vouchers to combat their own personal struggles with food insecurity. As it currently exists, students would have to meet with an associate or assistant dean if they become repeat visitors of the program. As a result, they have to self-identify (not by choice) to an administration official as someone who is struggling to eat in order to receive subsequent vouchers each quarter. Students are not given a choice to meet with an official, should the need occur and instead, are denied anonymity in a direct violation of their rights as students. In order to access services, students must swipe their identification cards which allows a university access to their private information, (such as grade point average, college, major, year in school, Expected Family contribution) something that is in tension with the Family Educational Rights and Privacy Act of 1974. When students swipe their identification cards to use the food pantry or to receive a meal voucher, they do not realize that they are also surrendering their private information to administration officials. Although many may view this intervention as a way to better address the root cause of a student’s battle with food insecurity, students should also have the right to choose whether or not they want to seek help or whether or not they want their information released to school officials. Again, the meal voucher program is not a sustainable method financially as well as a sustainable option for a student struggling to become food secure. This program fails to address the root cause of a student’s lack of food security, whether it be Expected Family Contribution, geographical location, etc. It merely solves a student’s immediate sense of hunger, similar to that of a package of ramen noodles.

**Cal/Fresh Outreach**

 The current CalFresh Outreach Program is in existence because of funding through a federal grant from the USDA. Cal Poly is currently in the midst of securing additional funding to maintain funding for the next several years. However, once again, a Cal Poly program to combat food insecurity from its campus is deriving its funding from a non-sustainable source of income. Should the grant cease funding after this academic year, the program would not exist in future years, and students would not know where to seek help when applying for benefits. Of the current available programs at Cal Poly, I would argue that this is the most sustainable program when addressing root causes of food insecurity, a lack of financial capital. The CalFresh program empowers students with financial support to purchase food, even though they are unable to do so at any on-campus venue. While it is difficult to assess whether or not the food is both healthy and affordable, the benefits allow the student the ability to shop for groceries in a manner that is similar to that of their classmates. It makes an attempt to normalize the stigma that surrounds a hungry student who cannot afford to eat.

**RECOMMENDATIONS** **FOR CAL POLY ADMINISTRATION**

In an effort to better utilize resources in a more efficient and effective manner, the following are recommendations that Cal Poly Administration Officials can quickly implement to reduce the overall number of food insecure students both on and off-campus. I compare these alternatives more specifically in Appendix 1 using a Criteria Alternative Matrix to better assess the outcomes of each program, should it be implemented.

**Campus Control**

**Alternative 1: Removing Stigma**: Create an application for mobile phones and/or utilize existing applications (Cal Poly Now) or social media accounts to notify students about leftover food or open club events where food will be served.

California State University, Fresno utilizes their university’s main mobile application. As part of the app, there is a section called “Catered Cupboard” that is specifically for students who are food insecure. Each time there is leftover food at a campus event, these students are notified to come and pick up leftovers to take back to their residences (The California State University, 2016). Other universities, such as San Diego State, uses Twitter (@asNOwaste) to notify students of free and/or leftover food on-campus (A.S. No Waste, 2018). Interestingly, the fact that SDSU’s program runs through their Zero Waste program offers both the opportunity to build a unique cross-campus partnership, but also reduces the stigma associated with being labeled or identified as a food insecure student.

**Alternative 2: Working with Campus Dining**: Use leftover Plu$ Dollars to fund new Basic Needs initiatives, such as a Basic Needs Hub on-campus; remove the maximum number of meals a student can donate; sell food items at cost at on-campus grocery stores.

By the end of the academic year, if the student does not spend all of their Plu$ Dollars, the money is then treated as earned revenue by Campus Dining. In an interview with the Executive Director of the Cal Poly Corporation, Lorlie Leetham, there was a total of $90,630 of unused freshman dining plan Plu$ Dollars at the end of the 2016 – 2017 academic year (L. Leetham, personal communication, January 25, 2018). This equates to 0.5% of the total first-year student dining plan revenues. When looking at other meal plans on-campus, specifically for non-first-year students plus staff and faculty, there was a total of $474.32 (L. Leetham, personal communication, March 8, 2018). It is difficult to determine the exact amount of Plu$ Dollars that will be leftover at the end of each academic year; however, instead of treating the money as earned revenue, Campus Dining should consider using this money to help jumpstart new initiatives that directly address basic needs on our campus.

As of March 2018, students are only able to donate 10 meals each academic year. Instead of creating a restriction of the number of meals a student is allowed to donate, students should be given the option of the number of meals they would like to donate. This would remove additional barriers that prevent students from wanting to donate more meals to other students in need.

 Further, much of the food available for purchase at on-campus grocery stores is marketed at much higher costs than what it is purchased for. Instead of making a profit off of students’ basic needs, Campus Dining should also consider selling the food at-cost, similar to the method used by the pharmacy at Campus Health & Well-Being.

 In 2015, University of California, Irvine opened FRESH, a one-stop shop for Basic Needs on its campus. The campus utilizes the space for its food pantry, CalFresh enrollment, cooking classes, nutrition workshops, as well as confidential one-on-one appointments for students who would like additional assistance. Since opening, FRESH has interacted with over 10,000 students on-campus, with nearly 4,000 accessing the food pantry (University of California, Irvine, 2018).

**Alternative 3: Increasing Research**: More research specifically regarding Basic Needs at Cal Poly, while also determining a way to better measure and assess effectiveness of current programs

There is an enormous gap in the literature regarding the health and academic effects of students who are experiencing food insecurity in college. While some data which reflects the grade point average of these students, future research should examine the effects of the individual in the classroom and the subsequent consequence beyond the classroom, i.e. writing essays, studying, comprehension of difficult subjects, etc. Much of this research already exists for K-12 students. Cady (2014) finds numerous negative effects of food insecurity present in elementary, junior high, and high school students. Issues related to behavior and mental health are most commonly explored in the K-12 population; however, more specific research needs to be conducted to determine if this is also true for college students.

I would also suggest that Cal Poly conduct its own Basic Needs Study. Although timely and quite costly, this could serve as a better illustration of the current issues that students face beyond the classroom. This could also shed light onto the exact causes of both food and housing insecurity for students. Given the unique location of San Luis Obispo in contrast of other universities in the CSU system, particularly in relation to the cost of living, such research may expose critical assumptions that have never before been considered.

**State Government Control**

**Alternative 4: Revising Benefits**: Amend the CalFresh requirements to include in-class instruction as working hours in eligibility requirements.

 One of the exemptions listed in order to apply for CalFresh benefits includes that a student must be working a minimum of 20 hours a week. For full-time students, this is nearly impossible to do when combined with a full course load. Thus, to better address the needs of food insecure students, the DSS should amend the eligibility requirements to include class time as part of the 20 hours a week minimum. For many, school is a full-time job; if this is the case, then the Department of Social Services should also include it as a potential exemption for application.

**Alternative 5: Status Quo**

 Currently, Cal Poly implements a middle-of-the-road approach when responding to food insecurity on its campus, when compared to other campuses in the CSU. The argument could be made that the efforts are effective in reducing the number of food insecure students, given that the university is ranked 22 out of 23 campuses. However, the university needs to continue to monitor current policies for their effectiveness in reducing the problem. Additionally, the campus should be proactive when considering future ideas, programs, and resources.

**CONCLUSION**

This policy analysis examined several alternatives to effectively address and reduce the number of food insecure students at Cal Poly, San Luis Obispo. Additionally, the analysis provided contextual solutions specifically geared towards the unique conditions and stakeholders involved in this particular issue. As a result, the explored alternatives are comprehensive packages of possible solutions that could have profound effects on the number of food insecure students.

**Appendix 1: Criteria Alternative Matrix—Cal Poly Food Insecurity**



**REFERENCES**

Anderson, S.A. (1990). Core indicators of nutritional state for difficult-to-sample populations. *The Journal of Nutrition*, *120*(11S), 1557S-1600S.

A.S. No Waste. [Twitter moment] (2018). Retrieved from <https://twitter.com/asnowaste?lang=en>

Bedore, A., Jiang, M., Stamper, N., Breed, J., Paiva, M., & Abbiati, L. (2016). Identifying food insecure students and constraints for SNAP/CalFresh participation at California State University, Chico.

Blagg, K., Gundersen, C., Schanzenbach, D. W., & Ziliak, J. P. (2017). Assessing food insecurity on-campus.

Breed, J., Riesen, A., & Bianco, S. (n.d.). *CalFresh Outreach Overview*. [PowerPoint Slides]. Retrieved from <https://www2.calstate.edu/impact-of-the-csu/student-success/basic-needs-initiative/Documents/CalFreshOutreachOverview.pdf>

Broton, K., & Goldrick-Rab, S. (2016). The dark side of college (un) affordability: Food and housing insecurity in higher education. *Change: The Magazine of Higher Learning*, *48*(1), 16-25.

Cady, C. L. (2014). Food insecurity as a student issue. *Journal of College and Character*, 15(4), 265-272.

Cal. S.B. 85, (2017-2018) Chapter 23 Cal. Stat. 2017.

The California State University. (2016). *Serving Displaced and Food Insecure Students in the CSU*. Long Beach.

The California State University. (2018). *Report on CSU Actions to Support Students Facing Food and Housing Insecurity*. Long Beach.

Cal Poly. (2018). *Hunger-Free Campus Designation: Request for Proposals (RFP)*. San Luis Obispo.

Cal Poly Admissions. (2017). *Student Profiles*. Retrieved from Cal Poly website: <https://admissions.calpoly.edu/prospective/profile.html>

Cal Poly Campus Dining (2018). *Freshman Dining Plans*. Retrieved from Cal Poly website: <https://www.calpolydining.com/diningprograms/freshman/>

The Campaign for a Healthy CUNY. (2011). Food insecurity at CUNY: Results from a survey of CUNY undergraduate students*.* New York, NY: Freudenberg, N., Manzo, L., Jones, H., Kwan, A., Tsui, E., & Gagnon, M.

Chaparro, M. P., Zaghloul, S. S., Holck, P., & Dobbs, J. (2009). Food insecurity prevalence among college students at the University of Hawai'i at Manoa. *Public health nutrition*, *12*(11), 2097.

Clark, S. (2002). *The policy process: A practical guide for natural resources professionals*. Yale University Press.

 The College Board. (2016). Average net price over time for full-time students at public four-year institutions. Retrieved from <https://trends.collegeboard.org/college-pricing/figures-tables/average-net-price-over-time-full-time-students-public-four-year-institution#Key%20Points>

Crutchfield, R. M. & Maguire, J. (2018). *California State University Office of the Chancellor study of student basic needs*. Retrieved from <http://www.calstate.edu/basicneeds>

Food Recovery Network. About us. (n.d.). Retrieved from <https://www.foodrecoverynetwork.org/aboutus/>

Gaines, A., Robb, C. A., Knol, L. L., & Sickler, S. (2014). Examining the role of financial factors, resources and skills in predicting food security status among college students. *International journal of consumer studies*, *38*(4), 374-384.

Goldrick-Rab, S. (2016). *Paying the price: college costs, financial aid, and the betrayal of the American dream*. Chicago: The University of Chicago Press.

Holland, G. (2017, June 29). 1 in 5 L.A. community college students is homeless, survey finds. *Los Angeles Times*. Retrieved from <http://www.latimes.com/local/lanow/la-me-ln-homeless-community-college-20170628-story.html>

Hughes, R., Serebryanikova, I., Donaldson, K., & Leveritt, M. (2011). Student food insecurity: The skeleton in the university closet. *Nutrition & dietetics*, *68*(1), 27-32.

Kent, G. (2005). Freedom from want: The human right to adequate food. Georgetown University Press.

Maroto, M. E., Snelling, A., & Linck, H. (2015). Food insecurity among community college students: prevalence and association with grade point average. *Community College Journal of Research and Pratcie, 39*(6), 515-526.

Meldrum, L., & Willows, N. (2006). Food insecurity in university students receiving financial aid. *Canadian Journal Of Dietetic Practice & Research*, *67*(1), 43-46.

Morris, L. M., Smith, S., Davis, J., & Null, D. B. (2016). The prevalence of food security and insecurity among Illinois university students. *Journal of nutrition education and behavior*, *48*(6), 376-382.

National Student Campaign Against Hunger and Homelessness. (2016). Hunger on-campus: The challenged of food insecurity for college students. Boston, MA: Dubick, J., Mathews, B., & Cady, C.

NYU Faculty Against the Sexton Plan. (2015). *The art of the gouge*. Retrieved from <https://archive.org/details/NYU-FASP-Art-Of-Gouge>

Patton-López, M. M., López-Cevallos, D. F., Cancel-Tirado, D. I., & Vazquez, L. (2014). Prevalence and correlates of food insecurity among students attending a midsize rural university in Oregon. *Journal of nutrition education and behavior*, *46*(3), 209-214.

Silva, M. R., Kleinert, W. L., Sheppard, A. V., Cantrell, K. A., Freeman-Coppadge, D. J., Tsoy, E., ... & Pearrow, M. (2015). The relationship between food security, housing stability, and school performance among college students in an urban university. *Journal of College Student Retention: Research, Theory & Practice*, 1521025115621918.

California Department of Social Services. (n.d.). Retrieved from <http://mycalfresh.org/students/>

Swipe Out Hunger. History, mission, & vision. (N.d.). Retrieved from <http://www.swipehunger.org/about>

The United Nations. (1948). Universal Declaration of Human Rights.

The United Nations’ Office of the High Commissioner for Human Rights (OHCHR). (2010). Fact Sheet No. 34, The Right to Adequate Food. Retrieved from <http://www.refworld.org/docid/4ca460b02.html>

United States Department of Agriculture. Economic Research Service. (2016). *U.S. households by food security status*. Washington, D.C.

University of California, Berkeley. (2017). Basic needs: Food security. Retrieved from <https://food.berkeley.edu/foodscape/map-gallery/basic-needs-food-security/>

University of California, Irvine, (2018). FRESH Basic Needs Hub. Retrieved from <https://docs.google.com/document/d/1oa-taHofq7wPfEF7jHR7ZeVoYkudPyDhPuVJDD8D39s/edit>

Wisconsin HOPE Lab. (2017). Hungry and homeless in college: Results from a national study of basic needs insecurity in higher education*.* Madison, WI: Goldrick-Rab, S., Richardson, J., & Hernandez, A.

1. There are a wide variety of definitions that researchers use to describe food insecurity—I use this particular definition because of the multiple components it includes, such as availability, safe, and acquiring in an acceptable way. Most definitions often lack one or more of these critical pieces. [↑](#footnote-ref-1)
2. I include the USDA definitions here because they are most commonly used in studies when determining a student’s level of food security. [↑](#footnote-ref-2)
3. The Cal Poly Food Pantry opened during mid-winter quarter in 2014, which may explain the low number of students utilizing the resource in the beginning stages of its development. [↑](#footnote-ref-3)
4. At the beginning of each academic year, first-year students are required to have a meal plan on-campus. This program, called a declining balance system, provides students with a certain amount of Plu$ Dollars to spend at any of Campus Dining’s 22 venues. For the 2017 -2018 academic year, the mean plan cost for students living on-campus ranges from between $4,259 and $5,323, depending on on-campus living situation (Cal Poly Campus Dining, 2018). If a student does not spend the quarterly allotted amount, the funding rolls over from quarter to quarter. Similar to other meal sharing programs, first-year students to donate up to 10 meals per academic year. The program has recently been established, and efforts are underway to notify first-year students of the opportunity to donate. Students who are interested in donating must download a form, fill out the information, and then submit the form online. Each donated meal costs $6.50 of the student’s Plu$ Dollars or $65.00 if the student donates the maximum number of meals allowed. Currently, only first-year students would be allowed to donate to the program. In essence, the student-donated meals are given out in the same way that meal vouchers are. [↑](#footnote-ref-4)