Food Insecurity and SNAP in the Berkshires:
A Portrait

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Abstract

My investigation into food insecurity in the Berkshires began with the Supplemental Nutrition Assistance Program (SNAP), formerly known as food stamps. I researched how the program works and what resources are available for Berkshire residents who are eligible for SNAP. In the course of my research, however, I found a range of ways in which SNAP falls short of fully addressing food insecurity. The formula to calculate SNAP benefits makes certain assumptions that underestimate many households’ needs, the population of SNAP enrollees is far smaller than the population that is eligible, and people tend to run out of benefits before the end of the month. Furthermore, politicians in Congress have proposed changes to SNAP that would make it even more difficult to receive benefits.

Luckily, there are some local resources that help fill the gap between what SNAP is able to provide and people’s actual food needs. One of these is the Berkshire Food Project, which is based in North Adams and serves free meals every weekday to anyone who comes. I volunteered with the Berkshire Food Project and used their data to learn more about the organization’s role in fighting food insecurity. I found that the group served significantly more people towards the end of each month, suggesting that the Project’s clientele includes SNAP recipients whose benefits are exhausted by the end of the month.
Introduction

A household is defined as experiencing food insecurity when it reports difficulty providing enough food for all members due to a lack of resources. Very low food security is defined as having had disruptions in food intake or changes in eating patterns during the year because of lack of resources. 12.3 percent of households in the U.S. experienced food insecurity at some point in 2016, and 4.9 percent experienced very low food security. On average, food insecure households were food insecure for seven months out of the year.\(^1\) The problem is especially acute for American children. In 2014, more than one in five children in the US lived in a food-insecure household. The situation in Berkshire County is even worse: roughly one in three children are food insecure.\(^2\)

There is substantial evidence linking food insecurity with health problems, making it a serious public health issue. In their review of the literature on the relationship between food insecurity and health, Gundersen and Zillak (2015) report that children in food insecure households are two times more likely to be in fair or poor health, two to three times more likely to have anemia, and between 1.4 and 2.6 times more likely to have asthma. They also face higher risks of cognitive problems, behavioral issues, and a host of other problems. Though research on the interaction between food insecurity and health for adults is less extensive, there is evidence that it is associated with lower nutrient intake and worse mental health.


The Supplemental Nutrition Assistance Program (SNAP), otherwise known as food stamps, is the most important governmental program addressing food insecurity and the health problems that come along with it. I will discuss how SNAP works to fight hunger, the gaps in the protections it offers, and some of the groups trying to fill those gaps in the Berkshires.

What is SNAP?

SNAP is a program that transfers money each month to enrollees. Benefits are electronically loaded each month onto a card that recipients can use to pay for food and plants and seeds to grow food themselves.3 Though the program is funded completely by the federal government through the USDA, states determine eligibility and actually issue the benefits.4 As of December 2017, 41.3 million individuals were enrolled in SNAP.5 Almost ⅔ of recipients are children or disabled.6

Positive Effects

Research shows that SNAP successfully increases household access to food. In a study of the initial rollout of the food stamp program between 1962 and 1975, Hoynes, Schanzenbach, and Almond (2016) found that receiving food stamps increased expenditures on food. Shaefer

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and Gutierrez (2013)’s analysis shows that SNAP participation reduces household food insecurity by 12.8 percentage points. Not surprisingly given the correlation between food insecurity and health problems, SNAP has also been shown to have positive health effects for beneficiaries. Hoynes, Schanzenbach, and Almond (2016) observed increases in reporting being in good health and decreased incidence of obesity, heart diseases, and related illnesses among people who had access to food stamps while in utero or early childhood.\(^7\)

Furthermore, SNAP has been shown to have positive effects on recipients’ financial situations. Shaefer and Gutierrez (2013) found that families receiving SNAP were less likely to fall behind on housing, utilities, and medical bills.\(^8\) Tiehen, Jolliffe, and Smeeding (2013) report that SNAP reduces the poverty rate by between 14 and 16 percentage points and reduces the severity of poverty by 54 percent. The authors conclude, “No other program for the nonelderly does such a great job preventing poverty, or alleviating poverty’s weight on those who remain poor.”\(^9\)

Not only does it successfully relieve poverty, but, unlike most other safety net measures, SNAP is able to respond quickly to changes in people’s need. The 2007 recession damaged millions of Americans’ finances, with serious consequences for their access to food: the percentage of households with children that were food insecure rose from 16.9 in 2007 to 22.5 in 2008.\(^10\) At the same time, though, the SNAP caseload expanded dramatically between 2007 and

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10 Craig Gundersen and James Ziliak, "Food Insecurity and Health Outcomes," Health Affairs 34, no. 11 (November 2015).
2011.\textsuperscript{11} Ganong and Liebman (2013) found that at least two-thirds of the increase in SNAP enrollment during this period was due to changes in local unemployment. A significant fraction of the remainder of the increase was due to changes in state policies, including the relaxation of income and asset thresholds.\textsuperscript{12}

\textbf{Enrollment}

SNAP enrollment is handled on a state-by-state basis. In Massachusetts, people can apply online, by mail, by fax or in person at one of the Department of Transitional Assistance (DTA)’s local offices. Eligibility varies based on gross household income (net income minus certain deductions), citizenship status, household size, age, disability and work status. Eligibility standards are particularly stringent for able-bodied adults without dependents (ABAWDs). People in this group are between ages 19 and 50, have no formally documented disability, and report no dependents. They can only receive SNAP benefits for 3 months every 3 years unless they also satisfy work requirements, or unless they live in a locality with a waiver for this time limit. Waivers are granted by the USDA for areas with local unemployment rates either above 10 percent or well above the national average. SNAP recipients must have their enrollment recertified regularly, between every 6 and 24 months.\textsuperscript{13}

\textsuperscript{12} Ganong and Liebman, 2013.
\textsuperscript{13} Ibid.
Using SNAP Benefits

Once enrolled, beneficiaries receive an Electronic Benefits Transfer (EBT) card that is loaded at the beginning of each month. In Massachusetts, the precise day that recipients receive their benefits depends on the last digit of their Social Security numbers.\textsuperscript{14} Benefits can be used on food from SNAP-certified stores, but cannot be used on non-food products, alcohol, hot foods, or any food to be eaten within a store.\textsuperscript{15} Supermarkets and supercenters accounted for almost two-thirds of SNAP transactions and more than three-quarters of SNAP benefits, but benefits can also be used at specialty stores and farmers markets.\textsuperscript{16}

SNAP: The Local Picture

On the whole, SNAP enrollment rates are lower in Berkshire County than in the rest of the state. I used data from the Department of Transitional Assistance to illustrate this.\textsuperscript{17}

\textsuperscript{15} "Supplemental Nutrition Assistance Program (SNAP)."
Figure 1: Data on SNAP caseloads are from the Massachusetts DTA. Assistance Units (AUs) are defined as the number of household heads receiving benefits. ZIP codes with fewer than 11 AUs were excluded from the data set for privacy reasons. Data were normalized by taking the natural log of the number of AUs per ZIP code, and trend lines were constructed by averaging values for ZIP codes in each region.

Figure 2: Data on number SNAP recipients by ZIP code are from the Massachusetts DTA. I used data on population by ZCTA from the 2016 American Community Survey, and matched
this data with SNAP numbers to calculate the rough percentage of each ZIP code’s population enrolled in SNAP. There is some error introduced by the fact that the borders of ZIP codes and ZCTAs are not identical.

This gap between SNAP enrollment in the Berkshires and enrollment in the rest of the state may not be due to a difference in need: at 12.4 percent, the poverty rate in Berkshire County is a full percentage point above the state-wide rate.\(^\text{18}\) It may instead be the result of different patterns of enrollment, an issue I will discuss later.

Because of high unemployment in many areas of western Massachusetts, the state has applied for and received waivers of SNAP’s work requirements for several localities. These waivers make it easier for able-bodied adults without dependents (ABAWDs) to continue receiving benefits during periods of unemployment and underemployment. Adams, Clarksburg, and North Adams have waivers for this year and last. Several towns in the Berkshires, including Lee, Lenox, and Pittsfield, had waivers last year but did not qualify again for 2018.

Using DTA data, I analyzed whether or not this lapse in work requirement waivers led to a change in the number of SNAP recipients over the period for which I had data, August 2017 through May 2018. I used a difference-in-differences approach and included controls for each town and month. My variable of interest was the interaction between having a waiver that lapsed in January 2018 and whether the observation was taken in or after January 2018. With a p-value of 0.62, there was no evidence for a significant difference in caseloads for towns that lost waivers in 2018. This was not very surprising, given that 2018 also marked the beginning of another three-year period of eligibility for ABAWDs. Thus, even adults in areas without waivers who were not working were eligible for three months of SNAP starting in January 2018. I ran my

analysis again, using April 2018 as the beginning of the treatment period to allow for the possibility that unemployed ABAWDs remained on SNAP as long as they could during the new three year period. I did not find significant results with this setup either. It seems that the change brought about by the waiver lapse was not sharp or dramatic enough to be picked up by these statistical methods. MassLegalServices estimates that between 6,000 and 7,000 people were affected by the lapses, but given the complication added by the new “three-year clock” that began in 2018, it is unlikely that all six to seven thousand people were dropped from SNAP at the same time.19 Regardless, changes in waiver status are important for SNAP beneficiaries and advocates to be aware of.

Resources for Enrolling

Berkshire residents have access to several resources to help them through the SNAP enrollment process. The Food Bank of Western Massachusetts helps about 80 people per month apply for SNAP through a combination of over-the-phone and in-person assistance. The latter occurs at monthly events, including at North Adams’ Friendship Center food pantry. It relies on a volunteer network to offer this help. According to Beth Ziemba, SNAP Program Manager for the food bank, the group would like to train more volunteers in Berkshire County, as this would allow them to reach a broader geographic area. They are also hoping to promote their phone service, since this can help bridge the transportation problems that make in-person help

challenging. Currently, referrals to their enrollment services come from partner groups including pantries, meal sites, colleges, and senior centers.20

Another resource for accessing SNAP and other food resources is Project Bread, a Boston-based nonprofit focused on ending hunger in Massachusetts.21 Their FoodSource Hotline helps callers connect with their options for accessing food and answered more than 28,000 callers in 2017. FoodSource Hotline counselors can even help callers apply for SNAP over the phone.22 Another of Project Bread’s initiatives is GettingSNAP.org, a website that helps visitors determine their eligibility for SNAP in Massachusetts and guides them through the process of applying. FoodSource Hotline counselors are available to help visitors through the site’s live chat function. According to Project Bread, GettingSNAP.org helps 540,000 unique visitors each year.

SNAP and Massachusetts Farmers Markets

Massachusetts SNAP recipients can make use of the state’s Healthy Incentives Program (HIP) to get subsidized access to fresh produce at Massachusetts Farmers Markets. HIP is a collaboration between the Department of Transitional Assistance, the Department of Agricultural Resources, the Department of Public Health, and Project Bread, with funding from the USDA Food Insecurity Nutrition Incentive (FINI) Grant Program. SNAP recipients who use their EBT cards at participating farmers markets, farm stands, farm share programs, and mobile markets receive a dollar back for every dollar they spend on eligible food up to a monthly cap. This cap

20 Beth Ziemba, "SNAP Questions," e-mail message to author, July 18, 2018.
varies based on household size and ranges between $40 per month for households of 1 and 2 and $80 per month for families of six or more.\textsuperscript{23}

HIP was first piloted in 2012 in Hampden County, Massachusetts. 7,500 of the county’s SNAP households were randomly chosen to participate in the program. The pilot program credited participants with 30 cents for each dollar spent on targeted products, which included most fruits and vegetables, at participating supermarkets and superstores. Focus groups and interviews with participants, as well as detailed transaction data, revealed that program participants consumed 26 percent more fruits and vegetable and spent 11 percent more SNAP benefits on fruits and vegetables than non-participants.\textsuperscript{24}

The current incarnation of the program, which began in 2017, is different in its incentive structure and where benefits can be earned, but it appears to be having a similarly dramatic effect. In HIP’s first ten months, around 35,000 households participated, farmers markets reported increased sales, and the program paid out $3.3 million in benefits. In fact, the program was so popular that in April of this year, it exhausted the funds that had been meant to sustain it through 2020.\textsuperscript{25} HIP was suspended April 15, but reinstated May 23 after the state was able to secure supplemental funding to prolong the program through the end of the year.\textsuperscript{26} On July 26,

Governor Baker signed a budget for FY 2019 that included $4 million in funding for HIP, securing the program’s future for at least the next year.\(^\text{27}\)

Supplementing HIP in the Berkshires is Market Match, an initiative of the Berkshire Market Collective (BMC). The BMC is a USDA-funded organization bringing together 15 farmers markets in the Berkshires. Their Market Match program unifies farmers markets’ individual efforts to double SNAP, WIC, and Senior Coupons using money fundraised from grants, local businesses, and other sponsors. Through this initiative, the BMC is able to better publicize which local farmers markets not only accept SNAP, but offer additional incentives for beneficiaries of SNAP and other government programs. Going forward, the BMC could also play a role in expanding farmers market benefit programs. Executive director of Berkshire Farm and Table and cofounder of BMC Angela Cardinali explains, “It is our hope that, in the future, the Berkshire Market Collective can help develop a funding source so funding is more easily accessible to our region’s markets.”\(^\text{28}\)

When SNAP Falls Short

Though SNAP provides vital assistance to food insecure families, it is not always enough to fill these families’ needs. Structural features of the program and underenrollment mean that many people still go hungry.


\(^{28}\) Angela Cardinali, "Market Match," e-mail message to author, July 29, 2018.
Flaws in How Benefits are Calculated

SNAP benefits are calculated based on the Thrifty Food Plan for a reference family of four, which calculates the cost of the foods necessary to meet the dietary needs of an adult male, an adult female, a child between the ages of 6 and 8, and a child between the ages of 9 and 11. This cost is then scaled to match the actual size of the household enrolled in SNAP. However, it does not take into account variation in the actual genders and ages of the household’s members, which can significantly alter caloric needs. As a result, households with more adolescents and adults, especially males, are likely to receive a SNAP benefit that assumes food costs below their actual costs. Perhaps because of this, over 20% of households with teenagers are food insecure, 2 percentage points more than families with younger children. The SNAP formula also does not adjust for geographical variation in the cost of food. SNAP households in areas with high food costs effectively receive less money from the program, and so are less able to fulfill their food needs.

Another piece of the SNAP formula that can lead to families receiving less money for food than they require is the Benefit Reduction Rate (BRR), or the rate at which benefits are reduced for each additional dollar a household earns. SNAP benefits are calculated as the maximum benefit guarantee for a given family size reduced by 30 cents for each dollar the

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31 Committee on Examination of the Adequacy of Food Resources and SNAP Allotments et al., 2013.
family earns. When income deductions are taken into account, this formula assumes that the family is able to spend 20-25 percent of its income on food. In reality, data from the 2010 Consumer Expenditure Survey indicate that families generally spend much less than that on food. The median U.S. family spent around 13% of its pretax income on food, and though this fraction is higher for low-income families, even families earning between $5,000 and $10,000 in pretax income annually spent only 16.8 percent of their incomes on food.\(^{32}\) As a result, SNAP may systematically underestimate how much assistance families need to purchase adequate food.

Furthermore, the benefit reduction rate applies to net income, which is gross income less certain deductions for families’ other expenses. Deductions include those for medical expenses, dependent care, earned income, and shelter. However, there is reason to believe that these deductions do not entirely account for the costs that low-income families face. The earned income deduction, for instance, is a response to the fact that being employed comes with certain costs, such as for child care and transportation to get to work. However, it does not account for the fact that employment reduces available time to prepare meals, especially for households with single parents. These families might choose to buy partially prepared foods (pre-cut vegetables, for instance) to save time, but since these foods are more expensive, their SNAP dollars might not go as far as they need to. The shelter deduction too is inadequate for many families. Intended to allow families to deduct costs such as rent, mortgage payments, and utilities, the shelter deduction is capped for most families. More than 70 percent of all households on SNAP use the shelter deduction, and almost 30 percent of these households would receive a larger deduction if not for the cap. Because of features like these in income deductions, the net income figure that is

\(^{32}\) Committee on Examination of the Adequacy of Food Resources and SNAP Allotments et al., 2013.
entered into the SNAP benefit calculation may not be an accurate reflection of many families’
resources.\textsuperscript{33}

Recent research points to another factor that SNAP calculations do not take into account. Anderson (2016) finds that child food insecurity depends not only on a family’s socioeconomic status, but also on parents’ mental and physical health. In households with low or very low food security, adults were significantly more likely to result being depressed or in poor overall health. This was true even when controlling for household income.\textsuperscript{34} These results suggest that physical and mental health stretch families’ resources and their ability to use them effectively. SNAP, however, treats families with and without health problems the same unless those issues are officially designated as disabilities. Given the difficulty many low-income Americans have accessing medical help, especially mental health resources, it seems likely that many mental and physical health problems remain undiagnosed and that SNAP will fall short of giving families facing health issues the resources to access adequate food.

\textbf{Gap Between Eligible and Enrolled}

In addition to benefits being insufficient for many families, not all those eligible for SNAP benefits receive them. Eslami, Leftin, and Strayer (2012) calculate that of the average 51 million individuals eligible for SNAP benefits each month of 2010, only 38 million received them.\textsuperscript{35} A 2014 USDA report on the dynamics of the SNAP program between 2008 and 2012

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\textsuperscript{33} Committee on Examination of the Adequacy of Food Resources and SNAP Allotments et al., 2013.
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provides some insight into which eligible people may not be enrolling. This analysis includes breakouts of dynamics for subsets of at-risk population (below 300% of poverty): single adults with children, children with single parents, married adults with children, elderly, and disabled adults. At-risk elderly people had particularly low entrance rates into the program, which could signal that this group is less aware of SNAP or faces greater challenges navigating the enrollment process. Among low-income people, those who had previously received SNAP benefits were much more likely to join the program, perhaps indicating that people who have not enrolled in SNAP before do not know how to.

The study also found a great deal of cycling in and out of the program: of those who entered SNAP between 2008 and 2012, 33% stayed on for less than 6 months, and 52% stayed for a year or less. During the study period, almost 60 percent of beneficiaries who exited SNAP re-entered the program within two years. These changes in enrollment are likely due to the rapidly fluctuating family and employment circumstances of low-income people in the U.S. Brynne Keith-Jennings and Raheem Chaudhry report for the Center for Budget and Policy Priorities that, “Large numbers of participants receive SNAP for short-term periods and work both before and after their stay on SNAP (or work in some months while on SNAP but are underemployed in other months).”36 It is easy to imagine that the kind of chaos and turmoil that would lead to lapses in and out of eligibility would also make it more difficult to remember to re-apply for SNAP upon regaining eligibility.

The gap between those eligible for SNAP and those enrolled is a serious issue in the Berkshires. According to the Northern Berkshire Community Coalition, over 30% of

36 Keith-Jennings and Chaudhry, 2018.
SNAP-eligible people in North Adams and Adams are not receiving SNAP benefits. The problem is particularly acute for older adults, who often face additional challenges in navigating the application process.³⁷ Negative perceptions may also play a role in widening the SNAP gap: says Beth Ziemba, SNAP Program Manager for the Food Bank of Western Massachusetts, “Unfortunately, there is still a level of stigma associated with the SNAP program, which can deter folks from applying.” She also cites an unawareness of eligibility and lack of transportation as barriers to enrollment, despite online and over the phone options for applying.³⁸

End-of-Month Squeeze

As discussed previously, SNAP benefits are distributed at the beginning of each month. The combination of inadequate benefits and a once-per-month disbursement has led to a well-documented pattern of recipients running out of benefits by the end of the month. Castner and Henke (2011) discovered that the average SNAP household had redeemed more than three quarters of its benefits in the first two weeks of receiving them. 86% of households had redeemed more than half their benefits by the second week, while 53% had redeemed more than 90% of their benefits by the second week.³⁹

This has serious consequences on SNAP beneficiaries’ health. Shapiro (2005) found that, on average, SNAP recipients’ caloric intakes declined between 10 and 15 percent over the course

³⁸ Beth Ziemba, "SNAP Questions," e-mail message to author, July 18, 2018.
of the month.40 Patterns of shopping more at the beginning of the month could also lead to reduced consumption of perishable items such as fruits and vegetables.41

Potential Changes to SNAP

As it is, SNAP is far from perfect. Some politicians are proposing changes that would make it fall even further from meeting the needs of food-insecure Americans. In June, House Republicans passed a version of the Farm Bill that includes expanded work requirements for SNAP recipients.42 Currently, only able-bodied adults (ages 18-50) without dependents are subject to the requirement that they work or participate in job training for 20 hours per week to qualify for SNAP for more than three months out of every three years. Under the House changes, work requirements would be extended to include adults with children six and older and adults ages 50 to 59. The bill also imposes more stringent penalties for failing to meet work requirements, equal to one year of lost benefits for the first offense and three years for the second offense.43 These modifications would cause an estimated two million people to lose SNAP benefits, and cut almost $17 billion from the program’s costs by 2028. They amount to what the Food Research and Action Council calls an “assault on the (already limited) food budgets of hungry people.”44 45

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These changes may not make it into law. The Senate version of the Farm Bill “tinkers” with SNAP in an effort to reduce fraud but does not change work requirements.\textsuperscript{46} It also enjoyed broad, bipartisan support in that chamber, while the House version passed by only two votes. However, some Republicans, including President Trump, appear ready to fight for work requirements to remain in the final version of the bill. It is unclear what will happen before the current Farm Bill expires on September 30.\textsuperscript{47}

**Local Resources**

Due to the way benefits are structured, gaps in who receives benefits, and timing of those benefits, SNAP is not enough to relieve many families’ hunger. Depending on how Congress votes on the future of SNAP, this problem could become even more severe. Local groups that work to keep people in their communities fed are thus an essential part of the fight against hunger. Below are just a couple of these resources.

**WRAPS**

Williams Recovery of All Perishable Surplus (WRAPS) is a student-run group that packages and delivers excess food from Williams dining halls to local organizations for distribution to people who need food. WRAPS also accepts and distributes donations from Wild Oats. It operates both during the academic year and over the summer, delivering meals to partner


\textsuperscript{47} Paschal, 2018.
sites including the Mohawk Forest low income housing development and the Roots Teen Center in North Adams. According to Marco Vallejo, student leader for WRAPS, the limiting factor of the group’s ability to deliver free meals to people in need is student involvement. When the group lacks sufficient volunteers to pick up and package excess food from dining halls, that food ends up being thrown out rather than reaching the people who need it. Vallejo cites a lack of student awareness and engagement with the group’s work as the reason for low participation, but remains convinced of WRAPS’ important role in the food access landscape.

Berkshire Food Project

Since 1987, the Berkshire Food Project has served free meals each week out of the First Congregational Church of North Adams. It began as a club of Williams College students, who used money from a monthly meatless meal at Williams to fund their efforts to help North Adams residents who were left unemployed by the region’s economic shift.48 Today, the group serves a free lunch every weekday between 12 and 1 at the First Congregational Church. The meal is prepared by a crew of volunteers using a mix of foods donated by local retailers, including Cumberland Farms and Big Y, and food purchased using funds from donors. In addition to individual donors, benefactors include Williams College through its weekly meatless meal, Project Bread, and the United Way. Local organizations such as the Food Bank of Western Massachusetts, Ecu-Health Care, and the Berkshire Community Action Council are invited to table during the meals to talk to patrons and distribute information.49

The Berkshire Food Project’s mission has always been two-fold: food and dignity. The bylaws of the group The Project operates on the principle that the people they serve know best what they need, and as such, the bylaws of the group require that employees and volunteers not ask questions of the people who come about why they are there. Although this helps create an atmosphere of respect, it also makes it more difficult to know who the group serves.

I used data that the Berkshire Food Project collects on number of meals served, pounds of food distributed, and number of individuals served daily to get a better sense of BFP’s clientele. These numbers are gathered to report back to the Food Bank of Western Massachusetts and allow donor corporations to get tax write-offs for the number of pounds of food they donate. In this analysis, I used the fact that many government welfare program benefits are received at the beginning of the month. As discussed earlier, SNAP benefits in Massachusetts are distributed sometime in the first couple weeks of the month depending on recipients’ SSNs. Research also indicates that recipients exhaust the majority of their benefits within the first weeks of having them. My hypothesis was that most of the people who rely on the Berkshire Food Project also receive SNAP, and so have more need for the Project’s meals towards the end of each month. This would increase the Berkshire Food Project’s counts of meals served for days later in the month. Timing of other government benefits should not contribute to this end-of-the-month bump: Social Security benefits are disbursed in the middle and end of the month and Transitional Aid to Families with Dependent Children (TAFDC) is disbursed in the beginning and middle of the month.50 51

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As Figure 3 shows, my initial analysis revealed a slight upward trend in the number of individuals served at the Berkshire Food Project over the course of the month. I did not see a corresponding upward trend in the number of meals served (Figure 4), likely because this data point is greatly affected by patterns of food donations. When the Project receives more fresh food than it can serve in a prepared meal, it gives out excess food at a table in the back of the church. It then records the number of pounds it distributes and adds them to its meal count for the day at a conversation rate of 1.2 pounds per “meal”. Since food donations do not follow the SNAP calendar, I decided to focus on number of individuals served for the remainder of my analysis.

Figure 3: Data from the Berkshire Food Project for the period between October 2, 2017 and June 29, 2018.

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Figure 4: Data from the Berkshire Food Project for the period between October 2, 2017 and June 29, 2018. Meals served includes hot meals as well as pounds of food distributed, converted at the rate of 1.2 pounds per meal.

I ran regressions using weather data from Weather Underground to predict the daily number of individuals served. Rather than using rainfall and temperature as continuous variables, I created indicator variables for the kinds of conditions that would make it more difficult for people, especially the mobility-limited, to make it to the church for a meal. One of these indicators was for more than 0.1 inches of precipitation. The other was for a daily maximum temperature below 32 degrees Fahrenheit. I also used indicator variables for being in the latter portions of the month. I found that, when including month fixed effects and controlling for bad weather, BFP served an average of 13 more people than on days in the second half of the month than in the first. They also served about 10.6 more people in the last week (the 24th and later) of the month than in the preceding weeks. These results were significant at the 1 percent level, and remained significant and of similar magnitude and direction when I removed weather controls, providing strong evidence that the Berkshire Food Project serves more people later in the month.
This further implies that its clientele is reliant on SNAP, and that the Project fills the gap left by insufficient SNAP benefits.

Even though my volunteering at BFP and talking with volunteers and coordinators there indicated that weather was also a strong determinant of number of people served, my results showed that weather had an impact but a smaller one than day of the month. Having 0.1 inches or more of rain decreased the number of people served by 4.8, while having a daily maximum temperature below 32 decreased it by about 8.4. These results were not significant at the 5 or 10 percent levels.

**Conclusions**

Food insecurity is a serious and widespread problem in the United States, Berkshire County included. SNAP is a necessary part of our collective response but it is not enough: lack of awareness about the program and the stigma that goes along with benefiting from it prevent eligible people from enrolling, and even those who do enroll may not receive enough benefits to meet their needs. Changes to the program on the federal level, such as fixing aspects of the benefit formula or disbursing benefits multiple times per month, could help keep some from going hungry. In the current political environment, however, changes to SNAP are more likely to cut benefits and eligibility than expand them. Local groups, like WRAPS and the Berkshire Food Project, are thus an essential piece of the fight against food insecurity.
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