

Technical Research Memo: An Early Look at a Pilot SNAP Outreach Intervention in California

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In the fall of 2021, The Hope Center for College, Community, and Justice partnered with Compton College to evaluate the impact of sending students text messages (or “nudges”) about CalFresh, California’s Supplemental Nutrition Assistance Program (SNAP). We wanted to connect more Compton College students to CalFresh and to learn whether “nudging” students to CalFresh using stigma-reducing language resulted in increased awareness, application, and utilization of CalFresh.

INTERVENTION DESIGN

We conducted a randomization design to begin to evaluate the impact of the nudging messages. Ideally, outreach efforts would be directed only to students eligible for CalFresh benefits. Unfortunately, data systems today are not aligned in such a way that makes data sharing between colleges and government agencies easy. Instead, most colleges must use the information available to them to serve as proxies for CalFresh eligibility. The first step in implementing the intervention was to determine which students to target for outreach. Study participants had to meet the following criteria:

- Enrolled in the fall of 2021;
- 18 years or older;
- Not enrolled in a dual enrollment program;

- Enrolled in a certificate or degree program for at least two semesters (as early as fall 2019); and
- Either received a Pell Grant or Cal Grant, were eligible for work-study, had an Expected Family Contribution of \$0, received emergency aid (e.g., CARES funding), OR did not submit a Free Application for Federal Student Aid (FAFSA).¹

In early September 2021, students were selected at random to be in one of three approximately equal-sized study groups:

- **No outreach (n=539):** Students in this group did not receive any text messages. They served as the comparison group. While students in the no outreach group did not receive the nudge text messaging, they were still able to apply for and use CalFresh.
- **Information-only (n=500):** Students in this group received informational text messages about signing up for CalFresh benefits.
- **Attuned, or stigma-reducing (n=500):** Students in this group received texts that contained the same information about CalFresh sign-up, but these texts included additional language to help students recognize that non-tuition supports like CalFresh are positive, useful, and geared toward helping students focus on degree completion.

During randomization, the study groups were checked for equivalency across the following student characteristics: gender, age, full-time status, FAFSA completion, and race/ethnicity. Outreach and no outreach groups were determined to be equivalent according to What Works Clearinghouse standards. During random assignment, we also chose a random subset of 500 students across the three study groups to invite to a subsequent survey. We shared the results of the random study assignment and survey assignment with our Compton partners.

The intervention took place between September 14th and October 4th, 2021. Four text messages were sent to study participants in the outreach groups via Compton's one-way text messaging platform (Figure 1).²

FIGURE 1 | EXAMPLE OF TEXT MESSAGES

INFO ONLY vs ATTUNED

Hey, this is Lauren with Compton College. If you need help paying for food, check out CalFresh. It is a state program that awards up to \$234 a month for groceries.

Hey, this is Lauren with Compton College. **We know money is tight for most students.** That's why we are connecting students to CalFresh, a state program that awards up to \$234 a month for groceries. Whatever your situation, **we want to help you focus on studying and make progress toward your goals.**



Shortly after nudges were sent, a random sub-sample of 500 students in the study were sent an invitation to participate in an electronic survey. This survey assessed students' food security, their use of campus supports and CalFresh, and their impressions of the text messaging. To increase survey participation, students were offered a chance to receive a \$100 gift card.³ Recruitment to the survey was advertised via weekly email and text message between October 7th and October 29th, 2021.⁴ To ensure the sample or results were not biased to only include students with certain experiences with food insecurity or use of public benefits, the survey invitation did not mention those topics (see Appendix A for samples of our survey invitations).

STUDENTS IN THE STUDY

Students participating in the study were demographically similar to the larger student population at Compton College. Students in the study, on average, were in their mid-twenties and disproportionately female (Table 1). Fifty-seven percent of study participants were Latinx, 29% were Black, and 14% identified with another race or ethnicity. In addition, about half of all students in the study filed a FAFSA or received a Cal Grant. About one in four students received a Pell Grant and about three in ten students were enrolled full-time. Overall, differences between study groups (outreach vs. no outreach) were small.

TABLE 1 | BACKGROUND CHARACTERISTICS OF THE FULL STUDY SAMPLE, BY STUDY ASSIGNMENT

	Total Study Sample	Outreach Groups		Both Outreach Groups	
		Info Only	Attuned	No Outreach Group	
Age (mean)	27	27	27	27	27
<i>Gender Identity</i>					
Female (%)	64	64	63	63	65
Male (%)	35	35	37	37	33
<i>Race and Ethnicity</i>					
Latinx (%)	57	57	58	57	57
Black (%)	29	29	27	28	31
Another race (%)	14	14	15	15	12
<i>Financial Aid Status</i>					
Filed FAFSA (%)	46	46	46	46	46
Has Cal Grant (%)	48	48	48	48	47
Has Pell Grant (%)	26	26	24	24	29
<i>Enrollment Status</i>					
Full-time (%)	31	31	30	31	31

Source | Compton College administrative records

Notes | N = 1,539. For race, the category labeled as "another race" was used to aggregate racial and ethnic groups with small sample sizes. Pell Grant recipients may have also applied for and received a Cal Grant. Full-time students were enrolled in 12 or more units in the fall.

About 10% of the 500 students invited to the survey responded (i.e., 49 out of 500 students). Mirroring patterns seen in other college surveys, female students were

disproportionately more likely than their male counterparts to respond to our survey (while female students accounted for 64% of the study sample, they were 83% of the survey sample; Table 2).⁵ In addition, students who filed a FAFSA, received a Cal Grant or Pell Grant, and who were enrolled at a full-time status are overrepresented in our survey sample in comparison to our full study sample.

TABLE 2 | BACKGROUND CHARACTERISTICS OF THE SURVEY SAMPLE, BY STUDY ASSIGNMENT

	Total Survey Sample	Outreach Groups		Both Outreach Groups	No Outreach Group
		Info Only	Attuned		
Age (mean)	27	30	29	29	27
<i>Gender Identity</i>					
Female (%)	83	83	84	82	85
Male (%)	17	17	16	18	15
<i>Race and Ethnicity</i>					
Latinx (%)	53	53	48	50	62
Black (%)	34	34	40	38	23
Another race (%)	13	13	12	12	15
<i>Financial Aid Status</i>					
Filed FAFSA (%)	66	66	74	68	62
Has Cal Grant (%)	66	66	74	68	62
Has Pell Grant (%)	36	36	28	26	62
<i>Enrollment Status</i>					
Full-time (%)	43	43	37	38	54

Source | Compton College administrative records

Notes | N = 49. For race, the category labeled as "another race" was used to aggregate racial and ethnic groups with small sample sizes. Pell Grant recipients may have also applied for and received a Cal Grant. Full-time students enrolled in 12 or more units in the fall.

SURVEY RESULTS

Before exploring the potential effects of text messaging on student behavior, we investigated whether the student in the study needed support. We found 43% of Compton

College students who participated in the study experienced food insecurity and 35% were already receiving CalFresh (Table 3).

Rates of food insecurity and utilization of supports varied across student subgroups, particularly by race and ethnicity. Rates of food insecurity were eight percentage points higher among Black students than rates among Latinx students. However, Black students utilized CalFresh at a higher rate than Latinx students, with a difference of 21 percentage points. These differential patterns of food insecurity and utilization of supports are consistent with national trends.⁶ Students who did not identify as Black or Latinx experienced the most food insecurity and used CalFresh the least, with rates of 83% and 17%, respectively.

TABLE 3 | RATES OF FOOD INSECURITY AND USE OF CALFRESH BENEFITS

	Experienced Food Insecurity		Received CalFresh	
	%	N	%	N
<i>Total</i>	43	21	35	16
<i>Gender Identity</i>				
Female	46	18	35	13
Male	38	3	29	2
<i>Race and Ethnicity</i>				
Latinx	36	9	29	7
Black	44	7	50	7
Another race	83	5	17	1
<i>Financial Aid Status</i>				
Filed FAFSA	45	14	45	13
Has Cal Grant	45	14	45	13
Has Pell Grant	65	11	44	7
<i>Enrollment Status</i>				
Full-time student	45	9	35	6

Source | Compton College administrative records and 2021 Compton College CalFresh Pilot Outreach Study - Survey

Notes | This table displays students' experiences of food insecurity (N = 49) and rates of CalFresh use among students in the survey (N = 46). For race, the category labeled as "another race" was used to aggregate racial and ethnic groups with small sample sizes. Pell Grant recipients may have also applied

for and received a Cal Grant. Full-time students enrolled in 12 or more units in the fall. For more details on how the measure of food insecurity was created, refer to the web appendices.

Given the short amount of time we nudged Compton students, four times within four weeks, it was unclear if students would remember these texts. However, 78% of students in the outreach groups remembered receiving texts from Compton College about CalFresh (Table 4). Meanwhile, 23% of students who did not receive texts from the study remembered receiving them, perhaps suggesting that a friend had forwarded the texts to them, that they misremembered, or that they confused our outreach efforts with other outreach efforts about CalFresh.

TABLE 4 | STUDENTS WHO REMEMBER RECEIVING TEXT ABOUT CALFRESH, BY PROGRAM ASSIGNMENT

	Overall		Both Outreach Groups		No Outreach Group	
	%	N	%	N	%	N
Remembered receiving text about CalFresh	62	28	78	25	23	3

Source | 2021 Compton College CalFresh Pilot Outreach Study - Survey

Notes | Students were asked if they remembered receiving a text about CalFresh (N = 45).

While some students were already receiving CalFresh, many of those who were not receiving the benefit had previously heard about it. Among students not receiving CalFresh assistance, 83% had heard of the benefit before and about half recalled hearing about the benefit from a text message sent by Compton College (Table 5).

TABLE 5 | HOW STUDENTS NOT RECEIVING CALFRESH LEARNED ABOUT IT

	%	N
Student has heard of CalFresh	83	25
<i>If yes, how did you learn about it?</i>		
From another person	52	13
From a text from Compton College	48	12
From a postcard or another source	8	2

Source | 2021 Compton College CalFresh Pilot Outreach Study - Survey

Notes | For students who were not receiving CalFresh benefits (N = 30), we asked them to share whether they had heard of the benefit. Among those who had heard of CalFresh (N = 25), we asked them to share how they learned about it. Some students may have reported multiple sources for how they heard about CalFresh. Students were listed as having heard about CalFresh from a person if the source of information came from a friend or family member, a classmate, or Compton College faculty or staff. We did not disaggregate the results by study group due to small sample sizes.

In addition to inquiring about student awareness and use of CalFresh benefits, the survey included questions about students’ use of other campus supports, such as food-based resources. This information can be used to learn whether students are utilizing supports other than CalFresh. Even though four in ten students experienced food insecurity, only one in four (28%) used food-based campus resources at Compton College (Table 6). Few students visited Compton’s campus food pantry or received meals from food-based services offered by the college (i.e., Everytable and Uber Eats), with rates ranging from 15-17%. Moreover, only 6% of students received produce from the local wholesale produce distributor, Sunrise Produce.

TABLE 6 | USE OF FOOD-BASED RESOURCES ON CAMPUS

Type of food-based campus resource used	%	N
Any food-based resource	28	13
Food pantry and/or local food bank	17	8
Meals from Everytable	15	7
Meal vouchers from Uber Eats	15	7
Produce (fruits and vegetables) from Sunrise Produce	6	3

Source | 2021 Compton College CalFresh Pilot Outreach Study - Survey

Notes | N = 47. Students were asked if they had ever used any of the above campus-based resources. They were also asked if they had used other campus resources like counseling services, emergency aid, and laptops provided by Compton College. All students who participated in the survey reported using at least one campus resource.

To improve students’ access to resources, it is important that practitioners better understand the reasons behind students’ limited use of campus supports. Almost 80% of students who used only one or two supports were unaware of the other resources on campus (Table 7). Additionally, roughly two-thirds of these students had no idea if they were eligible for supports or did not know how to apply for them. Half of the students felt that others needed the resources more than them. The main barriers to using campus

supports seem to be a lack of information about eligibility and not knowing how to apply for those supports. Stigma appears to be a secondary reason.

TABLE 7 | REASONS WHY STUDENTS DID NOT USE CAMPUS-BASED RESOURCES

	%	N
I did not know they existed or were available.	77	23
I do not think I am eligible.	67	20
I do not know how to apply.	67	20
Other people need those programs more than I do.	50	15
I do not need these programs.	37	11
I am embarrassed to apply.	33	10
I had difficulty completing the application.	20	6
People like me do not use programs like that.	7	2
Other	5	1

Source | 2021 Compton College CalFresh Pilot Outreach Study - Survey

Notes | N = 30. Students were asked to respond 'yes' or 'no' to the above list of reasons only if they used one or two campus-based resources. All students who participated in the survey reported using at least one campus resource.

In addition to collecting information on the resources students were using, we collected general information on students' sense of belonging at Compton College. On average, most students felt that they belonged at Compton. Overall, students felt positive about being part of the Compton College community (Table 8). However, there were demographic differences in students' feelings. Latinx students were less likely than Black students to feel like they belonged at Compton College and felt less comfortable at Compton. About two-thirds of Black students felt supported by the college, while a little less than two-thirds of parenting students felt supported. Interestingly, 62% of students in the outreach groups felt supported by their college compared to the 43% of students who were in the no outreach group (Table 9).

TABLE 8 | STUDENT SENSE OF BELONGING, BY BACKGROUND CHARACTERISTICS

	Overall		Black Students		Latinx Students		Parenting Students	
	%	N	%	N	%	N	%	N
	I feel like I belong.	66	31	79	11	60	15	80
I fit in well.	70	33	64	9	76	19	70	14
I feel like an outsider.	11	5	7	1	12	3	0	0
I feel comfortable.	74	35	79	11	72	18	85	17
Compton College is supportive of students like me.	56	27	67	10	48	12	65	13

Source | 2021 Compton College CalFresh Pilot Outreach Study - Survey

Notes | Data are from a survey of study participants who were asked various questions on how they felt about their experience at Compton College (Overall, N = 47; Black, n = 14; Latinx, n = 25; Parenting Students, n = 20).⁷ For questions about students’ feelings towards Compton College, students were asked to rate their feelings on a five-point Likert scale (Strongly Disagree to Strongly Agree). Reported percentages represent students who ‘Agree’ or ‘Strongly Agree’ with each item. For the question on whether students felt Compton College had a supportive environment, students were asked to rate their feelings on a five-point Likert scale (Not at all, Slightly, Moderately, Very, and Extremely). Reported percentages for this item reflect students who felt ‘Very’ or ‘Extremely’ supported by Compton College.

TABLE 9 | STUDENT SENSE OF BELONGING, BY STUDY ASSIGNMENT

	Outreach Groups		No Outreach Group	
	%	N	%	N
	Compton College is supportive of students like me.	62	21	43

Source | 2021 Compton CalFresh Survey

Notes | N = 48. Data are from a survey of study participants who were asked to rate their feelings on a five-point Likert scale (Not at all, Slightly, Moderately, Very, and Extremely). This item is defined by students who felt ‘Very’ or ‘Extremely’ supported by Compton College.

In our survey, we presented all survey respondents with two forms of messages (information-only vs. attuned) and asked students how the text made them feel (for more details on these messages see Appendix B). On average, most students rated the attuned messages as more empowering than the information-only messaging (Table 10). However, Black students did not perceive the attuned language as more empowering.

TABLE 10 | STUDENT FEELINGS IN RESPONSE TO CALFRESH MESSAGES

Feeling about messages (Attuned in comparison to Information Only)	Students Who Experienced				
	Overall	Food Insecurity	Black Students	Latinx Students	Parenting Students
Respected	n/a	n/a	n/a	n/a	n/a
Empowered	+	+	n/a	+	+
Motivated	n/a	n/a	n/a	n/a	n/a
Understood	n/a	n/a	n/a	n/a	n/a
Cared for	n/a	n/a	n/a	n/a	n/a
Supported	n/a	n/a	n/a	n/a	n/a
Connected to Compton College	n/a	n/a	n/a	n/a	n/a
Disconnected to Compton College	n/a	n/a	n/a	n/a	n/a

Source | 2021 Compton College CalFresh Pilot Outreach Study - Survey

Notes | Overall N = 44; Experienced food insecurity, n = 44; Black, n = 13; Latinx, n = 23; Parenting Students, n = 20. Data come from a survey of student perceptions of different text nudges styles. All students were shown samples of the information-only and attuned text messages about CalFresh. After each text, students were asked how the messaging made them feel about Compton College. Students were asked to rate their feelings on a five-point Likert scale (Not at all, Slightly, Moderately, Very, and Extremely). Answers above with n/a indicate that perceptions of the two messaging styles did not differ at a $p < 0.10$ significance level. A plus symbol indicates that students rated the attuned messaging higher than the information-only messaging at $p < 0.10$.

CONCLUSIONS & RECOMMENDATIONS

In a time of tight budgets, decreased college enrollment, and low utilization of benefits by students experiencing basic needs insecurity, texting is an appealing outreach approach that colleges and universities can employ. This study and past work by The Hope Center indicate that information is the biggest barrier to students accessing benefits. Texting is a low-cost and scalable strategy that could fill this knowledge gap.

This study suggests that texting, particularly when using attuned language, is a strategy worth exploring further:

- Nearly 80% of students texted remembered receiving a text from Compton College
- Forty-eight percent of students who were not using CalFresh but had heard of it learned about CalFresh from a Compton College text message
- Sixty-two percent of students who received text messages felt supported by Compton, compared to 43% of students who did not receive texts
- The tone of these messages matters; most students felt that attuned messaging was more empowering than info-only messaging

While we are encouraged by these results, they have limitations. Ideally, our sample would have only included CalFresh-eligible students who were not already using the benefit. Because we did not have access to this data, we had to use proxies for CalFresh eligibility (e.g., Pell Grant eligibility) and some of the students contacted may not have been eligible for CalFresh or were already using CalFresh benefits.

Our survey data also has limitations. While students' survey responses offer valuable insight into their initial responses to the intervention, our survey sample size is too small to estimate the impacts of our intervention on use of supports or academic performance. Furthermore, the impacts that we want to explore further are not best captured by a survey.

Fortunately, we have set up our study so that we could examine impacts with additional data. Using our full study sample (N = 1,539), we could connect information on our study participants to information on CalFresh applications and use of benefits. For example, we could partner with our colleagues at the California Community College Chancellor's Office and California Policy Lab, who are researching CalFresh eligibility and participation.⁸ By partnering with the California Policy Lab, we can connect our respective datasets to provide a better picture of the impacts of this pilot intervention.

In addition to connecting our data to CalFresh systems, we are also interested in connecting study data to administrative data from Compton College to measure the impacts of our outreach on students' academic outcomes such as grades, retention, and degree attainment. This would allow us to better understand impacts for all 1,539 students in the study, not just those who completed our survey. The Hope Center's work at Amarillo College and Dallas College suggests that text messages have the potential to positively influence support utilization and academic outcomes, but testing these findings in another setting could confirm the efficacy of the findings from those studies.⁹

APPENDICES

Appendix A. Sample of survey invitations

EXAMPLE OF TEXT MESSAGE

From: Compton College

To: Compton College students selected

Hey, this is [Name] with Compton College. Life is a lot right now and Compton College needs help figuring out how best to support you. This survey is the place to share your thoughts. Please take it now! Click here: [LINK]

Everything you say is confidential, and the survey will take no more than 20 minutes. In appreciation, you can win a \$100 gift card.

EXAMPLE OF EMAIL MESSAGE

From: Compton College administrator's email

To: Compton College students selected (500 total)

Subject: Final chance: Win \$100 by helping Compton College get to know you!

[COMPTON COLLEGE EMAIL LETTERHEAD]

Dear [STUDENT FIRST NAME],

Recently, we've texted you about completing a survey regarding your experiences at Compton College. We're emailing you to let you know this is your **LAST chance to complete the survey** and potentially win a \$100 gift card.

Your participation is invaluable and will help ensure Compton College knows how to best support students like you. Everything you say is confidential, and the survey will take no more than 20 minutes.

If you already took the survey, please ignore this email.

Click here to take the survey: [SURVEY LINK]

If the link is not working, copy and paste it into your web browser.

Please be honest—everything you say is confidential.

We have partnered with [The Hope Center for College, Community, and Justice](#) at [Temple University](#) to administer this survey. If you have questions, send a note to The Hope Center at hopesrvy@temple.edu.

Thanks in advance,

[NAME AND EMAIL SIGNATURE OF PERSON SENDING EMAIL]

Appendix B. Text messages presented in survey

INFORMATION-ONLY TEXT MESSAGE

Please read the text below, and then answer the questions about how you would feel if you received this message from Compton College at the start of a semester.

"Hey [NAME], this is [NAME] with Compton College. If you need help paying for food, check out CalFresh. It is a state program that awards up to \$234 a month for groceries. Click here to learn more: <https://students.getcalfresh.org/>"

ATTUNED TEXT MESSAGE

Now read the second text below, and then answer the questions about how you would feel if you received this message from Compton College at the start of a semester.

"Hey [NAME], this is [NAME] with Compton College. We know money is tight for most students. That's why we are connecting students to CalFresh, a state program that awards up to \$234 a month for groceries. Whatever your situation, we want to help you focus on studying and make progress toward your goals. Click here to learn more: <https://students.getcalfresh.org/>"

¹ Originally, we intended to include only students who submitted a FAFSA in the study. However, we expanded the study to include students who did not submit a FAFSA to obtain a sample large enough for this study as many of these students are likely eligible for federal financial aid and possibly SNAP benefits

(TICAS, 2010). Moreover, according to [California Community Colleges Chancellor's Data Mart](#), less than 5% of students in the Compton Community College district were non-U.S. citizens in the fall of 2021.

² Due to capacity constraints and technological challenges at Compton College, the first and second texts were sent about two weeks apart, and the second and third texts were sent during the same week.

³ We had budgeted incentives for the first 50 survey responses. Because we received only 49 survey responses in total, all participants received a gift card.

⁴ Survey recruitment was initially only fielded via text messaging. However, a week after the first text invitation was sent, we realized few students had responded to the survey. To boost response rates, we decided to also send email invitations to our survey.

⁵ Baker-Smith, C., Coca, V., Goldrick-Rab, S., Looker, E., Richardson, B. & Williams, T. (2020, February). [#RealCollege 2020: Five years of evidence on campus basic needs insecurity](#). The Hope Center for College, Community, and Justice; National Student Clearinghouse Research Center. (2020, January). [Current term enrollment estimates - Fall 2020](#).

⁶ The Hope Center for College, Community, and Justice. (2021). [#RealCollege 2021: Basic needs insecurity during the ongoing pandemic](#).

⁷ The racial category “another race” was excluded from the analyses due to small sample sizes.

⁸ Castellanos, K. P., Davis, C., Dizon-Ross, E., Doherty, A., Fu, S., Lacoé, J., Rothstein, J., & Saucedo, M. (2022, February). [California Community College and University of California student participation in CalFresh food benefits](#). California Policy Lab.

⁹ Goldrick-Rab, S., Baker-Smith, C., Bettinger, E., Walton, G., Brady, S., Gill, J., & Looker, E. (2022, February). [Connecting community college students to non-tuition supports during the COVID-19 pandemic](#). The Hope Center for College, Community, and Justice; Goldrick-Rab, S., Clark, K., Baker-Smith, C., & Witherspoon, C. (2021). [Supporting the whole community college student: The impact of nudging for basic needs security](#). The Hope Center for College, Community, and Justice. Philadelphia, PA.