United States Department of Agriculture

Modernizing Channels of Communication With SNAP Participants

Final Report

U.S. Department of Agriculture | Food and Nutrition Service | April 2023

Modernizing Channels of Communication With SNAP Participants

Final Report

April 6, 2023

Authors

Chrissy Steigelman
Carla Bozzolo
Nina Page

Submitted to

U.S. Department of Agriculture
Food and Nutrition Service
1320 Braddock Place
Alexandria, VA 22314

Project Officer

Andrew Burns

Submitted by

Insight Policy Research, Inc.
1310 North Courthouse Road
Suite 880
Arlington, VA 22201

Project Director

Carla Bozzolo

This study was conducted by Insight Policy Research, Inc., under Contract GS-10F-0136X/12319818F0109 with the Food and Nutrition Service, U.S. Department of Agriculture (USDA). The findings and conclusions in this report are those of the authors and should not be considered to represent any official USDA or U.S. Government determination or policy.

Suggested Citation

Steigelman, C., Bozzolo, C., & Page, N. (2023). *Modernizing channels of communication with SNAP participants.* Prepared by Insight Policy Research, Inc. U.S. Department of Agriculture, Food and Nutrition Service.

Acknowledgments

This report was prepared by Insight Policy Research (Insight) under contract GS-10F-0136X/12319818F0109 for the U.S. Department of Agriculture, Food and Nutrition Service (FNS). It represents a team effort in which many individuals made key contributions in addition to the authors. We gratefully acknowledge their assistance. In particular, we recognize Project Officers Andrew Bryant, Barbara Murphy, and Lauren Badger for their leadership and guidance. We also thank the FNS staff who provided support, expert advice, and encouragement to the Insight team. Their insightful comments on the deliverables and throughout the study greatly influenced this research.

The authors also express appreciation to the dedicated individuals in each of the five case study sites who participated in focus groups and in-depth interviews and provided the data for this study. Their time and effort to provide insightful information on SNAP mobile communications strategies made this research possible.

The authors also gratefully acknowledge the numerous individuals from Insight who provided valuable assistance throughout this study: Jonathan Blitstein for serving as interim project director and his thoughtful review of several deliverables; Rachel Gaddes for her leadership and creative problem solving during the first few years of the contract; Rachel Holzwart, Kyle Brees, and Samuel Cohen for contributing to qualitative data collection; Kelsey Gray for her leadership and creative contributions to the national scan State profiles; Hollie Harsanyi, Paul Reischmann, and Megan Worden for their time updating national scan data during the 2022 update; and Katya Scanlan, Nancy McKenzie, Kim Kerson, and Caroline Brent-Chessum for editing and producing the report.

Contents

Tables

Figures

Executive Summary

The Supplemental Nutrition Assistance Program (SNAP) provides nutritional benefits to eligible households. Administered through the U.S. Department of Agriculture's (USDA) Food and Nutrition Service (FNS), the program provides monthly benefits to households to spend on food at authorized vendors. In recent years, State SNAP agencies have enhanced their use of mobile communications strategies (MCS) to enable SNAP participants to access information about SNAP, receive alerts and notifications, and perform certain case management functions.

A. Study Objectives

The primary purpose of this study was to highlight best practices and lessons learned from various MCS implemented by SNAP State agencies. For this study, MCS are defined as (1) text messaging (SMS), (2) mobile apps, and/or (3) mobile-optimized websites that facilitate communication between participants and SNAP agencies.

This examination will help FNS and States improve communication and identify best practices that lead to improved program outcomes. Specifically, the study was designed to meet four study objectives:

- **Objective 1:** Provide a general overview of how mobile technologies are used by all States and program recipients for case management and notification.
- **Objective 2:** Conduct case studies of selected State projects that use mobile technology for case management and/or notification and describe in detail the app or technology used.
- **Objective 3:** Gather information on client satisfaction with and perspectives on MCS.
- **Objective 4:** Identify best practices and lessons learned.

Figure ES.1 displays data collection methods used for each study objective.

Figure ES.1. Data Collection Methods by Study Objective

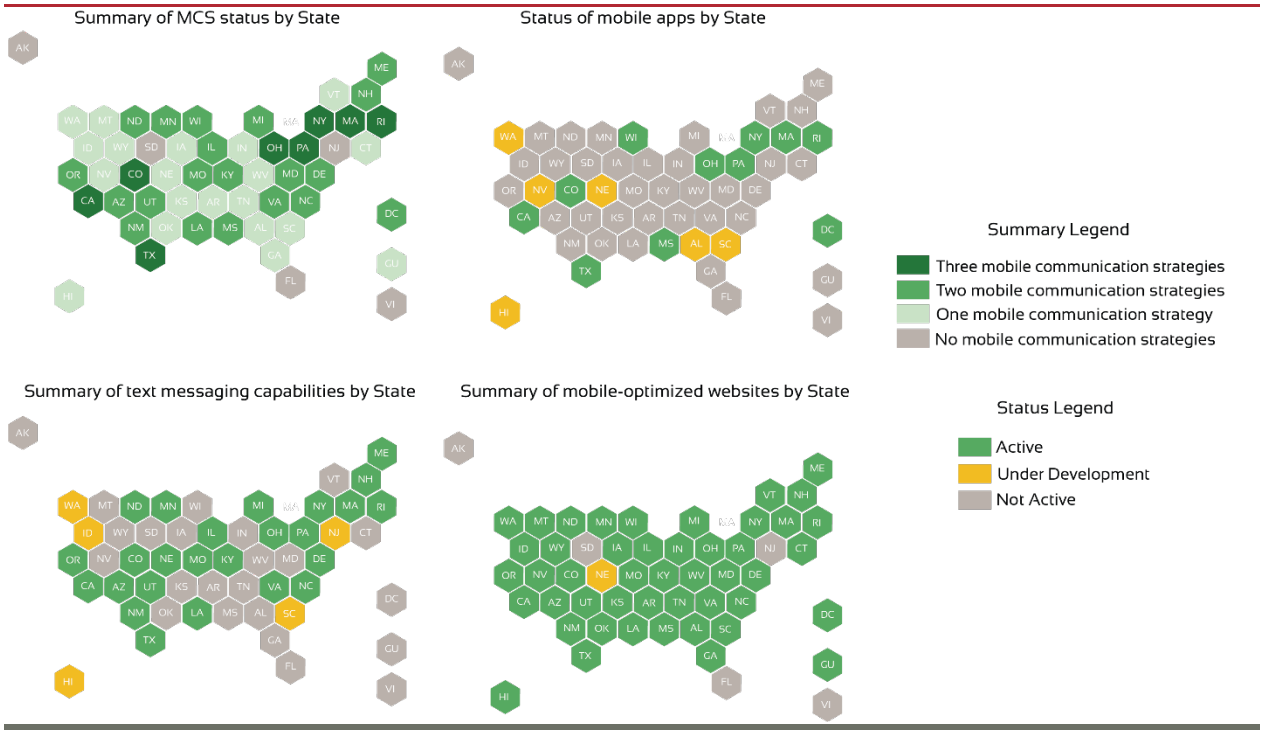
OBJECTIVE 1 Provide overview of MCS activities in all States	OBJECTIVE 2 Conduct case studies	OBJECTIVE 3 Gather client perspectives on MCS	OBJECTIVE 4 Identify best practices and lessons learned
▪ National scan of State activities ▪ Interviews with national and regional SNAP staff ▪ Selection of five States for case studies ▪ Updated national scan to understand progress	▪ In-person site visits to five States ▪ Interviews with State SNAP directors, MCS staff, and software developers/ IT staff ▪ Focus groups with local office staff ▪ Participant journey-mapping exercise	▪ Focus groups with SNAP participants experienced with using MCS to test usability and assess satisfaction with and perspectives on MCS	▪ Synthesis and triangulation of data collected across all sites and study phases

B. National Scan

Under contract with FNS, Insight Policy Research (Insight) conducted a thorough national scan of MCS availability and functionality in November and December 2018 and an updated scan in May and June 2022. The purpose of each scan was to collect detailed information about MCS capabilities available in each State and territory. In the initial scan, Insight used a combination of administrative and public data sources to build a robust understanding of the types of MCS State SNAP agencies were using or planning to use.

Between 2018 and 2022, MCS use increased nationwide, with some technologies moving more quickly than others. Although 49 States had at least portions of their SNAP websites optimized for mobile devices, only 11 had implemented a mobile app, and 5 were using text messaging. Full implementation of MCS is happening—but slowly. To date, only eight States have a full suite of MCS serving SNAP clients. Figure ES.2 summarizes the status and type of MCS in each State and territory as of June 2022.

Figure ES.2. Summary of MCS Status by State and Type



C. Case Study Findings

Insight conducted in-depth case studies of five States: four States (Texas, Kentucky, Massachusetts, and Mississippi) and one municipality (New York City). These States were selected using data collected during the first national scan. Each case study involved a combination of key informant interviews with State-level stakeholders, consultants, local caseworkers, and focus groups with SNAP participants who used their State's SNAP MCS. The themes described below highlight the primary takeaways from key informant interviews.

Marketing and Outreach Strategies

State SNAP agencies deployed various strategies to inform and encourage SNAP participants to seek out MCS available to them. The most common strategies included (1) word of mouth among friends, family, SNAP caseworkers, and representatives from community-based organizations (CBOs); (2) social media; and (3) email and paper notices.

Community Involvement

SNAP agencies regularly engaged with CBOs during the development and implementation of MCS. During the development stage, State staff met with community partners to test MCS and provide feedback. Once MCS were developed, State staff would continue to meet with community partners monthly or quarterly to share SNAP clients' feedback on MCS, suggestions for improvements, dissemination strategies, and technology updates. Organized meetings helped SNAP State agencies keep an ongoing dialogue with CBOs that consistently work with the target audience. Stakeholders emphasized the importance of engaging community partners and advocates throughout the process to ensure transparency and best service to SNAP clients. Some CBOs also provided technical assistance to SNAP clients in their use of MCS tools.

Software and Data Infrastructure

SNAP MCS and their functionality evolved. SNAP agencies frequently addressed data security, identified technological strategies for reducing churn, and managed evolving MCS features. The Process and Technology Improvement Grant funding can be a critical tool for expanding MCS functionality.

Data security was a priority for SNAP agencies, and approaches varied across sites. SNAP agencies typically used third-party vendors or private IT consultants to manage the development and implementation of MCS. Vendors collaborated with State staff throughout the process. Vendors and consultants typically worked on similar projects, which enabled SNAP agencies to use existing code and data from other projects and customize as needed. However, key informants in Massachusetts noted they preferred to manage MCS in-house because of the ability to tailor the tools more closely to their needs.

Features of MCS were typically limited initially and expanded over time. Developing and implementing MCS and their features in several phases enabled States to best serve clients by incorporating feedback received through CBOs, State program staff, and client focus groups. Stakeholders highlighted the importance of testing MCS during the development and implementation to identify any defects or errors.

Most States licensed commercial products; one State collaborated with a consultant to build the products from scratch. Stakeholders in New York City explained that licensing commercial products customized for the agency's needs was a more efficient strategy than building the tools from scratch; this process enabled the agency to make frequent software updates to accommodate the updates to the mobile device operating systems. Alternatively, Mississippi's agency consulted with an organization that built the tools specifically to Mississippi's needs. This process enabled the agency to customize the tools exactly to what the State needed and create more flexibility with back end control of certain features.

SNAP agencies with both an app and a website varied in the way their mobile app and website interacted. The availability of both platforms enabled clients to pick the one they preferred for SNAP-related business.

Evaluation and Monitoring of MCS

To gauge the success and limitations of MCS, SNAP agencies (1) collected feedback from SNAP clients via mobile app store comments and ratings, customer service interactions, and website feedback requests; (2) gathered feedback from CBOs during regular meetings with SNAP agency; and (3) used analytics to monitor usage and decrease churn, such as monitoring the time visitors spent on each page, abandonment rates, read receipts from electronic notices, and login details.

Implementation Challenges

Stakeholders explained the administrative structure of State and local government resulted in delays in the implementation of MCS or their updates. Stakeholders also felt some segments of the population were resistant to technology, overwhelmed by the application process, had data security concerns, or did not have smartphones to access MCS.

Perceived Benefits and Limitations of MCS Features

Stakeholders shared perceived benefits and limitations of MCS and offered their perspectives on resources they believed would help streamline SNAP business via MCS tools.

Perceived benefits. Overall, stakeholders agreed that MCS in their State were beneficial to clients for the following reasons: (1) reduced churn by allowing clients to apply or recertify remotely and streamlining the application submission process; (2) facilitated faster updates to clients; (3) reduced barriers to access, especially in rural areas with limited broadband access but sufficient cellular data; and (4) allowed for continuous services during emergencies such as the COVID-19 pandemic.

Perceived limitations. Stakeholders approved of the usefulness of MCS, though some limitations were noted: (1) lack of some desired functionality, such as the ability to live chat with caseworkers; (2) security and data privacy concerns leading to missing information on applications; (3) limited broadband and/or cellular service in some locations; and (4) discomfort with technology and a preference for traditional means of communicating.

Effects of MCS on State and Local Operations

Implementation of MCS affected the way State staff and local caseworkers conducted SNAP-related business by (1) improving communication and reducing the need for customer service calls and visits to the local SNAP office, (2) increasing the efficiency of case processing by uploading documents electronically, and (3) enabling staff to spend less time addressing churn via repeated requests for documents.

D. Focus Group Findings

The study team conducted 10 focus groups with SNAP participants across the 5 case study sites. SNAP participants discussed the features they found the most helpful and offered suggestions for improvements to various features.

Mobile Apps

At the time of the study, four of the five States—Massachusetts, Mississippi, New York City, and Texas—had a mobile app. Most participants learned about the mobile app through a caseworker. Other methods included friends, family, State government website, Facebook advertisements, and the app store. The COVID-19 pandemic prompted several participants to sign up for the mobile app because they experienced challenges associated with office closures or became newly eligible for SNAP as a result of the economic effects of the pandemic.

Participants frequently used the mobile app to upload documents, check their account balance, and complete recertification forms. The app was seen as a convenient way of conducting SNAP business because of participants' perceptions that users always had access to their smartphone compared with a computer, providing easy access to application/recertification through the document upload feature. Although participants frequently used their app to check their electronic benefit transfer (EBT) balance, they provided mixed feedback on the app's accuracy of this feature. As a result, participants often turned to the third-party Providers app as an alternative for checking their balance.

Mobile- Optimized Website

All five States had a mobile-optimized website at the time of the study. Participants frequently used both the website and the mobile app for various SNAP-related business, depending on the functionality available. Several participants reported they conducted an internet search on how to apply for SNAP benefits in the State and were referred to the website. Another common way of learning about the website was from a SNAP caseworker, a letter, or an email notification. A few participants learned about the website through word of mouth from friends, family, and colleagues. Difficulties getting to the local SNAP office, including inclement weather and lack of transportation, motivated participants to create an account on the website.

Some participants used the website to check their EBT balance, but most used their SNAP agency's mobile app or the Providers app for this purpose. They liked the additional information the website provided compared with the app, including frequently asked questions and links to other websites with relevant information, such as pandemic EBT (P-EBT) benefits or the location of local food pantries.

SMS Text Messaging

Four study States—Kentucky, Massachusetts, New York City, and Texas—had implemented text messaging at the time of the study. Participants were satisfied with the number of text messages they received. Most participants received text messages when they needed to take a particular action, such as submit documents or recertify. They also received messages informing them of office closures or appointment confirmations and reminders. Participants noted that receiving too many text messages would make them less likely to pay attention to the content and decrease the utility.

Participants who did not opt in noted text messages would be duplicative because they frequently checked their email, notifications in the mobile app, or the website. Some participants who were

unaware that text messaging was available said they would opt in because text messages would be timelier and more efficient than mail notifications.

E. Lessons Learned

The findings from the five case studies provided an overview of the successes and challenges the SNAP agencies experienced implementing SNAP MCS. These findings were analyzed to identify lessons learned and implications for other States for successful MCS implementation. Some lessons learned were gathered from the case studies as a whole, and some were borne out of multiple interviews from one State.

Table ES.1. Summary of Lessons Learned From Case Studies

Domain	Lesson Learned
Financial and Human Resources	• Minimize administrative processes and ensure seamless transitions between State staff • Obtain leadership buy-in • Enlist authorized aides to help with applications • Obtain funding specifically intended for MCS development and improvements
MSC Marketing, Outreach, and Stakeholder Engagement	• Engage CBOs and SNAP participants in MCS development • Leverage CBO and caseworkers' communication with SNAP clients to promote the availability of MCS and offer tech support • Market with intention and use social media to promote awareness of MCS • Integrate SNAP MCS with other social safety net programs
Software, Data Systems Development, and Technical Considerations	• Engage a variety of technical and program experts • Perform comprehensive testing and documentation • Apply behavioral economics (e.g., nudge theory) to text and push notifications • Implement back end switches for each feature (e.g., the ability to disable specific features for maintenance without disabling the entire app) • Use native apps to improve ease of use • Build direct routing from app to website • License commercial products for more efficient development • Use a queue case management system
MCS Monitoring and Evaluation	• Apply MCS analytics to address churn • Seek continuous improvement of MCS
Text Messaging and Push Notifications	• Use push notifications and text messaging • Personalize text messages • Implement opt-out text messaging rather than opt-in[1] • Provide links in text showing State website URL
Uploading and Accessing Documents via MCS	• Acknowledge document receipt • Offer document uploads from mobile devices • Provide access to uploaded documents from user account
Notices and SNAP Communication	• Autogenerate paper notices when electronic notices are not opened[1] • Offer two-way communication via mobile app • Provide several viewing formats for electronic notices • Offer access in multiple languages

[1] For electronic notices (e-notices) specifically, States must receive the household's consent before providing. States that want to use text messaging alone for e-notices (without a corresponding email) as a way to inform clients of a new notice must continue to request waivers. Additionally, if the State finds the household's email address is invalid or inactive, the State must automatically resume providing the household with paper notices. See FNS's Electronic Notice Waivers and Options memo for more information on e-notice requirements.

Domain	Lesson Learned
User Account Activity	• Offer balance inquiry via MCS accounts • Simplify login for mobile app and website

Chapter 1. Introduction

The Supplemental Nutrition Assistance Program (SNAP) provides nutritional benefits to eligible households. Administered through the U.S. Department of Agriculture's (USDA) Food and Nutrition Service (FNS), the program provides monthly benefits to households to spend on food at authorized vendors. In recent years, State SNAP agencies have enhanced their use of mobile communication strategies (MCS) to enable SNAP participants to access information about SNAP, receive alerts and notifications, and perform some case management functions.

MCS and MCS functions vary substantially across States. The landscape for mobile technologies is constantly changing, and the onset of the COVID-19 pandemic, which led to the closing of local SNAP offices, may have affected the rate at which States developed and implemented MCS.

Given the proliferation of mobile devices and advancements in mobile technology, MCS offer SNAP participants an alternate way of interacting with SNAP agencies from their own location and on their own time. These tools and their supporting processes may improve customer access and increase customer satisfaction. States' use of MCS may also streamline case management activities by decreasing the volume of paperwork and follow-up with participants, thereby reducing the administrative burden on State and local SNAP agencies.

A. Overview of MCS

For this study, MCS are defined as (1) text messaging (SMS), (2) mobile apps, and/or (3) mobile-optimized websites that facilitate communication between participants and SNAP agencies.

- **SMS text messaging**. SMS text messaging can include sending participants notifications (e.g., appointment alerts, verification due dates), sharing program information with participants (e.g., announcements, resources, office locations and business hours), and communicating with participants in real time (e.g., number in a queue).
- **Mobile apps**. Mobile apps can enable users to upload documents (e.g., recertification information), review benefit/case information (e.g., balance inquiry, case status, recent transactions), communicate with the SNAP agency (e.g., submit questions to SNAP agency), and receive push notifications from SNAP.
- **Mobile-optimized websites**. Mobile-optimized websites are designed specifically to be used on a mobile device. These websites are redesigned to make it easier for a user to view the website information on a smaller screen (e.g., larger buttons, reformatted images, dropdown menus).

This study did not include online portals or internet-based applications that are not mobile-optimized in the definition of MCS.

B. Study Objectives

The primary purpose of this study was to highlight best practices and lessons learned from MCS implemented by selected SNAP State agencies to help FNS and States improve communication and program outcomes. Specifically, the study was designed to meet four study objectives:

Objective 1: ***Provide a general overview of how mobile technologies are used by all States and program recipients for case management and notification.***

Under contract with FNS, Insight Policy Research (Insight) conducted a comprehensive national landscape analysis to catalog States' use of MCS during 2018. The national scan used a variety of data to identify the range of features and complexity of MCS across States (e.g., uploading documents, submitting applications). Insight updated the national scan in May 2022 to understand the potential impact of the COVID-19 pandemic on MCS development and implementation.

Objective 2: ***Conduct case studies of selected State projects that use mobile technology for case management and/or notification and describe in detail the app or technology used.***

Based on findings from the national scan, Insight identified five sites and conducted in-depth virtual case studies to deepen FNS's understanding of the benefits and challenges of implementing MCS. Between August and October 2020, Insight interviewed State SNAP directors, MCS staff, software developers/IT staff, and other relevant stakeholders. Interviews examined the history, goals, objectives, and functionality of MCS.

Objective 3: ***Gather information on client satisfaction with and perspectives on MCS.***

To provide client perspective on MCS, Insight conducted 10 virtual focus groups (2 per site) with SNAP participants who used MCS for SNAP activities. The focus groups sought to (1) assess the usability of MCS, (2) evaluate customer satisfaction with MCS, and (3) understand features clients found most important.

Objective 4: ***Identify best practices and lessons learned.***

Insight synthesized data collected throughout each phase of the study and compiled lessons learned across sites to guide FNS and States in the process of developing and implementing MCS.

C. Organization of the Report

The remainder of this report presents study methodology and findings by study objective. Chapter 2 describes study methods, chapter 3 presents a summary of national scan findings (objective 1), chapter 4 summarizes case study findings (objective 2), chapter 5 highlights focus group findings (objective 3), and chapter 5 presents lessons learned from the case studies (objective 4) and study conclusions.

Chapter 2. Methodology

This chapter presents an overview of the data collection components for the study objectives, analysis procedures, and considerations and limitations.

A. Data Collection Components

The study used a qualitative design and a landscape analysis to produce a national scan of MCS across all States and territories, case studies with five States, and an analysis of progress made before and after the COVID-19 pandemic. Figure 2.1 displays the data collection methods used for each study objective described in chapter 1.

Figure 2.1. Data Collection Methods by Study Objective

OBJECTIVE 1 Provide overview of MCS activities in all States	OBJECTIVE 2 Conduct case studies	OBJECTIVE 3 Gather client perspectives on MCS	OBJECTIVE 4 Identify best practices and lessons learned
▪ National scan of State activities ▪ Interviews with national and regional SNAP staff ▪ Selection of five States for case studies ▪ Updated national scan to understand progress	▪ In-person site visits to five States ▪ Interviews with State SNAP directors, MCS staff, and software developers/ IT staff ▪ Focus groups with local office staff ▪ Participant journey-mapping exercise	▪ Focus groups with SNAP participants experienced with using MCS to test usability and assess satisfaction with and perspectives on MCS	▪ Synthesis and triangulation of data collected across all sites and study phases

B. National Scan

Insight conducted a national scan of MCS availability and functionality in November and December 2018. The purpose of the scan was to collect detailed information about MCS capabilities available in each State and territory. Insight used a three-phased approach to build a robust understanding of the types of MCS State SNAP agencies were using or planning to use.

Phase 1. To identify whether a State SNAP agency implemented MCS, Insight used data from the FNS State Options report section on mobile technology, FNS SNAP Process and Technology Improvement Grants (PTIGs), Google's Mobile-Friendly Test Tool, interviews with FNS staff at National and Regional Offices, interviews with the American Public Human Services Association, e-notice waivers, and State SNAP websites and available publications about States' MCS.

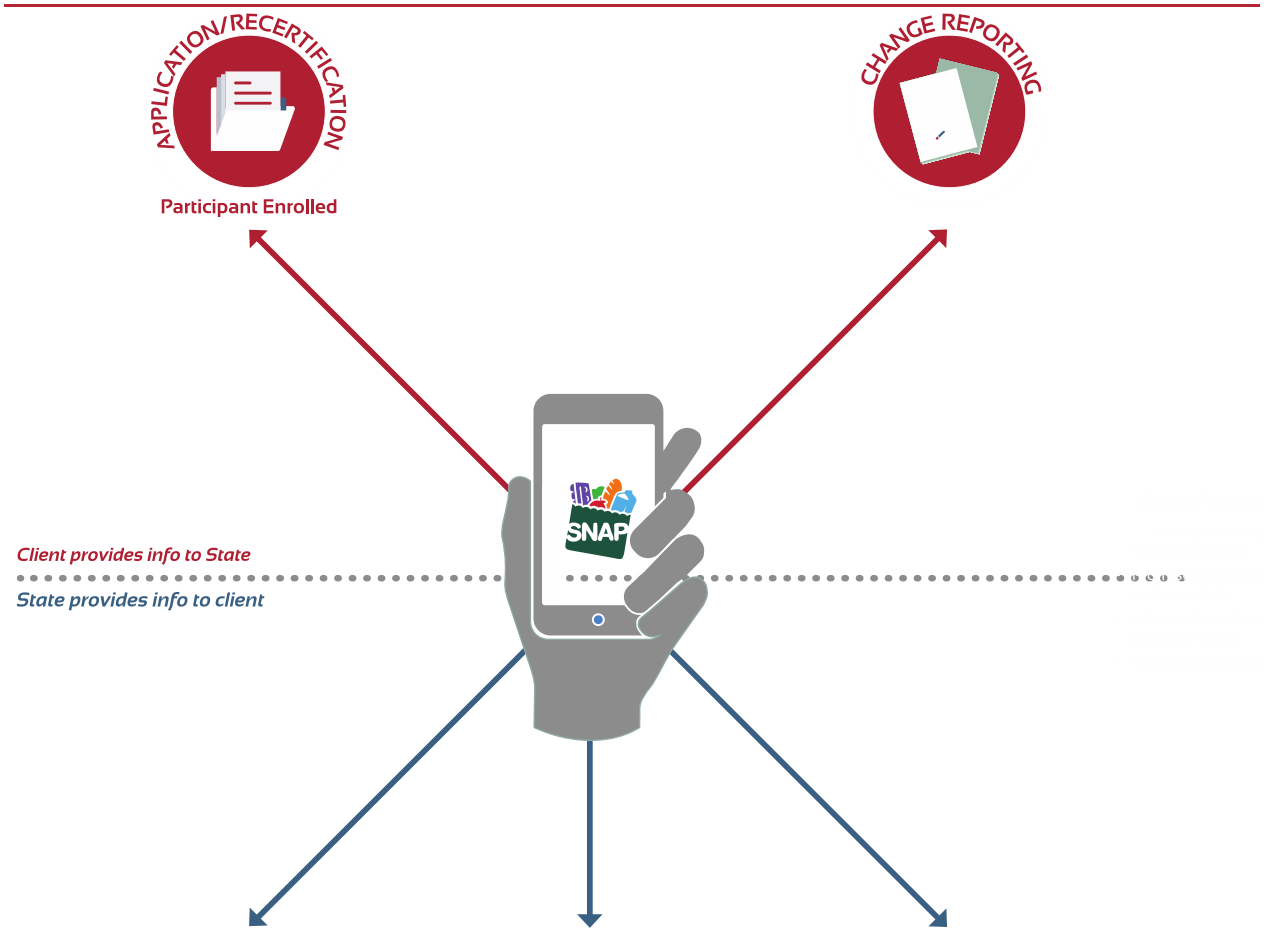
Phase 2. To explore the functionality of each State's MCS, Insight reviewed associated potential functions across five areas: (1) application/recertification, (2) benefits and electronic benefit transfer (EBT), (3) change reporting, (4) client inquiries, and (5) notifications. To collect this information, Insight used information collected in phase 1 and State documentation provided by the FNS Regional Offices,

mobile app stores, AppAdvice.com, and publicly available secondary data sources on MCS and other mobile technologies in States. Figure 2.2 depicts a comprehensive graphic of these functionalities as they relate to the SNAP application and account management process.

Phase 3. To explore the relevant characteristics of each State to better understand potential nuances in MCS deployment, Insight examined the available data. These data included publicly available data on mobile wireless services availability, publicly available secondary data sources on participant characteristics, and FNS SNAP State Options report sections on online applications and online case management.

For more details on the data sources used for the national scan, please refer to the national scan memorandum found in appendix E.

Figure 2.2. List of MCS Design and Functionality Features



Note: EBT = electronic benefit transfer; FAQs = frequently asked questions; PIN = personal identification number

Second National Scan

The COVID-19 pandemic created a need for SNAP agencies to provide services remotely for SNAP participants who could not visit local offices because of COVID-19-related office closures. In May and June 2022, Insight conducted a second national scan to identify whether substantial progress in MCS implementation had been made.

State MCS Profiles

Using Tableau and the information collected during the national scan in 2018, Insight created customized State-specific profiles that detailed (1) whether the State had a mobile app, text messaging capabilities, and/or a mobile-optimized website; (2) MCS functionalities available in that State and SNAP characteristics in that State (e.g., number of SNAP households); (3) broadband coverage; and (4) capabilities to do any SNAP-related activities online. These profiles were updated in 2022 to include progress made before the COVID-19 pandemic and 2 years after the COVID-19 pandemic began. Appendix E contains all State profiles.

C. Case Studies

To learn more about the process of developing and implementing MCS and capture lessons for other States to consider when conducting the same activities, the information from the national scan was used to select the sites for the case studies. Insight conducted in-depth case studies of five sites: four States (Texas, Kentucky, Mississippi, and Massachusetts) and one municipality (New York City). The site visits involved a combination of key informant interviews with State-level stakeholders, consultants, and local caseworkers and focus groups with SNAP participants who used their State's SNAP MCS.

Selection of Sites for Case Study Participation

Insight selected States that represented a mix of mobile technologies related to participant adoption and satisfaction, MCS functionality, and features. The criteria for site selection also included a mix of SNAP participant characteristics and geographic characteristics to ensure relevancy of study findings to a range of States' circumstances. Insight worked closely with FNS to identify the characteristics of most interest for this study. State agencies were sorted based on these characteristics:

- FNS Regions
- MCS capabilities (e.g., at least one State that uses a combination of SMS text messaging and mobile app technology/mobile-optimized website, at least one State that employs multiprogram MCS technology)
- Functionality covering all five major pathways of the client experience: (1) application/recertification, (2) change reporting, (3) notifications, (4) client inquiries, and (5) benefits and EBT
- Inclusion of other safety net programs in MCS (e.g., Medicaid, Special Supplemental Nutrition Program for Women, Infants, and Children [WIC], Temporary Assistance for Needy Families [TANF])
- Early adopters versus recent adopters of MCS

- Demographic characteristics (e.g., one rural State facing broadband access challenges, one State with older SNAP population)

After the States were sorted, Insight selected eight States that represented a mix of characteristics. Insight then recommended five States for inclusion in the study and held discussions with FNS. The remaining three States served as backup options. After corresponding with several States, Insight secured participation from Texas, Mississippi, Massachusetts, Kentucky, and New York City.

Key Informant Interviews

Insight interviewed key informants at the State and local levels to understand States' MCS functionality and lessons learned from implementation. Participants included the State SNAP director, State agency MCS administrative staff, software developers and IT personnel involved in MCS development and maintenance, and frontline SNAP caseworkers. Each participant type offered a perspective on the topics being discussed. Each interview was tailored to the expertise and role(s) of the interview participant(s) (table 2.1).

Table 2.1. Stakeholders and Key Topics Addressed During Site Visits

Stakeholder	History and MCS Rollout Timeline	Scope, Goals, and Target Audience of Project	Functional Components of MCS	Integration With State Processes and Procedures	Impact on Case Management Activities	State Data Collection and Evaluation Activities	Ease of Use/Usability	Journey- Mapping Exercise	Participant Awareness and Uptake of MCS	Customer Satisfaction	Challenges, Successes, and Lessons Learned
State SNAP staff and MCS administrators	●	●	●	●		●		●		●	●
Software developers and/or IT staff			●	●		●		●		●	●
Community Partners	●		●				●				●
Frontline staff/caseworkers				●	●		●		●	●	●

Recruitment

After sites were selected, FNS sent a letter to the State SNAP directors to inform them their State was selected for the study and encourage their participation. Insight then followed up with an email to the State SNAP directors to schedule a call to discuss the study. During the initial recruitment call, Insight addressed the State's questions, identified points of contact for staff at the SNAP office, and established a timeline for completing each stage of the recruitment process. Recruitment of interviewees was coordinated by State MCS staff, who made email introductions between the Insight study team and the points of contact for each participant type. This correspondence helped garner participation and trust and facilitated efficient scheduling.

Data collection instruments

The data collection instruments prompted discussions with key informants on the following topics: history and MCS implementation timeline; scope and goals of State's MCS project; integration of MCS with State processes and procedures; impact on case management activities; State data collection and evaluation activities surrounding MCS; perceived ease of use and usability of MCS; assessment of participant journey; participant awareness and uptake of MCS; customer satisfaction; and challenges, successes, and lessons learned. Each data collection instrument was tailored to the expertise and role(s) of the interview participant(s). The SNAP director and State MCS administrative staff were also asked to review their State's journey map of MCS functionality. The journey map (see figure 2.2) was tailored to each case study site and visually depicted all of the MCS features being studied, with indications of which features were available in that State. After the walkthrough of the journey map, these participants were asked to review the graphic after the call and respond to the study team with revisions via email. The updated journey map was included in each case study memorandum (appendix C). Appendix A includes the data collection instruments.

Adapting In-Person Site Visits to Virtual

Initially, the case studies were designed to include in-person site visits to enable the study team to observe local SNAP offices, interview State personnel in person, and conduct focus groups with hands-on exercises. However, the COVID-19 pandemic created barriers for conducting in-person site visits, and the study team adapted the interview protocols and focus group discussion guides to accommodate virtual site visits. The data collection component most affected by this change was focus group recruitment. Original plan was to recruit participants from SNAP office waiting rooms; instead, participants had to be recruited through various remote strategies.

Focus Groups With SNAP Participants

The study team conducted 10 virtual focus groups with SNAP participants who used their State's MCS within the past 12 months. Focus groups, lasting approximately 90 minutes each, were designed to assess participants' experience with MCS in their State through facilitated discussion, Zoom polls, and virtual whiteboard exercises.[2] If States used text messaging, Insight presented sample text messages provided by State staff for feedback from participants.

Recruitment

Insight partnered with Schlesinger Group, a market research firm, to recruit and screen participants, facilitate Zoom meetings, and distribute incentives to participants after focus group completion. The procedures used to recruit focus group participants varied by site and included sending emails and texts, posting Facebook advertisements, recruiting from a list of SNAP participants, and posting on social media. Eligible participants received SNAP benefits at the time of the focus group and had received them for at least 6 months prior; they were at least 18 years old, spoke English, and had access to high-speed internet and a device with a working web camera. To be eligible, participants were also required to answer "yes" to screening questions when asked if they had accessed their State's SNAP website, used the mobile app, and/or received any texts about SNAP on their mobile phones within the past 12

[2] Virtual whiteboard exercises are interactive exercises where participants call out responses while the moderator types them on the shared screen for follow-up discussion.

months. Eligible individuals were invited to participate in a focus group on a designated date and time; those who agreed received a $45 gift card for their participation.

Data collection instruments

Data collection instruments included a moderator guide and a focus group eligibility screener with an embedded demographic questionnaire. Data collection instruments were finalized in July 2021 and included in the Information Clearance Request package submitted to the Office of Management and Budget. To ensure instruments were easy for respondents to understand, Insight conducted pretests with three SNAP participants. Insight revised data collection protocols to adjust language as needed to implement the study virtually.

Data Analysis

To analyze data obtained from site visit interviews and focus groups, the study team synthesized data from interview transcripts and any supplemental documentation provided by the State MCS staff. After each virtual site visit, the study team summarized key site visit takeaways, updated each State's journey map, and met regularly during the data collection and analysis phases to discuss common and distinct insights gathered from each site visit. These procedures helped the study team identify themes and gaps in knowledge requiring additional data collection (e.g., a follow-up email to a respondent requesting clarification).

Coding scheme development

The study team coded interview and focus group transcripts using NVivo 12. All members of the study team worked iteratively to create a coding scheme that reflected the research questions and study objectives. Study team members coded one transcript from each type of interview (e.g., community partners, MCS administrative staff) and conducted an interrater reliability check to ensure all coders were consistently applying and understanding the codes. After reaching an agreement, team members coded the transcripts. The analysis focused on (1) goals and target audiences for State MCS, (2) marketing and outreach strategies, (3) community involvement, (4) software and data infrastructure, (5) evaluation and monitoring of MCS, (6) implementation challenges, (7) perceived benefits and limitations of MCS features, and (8) effects of MCS on State and local operations. Appendix B contains the final coding scheme.

Updating State-specific journey map

After interviews with State SNAP directors and State MCS administrative staff, the study team worked with these participants via email to update the journey map of MCS functionality to include in their corresponding case study report. This graphic provided a comprehensive picture of the MCS functionality in the State being studied. Each State's journey map can be found in its respective case study memoranda in appendix C.

Case study reports

Data analysis for each State resulted in a case study report (see appendix C). These reports focused on State-specific experiences in the development and implementation of MCS and lessons learned.

Chapter 3. Objective 1: National Scan Findings

This chapter provides an overview of how mobile technologies are used nationwide. These findings include data collected during the first national scan in 2018, with updated information when applicable. Some findings include comparisons between the first scan in 2018 (i.e., before the COVID-19 pandemic) and the updated scan in 2022 (i.e., after the COVID-19 pandemic). For more information on funding sources for MCS development and implementation and availability of other third-party apps, please see appendix E.

Objective 1: Overview of how mobile technologies are used by all States and program recipients for case management and notification

A. Summary Findings From National Scan

State use of MCS varied substantially, with some progress across all three MCS types (see figures 3.1 and 3.2). Few States had fully implemented a comprehensive MCS. While only eight States had all three types of MCS components in 2022 (mobile apps, mobile-optimized websites, and SMS text messaging), this number almost tripled from 2018, from three States to eight. States with all three MCS included California, Colorado, Massachusetts, New York, Ohio, Pennsylvania, Rhode Island, and Texas. Four additional States with apps under development will have all three MCS types once they are implemented.

About half of all States made progress in at least one MCS type. Twenty-six States made progress in at least one MCS type: 10 States added texting, 4 States added a mobile app, and 12 States optimized their website (figure 3.1). Few States had implemented mobile apps, and several had apps under development. Only 11 States had implemented a mobile app (an increase from 8 States in 2018), but 6 other States were in the process of developing apps.

Some States had implemented text messaging, and a few had plans to implement text messaging in the future. Twenty-five States were actively using text messaging to connect with SNAP participants (an increase of 10 States from 2018), and five more were working to develop such capabilities. Most States had optimized their websites for mobile devices. Almost all States (49) had at least portions of their SNAP websites optimized for mobile devices (an increase from 37 States in 2018). Eight of these were partially optimized, with part of the website mobile-optimized, such as the homepage, and part not optimized, such as the account page.

Figure 3.1. Change in MCS Implementation From 2018 to 2022

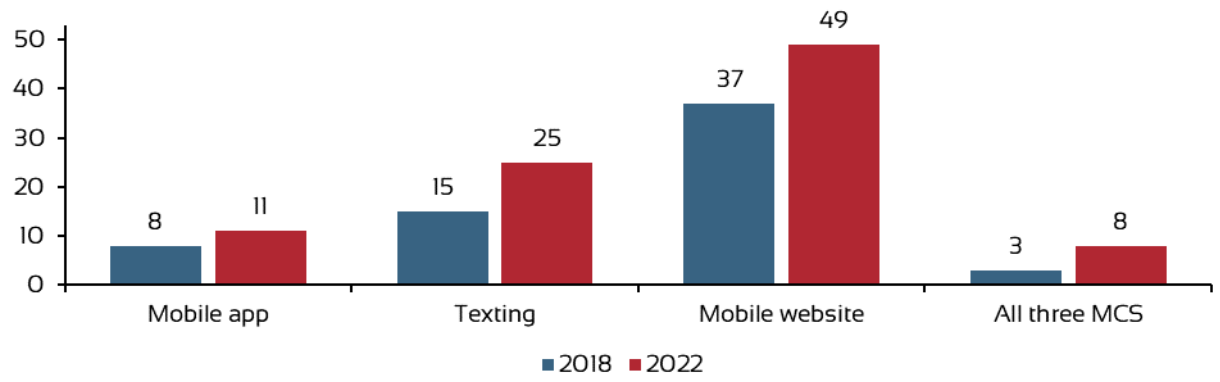
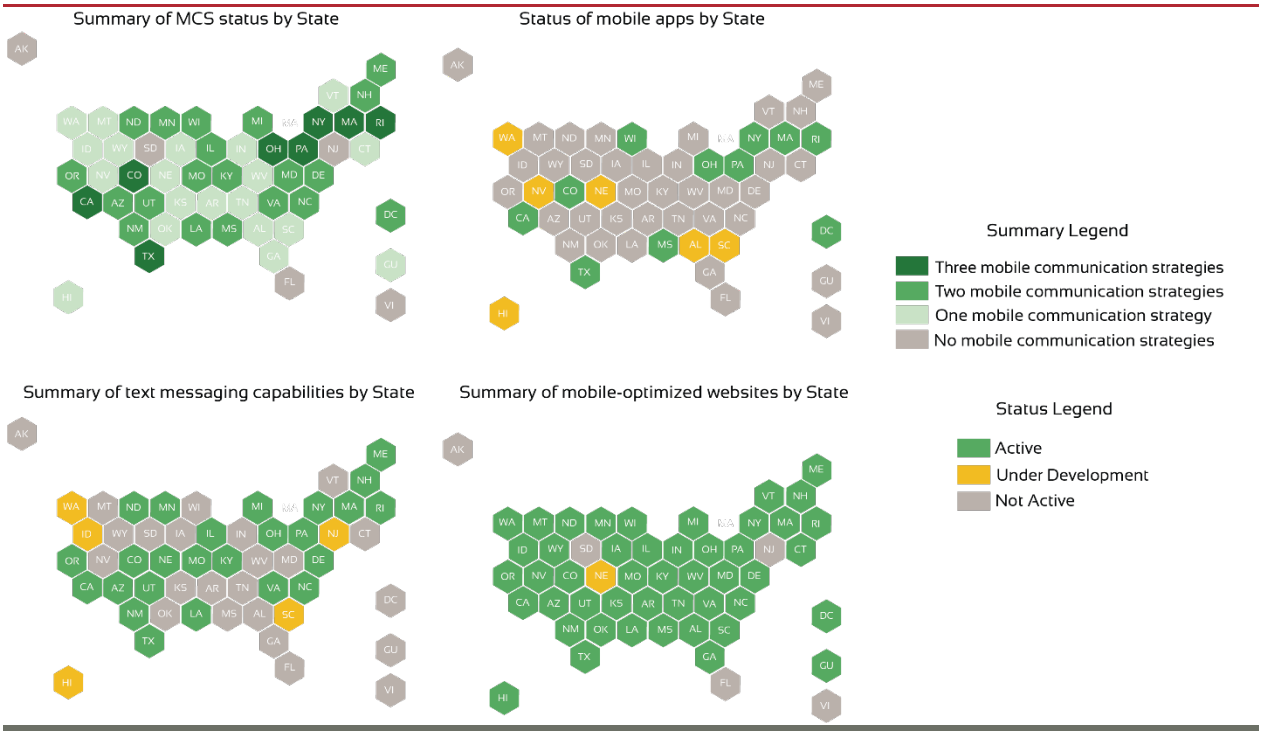


Figure 3.2 illustrates (1) States with any active or under development MCS (mobile app, text messaging capability, and/or mobile-optimized website); (2) States with an active or under development mobile app[3]; (3) States with an active or under development text messaging capability[4]; and (4) States with an active or under development mobile-optimized website[5].

Figure 3.2. Summary of MCS Status by State and Type



The most common functionalities across MCS types were receiving information tailored to personal needs, certification notifications, and account changes. However, the functions offered by a State largely

[3] States that added a mobile app: DC, OH, RI
[4] States that added text messaging: DE, MN, MO, NE, NM, NYC, NC, OR, PA, RI
[5] States that added a mobile-optimized website: AZ, FL, GA, ID, IA, KS, LA, NC, ND, RI, WA, WV

depended on whether its MCS included a mobile app, text messaging, or mobile-optimized website. States with mobile apps allowed SNAP participants to conduct a broad range of activities, such as checking application status (10 of 11 States), submitting documentation (6 of 11 States), and receiving information tailored to personal needs (9 of 11 States). States with text messaging capability used it to send clients tailored information (13 of 25 States), account change information (17 of 25 States), and certification notifications (12 of 25 States). States with mobile-optimized websites allowed SNAP participants to sign/submit an application (42 of 49 States), start and save an application (42 of 49 States), and check application status (32 of 49 States).

Table 3.1 summarizes the identified functionalities in each State by MCS and indicates which features have been implemented between 2018 and 2022. Several functionalities were limited or nonexistent based on the information found during the national scan update in 2022. Because of the limitations of this national scan update (e.g., not interviewing Regional Offices), the study team was unable to identify which features were under development. Therefore, figure 3.1 only displays whether the feature was identified as available or unavailable. Of the features identified, the most progress occurred with promised security of personal data, signing and submitting an application, starting and saving an application, submitting documentation, posting updates on office hours and locations, and offering language options other than English. For details on functionality by State, see appendix E.

Table 3.1. Summary of Functionality of MCS Across States in 2022 Compared With 2018

Category	Functionality	Text (25 States)		Mobile App (11 States)		Website (49 States)	
		Percent of States Offering	States Adding Since 2018	Percent of States Offering	States Adding Since 2018	Percent of States Offering	States Adding Since 2018
Application/ recertification	Benefit estimator	0%	0	18%	1	41%	5
	Check application status	0%	0	91%	1	65%	13
	Schedule interview	0%	0	0%	0	2%	1
	Sign/submit application	0%	0	27%	3	86%	14
	Start/save application	0%	0	27%	3	86%	14
	Submit documentation	0%	0	55%	6	71%	14
Benefits and EBT	Balance inquiry	0%	0	64%	1	22%	3
	Card replacement	0%	0	9%	1	10%	2
	PIN management	0%	0	0%	0	4%	0
Change reporting	Report household change	0%	0	36%	1	61%	10
	Report income change	0%	0	36%	1	61%	11
	Report other change	0%	0	55%	1	61%	11
	Submit documentation	0%	0	73%	1	55%	9
Client inquiries	Chat	0%	0	0%	0	20%	6
	FAQs	0%	0	36%	1	47%	13
	File complaint	0%	0	0%	0	29%	3
	Locate community partners/resources	4%	1	45%	1	31%	10
	Office hours/locations	0%	0	36%	1	43%	15
	Submit questions	8%	2	0%	0	16%	2

Category	Functionality	Text (25 States)		Mobile App (11 States)		Website (49 States)	
		Percent of States Offering	States Adding Since 2018	Percent of States Offering	States Adding Since 2018	Percent of States Offering	States Adding Since 2018
Notifications	Account changes	68%	5	55%	3	24%	10
	Certification notification	48%	3	64%	0	14%	5
	Office status	0%	0	9%	1	4%	2
	Report income change	20%	0	9%	1	8%	3
	Verifications needed	40%	4	55%	3	16%	6
Other features	Calendar/due date	32%	3	64%	2	16%	6
	Information tailored to personal needs	52%	1	82%	0	49%	5
	Promised security of personal data	4%	1	55%	1	39%	15
	Spanish (or other) language option	8%	1	45%	1	67%	15

Note: EBT = electronic benefit transfer; FAQs = frequently asked questions

B. Key Takeaways From National Scan Comparison

The national scan update conducted in 2022 revealed key themes that will provide FNS with an understanding of the landscape of MCS nationwide:

- **Progress was made, but few States comprehensively implemented MCS.** Since the first national scan, more States are offering all MCS types to their SNAP participants. While the number of States offering all MCS types more than doubled, it includes only 8 of the 53 States and territories that offer SNAP, with 4 more on their way to full implementation.
- **SNAP participants across nearly every State can conduct SNAP-related business from a mobile device.** With improved access to mobile-optimized websites, SNAP participants across nearly every State (49) were able to conduct some SNAP-related business safely during the COVID-19 pandemic from their mobile device.
- **State-run mobile apps have been the slowest to progress.** Of the three types of MCS, mobile apps are the most resource intensive to develop and implement, which is likely why they were the least common across each type of MCS. The time it takes to secure funding, develop, and successfully implement a mobile app helps explain why minimal progress has been made since 2018. Unless the State was in the process of developing an app, COVID-19 did not appear to facilitate or accelerate plans to do so. Texting and website optimization were the most prolific and likely to be accelerated by COVID-19 because implementation takes less time and is less resource intensive.

Chapter 4. Objective 2: Case Study Findings

This chapter summarizes the findings from the five case studies of select State MCS projects. The national scan conducted in 2018 enabled the study team to identify sites for participation in the five case studies. As described in chapter 2, these sites were chosen based on their progress implementing MCS in their State or local municipality. The themes described in this chapter highlight the primary takeaways from key informant interviews that focused on the following topics: (1) goals and target audiences for MCS, (2) marketing and outreach strategies, (3) community involvement, (4) software and data infrastructure, (5) evaluation and monitoring of MCS, (6) implementation challenges, (7) perceived benefits and limitations of MCS features, and (8) effects of MCS on State and local operations. For a more detailed account of each case study, see appendix C.

Objective 2: Case studies of selected State projects that use mobile technology for case management and/or notification

A. Goals and Target Audiences for MCS

This section outlines the goals for developing and improving MCS across the five States and target audiences.

Improve client experience with and access to SNAP. One of the aims of implementing MCS was to improve SNAP accessibility by increasing efficiency and streamlining the application process. Before the development of MCS, clients had to travel to local SNAP offices to conduct SNAP business. Some eligible individuals faced barriers to accessing local SNAP offices, such as limited transportation options and inflexible work schedules. MCS streamlined the process by allowing clients to upload and submit documents and applications through their mobile device rather than going into the SNAP office. Clients were also able to obtain case information through MCS rather than having to call into the office and wait on hold to speak with a caseworker.

> *My overall goal for this is to improve access—not just initial access but ongoing access so we don't lose people, cut down on the churn, and ensure eligible people continue to receive their benefits—and not lose them for some administrative reason.*
>
> —State SNAP director, Kentucky

Reduce churn. Stakeholders noted that some clients had difficulty managing their case information and knowing when they needed to renew or provide additional information about their household. Clients who do not provide the needed information or documentation may exit the program for a period of time and have to reapply for benefits. This process is known as churn and is a significant concern among State SNAP agency staff. Text messaging, push notifications, and electronic notices were used to increase awareness of deadlines and missing documentation and thereby decrease churn. Mobile-optimized websites and mobile apps also provided a faster and easier way for clients to upload the required documents.

Reduce costs and employee and participant burden. Prior to the implementation of MCS, many notices were sent via paper mail. The use of MCS enabled States to reduce the amount of paper documentation needed to process applications, recertifications, and notifications. This helped States save costs associated with printing, mailing, processing, and storing hardcopy documents.

Identify clients eligible for other benefits. Individuals and families who qualify for SNAP may also qualify for other social safety net programs such as WIC, TANF, and Medicaid. MCS can be designed to offer users several ways to connect with social support programs to improve awareness and uptake.

Accommodate clients with varying levels of technology skills. According to key informants, SNAP clients who had some existing comfort with smartphones, computers, and tablets had the most seamless transition to using MCS to manage their SNAP benefits. However, stakeholders from Kentucky noted they designed their website specifically to accommodate clients who had challenges with technology.

Reach low-income earners with mobile devices. Key informants shared that low-income households with smartphones and data plans tended to have high MCS uptake. Stakeholders indicated that low-income earners were more easily able to access smartphones with data plans than computers with broadband internet.

B. Marketing and Outreach Strategies

SNAP agencies deployed various strategies to inform and encourage SNAP participants to seek MCS available to them. The most common strategies included word of mouth, social media, and email and paper notices.

Word of mouth. SNAP participants were informed about their State's MCS by SNAP caseworkers, representatives from community-based organizations (CBOs) that helped them with their cases, and other SNAP participants. Caseworkers informed clients of the availability of MCS and SNAP-related activities that could be performed. CBOs also promoted MCS when they assisted SNAP clients with SNAP-related activities. CBOs played an important role in reaching diverse clientele with different backgrounds, needs, and technical skill levels because these organizations often have the connections and networks that local government agencies lack when trying to reach different groups. Some SNAP agencies distributed flyers and talking points to CBOs to assist with MCS outreach.

Social media. States used social media to generate awareness among current and potential SNAP clients about MCS. Posting important announcements through SNAP agency social media accounts was fast, reliable, and facilitated wider outreach to SNAP clients. One community partner highlighted how digital communications led to less participant stress than receiving formal letters in the mail from the SNAP office.

Email and paper notices. Regular mailed or emailed correspondence SNAP participants received included information on MCS available to them.

C. Community Involvement

Stakeholders emphasized the importance of engaging community partners and advocates throughout the process to ensure transparency and best service for SNAP clients. SNAP agencies regularly engaged with CBOs during the development and implementation of MCS. State staff met with community partners to test and provide feedback before MCS launch. Once MCS

> *And I personally found that tremendously useful for two reasons. One, these are folks that are navigating our systems every single day on behalf of clients, so their feedback is critical. And two, they were probably going to ask us for those changes anyway, so it's better to get on the front end, before we launch.*
>
> —IT staff, Massachusetts

were developed and implemented, State staff continued to meet with community partners monthly or quarterly to share SNAP clients' feedback on MCS, suggestions for improvements, dissemination strategies, and technology updates. Having regularly scheduled meetings helped SNAP State agencies keep an ongoing dialogue with CBOs that work with the target audience.

Technical assistance. Some CBOs also provided technical assistance to SNAP clients using MCS tools. CBOs provided in-person and phone support to clients who inquired about various MCS functions. In some States, CBOs were also able to submit applications on behalf of clients. In New York City, if clients completed the necessary consent forms, CBOs could create an account and submit applications on their clients' behalf. In Texas, staff at some CBOs were granted administrative controls to help clients use MCS tools.

D. Software and Data Infrastructure

SNAP MCS and their functionality have evolved since they were originally developed. SNAP agencies frequently addressed data security, identified technological strategies for reducing churn, and managed evolving MCS features.

Data security. Data security was a priority for SNAP agencies, and approaches varied across States. In Texas, IT staff described two areas of focus: protecting data in transmission using secure transport mechanisms and protecting data in storage. IT staff in Massachusetts noted that ensuring security compliance was challenging because the data had to be secured by several data security offices, all with different compliance requirements for data storage and data sharing. Kentucky stakeholders reported data security issues were not a challenge for their State's MCS. They attributed the successful application of data security to Medicaid, TANF, and SNAP systems being internally integrated and having a strong team of highly qualified staff whose primary role was to manage data privacy and security requirements.

In Texas, all client data resided on Texas State servers. Massachusetts stored data in a physical location with all other data for the Massachusetts Department of Transitional Assistance. The State planned to transfer the data to a government cloud server because of the increased flexibility with storage capacity.

Development and management of systems. SNAP agencies typically used third-party vendors or private IT consultants to manage the development and implementation of MCS. Vendors collaborated with State staff throughout the process. Vendors and consultants typically worked on similar projects, which allowed SNAP agencies to use existing code and data from other projects and customize as needed. However, key informants in Massachusetts noted they preferred to manage MCS in-house because of the ability to tailor the tools more closely to their needs.

Evolution of functionality. Features of MCS typically began with limited capacity and grew over time. Developing and implementing MCS and their features in phases enabled States to improve MCS by receiving feedback through CBOs, State program staff, and client focus groups. For example, in Texas, State program staff proposed new projects and ranked them in order of priority. Texas IT staff then reviewed the list and addressed the changes depending on available technological capacity. New York City also implemented its mobile app in two phases over a year, with different features implemented in each phase.

Grant funding. PTIG funding can be a critical tool for expanding MCS functionality. In Mississippi, PTIG funding was used to expand the ability to apply and submit documentation through the mobile app, upgrade the mobile app and website to offer multiple languages, and institute automatic paper notices when emails bounced or electronic notices were not opened. New York City also used PTIG funding to improve and add MCS features, including the mobile app document upload feature.

Methods for testing software. Stakeholders highlighted the importance of testing MCS software during the development and implementation to identify any defects or errors. States implemented various methods for testing the software and data infrastructure. Massachusetts used user acceptance testing, in which IT staff developed complex scenarios for community partners to use while testing the SNAP application on the website. In Mississippi, IT staff used a Scrum Testing Approach, which required a short, fixed schedule of release of each function. This strategy helped ensure each step of the development process was successful before proceeding to the next stage. Texas tested new and existing MCS and conducted "readiness release efforts" to address functional performance issues before the new product release.

Technological strategies to reduce churn. Reducing churn was a key goal for SNAP agencies when developing and implementing MCS. SNAP agencies implemented text messaging and/or mobile app push notifications alerting users to new information related to their account, such as electronic notices or reminders about recertification deadlines. Key informants noted that while push notifications were an ideal form of messaging because of the flexibility in character limits and content, they were not a reliable mechanism for reaching participants because some clients disabled push notifications. Therefore, text messages were still necessary to reach clients who disabled push notifications on their mobile devices. Mississippi also created a system that recognized if SNAP clients were not receiving electronic notices (e.g., if the email address was not functioning or entered incorrectly, if participant neglected to open notices) and triggered an automatic paper notice to be sent to the mailing address on file. This feature aimed to decrease churn by reducing the chances of clients missing their notices to recertify or provide verification documentation.

Licensing of commercial products for more efficient development. Stakeholders in New York City explained that licensing commercial products customized for the SNAP agency's needs was more efficient than building the tools in-house. It enabled the agency to make frequent software updates to accommodate the updates to the mobile device operating systems.

Ease of feature control on the back end. The third-party consultant that worked with Mississippi to develop its MCS noted they incorporated a tool into the back end of the app that allowed for specific features to be enabled and disabled. As a result, certain elements on the site could be updated without having to disable the entire app.

Website and app features. SNAP agencies with both an app and a website varied in the way their mobile app and website interacted. Massachusetts prioritized making the features offered throughout the app and the website interchangeable to enable clients to pick the MCS they preferred for SNAP-related business.

> *We added a number of seamless integration points where clients would get a notification saying the recertification is due. [It] would include a button saying 'recertify now,' and when clients click that on the mobile app, we would take them over to the mobile-enabled website where clients can submit the recertification ... We wanted to make sure that the app and the portal are really a part of a suite of tools that we're providing to clients that go hand in hand.*
>
> —SNAP agency staff, New York City

In contrast, the app and the website were integrated in New York City. Clients could initiate certain tasks on the mobile app and be routed directly to the website to complete the action.

E. Evaluation and Monitoring of MCS

SNAP agencies regularly engaged with stakeholders to gauge the success and limitations of MCS. In addition to getting input from CBOs, States also gathered feedback from clients, used analytics to decrease churn, and monitored the use of MCS.

Feedback from community partners. SNAP agencies regularly facilitated meetings with CBOs to obtain feedback on SNAP operations on the ground. Meetings included updates about the SNAP agency to CBOs and insights from CBOs about possible improvements to better meet clients' needs. CBOs also reported on any technical issues related to MCS.

Feedback from clients. States used client feedback to monitor and evaluate the usability of MCS. States with mobile apps reviewed direct feedback from app store ratings and comments. New York City also administered a one-question survey about clients' experiences through its website. Massachusetts conducted a study to assess clients' perceptions of the website. Client feedback gathered from the study resulted in a redesign of parts of the website, including adding the mass.gov logo to the website in a prominent spot.

Use of analytics to decrease churn. The continuous monitoring of and improvements to MCS tools create more opportunities for SNAP clients to receive notifications needed to maintain their benefits. In Kentucky, the SNAP agency can determine if electronic notices posted in user accounts on the website were opened. The Mississippi Department of Human Services uses information about uptake from Google analytics. Clients' login details (e.g., login success rates) and traffic volume can be tracked to help inform administrative changes to decrease churn.

Monitoring use. Some States tracked the use of MCS, including the number of applications submitted, crash reports, page usage, time visitors spent on each page, and abandonment rates. The State used these data to inform changes to the website and the app and improve the registration process.

F. Implementation Challenges

As expected with new initiatives, several implementation challenges were associated with the development and implementation of MCS.

> *What's maybe a little bit frustrating is just bureaucracy and how slow and tedious things can be. Changes take a lot of time, and they have to go through a lot of processes, so changes don't always come as quickly as you'd like.*
>
> —Community partner, Kentucky

State and local bureaucracy. The primary challenge SNAP agencies faced was the administrative processes of State and local government. Sometimes changing priorities among State leadership and Federal and State SNAP policies required revisions and adjustments to the features within MCS. A State's transition to new leadership (e.g., governor's administration) also resulted in high turnover among staff knowledgeable about MCS development and implementation, leading to delays in MCS implementation or updates.

Resistance to technology. Some segments of the population were resistant to technology, overwhelmed by the application process, or did not own smartphones to access MCS. Some clients were also reluctant to use MCS because of data security concerns, particularly around sharing their Social Security numbers.

G. Perceived Benefits of MCS Features

Stakeholders shared what they perceived to be the benefits of MCS. Overall, stakeholders agreed MCS in their State were beneficial to clients for several reasons.

> *This tool is helpful for organizations working with us. They can easily monitor cases, and therefore, our clients have the opportunity to stay on benefits for a prolonged time without interruptions because they get notifications when a case is about to close or if there's any documentations missing.*
>
> —State staff, Massachusetts

Reduced churn. SNAP participants may struggle to submit required documentation to SNAP offices on time because of various barriers (e.g., work schedules, lack of transportation). Allowing clients to apply or recertify through the website or app facilitated enrollment and prevented lapses in benefits. Push notifications from the mobile app and text messages informed clients when actions were required for their recertification.

Streamlined application submission process. Clients were able to submit applications and recertifications more quickly because they could complete the entire process online from a mobile device. Applications submitted online could be processed faster than those submitted by mail or in person at local offices. Online submission enabled new and existing participants to receive their benefits more quickly.

Faster updates to clients. Prior to MCS, clients would have to spend time on the phone inquiring about their case. The app and the website enabled clients to quickly access their case information. Text messages offered an additional means for clients to stay up to date on case information. Individuals who were not yet enrolled in SNAP were also able to submit applications online instead of visiting local SNAP offices or mailing documents. This process allowed new SNAP clients to get immediate notifications on their case status rather than having to wait for a notice in the mail.

Reduced barriers to access. MCS can increase access to SNAP benefits by removing certain barriers. Many SNAP clients did not have access to desktop or laptop computers. Access to a mobile-friendly website or a mobile app enabled these clients to submit applications, recertifications, and verifications using their mobile device. Some SNAP participants live in areas with limited access to broadband internet. These clients can still benefit from the convenience of MCS if they have access to cellular data.

Continuous services during COVID-19. SNAP agencies with MCS tools developed and implemented before the onset of the COVID-19 pandemic were able to easily transition to virtual platforms; clients and staff were already familiar with conducting SNAP-related business virtually. MCS also improved States' ability to manage and process a large influx of cases that occurred because of the COVID-19 pandemic.

H. Perceived Limitations of MCS Features

Stakeholders shared what they perceived to be the limitations of MCS and offered suggestions for streamlining MCS offerings. Overall, stakeholders approved of the usefulness of MCS, though some limitations were noted.

Lack of some desired functionality. Stakeholders noted that certain functionalities missing from their State's MCS presented limitations for clients. These included the inability to live chat with case workers, view communications in languages other than English or Spanish, schedule appointments, or conduct interviews online. This limitation only applied to States that did not have specified functions at the time of data collection. Several States did have these functions available.

Security and data privacy concerns. Some clients were hesitant to conduct SNAP-related business via the internet because of security and data privacy concerns. This issue was particularly common for MCS that required a Social Security number for login. Some clients also did not include key information, such as a Social Security number, phone number, or email address, on their electronic applications. These omissions made it challenging to connect with clients and often resulted in their application stalling in a preregistration queue.

Limited broadband and cellular service. Although the mobile-optimized website and mobile app mitigated issues for regions with access to cellular data service, some areas have neither broadband nor cellular service. SNAP clients in these regions must conduct their business through nondigital channels such as paper mail or in-person office visits.

Discomfort with technology. Using and accessing the MCS continued to be a challenge for clients who were not comfortable using technology. This population included older generations with less experience with certain technology and undocumented immigrants and clients who spoke other languages. To address this issue, stakeholders felt it was important to maintain nondigital avenues available for these groups, such as paper notices, telephone access, and in-person local office locations, to continue to access benefits.

I. Effects of MCS on State and Local Operations

The implementation of MCS affected the way State staff and local caseworkers conducted SNAP-related business by improving communication, increasing the efficiency of case processing, and enabling staff to spend less time addressing churn.

Improved communication. MCS enabled clients to access their case information and monitor their application status, which resulted in stakeholders' perceptions of fewer calls to caseworkers and fewer visits to local offices to obtain the information.

> *It really came full force, and now the public is used to uploading documents and doing online applications. And it has helped us—helped the staff, I should say—handle things faster. It's more automated. So … it's been good, it's been positive.*
>
> —State staff, Mississippi

Faster and more efficient case processing. The online portal and mobile app enabled local staff to focus on clients who needed the most assistance and other high-priority tasks. Application submission through the online portal saved local staff time

because they did not need to scan documents and enter data into the eligibility system. It also helped caseworkers process applications in fewer days compared with paper or in-person applications. Caseworkers also spent less time mailing applications and other documents to clients because clients could access this information through MCS.

Less time addressing churn. Caseworkers were able to spend less time repeatedly requesting documents and addressing churn. Electronic notifications helped keep clients engaged and updated on their case.

Chapter 5. Objective 3: Focus Group Findings

This chapter highlights the key takeaways from the 10 focus groups conducted with SNAP participants across the 5 case study sites. During the focus groups, SNAP participants discussed the features they found the most helpful and offered suggestions for improvements to various features. For a detailed description of focus group feedback, see appendix D.

Objective 3: Information on client satisfaction and perspectives on mobile communication strategies

A. Mobile Apps

At the time of the study, four of the five States—Massachusetts, Mississippi, New York City, and Texas—had a mobile app. Participants from these States described how they used the app, gave feedback on the app, and offered suggestions for improvement. Most focus group participants had used their SNAP program's mobile app at some point.

Learning about the mobile app. Most participants learned about the mobile app through a caseworker. Other methods of learning about the app included friends and family, State government website, Facebook advertisements, and the app store.

Mobile app account. The COVID-19 pandemic prompted several participants to sign up for the mobile app. Some participants indicated they had to apply for SNAP because of a job loss or other changes in their financial circumstances as a result of the pandemic; they noted the app was the only way for them to upload the necessary documentation. Other participants noted challenges of getting to the SNAP office, such as transportation or work schedules; the app helped them overcome these barriers.

Feedback on Mobile Apps

Participants shared their experiences using the mobile app and offered suggestions for improvement. Participants frequently used the mobile app to upload documents, check their account balance, and complete recertification forms. Overall, participant opinions varied by State.

EBT balance. Although participants frequently used the app to check their EBT balance, they provided mixed feedback on this feature's accuracy. Because of the apps' poor performance, participants often turned to the third-party Providers app as an alternative for checking their balance.

> *I like the turnaround time because, once you upload it, you would get ... a text message saying ... we received your documents. The next day, you could actually see what it is, just to be sure if it's ... two or three pages. You just want to be sure that all of it was uploaded. So that's pretty good.*
>
> —SNAP participant, Massachusetts

Document upload. The document upload feature was described as useful and straightforward by most participants. Participants appreciated the option to either upload a photo from their camera or take a new photo and upload it directly in the app.

Receiving a notification when documents were successfully uploaded was viewed as a beneficial element of the document upload feature.

App notifications. Notifications sent through the app to participants are intended to help manage their case information and remind them when they need to recertify or provide additional information about their household. However, push notifications and text messages referencing an action in the app were not always timely, which reduced the effectiveness of that method of communication and caused confusion among participants.

Recertification. Participants frequently used the app to recertify for SNAP benefits. Overall, participants described this process as relatively straightforward.

Convenience. Participants viewed the app as a convenient way of conducting SNAP business because they believed users always had access to their smartphone as opposed to a computer.

Suggested improvements. Participants suggested incorporating a live chat agent, offering more languages, providing a notification when the EBT card is used, and adding the ability to locate community partners of interest (e.g., food pantries, farmers' markets) to improve the app.

B. Mobile-Optimized Websites

All five States had a mobile-optimized website at the time of the study. Participants frequently used both the website and the mobile app for various SNAP-related business, depending on the functionality available. SNAP participants provided insights into their use of the mobile-optimized website, including how they learned about it, the process for signing up, and their frequency of use.

Learning about the website. Several participants reported they conducted an internet search about applying for SNAP benefits in the State and were referred to the website. Another common way of learning about the website was from the local SNAP office through a conversation with a caseworker, a letter, or an email notification. A few participants learned about the website through word of mouth from local food pantry staff, family, and colleagues.

Online account. Participants described the process of signing up for the website as straightforward. They were required to create an account to gain full access to the website and were able to do it without caseworker assistance. Difficulties getting to the local office, including inclement weather and lack of transportation, and office closures due to COVID-19 motivated participants to create an account on the website.

Feedback on Mobile-Optimized Websites

Participants' descriptions of their overall experience with their SNAP agency's mobile website included positive feedback, suggestions for improvement, and preferences for using the website on their phone compared with the computer.

EBT balance. Some participants used the website to check their EBT balance, but most used their SNAP agency's mobile app or the Providers app for this function.

Additional information. Participants noted they liked the additional information the website provided compared with the app, including a frequently asked questions feature. Participants also liked that the

website contained links to other sites with relevant information, such as Pandemic EBT (P-EBT) benefits or the location of local food pantries.

Document upload. Participants described the website document upload feature as simple and useful. Participants liked the ability to submit documents on their phone because they could easily take photos and upload them. Participants also mentioned that uploading documents through the website saved them money on postage. However, some participants indicated a preference to view the documents uploaded in the past, receive notification of document receipt, and upload more than one document at a time.

Application and recertification. Participants frequently used the website to complete their application or recertification documents. This process was sometimes viewed as easier through the website than through a mobile app. Participants were also able to check the status of their application on the website, and most found the feature timely and accurate.

> *I like the fact that you can check [the website], as opposed to having to call, and sometimes maybe you have to have ... an hour wait until you can actually get a live person to speak to.*
>
> —SNAP participant, Kentucky

Use of website on phone. At least half of the participants had used the website on their phone and had mixed views on their preference for using the website via their phone or computer. Participants who preferred using the website on their phone frequently cited convenience; they always had their phone with them, and many did not regularly have access to a computer. Participants also preferred to upload documents through a phone instead of a computer because most documents were already saved on their phone, or they could take a new photo.

The most frequently cited reason for using a computer instead of a phone was difficulty viewing and navigating the website on a phone. Participants struggled with small text on the phone and noted typing on a computer was easier. Participants also mentioned the ease of downloading and saving documents as reasons they preferred to use a computer.

C. SMS Text Messaging

Four study States—Kentucky, Massachusetts, New York City, and Texas—had implemented text messaging at the time of the study. Participants described their experiences with text messages and offered feedback on the utility of texts they received. Those who did not use text messaging explained why they did not; those who did not know the service was available talked about whether they would choose to use it if they knew about it.

> *I don't feel like I get bombarded with them. I get one a month. ... I find them helpful. I like getting the one reminding me about the balance or that I'm getting the benefit every month because I can't remember when I'm getting it. And the occasional one that I get about something that I may or may not be interested in, I find helpful.*
>
> —SNAP participant, Massachusetts

Opting in to receive text messages. In Texas, New York City, and Kentucky, participants reported having to opt in to receive text messages. In New York City, participants reported opting in during the application process.

Frequency of text messages. Participants were satisfied with the number of text messages they

received. Most participants received text messages when they needed to take a particular action, such as submitting documents or recertifying. Participants noted that receiving too many text messages would make them less likely to pay attention to the content and decrease the utility.

Text content. Text messages were used to provide recertification reminders, notify participants about missing documents, and confirm application or document receipt. In some States, text messages were used to inform clients about appointments and could be used to confirm appointment dates and times. In Kentucky, SNAP participants noted the texts let them know they had a notification in the portal; they would then have to visit the website to get additional information. Participants also reported receiving information on office hours and closing, P-EBT, and vaccine availability.

Participants who chose not to use text messaging. Participants who did not opt in noted text messages would be duplicative because they frequently checked their email, notifications in the mobile app, or the website. Security concerns were another reason not to opt in; one participant felt the texts disclosed too much personal information, and another did not feel comfortable receiving automated texts. Some participants who were unaware text messaging was an option said they would opt in because text messages would be timelier and more efficient than mail notifications. Others would appreciate the additional reminder. Similarly, participants from Mississippi who did not have text messaging available reported they would opt in if given the option.

Feedback on SMS Text Messaging

> *I was just hoping not to miss anything, in case they sent it by mail, and I didn't see the mail or [it] got lost, but they sent it by mail and that got lost. Yeah, and the mail is very slow, and emails can go to junk or disappear. ... So you want to cover all your bases.*
>
> —SNAP participant, New York City

Participants who had experience with text messaging provided feedback on beneficial features and made suggestions for improvement.

Additional reminders. Participants appreciated receiving text messages as additional reminders and often felt nudged to take necessary action. In some cases, text messages were preferred to notifications received in the mail, through email, or via push notifications because texts were timelier and more reliable.

Wording of text messages. Participants' views on text message wording varied. Some participants found the wording direct and informative, while others said the texts they received were sometimes phrased in an urgent manner that made the texts seem worrisome.

Security of text messages. Participants worried about receiving spam text messages and clicking links provided in texts. Participants discussed the importance of consistent language across text messages and a consistent URL for the SNAP agency website to reassure them the texts were coming from a legitimate source. Participants also had some concerns about including personal information in text messages.

> *I only received one saying the recertification was going to be opening ... soon ... So it was helpful to remind me that it's going to open, but it wasn't helpful to tell me it's happening in a week. ... I can't do anything about it, and by the time the week passes, I won't remember. So they should send it again.*
>
> —SNAP participant, New York City

Timing of text messages. Participants reported mixed feelings about the appropriate timing of text messages. Some participants appreciated text messages coming several weeks in advance to give them enough time to collect necessary information. Others preferred a text message sent closer to the date of action because a notification several weeks in advance was more likely to be put off and forgotten about.

Chapter 6. Objective 4: Lessons Learned and Conclusions

This chapter presents a synthesis of the lessons learned and conclusions from the five sites included in the study. It highlights implications for other States in earlier stages of the MCS implementation process and suggestions for FNS policies.

Objective 4: Best practices and lessons learned from case studies

A. Lessons Learned From Case Studies

The findings from the case studies detail the successes and challenges the five States experienced implementing SNAP MCS. From those findings, this section presents lessons learned and recommendations for other States' successful MCS implementation. Some lessons learned were generated from findings across States; others came from interviews from one State.

Financial and Human Resources

Minimize administrative processes and ensure seamless transitions between State staff. Assess the utility of certain administrative requirements to make meaningful improvements to MCS and take steps to minimize barriers to ensure continuous improvement. Ensure all staff involved in MCS development are fully informed about each part of the process to ensure MCS implementation remains on track and achieves intended goals.

Obtain leadership buy-in. Leadership must be willing to ensure adequate resources are allocated to design, implement, and maintain MCS. MCS are multifaceted and involve substantial coordination, collaboration, and approval of each step of the development and implementation process. Therefore, leadership support is essential to implement these tools effectively.

Enlist authorized aides to help with applications. Partner with individuals and organizations that can promote MCS and help SNAP beneficiaries learn to use them. These individuals are legally permitted to complete applications on behalf of SNAP clients. The positive impact of these legally authorized individuals is supported by research that found consumers who received in-person assistance were more than twice as likely to successfully enroll in social safety net programs than those who tried to enroll online without any assistance; those who received local assistance were the most successful.[6] Designating legally authorized individuals who have permission to access client accounts and help SNAP clients navigate MCS will facilitate meaningful use of MCS by clients who may initially hesitate because of discomfort with mobile technology.

Obtain funding specifically intended for MCS development and improvements. MCS require adequate funding for development, implementation, continuous improvement, and maintenance. Obtaining funds intended for MCS development and future improvements, such as PTIG funding, is instrumental to obtaining buy-in from leadership and ensuring high-quality execution and continuous improvement of MCS tools. Other sources of funding used by States included State funds and A-87 waivers from 2011.[7]

[6] Grob, R., & Schlesinger, M. (2015). Educating, enrolling, and engaging: The state of marketplace consumer assistance under the Affordable Care Act. *Health Affairs, 34*(12).

[7] A-87 waivers were issued in August 2011 by the U.S. Department of Health and Human Services and USDA to allow human services programs to benefit from enhancements to Medicaid eligibility systems without sharing the costs of developing such systems.

MCS Marketing, Outreach, and Stakeholder Engagement

Engage CBOs and SNAP participants in MCS development. Community partners offer expertise and access to SNAP participants and SNAP-eligible individuals. These partners have a unique understanding of SNAP participants' needs and can offer invaluable feedback on MCS design and outreach. Engaging CBOs and SNAP participants early in the development process will help developers build a more effective and useful product for SNAP clients and avoid the expense of costly and time-consuming redesigns. Forming a SNAP workgroup that includes input from community and IT partners is important to ensure necessary considerations are shared with those who are building and upgrading MCS tools. When possible, SNAP participants should be included in the testing of MCS via interviews or focus groups before implementation. SNAP participants can also provide feedback on the wording used within MCS to ensure it is understandable.

Leverage CBO and caseworker communications with SNAP clients to promote the availability of MCS and offer tech support. Caseworkers and CBOs are in a position to easily and effectively share the availability of MCS with SNAP clients and provide some level of tech support. These relationships are key to engaging clients about mobile technology, information needs, and suggestions for improvement. It can also prove beneficial for clients who struggle with technology or do not have the credentials to create an account themselves. SNAP caseworkers and CBOs should also be trained on the full range of activities that can be performed via MCS to inform clients about the availability and utility of MCS. This training will facilitate a positive user experience that can influence client uptake of MCS.

Market with intention and use social media to promote awareness of MCS. Before implementation of MCS, marketing and related outreach should include clear descriptions of the activities clients can conduct with these tools. The wide reach and low cost of social media facilitate communication with eligible citizens about SNAP benefits and other social safety net programs for which they may qualify. Social media can alert SNAP clients about the availability of new MCS modes and features and update them on temporary MCS maintenance.

Integrate SNAP MCS with other social safety net programs. When possible, combine MCS for SNAP with other social safety net programs, such as WIC, TANF, and Medicaid. Maintaining several programs on one platform streamlines the back end data requirements (e.g., data management and security) and facilitates communication with beneficiaries who may be eligible for more than one program. Combining programs on one platform also minimizes burden on beneficiaries who are enrolled in more than one program by consolidating the documentation they need to provide.

Software, Data Systems Development, and Technical Considerations

Engage a variety of technical and program experts. Development of MCS requires a variety of technical and program experts. Involving necessary experts such as software developers, IT infrastructure experts, policy experts, community partners, and content experts will enhance the SNAP agency's ability to resolve any issues that arise during implementation. Ensure all experts are involved in the design, implementation, and maintenance of MCS.

Perform comprehensive testing and documentation. When users experience errors, they lose trust in the system, which inhibits the utility of MCS. Allocate sufficient time for testing and documenting technical issues that arise. Ensure all issues are documented comprehensively to facilitate long-lasting improvements.

Apply behavioral economics (e.g., nudge theory) to text and push notifications. It is important to be intentional about the length, content, and frequency of text messages and push notifications. If messages are sent too frequently, they can be considered spam, making each message less effective as clients may begin to ignore the messages they receive. Limiting the number of mass-audience text messages will improve its utility.

Implement back end switches for each feature. Building the MCS tools to enable turning features on and off on the back end is helpful to maintain the functionality and utility of the tools when certain features need updates. This strategy ensures the remaining functions of the app can remain active while some features undergo maintenance.

Use native apps[8] to improve ease of use. Optimizing websites for mobile devices ensures clients without computers can fully access their SNAP benefit accounts. However, native apps generally result in a better experience for clients using mobile devices compared with mobile-optimized websites. When possible, providing SNAP clients with the option of a native app will likely result in a more successful user experience.

Build direct routing from app to website. Where native apps do not include functions available in the mobile-optimized website, building direct routing from the app to the website ensures users have a seamless MCS experience when conducting SNAP-related business from a mobile device.

License commercial products for more efficient development. Licensing commercial products that can be customized for the SNAP agency's needs is more efficient than building tools in-house. It is especially helpful when the SNAP agency must make changes to accommodate updates to the operating systems of mobile devices. Building the MCS in-house facilitates more granular customization but also likely requires more human and financial resources.

Use a queue case management system. Some States use a case management system that assigns cases as they arrive in the system, and other States assign a set number of cases to each caseworker at various stages in the approval process. Assigning cases as they come in and as certain parts of the application are submitted is more compatible with using MCS to apply and recertify for SNAP. Document upload through MCS eases the transition to a queue case management system because documents are automatically uploaded into the case management system rather than a caseworker receiving paper documents, scanning them, and then applying the appropriate tag to the file.

MCS Monitoring and Evaluation

Apply MCS analytics to address churn. Analytics enable the SNAP agency to see how MCS are used and identify ways to adapt. For example, tracking the read receipts (i.e., notifications that a person has read a text or other type of message) for electronic notices can help identify if alternative communication strategies are necessary to prevent churn. This information can be used to alter methods of communication with SNAP clients who may miss electronic notices and would benefit from paper notices in the mail.[9]

[8] Native apps are apps built for storage and access directly from a mobile device.

[9] If the State finds the household's email address is invalid or inactive, the State must automatically resume providing the household with paper notices. See FNS's Electronic Notice Waivers and Options memo for more information on electronic notice requirements.

Seek continuous improvement of MCS. Improvements to MCS need to be continuous and consistently applied across all modes of client communication. When making improvements, it can be helpful to use dedicated staff to monitor and reply to user feedback from the app store. Focus groups and surveys with clients and community partners and systematical analysis of feedback is another method of evaluating MCS features and functionality.

Text Messaging and Push Notifications

Use push notifications and text messaging. Push notifications and text messages are a simple way to alert SNAP clients about updates to their account. Incorporating these features creates an opportunity to decrease churn by reaching more SNAP clients in ways that get their attention. Push notifications have more flexibility in the length and format of the messages but can be disabled by individuals. Text messages could be particularly useful for reaching clients when push notifications are disabled. Send reminders at least 1 month and 2 weeks prior to any deadline or appointment to accommodate varied preferences for recertification reminders.[10]

Personalize text messaging. Use text messages to provide additional reminders on case-specific information to clients, such as appointment notifications, reminders for required documents, and updates on application status. This feature can help clients stay informed of their case and decrease churn.

Implement opt-out text messaging rather than opt-in. Implementing text messaging as opt out rather than opt in enables the SNAP agency to reach more individuals who initially feel indifferent to the receipt of text messages and later find them helpful.[10]

Provide links in text showing State website URL. In response to security concerns, participants appreciated texts that included links to the State's website. This practice made them feel more confident in the legitimacy of the source and comfortable clicking the link. Ensure links and URLs are clearly labeled as State sources.

Document Upload and Access via MCS

Acknowledge document receipt. SNAP clients often spend time calling caseworkers because they are unsure their documents were uploaded successfully. Designing MCS systems to automatically send a confirmation receipt to SNAP clients that acknowledges the local SNAP agency has received the uploaded documents can help build trust in mobile tools among clients and save caseworkers time fielding phone calls. This receipt can be in the form of a text message or an email.

Offer document upload from mobile devices. The ability to upload documents directly from mobile devices was the most appreciated feature of MCS. MCS should ensure participants can upload documents from several sources, including existing pictures on their phone and pictures taken and uploaded directly to the app or website.

[10] States that want to use text messaging alone for electronic notices (without a corresponding email) as a way to inform clients of a new notice must continue to request waivers. Additionally, for electronic notices specifically, States must receive the household's consent before providing. See FNS's Electronic Notice Waivers and Options memo for more information on electronic notice requirements.

Provide document access from user account. SNAP clients would benefit from being able to view uploaded documents within their benefit accounts. SNAP clients often send duplicates of documents because they are not certain which documents the SNAP agency has on file.

Notices and SNAP Communication

Autogenerate paper notices. Autogenerating paper notices for SNAP clients who do not open their electronic notices or whose emails are returned creates an opportunity to decrease churn by using alternative methods to contact SNAP clients about their case.[11]

Offer two-way communication via mobile app. Enable clients to communicate with the SNAP agency through the mobile app and mobile-optimized website via a chat bot or messaging system to ensure they can report additional information based on their unique circumstances. This option could increase the utility of the app and reduce clients' need to call local offices for assistance.

Provide several viewing formats for electronic notices. Build MCS systems to enable SNAP clients to view their electronic notices in formats other than downloadable PDF. SNAP clients often are unable to locate the PDF document after download and resort to calling a caseworker to email them their notice. Incorporating more formats for viewing electronic notices will relieve the burden on caseworkers and SNAP clients.

Offer access in multiple languages. Offer several languages across all MCS to create a better user experience and give a wider range of SNAP clients more independence in managing their benefits.

User Account Activity

Offer balance inquiry. Ensure accuracy and timeliness of the balance inquiry feature to keep users engaged with MCS. Because a third-party app (i.e., Providers) is perceived as a more accurate or current reflection of participants' benefit balance, participants tend to go outside the State MCS environment for balance inquiries. When SNAP clients do not find the feature reliable, the feature is rendered ineffective.

Simplify login for mobile app and website. Make the process for logging in to the mobile app and website simple. The process for setting up an account on the website should only require participants to enter a username, password, and security questions. Clients should also be able to log in to the mobile app without revealing sensitive information, namely Social Security number. Ensure the password reset process is user-friendly and self-service; otherwise, users will not be motivated to use the tools.

B. Limitations and Considerations

This study has noteworthy limitations that warrant consideration.

[11] If the State finds the household's email address is invalid or inactive, the State must automatically resume providing the household with paper notices. See FNS's Electronic Notice Waivers and Options memo for more information on electronic notice requirements.

National Scan

Limitations encountered during the national scan follow:

- **Reliance on secondary data sources.** A primary limitation of this study was the reliance on secondary sources of information. During the initial stage of the project, Insight was unable to contact each State to confirm its use of MCS. Insight also had to rely on secondary data sources that may not have accurately reflected the current status of each State's MCS. For example, although Insight conducted its initial scan in December 2018, the State Options report reflected information as of October 1, 2017.
- **Missing or incomplete data.** Although Insight strived to use current and accurate information on States' MCS, the study team was unable to identify certain types of status and functionality, especially as it related to functionality under development.
- **Limitations of Google mobile-friendly test tool.** For some States, neither the home page nor the create accounts page of their websites could be assessed by the Google mobile-friendly test tool. In each case, it was a result of the tool's inability to fully load the page or inability to access a page without manual entry. In these cases, Insight manually captured screenshots of the websites. Most of the create account pages could not be analyzed through the Google tool because of the security barriers the test could not pass as an automated system (i.e., Captcha human verification test). For more details on this methodology see appendix E.

Case Studies

Limitations encountered during case studies and considerations for interpretation of findings follow:

- **Staff turnover.** Some sites had staff turnover that made it difficult to collect certain detailed information because few staff had historical knowledge of MCS development and implementation. The impact of staff turnover on the study was minimal but worth noting.
- **Virtual site visits.** Because of the COVID-19 pandemic, the study team was restricted to conducting virtual site visits. While the data collected was still rich and meaningful, conducting these visits virtually created the potential for missed observational opportunities that may have added context to the interview data collected.

C. Conclusions

MCS are integral for improving client experience and access to SNAP. They have the potential to substantially reduce churn, identify clients eligible for other benefits, reduce barriers to access, and reach low-income earners with mobile devices. States that develop MCS can streamline the application and recertification submission process and facilitate more efficient updates to clients. MCS also improve State and local operations by increasing the efficiency of case processing by caseworkers, improving caseworker and client communication, and decreasing the time spent on churn.

For States either beginning to implement MCS or those looking to expand, involving a diverse set of stakeholders in the development and implementation of MCS is essential. The IT infrastructure for these tools can be complicated and is best addressed by including a variety of IT programming and SNAP policy experts. Together, the group can decide which features will be included, which data security elements are required, and which tools to test before deployment. Building these back end features to be flexible

is important for maintenance and improvements to MCS, including features that support continuous monitoring and evaluation of aspects of MCS that may need revisions.

Involvement of caseworkers, CBOs, and SNAP participants in the development and implementation of MCS helps ensure participants' needs are being met and facilitates marketing of MCS to clients. SNAP participants were most interested in using MCS to check their balance, upload documentation, and complete application/recertification forms. Ensuring availability of these features will achieve the high levels of utility of MCS. Assuming text messages are not too frequent, they also have the potential to be an important vehicle for SNAP updates to clients.

Abbreviations and Acronyms

CBO	community-based organization
EBT	electronic benefit transfer
FNS	Food and Nutrition Service
MCS	mobile communications strategies
P-EBT	pandemic electronic benefit transfer
PTIG	Process and Technology Improvement Grant
SMS	short message service
SNAP	Supplemental Nutrition Assistance Program
TANF	Temporary Assistance for Needy Families
USDA	U.S. Department of Agriculture
WIC	Special Supplemental Nutrition Program for Women, Infants, and Children

Appendices