

# Designing Benefit Enrollment Experiences for Vision Impaired Seniors

A CASE STUDY BY THE  
BEECK CENTER FOR SOCIAL  
IMPACT + INNOVATION

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# About the Beeck Center for Social Impact + Innovation

The Beeck Center is an experiential hub at Georgetown University that trains students and incubates scalable, leading-edge ideas for social change. We believe impact at scale requires the courage to think and behave differently. Our work centers on investing in outcomes for individuals and society. We equip future global leaders with the mindset to promote outcome-driven solutions, using tools such as data, design, and technology. We convene actors across the public, private, and civic sectors to advance new tools, frameworks, and approaches necessary to achieve these outcomes.

## About this Case Study

This case study summarizes research from the Beeck Center's [Social Safety Net Benefits](#) project on "Designing Enrollment Experiences for Vision-Impaired Seniors" by Data+Digital fellow Chad Smith, which was recently featured in the [the Beeck Center report](#) titled, "[Technology, Data, and Design-Enabled Approaches for a More Responsive, Effective Social Safety Net.](#)"

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*Credit Anna Shvets from Pexels*

According to the [American Foundation for the Blind](#), more than 6 million people aged 65+ live with some form of self-reported vision loss. With more than 4 million seniors currently relying on federally-funded social safety net benefits like the Supplemental Nutrition Assistance Program (SNAP), it is critical that these types of benefits shift from vision-dependent processes to voice-based ones so that vision-impaired adults are able to enroll themselves quickly and easily.

Approximately three out of five seniors — an estimated 5.2 million<sup>1</sup> — qualify for SNAP, but many of them are not enrolled in the program despite being eligible. This research examines the importance of prioritizing a voice-based experience for seniors enrolling in SNAP, as seniors tend to have lower engagement using online enrollment processes. The research also provides actionable information for local- and state-level social services directors to introduce or improve a range of voice-based enrollment experiences.

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<sup>1</sup> McGovern, E. (2018) [7 Facts about Older Adults and SNAP](#), National Council on Aging.

# Understanding the Problem: Decreasing Hospital Visits for SNAP-Eligible Seniors



*Credit: Anna Shvets from Pexels*

*If more eligible seniors enrolled in SNAP there would be significant reductions in hospital utilization costs at the state level.*

Ensuring equitable access to our nation's social safety net is an incredibly important step in improving the lives of seniors, especially when it comes to food insecurity and medical care. When building technology-enabled access points to enrolling in social safety benefits, it is important to understand how age and disability affect online user experiences. Conversely, failing to enable user-friendly, technology-enabled access points for seniors — particularly for those enrolling in SNAP — can lead to greater levels of malnutrition, untreated chronic disease, and other health disparities.

Adults living under or near the poverty line rely more heavily on emergency department (ED)-based healthcare and are hospitalized more often than their

higher-income peers.<sup>2</sup> According to the Benefits Data Trust study “[Does the Supplemental Nutrition Assistance Program Affect Hospital Utilization Among Older Adults? The Case of Maryland](#),” there is statistical evidence of reduced caloric intake, poorer dietary quality, and greater risk of hypoglycemia for low-income older adults at the end of the month when funds run low. Study participants consisted of 68,956 Maryland residents aged 65+ years who were dually enrolled in Medicare and Medicaid (2009–2012). Statistical modeling — which was based on the annual number of inpatient hospital days and costs over one year of SNAP participation including for chronic health conditions — found that for each \$10 increase in monthly SNAP benefits, seniors reduced the likelihood that they would be admitted to hospitals for treatment.

Adjusting for sociodemographic and health characteristics, SNAP participants had, on average, 14% lower odds of hospitalization. The study estimated that in the year 2012 alone, enrolling the 47% of nonparticipating SNAP-eligible older adults could have led to healthcare savings of \$19 million. Accounting for the strong effects of healthcare access, this study finds that SNAP is associated with reduced hospitalization in dually-eligible older adults (those who are eligible for both SNAP and Medicaid).

In other words, policies to increase SNAP enrollment and benefit amounts for eligible older adults would likely reduce hospitalizations and health care costs. Therefore, it is critical to consider ways to make SNAP enrollment easier and more user-friendly for seniors, including vision-impaired ones, via the implementation of new, voice-based processes.

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<sup>2</sup> Samuel, L., Szanton, S., Cahil, R, Woff, J., Ong, P., Zielinskie, G., Betley, C. (2017) [Does the Supplemental Nutrition Assistance Program Affect Hospital Utilization Among Older Adults? The Case of Maryland](#).

# Vision Impairment and Voice-Based User Experiences for Seniors



*Credit: Fabian Hurnaus from Pexels*

*A substantial body of work exists on the topic of enabling greater access to digital services for older adults and those with vision impairment, with specific insight into voice-based technical options.*

Microsoft User Experience Researcher and University of Michigan Assistant Professor [Robin Brewer, Ph.D](#) has spent her career studying and building online communities to make key information more accessible to people, with a focus on older adults and people with vision impairments.

In her paper [xPress: Rethinking Design for Aging and Accessibility through a Voice-Based Online Blogging Community](#), her research notes that although increasing numbers of American older adults are now online, they continue to exhibit lower levels of online engagement and skill compared to younger adults.

Furthermore, recent analyses of internet adoption among disabled users highlights a similar tendency towards lower levels of internet skill. Compared to people without disabilities, people with disabilities are less likely to use the internet in their homes, access the internet via a smartphone, and participate in activities requiring constant digital device usage, such as receiving news and obtaining health information online.

Followed by Dr. Brewers work [Exploring Traditional Phones as an E-Mail Interface for Older Adults](#), created alongside [Dr. Raymundo Cornejo](#), PhD student [Ted Schwaba](#), [Dr. Darren Gergle](#) and [Dr. Anne Marie Piper](#) at Northwestern University, the research found that simple, voice-based interfaces, accessed through traditional phones, provide useful ways for offline older adults to interact with digital ecosystems, such as providing information verbally to collect required personal data. Ease of use and the convenience of a phone-based interface are both important for keeping seniors engaged in the digital ecosystem. The voice-based approach continues to open up new avenues of online access for older adults who are still offline or who have late-life disabilities that make using graphics-based user interfaces systems difficult.

Although most digital platforms are graphical in nature, voice-based systems are growing in available options. Digital assistants like Google Assistant, Amazon Echo, and Microsoft's Cortana, for example, all allow users to interact online without the need for a graphics-based user interface.

## Voice-Based Applications for Enrollment

A [2014 study](#) in Alabama, Maryland, and Michigan found that, regardless of age or ability, almost twice as many low-income people want help over the phone compared to those who want help online.

Enabling greater access to social safety net benefits via voice-based applications—which rely on the use of a landline or cellular phone—also remove the requirements for applicants to use the Internet, mail documents, visit a physical location, or speak with someone face-to-face. These requirements can be significant obstacles to application. Postal mail can be slower and less reliable, and mobile application technology is not yet fully available and often requires data or internet access which can be a cost barrier.

Voice-based applications, including telephonic applications and applications supported by interactive voice response (IVR) technology, are proven technologies to assist applicants who are newly-eligible, as well as those who have previously

received benefits and need to recertify. The work by Dr. Brewer found that IVR systems for sending and receiving web-based email worked well for older adults without Internet access in their homes or limited knowledge of computers. Other work demonstrated the use of an IVR system also worked for those who are blind.<sup>3</sup>

## Accepting Voice-Based Applications During COVID-19

In March 2020, the Families First Coronavirus Response Act (FFCRA) allowed the U.S. Food and Nutrition Service, an agency within the U.S. Department of Agriculture (USDA), to create two temporary waivers for states that allow more options to use telephonic (distributed-by-phone) signatures.<sup>4</sup> One allows assister organizations — Community Partner Organizations (CPO) or other service providers that have been approved by their state to be an alternative benefit access point — to note a telephonic signature in a case file without needing a recording.<sup>5</sup> The second allows assisting organizations to act as applicants' authorized representatives. The ability to act as an authorized representative has three advantages: it offers personalized help to people who may have difficulty with the application process, reduces exposure risk during the pandemic by limiting the need to mail documents, and reduces the aggregate administrative burden by having assisters submit more applications online or over the phone, reducing paper applications.<sup>6</sup> The USDA has said it may limit future approval of these and other waivers and extensions while future pandemic relief legislation remains under debate.<sup>7</sup>

**Assister organizations offer the advantage of tailored benefit outreach and application assistance to people and specific populations, such as senior citizens.**

<sup>3</sup> Brewer, R., Piper, A. (2017) [xPress: Rethinking Design for Aging and Accessibility through a Voice-based Online Blogging Community](#), Association for Computing Machinery.

<sup>4</sup> States must be individually approved by the Food and Nutrition Service to receive a waiver. Not all states opt to undergo the process to adopt waivers.

<sup>5</sup> Wagner, J. (2020). [States Can Make Applications More Accessible During COVID-19 Crisis](#), Center on Budget and Policy Priorities.

<sup>6</sup> (2020). [Facilitating Remote Application Assistance for SNAP During COVID-19: Recommendations for States and Application Assisters](#), Benefits Data Trust.

<sup>7</sup> (2020). [States Are Using Much-Needed Temporary Flexibility in SNAP to Respond to COVID-19 Challenges](#), Center on Budget and Policy Priorities.

Assister organizations can be authorized by their state to collect SNAP applications over the phone; however, getting that approval typically requires the assister organization complies with a federal regulation to store recorded telephonic signatures. This requirement may pose resource and technical challenges even in non-pandemic times, and is very difficult to meet when employees of assisting organizations need to work from home during the pandemic.<sup>8</sup>

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<sup>8</sup> Wagner, J. (2020). [States Can Make Applications More Accessible During COVID-19 Crisis](#), Center on Budget and Policy Priorities.

# Recommendations for Building Voice-Based Enrollment Experiences for Seniors



*Credit: RODNAE Productions from Pexels*

## For Local Social Services Directors

**Recommendation:** Consider partnering with local colleges or universities to examine the feasibility and economic impact of delivering a quality and measurable experience using voice-based applications for seniors.

For example, as mentioned in [our living report](#), in Minnesota, the Olmsted County Department of Health, Housing, and Human Services, as well as Dakota County, and the [Future Services Institute](#) based at the University of Minnesota's Humphrey School of Public Affairs worked together to design and implement experiential learning to address a [benefits cliff](#), which is when the working poor reach a point where a \$1 increase in their hourly wage can result in a significant reduction in benefits. The transcript from the conversation with [Paul Fleissner](#), founding member of the Future Services Institute and Deputy County Administrator of Olmsted County Health, Housing, and Human Services, [can be viewed here](#).

**Recommendation:** Consider how your pilot programs can connect to federal evidence-based funding.

For example, Nurse Family Partnership programs, which in part, help first-time mothers enroll in social safety net programs to reduce early childhood hospitalization, meets the [evidence-based funding criteria](#) under the [Family First Prevention Services Act](#) for local social service programs, and also uses a [Social Impact Bond](#) to build incentives for state governments to administer the program.

## For State-Level Social Services Directors

**Recommendation:** Lean on outsourcing organizations capable of delivering voice-based technology innovation, upon establishing foundational research and defining success factors.

For example, [Benefits Data Trust](#) has direct technology offerings and call center provider services that state social services directors can leverage. As another example of consulting, the non-profit organization [Change & Innovation Agency](#) played a supporting role in transforming the Nevada Department of Health and Human Services to bring its call center operations and voice-based experiences to scale, as seen in [this webinar](#) hosted by Code for America.

Outsourced organizations can also support an employee-centered design of your program to deliver voice-based experiences. For states new to telephonic applications, employee-centered design approaches for anticipated issues like handling volume, connecting employees with mission, and setting up supportive activities (such as call center self-care to reduce burnout) can help establish more effective service delivery. States that currently offer telephonic applications and organizations experienced in supporting them, such as [Benefits Data Trust](#), can offer technical assistance with design exercises.

### Resources from Experts in the Field

- [Improving Customer Service in Health and Human Services Through Technology](#) (2018). Produced by the Center on Budget and Policy Priorities.