

## Non-Medical Transportation Special Supplemental Benefits for the Chronically Ill Supporting Bibliography

### Introduction

This bibliography represents a comprehensive compilation of research and literature on the impact of non-emergency, non-medical transportation on healthcare access and outcomes. This collection of resources serves as a valuable tool for Medicare Advantage organizations subject to a CMS final rule requiring the production of a bibliography of each special supplemental benefit for the chronically ill (SSBCI) that they offer, pursuant to 42 CFR 422.102(f)(3). An internal analysis by MTAC found that MAOs offer non-medical transportation as SSBCI primarily to address diabetes, heart disease/congestive heart failure, cancers, end-stage renal disease and dementias, though other chronic conditions may be targeted.

This resource may be useful to other stakeholders aiming to enhance policies and practices surrounding transportation services to address health-related social needs, ensuring that the benefits of non-medical transportation continue to be explored and evaluated to support improved health outcomes and accessibility for all.

### Bibliography

Aravind, G., Bashir, K., Cameron, J. I., Bayley, M. T., Teasell, R. W., Howe, J.-A., Tee, A., Jaglal, S. B., Hunter, S., & Salbach, N. M. (2023). What matters to program partners when implementing a community-based exercise program for people post-stroke? A theory-based qualitative study and cost analysis. *Frontiers in rehabilitation sciences*, 4, 1064206-1064206. <https://doi.org/10.3389/fresc.2023.1064206>

Annotation: This study, conducted in Canada, found that cost, resource requirements, and the perceived value of the influenced managers' decisions to implement a community-based exercise program for individuals post-stroke. The analysis of personnel costs, including participant transportation to the recreation centers where the program was held, highlighted the need for affordable transport options to facilitate access and sustainability.

Elevance Health Public Policy Institute (2023). Medicare Advantage supplemental benefits address health-related social needs: Full report.

[https://www.elevancehealth.com/content/dam/elevance-health/articles/ppi\\_assets/62/20230726\\_MASupplementalBenefitsAddressHRSN.pdf](https://www.elevancehealth.com/content/dam/elevance-health/articles/ppi_assets/62/20230726_MASupplementalBenefitsAddressHRSN.pdf)

Annotation: The report highlights that non-medical transportation benefits within Elevance Health's affiliated MA plans are being utilized significantly by members with higher healthcare needs, as indicated by elevated CMS-HCC risk scores. Dual eligible individuals, in particular, showed higher utilization rates for transportation benefits compared to non-dual eligible members. Additionally, the report notes that these transportation benefits are more frequently used by members who are Black non-Hispanic and those living in lower socioeconomic status (SES) areas. The findings suggest that transportation benefits are improving access to healthcare and addressing social determinants of health for vulnerable MA members.

Fitzpatrick, K., Greenhalgh-Stanley, N., & Ver Ploeg, M. (2019). Food deserts and diet-related health outcomes of the elderly. *Food policy*, 87, 101747.

<https://doi.org/10.1016/j.foodpol.2019.101747>

Annotation: Low-income elderly in urban areas may be uniquely affected by “food deserts” due to limited transportation options, strong attachments to local neighborhoods, fixed incomes, physical limitations in food shopping and meal preparation, and chronic health problems. Interventions to address food deserts need to be carefully justified on grounds other than reducing diet-related disease, such as reducing food insufficiency, easing transportation burdens, or improving equity.

Giroux, S., Waldman, K., Burris, M., Valliant, J. C. D., Babb, A. M., Stafford, P., Fobi, D., Czebotar, K., & Knudsen, D. C. (2022). Food security and well-being among older, rural Americans before and during the COVID-19 pandemic. *PloS one*, 17(9), e0274020-  
e0274020. <https://doi.org/10.1371/journal.pone.0274020>

Annotation: This study found that the COVID-19 pandemic significantly worsened food security, physical and mental health, and loneliness among older, low-income adults in rural Indiana, with transportation barriers being a critical factor. Fear of going to stores or food pantries and limited transportation access exacerbated these issues, highlighting the need for improved rural transportation and targeted support to address the health and well-being of vulnerable populations.

Kumar, D., Zamani, C., Martin, E., Kolevska, T., Payne, J., Sheehan, T. R., Gordon, N. P., Egorova, O., Kroenke, C., Neeman, E., & Liu, R. (2022). Prevalence of social risks among oncology patients in an integrated health care delivery system. *Journal of clinical oncology*, 40(28\_suppl), 128-128. [https://doi.org/10.1200/JCO.2022.40.28\\_suppl.128](https://doi.org/10.1200/JCO.2022.40.28_suppl.128)

Annotation: Social risks and needs can affect oncology treatment and outcomes, and some may be amenable to intervention before or during treatment. The authors surveyed Kaiser Permanente Northern California oncology patients to estimate the prevalence of social risks among cancer patients. Approximately 24% said they had no one to help them with daily activities (shopping, cooking, transportation, etc.), 8% reported the need for more help with daily activities, and 8% indicated that lack of transportation made it hard to get to medical appointments.

Luo, T., Elewonibi, B., & Williams, D. (2023). A hospital-based therapeutic food pantry study for people living with cancer in New Orleans. *Supportive care in cancer*, 31(12), 712-712. <https://doi.org/10.1007/s00520-023-08171-x>

Annotation: This study examines the impact of a therapeutic food pantry on individuals living with cancer in New Orleans. The participants, predominantly female, reported significant quality of life issues, including interference of cancer with work, lack of energy, difficulty affording food, pain, and sleep problems. A notable transportation barrier was identified, as over half of the participants did not have access to a vehicle or used public transportation to access grocery stores. The study highlights the necessity of addressing food insecurity and transportation challenges among cancer patients, suggesting potential benefits from providing transportation services or home delivery of nutritious food.

Razon, N. a., Gottlieb, L. M., & Frazee, T. (2023). Essential not Supplemental: Medicare Advantage Members' Use of Non-Emergency Medical Transportation (NEMT). *Journal of general internal medicine : JGIM*, 38(16), 3566-3573. <https://doi.org/10.1007/s11606-023-08321-1>

Annotation: This study explores Medicare Advantage members' experiences with NEMT. Participants emphasized the essential nature of NEMT for accessing healthcare but also highlighted the importance of non-medical transportation for broader needs like grocery shopping and attending community events. Many participants relied on multiple

transportation services to meet both medical and non-medical needs. The study underscores the necessity of integrating comprehensive transportation solutions that address both medical and non-medical transportation needs to improve overall health and well-being for MA members.

Roth, S. E., Gronowski, B., Jones, K. G., Smith, R. A., Smith, S. K., Vartanian, K. B., & Wright, B. J. (2023). Evaluation of an Integrated Intervention to Address Clinical Care and Social Needs Among Patients with Type 2 Diabetes. *Journal of general internal medicine : JGIM*, 38(Suppl 1), 38-44. <https://doi.org/10.1007/s11606-022-07920-8>

Annotation: This study evaluates the Providence Diabetes Collective Impact Initiative (DCII), which integrates clinical care and social determinants of health (SDoH) strategies to improve outcomes for patients with type 2 diabetes. The DCII included clinical interventions like diabetes self-management education and social interventions such as SDoH screening, a community resource desk, and a transportation program. The transportation program, in partnership with a community organization, aimed to provide accessible transportation for medical appointments, pharmacy visits, grocery stores, and food box deliveries. Compared to patients at the control clinics, patients at DCII clinics saw an increase in diabetes education (15.5%,  $p < 0.001$ ), were modestly more likely to receive SDoH screening (4.4%,  $p < 0.087$ ), and had an increase in the average number of virtual primary care visits of 0.35 per member, per year ( $p < 0.001$ ). There were no statistically significant differences in mean HbA1c levels for either the overall sample or the Medicaid subgroup. Similarly, no differences in the amount of primary care, inpatient, and emergency department utilization PMPY were observed.

Ruggiano, N., Shtompel, N., Whiteman, K., & Sias, K. (2017). Influences of Transportation on Health Decision-Making and Self-Management Behaviors among Older Adults with Chronic Conditions. *Behavioral medicine (Washington, D.C.)*, 43(1), 61-70. <https://doi.org/10.1080/08964289.2015.1065788>

Annotation: This study investigates how transportation influences health decision-making and self-management behaviors among older adults with chronic conditions. Through interviews with 37 older adults in Florida, the research reveals that transportation is a critical factor in managing chronic health needs, impacting both medical and non-medical activities such as grocery shopping and social engagements. Participants highlighted how unreliable or unavailable transportation increases the cost, burden, and stress of health self-management. The study emphasizes that managing transportation is itself a component of health self-management and suggests that enhancing transportation services and policies can better support older adults in maintaining their health and independence.

Saxon, L., Ebert, R., & Sobhani, M. (2019). Health impacts of unlimited access to networked transportation in older adults. *The Journal of mHealth*. <https://thejournalofmhealth.com/health-impacts-of-unlimited-access-to-networked-transportation-in-older-adults/>

Annotation: This study assesses the health impacts of providing unlimited access to networked transportation (Lyft) for older adults with chronic conditions who face transportation barriers. Conducted over three months with 150 participants, the study found high adoption rates of the Lyft app, with 93% of participants using the service primarily for medical appointments, and also non-medical destinations such as errands, entertainment, and social visits. The results indicated improved quality of life and increased social engagement, although there was no significant change in physical activity levels. Despite the positive outcomes, cost remained a significant barrier to

continued use post-study. The study suggests that networked transportation can reduce social isolation and improve healthcare access for older adults, highlighting the potential benefits of integrating such services into broader healthcare strategies.

Shekelle, P. G., Begashaw, M. M., Miake-Lye, I. M., Booth, M., Myers, B., & Renda, A. (2022). Effect of interventions for non-emergent medical transportation: a systematic review and meta-analysis. *BMC public health*, 22(1), 799-799. <https://doi.org/10.1186/s12889-022-13149-1>

Annotation: This systematic review and meta-analysis by Shekelle et al. (2022) found that interventions aimed at reducing barriers to NEMT significantly decreased missed appointments, but there was insufficient evidence to draw conclusions about their impact on costs, overall healthcare utilization, or health outcomes. Only one study addressed non-medical transportation, indicating a need for further research in this area.

Sisk, A., Rappazzo, K., Luben, T., & Fefferman, N. (2023). Connecting people to food: A network approach to alleviating food deserts. *Journal of transport & health*, 31, 101627. <https://doi.org/10.1016/j.jth.2023.101627>

Annotation: Public transportation could better connect people with food and offer suggestions to city leaders as a way to help eradicate food deserts.

Strome, S., Johns, T., Scicchitano, M. J., & Shelnett, K. (2016). Elements of Access: The Effects of Food Outlet Proximity, Transportation, and Realized Access on Fresh Fruit and Vegetable Consumption in Food Deserts. *International quarterly of community health education*, 37(1), 61-70. <https://doi.org/10.1177/0272684X16685252>

Annotation: Among food-insecure respondents, limited car access had a negative effect on fresh fruit and vegetable consumption. This research underlines the importance of focusing on dimensions of access other than proximity when considering interventions designed to improve nutrition and health outcomes in food deserts.