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What Does the Evidence Reveal Regarding Home and Community-based Nutrition Services for Older Adults?

David R. Buys, PhD, MSPH*

Assistant Extension Professor and State Health Specialist Mississippi State University Extension Service Assistant Research Professor Mississippi Agriculture and Forestry Experiment Station Mississippi State University Adjunct Assistant Professor of Medicine Division of Gerontology, Geriatrics, and Palliative Care University of Alabama at Birmingham

Julie L. Locher, PhD, MSPH [Professor of Medicine and Public Health]

Division of Gerontology, Geriatrics and Palliative Care Department of Health Care Organizations and Policy University of Alabama at Birmingham

Maintaining a healthy and fully replete nutritional status is critical for optimal aging, for quick and full recovery after acute illnesses, and for successful management of chronic conditions for older adults [1, 2]. Some of the demonstrated outcomes of under-nutrition in older individuals include poorer functional status [3], greater health services utilization, and higher likelihood of mortality [4]. Combatting under-nutrition is difficult because gaining access to sufficient and healthy foods can be particularly challenging for this population [5]. Over the past several decades, many programs have emerged that focus on providing home and community-based nutritional services to older adults. Such home-delivered meals programs, many of which are referred to as Meals on Wheels, provide meals particularly for persons who live on low and fixed incomes and who are physically impaired and unable to leave their homes to obtain adequate nutrition or to stand and prepare meals in their own kitchens.

Home and community-based nutrition services programs are designed to intervene on poor health-related outcomes by addressing under-nutrition and are critically important for older adults. Understanding how to provide these services in an efficacious and cost-effective manner is necessary for justifying the programs' existence and for obtaining funding for them from federal, state, local, and private sources. The goal of this Special Issue of the *Journal of Nutrition in Gerontology and Geriatrics* is to feature state-of-the-field original articles that provide research-based insight into different programs and approaches that deliver nutrition-related home and community-based services (HCBS). This is the first single body of work that details many facets of evidence regarding these programs, and it may serve to suggest needed research to inform how these programs might work most effectively in the future.

The issue begins with an editorial from Kali Thomas [6] that highlights the critical need for more definitive measurement and evaluation of home and community-based nutrition

*Contact Information: PO Box 9805, MS State, MS 39762, david.buys@msstate.edu.

services. This includes the need for a uniform, standardized data collection tool that can be used to evaluate program efficacy across regions and states. The next two articles detail the longest-standing and most widely-known home and community-based nutrition services programs. In the first of these papers, Lloyd and Wellman [7] discuss the need to proactively address system, service, and professional challenges. They emphasize the importance of increasing funding to continue shaping the OAA Nutrition Program to meet the needs of those who value these services. Akobundu and Netterville [8] then present the activities of the Meals on Wheels Association of America (now called Meals on Wheels America (MOWA)), including the history of the service and the recent and upcoming work of the National Resource Center on Nutrition and Aging which is operated by the Association.

Campbell et al. [9] presents a comprehensive review of existing research on outcomes associated with receipt of home-delivered nutrition services. This paper highlights what is known and where there are gaps in knowledge that may be filled in future work. Next, Lee, Shannon and Brown [10] use statewide data from Georgia in a paper which documents the dynamic need for home-delivered meals and other home and community-based services for vulnerable older adults. They show that such data can help identify those at high risk of institutionalization, optimize HCBS delivery and coordination, and maximize HCBS benefits.

DiMaria-Ghalilli et al. [11] reports on satisfaction measures of participants in a home-delivered meals program and demonstrate that older adults in one urban environment in Philadelphia, Pennsylvania, had greater levels of satisfaction with their HCBS benefits but were at greater risk than participants in the 2013 National Survey of the Older Americans Act Program for not having money to buy food, skipping meals, and having to make choices between paying important bills or buying food. This finding points to the importance of evaluating local needs in contrast to relying just on national averages. Furthermore, Cho et al. [12] discuss findings from Hospital or Emergency Room Patients Served by Meals On Wheels, Inc. and show that patients who received home-delivered meals, among other services, had lower than expected rates of healthcare utilization three and six months after initial receipt of the services. Wight and colleagues [13] report that community-dwelling seniors who qualify to receive home delivered meals have a high prevalence of malnutrition and risk for malnutrition, as well as food insecurity. However, they showed that after receiving home-delivered meals even for a short period of time that significant improvements were observed for nutritional status, dietary intake, food security, loneliness and mental wellbeing. Next, Sattler, Lee and Young [14] found that low-income older adults in need of nutrition-related HCBS, as well as those who had multiple chronic conditions, were at high risk of being admitted or readmitted to an inpatient hospital. Sayoun and colleagues [15] evaluated food anxiety among older adults being discharged from the hospital and showed that food anxiety was greatest among Hispanics, persons unable to cook, being a current/former smoker, having diabetes, and eating alone; they also found that receiving home delivered meals may serve as an intervention on these feelings of anxiety.

This Special Issue concludes with a paper by An [16] based on an analysis of National Health and Nutrition Examination Survey data; results showed that receipt of home-delivered meals was associated with a healthier diet and increased nutrient intakes.

Furthermore, except for excessive sodium content, the meals were consistent with dietary guidelines and provided higher daily intakes of a number of nutrients known to be important for older adults.

In conclusion, this Special Issue which focuses exclusively on home and community-based nutrition services, shows with a diverse set of research methods and samples including both quantitative and qualitative analyses and with local/county-based samples, state-wide samples, and national samples that home-delivered meals programs are important for the health and wellbeing of older adults. However, for the most part the research evidence base is limited mostly by reliance upon observational findings based upon small, local reports. The key messages that emerge in the Special Issue are that a more rigorous and systematic approach to collecting and analyzing program evaluation data at both local and national levels are needed to garner support for programs and to consider alternative programs. There exists a cadre of qualified researchers dedicated to the field of study and with the methodological skills necessary to advance the science related to home and community-based nutrition services.

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