



# SOCIAL IMPACT BOND TRANSACTION SUMMARY

JULY 2017

## EXECUTIVE SUMMARY

Meals on Wheels America, in partnership with Meals on Wheels of Central Maryland (MOWCM), is structuring a Social Impact Bond (SIB) transaction in Baltimore, Maryland to scale its evidence-based senior support services to 600 individuals over the next three years. The intervention, a combination of daily home-delivered meals, socialization, safety checks and case management, will be rigorously and independently evaluated to measure the impact on the reduction in unnecessary utilization of acute healthcare services at Johns Hopkins Bayview Medical Center. This project will allow Meals on Wheels to reach an increasingly vulnerable, aging population that wants to remain healthy and independent for as long as possible. As one of the largest service providers in the U.S. focused on the senior population, Meals on Wheels of Central Maryland will leverage their ability to cross the threshold into the homes of seniors to better understand their needs, deliver essential services, refer to other providers when necessary, and coordinate with acute care providers.

## PROJECT TEAM

**Meals on Wheels America**, headquartered in Arlington, VA, is the oldest and largest national organization supporting the more than 5,000 community-based senior nutrition programs across the country that are dedicated to addressing senior hunger and isolation. This network exists in virtually every community in America and, along with more than two million volunteers, delivers the nutritious meals, friendly visits, and safety checks that enable America's seniors to live nourished lives with independence and dignity. By providing funding, leadership, research, education and advocacy support, Meals on Wheels America empowers its local member programs to strengthen their communities, one senior at a time.

**Meals on Wheels of Central Maryland (MOWCM)** is a 501(c)(3) service provider headquartered in Baltimore, MD. Today, MOWCM is one of the largest and continuously operating, nonprofit, home-delivered meal programs in the U.S. As the largest provider of home-delivered meals in Maryland, MOWCM enables people to live independently at home by providing nutritious meals, personal contact, and other services. These services help the aging and disabled sustain their optimum health, maintain economic stability, improve their overall quality of life, and age in place with dignity. MOWCM serves nearly 3,000 individuals per year, providing services in Baltimore City, Baltimore County, Anne Arundel County, Carroll County, Harford County, Howard County, Prince George's County and Montgomery County.

**Johns Hopkins Bayview Medical Center**, located in Baltimore, Maryland, is a full-service Joint Commission-accredited academic medical center. Among the wide range of services offered are an area-wide trauma center and the state's only adult burn center. It is home to several centers of excellence including stroke, geriatrics, joint replacement and bariatrics, to name a few. Bayview Medical Center is exploring the potential of serving as the project Payor.

**Quantified Ventures**, a PFS Intermediary located in Washington, DC, supports innovative leaders across the governments, service providers, and health systems tap into the financial resources needed to scale what works and improve social, environmental, and health outcomes. They have conducted the Feasibility Assessment and are serving as the Transaction Coordinator through the transaction structuring phase of the project.

**Urban Institute**, a social and economic policy research organization located in Washington, DC, is serving as the Evaluation Designer and Project Evaluator, responsible for designing a Randomized Controlled Trial for the project. Urban Institute is a leader in the Pay for Success industry, providing education, tools, and support to PFS projects across the country.

## THE PROBLEM

### AN AGING AND FRAIL POPULATION

Every day in the U.S., 10,000 baby boomers turn 65.<sup>1</sup> By 2030, 74 million Americans, representing more than 20% of the overall population, will be 65 years of age or older, with those 85 and above constituting the nation's fastest-growing demographic group.<sup>2</sup> This rapidly growing population within MOWCM's area of coverage is poised to experience up to 83% growth in the 60+ population between 2010-2030.<sup>3</sup> As this age cohort increases, significant challenges will be faced in addressing the impact of this growth on older, homebound, frail, and disabled Marylanders. The clients served by MOWCM's programs are predominantly over the age of 75, are living in poverty, and are greatly impacted by the threat of food insecurity and its resultant health and mental health conditions. Elderly women, who comprise over 62% of meal recipients, are often disproportionately affected by these problems when compared to men.

The number of elderly who experience chronic illnesses, which are exacerbated by food insecurity and poor nutrition, as well as those who experience declining mental health from increased social isolation, will rise. Not surprisingly, nearly 92% of older adults have at least one chronic condition, and 77% have at least two. For many elderly persons, these conditions limit their ability to meet their basic everyday needs. A report by the U.S. Department of Health and Human Services found that in 2012, 45% of independent elderly persons experienced difficulty in performing one or more activities of daily living such as preparing meals and buying groceries.<sup>4</sup> Currently, 87% of Meals on Wheels clients are physically unable to shop for their own groceries, while 71% report that they are in "poor" or "fair" health.

### INCREASING FOOD INSECURITY

Food Insecurity is the percentage of the population who did not have access to a reliable source of food during the past year. A 2015 Canadian Medical Association Journal study highlighted a correlation between household food insecurity with a decline in functional health, barriers to self-management of care for those with chronic conditions, increasing the probability that they will become high-cost utilizers of healthcare and heighten the risk of negative disease outcomes.<sup>5</sup> In Maryland, over 140,000 seniors are threatened by hunger and over 237,000 are living in poverty. Unfortunately, only 29% of the individuals identified as in need of Meals on Wheels' services are currently receiving help from Meals on Wheels programs in the State, representing a significant unmet need. In MOWCM's area of coverage, the food insecurity rate ranges from 8-23%, with the City of Baltimore impacted disproportionately.<sup>6</sup>

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## TOO MANY SENIORS IN MARYLAND ARE LEFT BEHIND, ALONE AND HUNGRY, STRUGGLING TO STAY INDEPENDENT AND HEALTHY.

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**261,115** are isolated, living alone

**140,463** are threatened by hunger

**237,050** are living in or near poverty



Nationally, **1 IN 6** seniors struggles with hunger

Compared to seniors who do not experience hunger, seniors experiencing hunger are three times as likely to suffer from depression, twice as likely to have diabetes, and 60% more likely to have congestive heart failure.<sup>7</sup>

<sup>1</sup> Pew Research Center, "Baby Boomers Retire," (December 2010)

<sup>2</sup> *Healthy Aging Begins at Home*. Bipartisan Policy Center. 2016.

<sup>3</sup> Maryland Department of Planning. (2013) Total population projections for non-Hispanic white and all other by age, sex, and race.

<sup>4</sup> U.S. Department of Health and Human Services. Administration on Aging. (2014). *A profile of older Americans: 2014* (Brochure). Washington, D.C.: Author.

<sup>5</sup> Tarasuk, V., Cheng, J., de Oliveira, C., Dachner, N., Gundersen, C., & Kurdyak, P. (2015). Association between household food insecurity and annual health care costs. *Canadian Medical Association Journal*, 187(14), E429–E436.

<sup>6</sup> Gundersen, C., A. Satoh, A. Dewey, M. Kato & E. Engelhard. Map the Meal Gap 2015: Food Insecurity and Child Food Insecurity Estimates at the County Level. Feeding America, 2015.

<sup>7</sup> Ziliak JP, Gundersen C. The health consequences of senior hunger in the United States: Evidence from the 1999–2010 NHANES. Alexandria, VA: National Foundation to End Senior Hunger; February 2014.

## DECLINING FUNDING ENVIRONMENT

In 2015, MOWCM received an estimated 20 applications every week from those in need, who they were forced to turn away from service due to lack of the necessary financial and staffing resources. Despite the many benefits of providing nutritional services for the elderly, federal funding for these programs is decreasing. According to Meals on Wheels America, since 2010 federal funding for Maryland's nutritional programs has fallen by 2.4% despite rapidly increasing in need.<sup>8</sup> Due to this decrease, additional support will be required from other sources to meet the growing demand for services.

## HEALTH SYSTEMS TRANSITION TO VALUE BASED CARE

On average, Medicare enrollment is expected to rise by 1.6 million annually, leading to a total of nearly 81 million beneficiaries by 2030.<sup>9</sup> The Congressional Budget Office projects federal outlays for Medicaid will rise from \$350 billion in 2015 to \$642 billion in 2026.<sup>10</sup> Seniors with chronic conditions also account for an overwhelming share of federal healthcare spending and will continue to do so for the foreseeable future. It is estimated that 99 percent of Medicare spending is for seniors with chronic conditions, and 93 percent of Medicare spending is for seniors with multiple chronic conditions.<sup>11</sup> Up to 50% of patients admitted to the hospital are malnourished, limiting their ability to fight illness and resulting complications. These patients are predominantly dually eligible for Medicare and Medicaid.<sup>12</sup> Readmissions among this group costs the healthcare system nearly \$25 billion annually, with 70% of this cost for potentially avoidable readmissions that might not have been necessary if patients had received proper care, including nutrition.<sup>13</sup> It is this group of patients that this project targets. As the U.S. healthcare system rapidly transitions from fee-for-service to value-based care, traditional healthcare providers are incentivized to extend care beyond their four walls into the community and homes of their patients. This transition will require an integration with community-based service providers like Meals on Wheels that have provided care for decades. As one of the nation's largest service providers with trusted access into the homes of millions of seniors, Meals on Wheels America has a unique opportunity to assist healthcare systems in navigating this transition.

## THE SOLUTION

Meals on Wheels America is leading a nationwide effort to scale its Members' services through SIBs, an innovative way for impact investors to deploy capital to drive measurable social and financial returns. Meals on Wheels' evidence-based services fill a critical need by providing nutritious meals, socialization, safety checks, and case management to an increasingly vulnerable elderly population. A 2014 questionnaire conducted by AARP indicated that as many as 88% of senior households strongly or somewhat agree that they would like to stay in their current residences as long as possible, while 89% strongly or somewhat agree they would like to remain in their community as long as possible.<sup>14</sup> This population wants to age in their homes and the dedicated volunteers of Meals on Wheels help them do so.

***“Models and interventions that deliver health care and other services to seniors with these conditions in their own homes have the potential to improve health outcomes and reduce health care utilization and costs.”***

- Bipartisan Policy Center, 2016

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<sup>8</sup> Thomas, K., Dosa, D. (2015). *More than a Meal: Pilot research study.*

<sup>9</sup> Bipartisan Policy Center, “What is Driving U.S. Health Care Spending? America’s Unsustainable Health Care Cost Growth,” (September 2012)

<sup>10</sup> Congressional Budget Office, “The Budget and Economic Outlook: 2016 to 2026,” (January 2016)

<sup>11</sup> Robert Wood Johnson Foundation, “Chronic Care: Making the Case for Ongoing Care,” (February 2010); <http://www.rwjf.org/content/dam/farm/reports/reports/2010/rwjf54583>; Centers for Medicare & Medicaid Services, “Chronic Conditions among Medicare Beneficiaries, Chartbook,” (2012).

<sup>12</sup> Tappenden KA, Quatrara B, Parkhurst ML, Malone AM, Fanjiang G, Ziegler TR. Critical role of nutrition in improving quality of care: an interdisciplinary call to action to address adult hospital malnutrition. *J Acad Nutr Diet.* 2013;113(9):1219-1237.

<sup>13</sup> PriceWaterhouse Coopers' Health Research Institute. The price of excess: identifying waste in healthcare, 2008. October 2015.

<sup>14</sup> AARP, “Home and Community Preferences of the 45+ Population 2014,”. September 2014.

MOWCM has been selected to serve as the service provider in this first SIB transaction. Operating for over 50 years, MOWCM delivers services to over 1,500 seniors per day in eight Maryland counties in and around Baltimore. Through this project, MOWCM will demonstrate a significant reduction in hospitalizations, hospital readmissions, and ED visits. The project will initially target 600 seniors in Baltimore suffering from either COPD, Diabetes Mellitus, Congestive Heart Failure, or Hypertension, who have also been identified by Johns Hopkins Bayview Medical Center as “high” or “rising” risk for unnecessary utilization of acute healthcare services.

**HOME-DELIVERED MEALS**

MOWCM volunteers will deliver nutritious lunches and dinners 5 days per week. The two daily meals provide up to two-thirds of the daily nutritional requirements for older adults. As people age, they are more likely to skip meals due to the inability to shop for groceries and prepare meals. This lack of nourishment has the potential to lead to rapid physical decline, increasing the likelihood of serious illness and falls. The daily delivery of meals provides a unique opportunity to build a lasting personal relationship with the meal recipient, opening the door for Meals on Wheels to provide additional value.

**SOCIALIZATION**

An important element of the in-home service is the interaction the volunteer has with the meal recipient. Research suggests that increased social activity can slow the decline of cognitive function, with even this brief interaction helping to alleviate the sense of loneliness and depression that comes with social isolation and poor diet. In addition, socialization provides a unique opportunity for volunteers to notice any concerning changes in the client’s health, which allows for rapid escalation of issues to the case manager, healthcare providers, or emergency responders.

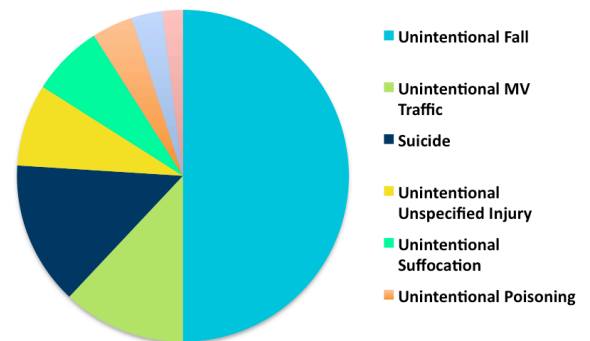
**SAFETY CHECK AND CASE MANAGEMENT**

Many Meals on Wheels recipients have unique challenges that require more attention than volunteers are able to provide. For this project, every meal recipient will be assigned a case manager, who will provide a range of services to the client, all of which are aimed at increasing quality of life, improving nutrition and health, and improving safety. A critical element of case management will be education and practice with evidence-based fall prevention activities.

The CDC has estimated that one-third of older adults fall every year, resulting in approximately 2.5 million ED visits, 700,000 hospitalizations, and approximately \$34 billion in healthcare costs. Falls are the leading cause of injury-related death in older adults, and most falls occur in the home setting.<sup>15</sup>

Case managers will regularly conduct checks to gauge the client’s likelihood of falling, and for those with increased risk, mitigate that risk through evidence-based fall prevention guidelines. During the initial in-home assessment, the case manager will determine whether MOWCM should provide minor home improvement services, such as the installation of a handrail or lighting, that could prevent falls or other serious injuries that are likely to result in a trip to the hospital.

**INJURY-RELATED DEATH**



**THE IMPACT**

**EVIDENCE BASE**

Independently validated research has shown the Meals on Wheels intervention to have a significantly positive impact on health outcomes and the ability of seniors to age in place in comfort. The combination of the daily home-delivered meals, socialization, and safety checks were shown in one three-arm, parallel, fixed single blinded randomized controlled trial, to decrease healthcare costs through positive health outcomes. Sponsored by Meals on Wheels America in partnership with Brown University, 626 seniors were selected and assigned to one of three groups: 1) daily, traditional meal delivery; 2) once-weekly frozen meal delivery, and; 3) continuance on the program’s waiting list.

<sup>15</sup> *Healthy Aging Begins at Home*. Bipartisan Policy Center. 2016

Seniors in the group receiving daily delivered meals demonstrated statistically significant improvements in mental health, self-rated health, rate of falls, feeling of loneliness and ability to remain in their homes. The outcomes from group 1 were better than those of Groups 2 or 3 across the board. Falls, often associated with a rapid decline in physical well-being, were markedly decreased when compared to the other groups.

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**A SENIOR WHO RECEIVES DAILY-DELIVERED MEALS EXPERIENCES THE GREATEST IMPROVEMENTS IN HEALTH AND QUALITY OF LIFE COMPARED TO A SENIOR WHO RECEIVES FROZEN, WEEKLY-DELIVERED MEALS OR NO MEALS AT ALL.**

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### MEASURING PROJECT SUCCESS

The success of this project will be based upon MOWCM’s ability to demonstrate a significant reduction in ED visits, readmissions, and hospitalizations among the target population at Johns Hopkins Bayview Medical Center. Under Maryland’s “Global Budget Revenue” model, hospitals are incentivized to reduce a known population’s potentially avoidable utilization rates, while maintaining quality of care. An annual budget is assigned to each hospital, incentivizing hospitals to keep total costs under budget while improving quality of care. As the only state in the U.S. with this model, MOWCM has a unique opportunity to establish strong ties to local hospitals to impact not just readmissions, but all unnecessary utilization of acute care.

The project will be evaluated through a Randomized Controlled Trial being designed by the Urban Institute. Claims and utilization data will be analyzed to determine with a high level of certainty the cost savings and improved health outcomes that can be attributed to Meals on Wheels’ intervention. Additional secondary outcomes will be measured, including weight maintenance, mental health, treatment and medication compliance and disease management, and increased social engagement and management of personal health.

### REQUIRED INVESTMENT

Meals on Wheels America is seeking funding from impact investors over a four-year term to scale this intervention to a minimum of 600 individuals identified as “high” or “rising” risk for unnecessary utilization of acute healthcare services by Johns Hopkins Bayview Medical Center. This investment will cover all costs associated with scaling, as well as all components of the direct service delivery including transportation, meals, case management, and minor home repairs. Additionally, the investment would fund a rigorous evaluation that will be used to trigger investment repayment.

### PROJECT TIMELINE

The project is currently in the Transaction Structuring phase and targeting a spring 2018 launch. The intervention will be delivered for three years, with an independent evaluation of the outcomes occurring in parallel and for one year following service delivery completion to ensure all outcomes are captured. Contingent upon the achievement of agreed upon outcomes, investors will be repaid their principal and return.