



ROI Calculator for Partnerships to Address
the Social Determinants of Health

Homage: Calculating the ROI of a Partnership to Meet the Health-Related Social Needs of Medicare Advantage Plan Members

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This case study is part of a series describing how health care and social service organizations can use a return-on-investment (ROI) calculator to develop mutually beneficial contractual partnerships that address the social determinants of health and improve outcomes for high-need, high-cost patient populations.

The Opportunity

Nutritious food, safe housing, and timely transportation to a doctor's appointment can be as important as medical care in helping patients recover from a health crisis and stay out of the hospital.¹ Yet these nonmedical needs are often not attended to by health care providers and health plans, which can leave patients in precarious circumstances. Recent federal legislation known as the CHRONIC Care Act now allows [Medicare Advantage plans](#) to pay for several health-related social services for patients with chronic illnesses as part of the supplemental benefits that some plans can offer their members.² Health plans that want to make the most of this opportunity will need to partner with community-based organizations (CBOs) that specialize in providing such services.³

Homage, a nonprofit, social service CBO located in the state of Washington, approached a Medicare Advantage plan to explore the possibility of a partnership to provide care coordination and select social services to health plan members eligible for the newly reimbursable services. Specifically, Homage identified how the plan could reduce hospital admissions by meeting the health-related social needs of patients with two chronic conditions that are complex and costly to treat: chronic obstructive pulmonary disease (COPD) and congestive heart failure (CHF). Previously, Homage had targeted the same populations through a care coordination program developed for a local health care system (box).

In response to the health plan's interest, Homage had to decide if they could forge a mutually beneficial agreement with the plan and what specific financial terms to suggest. Homage worked with a consultant, Collaborative Consulting, to help determine the financial value proposition of the CBO's services using the Commonwealth Fund's [ROI Calculator for Partnerships to Address Social Determinants of Health](#). A Homage team (led by director of finance Arin Ricchiuti and including wellness director Richard Robinson and data specialist Linda Church) found that the outputs from the calculator were a crucial consideration in quoting a price for Homage's care coordination services. That quotation was the starting point for discussions between Homage and the Medicare Advantage plan on the financial terms of the proposed partnership.

The following sections trace the steps taken by the Homage team when using the tool, including inputs required by the ROI Calculator and the outputs it provided to guide decision-making.

Homage is a nonprofit, social service agency serving Snohomish County, Washington, on Puget Sound north of Seattle. Each year, more than 200 employees and 500 volunteers serve 25,000 older adults with complex needs through a range of programs addressing the medical, cognitive, functional, and psychosocial determinants of health. Founded in 1974, the agency’s scope of services has expanded over the years to encompass food and nutrition, health and wellness, home repair, transportation, aging and disability resources, and other social services.

Homage developed a care coordination program for patients with congestive heart failure (CHF) and chronic obstructive pulmonary disease (COPD) as they transitioned home following a hospitalization at [Providence Regional Medical Center](#) in Everett.⁴ The pilot program, launched in December 2017, led to reduced hospital admissions and readmissions by meeting patients’ social needs and helping them follow dietary restrictions, take prescribed medications, and attend doctor’s appointments. The program helped the health system prepare for value-based payment arrangements and avoid financial penalties under Medicare’s [Hospital Readmissions Reduction Program](#).

Service Offering

The suite of services that Homage proposed to offer, called [HomeAdvantage](#), is a 60-day care management program consisting of home-delivered meals, medically related transportation, in-home care coordination, and falls prevention strategies and resources. Health plan members referred to the program will receive an assessment of their health-related social service needs as well as a care plan to address them. Homage care coordinators will assist members to make follow-up appointments, review medication adherence, identify warning signs when they should seek help, and coordinate resources to encourage their recovery.

The Medicare Advantage plan wanted to reduce hospital admissions and achieve a shorter length of hospital stay by meeting the health-related social needs of the target population. For the purposes of modeling the program, readmissions were included in the admissions data.

Health Care Utilization Before and After Enrollment

The ROI Calculator requires users to input data on the expected reduction in baseline health care utilization associated with the provision of a given set of social services to a defined population. In its pilot program for Providence Regional Medical Center in Everett, Homage offered a similar set of services to a comparable population as the proposed partnership with the Medicare Advantage plan. That pilot program demonstrated a 44 percent reduction in hospitalizations six months after the intervention (Table 1). However, given the uncertainty associated with a new partnership, Homage leaders decided to model a 25 percent reduction in admissions as a conservative projection for this prospective program with the health plan.

Table 1. Impact of the Pilot at Providence Regional Medical Center

	Six months before intervention	Six months after intervention	Change
Number of patients	112	112	—
Admissions	266	148	Reduction of 44%

Other baseline data inputs required by the ROI Calculator include the cost per hospital day (estimated to be about \$1,350 for the prospective health plan partner) and the average length of a hospital stay for the target population (estimated to be 5.8 days based on the pilot program). These figures were entered into the “Baseline” section of the tool to estimate the cost savings from reducing admissions.

Population and Service Intensity

The health plan wants to focus initially on COPD and CHF patients but may consider expanding the population to other chronically ill patients in the future. Eventually, as many as 750 Medicare Advantage plan members could be served by Homage annually under this arrangement. For the initial population of COPD and CHF patients to be served by the HomeAdvantage program, Homage estimated the prevalence and intensity of services to be provided (Table 2). These numbers were entered in the “Possible Social Services” section of the tool.

Table 2. Population and Service Volume

Service	Proportion of target population	Service intensity (units per month)
Transportation	100%	8
Care coordination	100%	4
Nutritional support	70%	60
Falls prevention classes	30%	1

Program Cost

The cost to Homage of delivering the program includes fixed and variable components, with the former category comprising about one-third of overall expenses (for example, cost to acquire vehicles for meal deliveries). Overhead expenses are added as a percentage of overall cost. The magnitudes of the cost figures were shaped by the percentages of the target population that are likely to require each of the individual services within the bundle, as well as the costs of providing each service. These numbers are entered in the “Population and Social Services” sections of the tool. Because the ROI Calculator expresses results as a per member per month metric, it was necessary to divide annual program costs by 12 to apportion the total costs appropriately on a monthly basis.

Projected ROI

With the above data as inputs, the calculator reported an attractive, projected ROI for the Medicare Advantage plan under these circumstances. The net benefit stems from the projected cost avoidance from reduced hospital admissions exceeding what the plan would pay to Homage for social services. If Homage did not require a markup over its expected costs, the ROI to the plan would be as much as 170 percent of the cost of the social services under the assumptions described above.

The ROI Calculator also allowed Homage to assess the risk that actual costs may exceed projected levels. The risk results from uncertainty concerning how many beneficiaries require each service, the intensity of each service, and the unit cost of each service. To shield Homage from financial risk, the finance team used the calculator to model various case rates having different positive net margins over estimated costs. The sensitivity analysis showed that, even with a markup cushion adequate enough to protect Homage from risk, the agency could still present the health plan with an attractive value proposition.

Contract Negotiation

Projecting an attractive ROI did not mean that Homage's proposed terms were accepted by the Medicare Advantage plan in contract negotiations. Given a budget constraint, the health plan sought to reduce the initial price that Homage quoted for its bundle of services, which prompted a corresponding adjustment in the intensity of the proposed services. Although this adjustment reduced the projected ROI of the intervention, the revised value proposition was still within an acceptable range of financial outcomes for the health plan.

The parties engaged in several rounds of discussions before coming to a formal agreement. It was also necessary to obtain buy-in from the health plan's contracted hospitals and physician groups, which will share the program's cost and benefits through risk contracts with the plan.

The ROI Calculator models five types of payment arrangements that partners might consider: full-cost recovery, fee-for-service, case rate, capitation (per member per month payment), and gainsharing. Of these, the partners chose a case rate payment for the first year of the contract. The health plan also agreed to pay an upfront outreach fee to compensate Homage for the costs of enrolling members in the program. Assuming the program is a success, the partners may consider a gainsharing arrangement in a future contract.

Insights and Lessons

Projecting an attractive ROI can help make the business case for a partnership, but it is just the start of a lengthy negotiating process. The following strategies may help overcome some of the challenges during these negotiations.

Allow enough time to build a partnership, and make communication a priority. A CBO can be disadvantaged in contract negotiations relative to a health plan with greater experience and standardized approaches to contracting. CBOs should allot time to build mutual understanding during the negotiating process, such as to explain why standard contract provisions offered by a payer should be adapted to fit the unique circumstances of the partnership. In turn, a CBO may need to understand a health plan's contractual relationships with providers, which can help ensure the success of the program once implemented. CBOs should consider including the cost of contracting and legal advice as a fixed cost of the services offered.

Understand that a negotiating target may trump expected ROI. Even though a health plan or other payer may accept the premise of a projected ROI, its negotiating position may be driven by how much it can spend on social services. In Medicare Advantage, this is typically determined by the amount of the "rebate" (shared savings) the plan receives from the federal government when its "bid" (price) for providing Medicare benefits falls below a geographic pricing benchmark.⁵ A Medicare Advantage plan also must weigh the value of using limited rebate dollars to offer social services to eligible chronically ill members versus other popular supplemental benefits (such as dental and vision coverage) for all its members.⁶

Medicare Advantage plans realize the value of a social service intervention through a reduction in claims for avoidable health services (such as inpatient stays or emergency department visits), which thereby reduces the plan's medical loss ratio (the percentage of revenue it spends on medical care) and increases its profitability. A Medicare Advantage plan with a medical loss ratio above the federal limit of 85 percent will have greater opportunity to benefit financially from the impact of a social service intervention than a plan with a medical loss ratio close to the federal limit.⁷ These financial factors will determine what the health plan can afford to pay for social services and how it values the potential savings. As a result, the parties may need to adjust the scope or intensity of proposed services — and the expected ROI — to meet this constraint.

Consider the strength of the evidence. Evidence from a comparison of utilization before and after program enrollment is not as robust as that obtained from a prospective study with a control group. Postenrollment utilization reductions in hospitalizations can occur for reasons other than the intervention. One such possibility is “regression to the mean,” whereby health care utilization may tend to fall naturally from preenrollment, crisis levels.

Evidence from a time comparison can be made stronger by lengthening the preintervention and postintervention comparison periods to help mitigate the effects of short-term events. Comparing the results reported by other pre/post and controlled studies also may offer insights to adjust the estimate of impact.⁸

Take account of competition for services. A buyer will consider alternatives when determining how much it must pay for a service, irrespective of its value as determined by an ROI Calculator. Pricing latitude declines with competition. Therefore, when negotiating with health care organizations, CBOs may be limited in pricing their services by the possibility of competition from other CBOs. CBOs should be prepared to explain why they have unique competency to offer a social service and/or to engage with the target population.

Conclusion

The ROI Calculator helped Homage to accomplish its objectives by demonstrating the conditions under which the CBO and the health plan can achieve mutually beneficial financial outcomes through a partnership. The expected ROI was an important factor that the parties considered in negotiations to determine a fair method of payment for services that help reduce health care spending and improve patients’ health outcomes.

Financial arrangements such as this can help ensure that the social service sector has the capacity to meet the increased demand for social services as health care organizations identify and refer patients in need of nonmedical services. The utility of the ROI Calculator and its impact will likely vary based on the organizational context and situation in which it is used.

Notes

1. National Academies of Sciences, Engineering, and Medicine, *Integrating Social Care into the Delivery of Health Care: Moving Upstream to Improve the Nation's Health* (National Academies Press, 2019).
2. Medicare Advantage plans pay for supplemental benefits using the “rebate” (shared savings) that they receive when their “bid” (price) for providing Medicare benefits to their members falls below a regional pricing benchmark established by the Centers for Medicare and Medicaid Services; see Medicare Payment Advisory Commission, *Payment Basics: Medicare Advantage Program Payment System* (MedPAC, Oct. 2015). The Creating High-Quality Results and Outcomes Necessary to Improve Chronic (CHRONIC) Care Act, enacted as part of the Bipartisan Budget Act of 2018, expands Medicare Advantage plan supplemental benefits to meet the needs of chronically ill enrollees. These special supplemental benefits for the chronically ill may include services that are not primarily health related, provided that the service has a reasonable expectation of improving or maintaining the health or overall function of the chronically ill enrollee; see Centers for Medicare and Medicaid Services, *Implementing Supplemental Benefits for Chronically Ill Enrollees* (CMS, April 24, 2019).
3. Martha Hostetter and Sarah Klein, “[In Focus: CHRONIC Care Act Prompts Some Medicare Advantage Plans to Incorporate Social Services](#),” *Transforming Care* (newsletter), Jan. 9, 2019.
4. Jocelyn Robinson, “[Providence Patients Connect with Homage for Vital Services](#),” *Homage Newspaper*, Feb. 2018; and Kim Williams, “[Providence Partners with Homage to Help Those in Need](#),” *Homage Newspaper*, Feb. 2018.
5. On average, Medicare Advantage plans received a rebate of \$107 per member per month in 2019, though this amount varied widely; see Medicare Payment Advisory Commission, “[The Medicare Advantage Program: Status Report](#),” *Report to the Congress: Medicare Payment Policy* (MedPAC, 2019).
6. Laura Skopec, Christal Ramos, and Joshua Aarons, *Are Medicare Advantage Plans Using New Supplemental Benefit Flexibility to Address Enrollees' Health-Related Social Needs?* (Urban Institute, Sept. 2019).
7. The Affordable Care Act requires that Medicare Advantage plans maintain a medical loss ratio (MLR) of at least 85 percent; see Centers for Medicare and Medicaid Services, “[Medical Loss Ratio](#),” Dec. 3, 2018. Plans with an MLR greater than 85 percent have an opportunity to reduce the MLR by providing health-related social services that reduce medical spending (personal communication with Sean Creighton and Tom Kornfield of Avalere, Nov. 21, 2019).
8. The Commonwealth Fund has published a review of relevant evidence on the impact of health-related social needs interventions from peer-reviewed and gray literature, which can be used to estimate an intervention's impact for the ROI Calculator; see Mekdes Tsega et al., *Review of Evidence for Health-Related Social Needs Interventions* (Commonwealth Fund, July 2019).

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