

Pay for Success in Health Care

Challenges and Opportunities

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Health care spending in the United States is high, reaching \$3.2 trillion in 2015, and nearly half is paid by the federal government and by state and local governments (29 and 17 percent, respectively).¹ Given these costs, public and private stakeholders have led several different efforts to reduce health care spending. Many efforts spearheaded by health care providers and insurers focus on coordinating care and increasing the use of primary care to prevent expensive events, such as emergency department visits and hospitalizations. However, many social programs that can improve health outcomes are not typically covered by health insurance. This has recently led several states, local governments, and nonprofit organizations to explore the pay for success (PFS) model as a potential financing solution. Under a PFS project, a private investor pays up front for a program, such as home visiting for low-income first-time mothers,² and a health system or government partner repays the investor if a rigorous evaluation shows that the intervention has successfully improved some predefined outcomes.

Health-related PFS efforts to date are largely still conceptual or in planning. Of the 19 PFS projects that have launched in the United States since 2013, only one, the Nurse-Family Partnership project in South Carolina, includes health care system funding as part of the PFS transaction.³ No projects that have launched include Medicare or private health insurance funding. However, many PFS projects currently in development are designed to repay investors through health care system savings (Corporation for National & Community Service 2016). Many of these projects aim to reduce health care use among high-cost or high-need patients by improving socioeconomic and community factors that can lead to poor health, such as homelessness, poor housing quality, food insecurity, or social isolation.

In general, PFS is an alternative mechanism for funding social programs that allows government or other payers to pay for outcomes rather than just for services. To date, state and local governments have been the most common end payer in this scenario, agreeing to pay back the investor's principle plus a profit if the desired outcomes are achieved. The underlying assumption embedded in this

structure is that the end payer saves sufficient money when the outcomes are achieved to justify repayment to the investor. Some efforts are under way to broaden this vision of PFS by defining value more broadly to include societal benefits, such as increased economic productivity or better school attendance, that are difficult to translate into cashable savings, but such a model depends on having nonprivate sources, such as governments or foundations, involved as end payers (Dorn, Milner, and Eldridge 2017).

Although PFS may seem a promising route to finance programs aimed at the social determinants of health, the health care system presents significant challenges as a PFS end payer:

- Studies of health care system cost savings from social programs designed to improve health are
 rare, and improvements in overall health, symptoms, or well-being often do not translate into
 significant reductions in people's use of health care services or the cost of care.
- 2. Health care spending is highly concentrated among a small number of people in a given year, so expensive interventions would need to be very narrowly targeted to achieve significant savings for a health care system end payer, making recruitment and evaluation difficult.
- 3. Many stakeholders in the health care system do not have an incentive to reduce health care use and spending and would be unlikely to participate in PFS as end payers.
- 4. Accessing Medicare and Medicaid funds for PFS projects presents legal hurdles, but securing government end payers will likely be the most promising route for launching PFS projects because of the diffuse benefits of most social programs designed to reduce health care use.

Although many of these challenges can be overcome, health care-related PFS projects should expect a long and complex planning process and involve government partners and evaluators early to maximize chances of success and replicability. This brief explores each of these challenges and provides recommendations on the path forward for organizations interested in pursuing health care-related PFS projects.

Improvements in Overall Health and Well-Being Do Not Necessarily Reduce Health Care Spending

In most PFS projects to date, the goal has been for the intervention to save more money than the total cost of the initial up-front investment, allowing the end payer to share those net savings with the investor. However, studies of the cost-effectiveness of social programs designed to improve health are rare, and improvements in overall health, symptoms, or well-being often do not translate into significant reductions in the use of health care services or the cost of care. For example, although the preventive services recommended by the US Preventive Services Task Force are considered evidence-based and generally improve health, quality of life, and longevity, most of these clinical services do not save the health system money on net (Cohen, Neumann, and Weinstein 2008; Russell 2009). The up-front costs of screening, for example, often outweigh the long-term savings from prevention of disease, particularly

in programs that are not targeted to at-risk groups (Cohen, Neumann, and Weinstein 2008; Russell 2009).

In general, although social programs aimed at the social determinants of health may have a large body of literature demonstrating their effects on overall health and well-being, the cost-effectiveness literature for these programs is often thin, and few randomized controlled trials (RCTs) have assessed the effects of social programs on direct health care use (such as hospitalizations) and direct health care costs. The available cost-effectiveness research also often accounts for societal benefits, such as fewer missed work and school days, increased economic productivity, and increased longevity. Although these are important outcomes, they do not generally lead to any direct, short-term savings for the health care system. State or local governments could be interested in paying for these societal improvements, but such improvements likely could not be financed solely with health care system dollars.

One proposed framework for assessing PFS projects suggests that state and local governments could agree to repay investors more than the government's directly calculable cost savings if the expected benefits (broadly defined) are determined to outweigh the net costs (Dorn, Milner, and Eldridge 2017). However, this model would only apply when a government is the end payer rather than another health system entity, such as a health insurance plan, which would be guided by cashable savings. Additionally, government payers can observe benefits in areas other than the health system. For example, a social program designed to improve health outcomes and decrease health costs may yield benefits and savings to the education sector as well. Governments' ability to account for savings across an array of services increases the chances that interventions will yield net positive savings.

Recommendations

Use literature on health-related outcomes to develop evidence-based estimates of potential program impact. Most social programs designed to improve health do not have a strong literature base indicating that they save more in direct health care spending than they cost to implement. PFS could be a valuable tool to test whether an evidence-based social intervention that improves health can also save the health system money. However, stakeholders must conduct a thorough, objective, and rigorous literature review during the early planning stages of the project to assess the strengths and limitations of the existing literature on the effects of the intervention or similar interventions. If direct cost-benefit estimates are not available, rigorous evidence from RCTs or quasi-experimental studies of the health care use outcomes achieved by the intervention could support estimates of potential cost savings when combined with average costs of the avoided outcome. If a social program has no rigorous evidence supporting its effects on health care use, the PFS model with a health care sector payer may not be an appropriate funding mechanism for the program.⁴

A government entity end payer may reduce pressure for net cashable health system savings. Working with a government end payer could remove some pressure for interventions to produce direct health care system savings sufficient to exceed the costs of the intervention. Governments may be willing to pay more than their direct, cashable savings for evidence-based interventions that can improve participants' health and well-being. Further, when assessing a program's value, government end payers

can factor in savings in other areas produced by the program, such as reduced government spending on housing or the justice system.

Small Populations Drive Health Care Spending

Health care spending is highly concentrated among a small share of the population in a given year, and this spending pattern has significant implications for PFS projects. In 2014, for example, the top 5 percent of health care users in the country accounted for over 50 percent of all health care spending, and the top 1 percent accounted for over 20 percent of all health care spending (Mitchell 2016).^{5,} These high users are disproportionately over age 65, meaning they are likely covered by Medicare. In addition, only about one-third of these people were in the top 5 percent of health care spenders two years in a row, meaning this population has significant natural turnover from year to year (Cohen 2015).

These spending patterns have significant implications for PFS projects. First, narrowly targeting an intervention to high-cost populations will make it easier to achieve savings, but in any given local area, the high-cost population is likely to be quite small, particularly for interventions focused on children or nonelderly adults. Narrowly targeting an intervention to a very small population may make recruitment difficult, and the ultimate sample size for evaluation purposes may be too small to reliably detect differences in outcomes caused by the intervention. Second, many high-cost individuals will have lower costs the following year regardless of whether they receive the planned intervention (a phenomenon known as regression to the mean), making it difficult to determine the effectiveness of an intervention without an RCT or a well-designed quasi-experimental evaluation. The literature assessing the effects of social interventions on health care use and spending often includes observational studies that do not include a control group, so studies may overstate the effectiveness of programs designed to reduce costs for high-cost individuals (Linden 2013; Weeks 2007). Many current PFS projects use an RCT for evaluation (Nonprofit Finance Fund 2016; Walsh et al. 2016), and a health care PFS project taking this approach could see lower-than-expected improvements in outcomes if the program's previous evidence base was largely composed of observational studies.

Recommendations

Engage evaluators early to ensure strong project design. Involving a PFS evaluator early during project planning is critical to assess the size of the target population, likely take-up and retention rates, and the sample size needed to be able to reliably detect differences between the treatment and control groups. In some cases, the target population will need to be expanded to ensure a sufficient pool of potential study participants, and such an expansion will be easier to navigate early in the PFS planning process when the details of the intervention are still malleable. The Denver Supportive Housing Social Impact Bond provides a model and lessons learned for early evaluator involvement in PFS projects (Gillespie 2016; Gillespie et al. 2016, 2017).⁷

Randomized controlled trials best ensure a credible evaluation. Building in RCTs as part of health care-related PFS projects would provide the most credible evidence of the program's effects because

RCTs are least likely to overstate program results among high-cost populations because of regression to the mean (Milner and Walsh 2016). Health care system stakeholders, particularly hospitals and physicians, are generally quite familiar with RCTs and comfortable with their process. For projects with ethical concerns about an RCT design and with sufficient resources to provide services to all eligible individuals, control group participants could be given the intervention with a time delay, providing the benefits of randomization without ultimately denying people services.

Many Health Care Stakeholders' Incentives Are Not Well-Aligned with Pay for Success

The health care system is complex and has many stakeholders with often-opposing interests and incentives. For example, most hospitals have very little incentive to reduce emergency department use and inpatient hospitalizations because such reductions would amount to a loss of revenue. Although hospitals could save money by reducing use by uninsured patients, the pool of uninsured hospital users in any given local area may be too small to support a PFS intervention because of reductions in the uninsurance rate under the Affordable Care Act and low hospital use among the uninsured (Zammitti, Cohen, and Martinez 2017; Zhou et al. 2017). Most physicians are also paid on a fee-for-service basis, so they have little incentive to reduce office visits. Although some efforts are under way in the Medicare and Medicaid programs to use penalties, bonuses, shared savings, and other incentives to encourage hospitals and physicians to help reduce health care costs, the savings from these programs have generally been low.⁸ Even when hospitals and physicians are willing partners in efforts to reduce health care use and costs, they generally would not be directly saving money from such interventions and thus would not be an appropriate end payer for a PFS intervention.

The health care sector stakeholders with incentives most aligned to the goals of PFS are entities providing health insurance coverage, such as state and federal governments (Medicaid and Medicare) and private insurance companies. In early 2017, just over one-third of Americans had public health insurance coverage (including Medicare and Medicaid), and the remaining two-thirds were covered by private insurance, mainly through employers (Cohen, Martinez, and Zammitti 2017). Vulnerable populations are more likely to have public insurance coverage, including nearly two-thirds of those with income below 100 percent of the federal poverty level and nearly half of all children (Cohen, Martinez, and Zammitti 2017). Both of these groups, who are common targets of PFS programs, generally receive coverage through Medicaid and the Children's Health Insurance Program, making state or federal partnerships important for PFS projects targeted to these populations.

Recommendation

Some end payers are better positioned to provide sustainable funding for effective projects. If a government or health insurance company is a PFS project's end payer, the project may more easily secure sustainable funding if proven successful. State government payers in particular can consider cost savings both to state-funded health care programs, such as Medicaid, and to other state programs that may benefit from the intervention, such as housing departments or the justice system.

Using Federal Health Care Money to Repay Investors Presents Legal Hurdles

No PFS projects currently under way use Medicaid as the sole end payer (Corporation for National & Community Service 2016). Because of restrictions on the services that can be covered by federal Medicaid funds, even projects using Medicaid as one of several funders have required states to request waivers of certain Medicaid requirements from the federal government, a time-consuming process that may not be feasible for small or highly localized projects. For example, the Nurse-Family Partnership PFS project, which provides home-visiting services to improve maternal and neonatal outcomes in South Carolina and used Medicaid as one of several funding sources, required a state Medicaid waiver.⁹ The Nurse-Family Partnership is currently the only PFS project with repayment based on health outcomes. The Massachusetts Chronic Homelessness PFS project also relies on a Medicaid waiver first granted in 2006 that allows the state to pay for care coordination by community support workers in permanent supportive housing (Kehn et al. 2015). However, Medicaid dollars are not part of the PFS transaction and, in effect, the Medicaid services covered under the waiver are carved out from the PFS project. 10 Further, although health outcomes are tracked as secondary outcomes, repayment is based solely on housing stability. The Centers for Medicare & Medicaid Services has approved only a select few waivers, such as for the Nurse-Family Partnership project, to allow coverage of services not traditionally considered "medical assistance" under state Medicaid programs (Lantz et al. 2016). In theory, a state could forgo the federal match and use only state Medicaid funds to serve as an end payer for a health-related PFS project, but the state would then be responsible for paying out on savings that accrue to both the state and federal governments, potentially producing a net increase in spending for the state government (Lantz et al. 2016).

Some PFS projects that have not yet launched are structured with a Medicaid managed care organization (MCO) as the end payer (Corporation for National & Community Service 2016). In general, MCOs negotiate contracts with states to provide Medicaid benefits in return for a set amount per enrollee, called a capitation rate. States have the flexibility to provide some performance bonuses to MCOs (Lantz et al. 2016). In addition, new regulations from the Centers for Medicare & Medicaid Services allow states to encourage MCO plans to pursue value-based purchasing, which is a subcontracting arrangement in which MCOs pay provider organizations or other service providers for outcomes rather than for the number of services delivered (Olson et al. 2017). Either performance bonuses or value-based purchasing arrangements could be used to allow MCOs to serve as end payers for a PFS project. However, such arrangements would still require a significant role for state governments, and these arrangements have not yet been tested as a means to repay investors in PFS programs.

Finally, the vast majority of elderly adults in the United State are covered by Medicare. About one-third of Medicare beneficiaries receive their coverage through private health insurance plans under a program called Medicare Advantage. These plans have the flexibility to cover benefits beyond those covered by traditional Medicare, potentially including PFS programs. ¹¹ However, funding for extra benefits is limited and varies greatly across the country. Further, Medicare Advantage plans have to provide the same benefit package to all enrollees in a geographic area, making it difficult to narrowly

target the intervention. As with Medicaid MCOs, PFS arrangements with Medicare Advantage plans have not yet been tested. Moreover, 10 million Medicare beneficiaries also have Medicaid coverage, and over one-third of all state Medicaid spending is on beneficiaries also enrolled in Medicare (Musumeci 2017), so programs targeted to seniors may also need to involve Medicaid.

Recommendation

Engage governments and legal experts early when including Medicare or Medicaid savings. Projects focused on Medicaid savings will need to involve the state government early during project planning. Projects focused on elderly populations covered by Medicare will also want to consider involving the state Medicaid agency, particularly if the program is expected to reduce reliance on long-term care. Health care-related PFS projects should be prepared to navigate the legal requirements of Medicare and Medicaid and will benefit from early involvement of legal staff and from understanding the lessons learned by other PFS projects that are further along in the planning or transaction structuring process. Even projects structured with a Medicaid MCO or Medicare Advantage plan end payer will need to navigate federal or state rules for those programs.

Conclusions

Interest in pursuing health care-related PFS projects is increasing, but the health care system presents significant challenges for this model. Despite high spending on health care in the United States, reducing that spending for even the highest-cost populations has been difficult, expensive, and time-consuming, ¹² and very few RCTs demonstrate that programs to improve the social determinants of health pay for themselves by saving the health care system a sufficient amount of money over the short term.

Although Medicaid and Medicare rules limit the use of federal health care funds in PFS projects, the diffuse benefits of most social programs designed to reduce health care use still make state and local governments the most likely viable payers and the most viable long-term funders of successful interventions. Governments can consider the broader value of a PFS project, including improvements in their residents' health and well-being, when determining the project's outcomes payments and return on investment, in turn reducing the pressure on the project to directly save substantial health care costs.

PFS is also not the only option available for organizations to test and expand programs that improve health and reduce health care spending, and simpler models, such as performance-based contracting, may be more appropriate for some programs. For example, health plans may be willing to contract with social service organizations to provide benefits to their enrollees, such as home remediation for asthma triggers or home-delivered meals for seniors, that may improve health outcomes. A performance-based contract would tie a portion of payments to service providers to their patients' outcomes (Eldridge and TeKolste 2016). Although evaluation in the performance-based contracting model may be less intensive than in the PFS model, social service organizations pursuing performance-based contracting arrangements would still gain some evidence of their effect on health outcomes while building relationships with health care–sector payers.

PFS could be a valuable tool for testing the effectiveness, return on investment, and replicability of social programs designed to improve health outcomes, but it is not the only available pay-for-performance approach. Organizations interested in pursuing health care-related PFS projects should expect a long and complex planning process and involve government partners and evaluators early to maximize the project's chances of success and replicability.

Notes

- "National Health Expenditures 2016 Highlights," Centers for Medicare & Medicaid Services, accessed March 12, 2018.
- 2. "Fact Sheet: South Carolina Nurse-Family Partnership Pay for Success Project," South Carolina Department of Health and Human Services, accessed March 12, 2018.
- "Fact Sheet: South Carolina Nurse-Family Partnership Pay for Success Project," South Carolina Department of Health and Human Services, accessed March 12, 2018; and "South Carolina Nurse-Family Partnership Project," Urban Institute, accessed March 12, 2018.
- 4. Lantz, Paula, and Samantha Iovan. "When Does Pay-for-Success Make Sense?" *Stanford Social Innovation Review*, December 12, 2017.
- 5. The pattern is a bit less stark looking only at the elderly: the top 5 percent of health care users over age 65 account for about a third of spending among that age group.
- 6. See, for example, McDonald and Mazzuca (1983), Weeks (2007); and Linden (2013).
- 7. "Denver Social Impact Bond Program," Urban Institute, accessed March 12, 2018.
- 8. See, for example, David Muhlestein, Robert Saunders, and Mark McClellan, "Medicare Accountable Care Organization Results for 2015: The Journey to Better Quality and Lower Costs Continues," *Health Affairs Blog*, September 9, 2016; and Zuckerman et al. (2017).
- 9. "Fact Sheet: South Carolina Nurse-Family Partnership Pay for Success Project," South Carolina Department of Health and Human Services, accessed March 12, 2018.
- 10. "Massachusetts Chronic Homelessness Pay for Success Initiative," Nonprofit Finance Fund, last updated February 14, 2018.
- 11. Nonprofit Finance Fund, "NFF Awards \$1.1 Million to Health, Housing and Human Services Pay for Success Projects," news release, April 11, 2017.
- 12. Dina Fine Maron, "How House Calls Slash Health Care Costs," Scientific American, December 5, 2014.

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