

ANALYSIS

Cash Benchmarking For Integrated Health Care And Human Services Interventions: Finding The Value Added

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ABSTRACT Health-related social needs, which include food insecurity, housing instability, and lack of transportation, are strongly associated with poor health outcomes, more health care use, and higher health care spending. Integrating human services that address health-related social needs into health care may address these issues. In this article we propose an innovative methodological approach (borrowed from developmental economics) called cash benchmarking, which can help determine when health care and human services integration is most useful. This is important because while integrating human services into health care offers potential benefits, it also comes with potential downsides—including the medicalization of social needs; deemphasis of upstream societal causes of health-related social needs, such as tax policy and labor conditions; and opportunity costs within the health care system, as resources are shifted to delivering social care. Ultimately, cash benchmarking can help stakeholders navigate closer to the promise, and away from the pitfalls, of health care and human services integration.

Health-related social needs are strongly associated with poor health outcomes, greater use of health care, and higher health care spending.¹⁻¹¹ Health-related social needs include food insecurity, housing instability, and lack of transportation. Drivers of health and health care expenditures are increasingly recognized to lie both within and outside the health care system, and integrating human services that address health-related social needs into health care may be a key mechanism to improve health.^{10,11} Although there are encouraging early results from such integration,¹²⁻¹⁵ rigorous evaluation of these programs is critical. In particular, it is important to use strong study designs that can validly estimate what would have happened in the absence of the program

and to avoid designs such as pre-post assessments that are subject to regression to the mean and other sources of bias.¹⁶

In this article we propose cash benchmarking^{17,18} as an appropriate study design for evaluations of interventions that integrate health care and human services. We discuss important considerations for navigating closer to the promise, and away from the pitfalls, of integrating health care and human services.

Cash Benchmarking

When control groups are used at all in health care and human services integration studies,^{3,13,15} the typical approach uses a usual-care design that compares the new program to current practice (which may be no specific intervention). An al-

ternative is cash benchmarking, which comes from the field of developmental economics. In a cash-benchmarking study, one group receives an intervention and another group receives the monetary value of the intervention as a cash transfer.¹⁷ Treatment effects estimated by such a study show the benefit (if any) of the intervention, above and beyond the cash value of the resources provided. This is particularly relevant for integrated health care and human services interventions, as the health-related social needs that these interventions seek to address are often rooted in a lack of financial means. Thus, seeing a benefit from an intervention in a cash-benchmarked study indicates that the intervention is not simply an improvement over usual care but instead offers value added—benefits that could not be achieved solely by a cash transfer.

It is important to distinguish cash benchmarking (in which a cash transfer is used as a comparison condition to study an intervention of interest) from cash transfer interventions (in which the effect of the cash transfer itself is the primary focus of the study). Cash transfers might or might not be effective interventions for specific health outcomes, as the example of the Opportunity NYC–Family Rewards program¹⁹ shows. Nevertheless, whether cash-transfer interventions are effective in specific situations is a discussion separate from whether cash benchmarking is a useful study design.

In an example of a cash-benchmarking study, a recent trial sought to improve diet quality among patients at a community health center who were overweight or obese.^{20,21} This study compared having a subsidized membership to a community-supported agriculture (CSA) program, which provided a weekly allotment of fresh produce, to receiving the cash value of the subsidy. The study found greater diet quality improvement in the CSA group, which showed that there was value to the program above and beyond the cash value of the subsidy.

In developmental economics, cash-benchmarked studies have recently come into use. Examples include a comparison of cash versus food aid from the World Food Program²² and an evaluation of a sanitation and nutrition behavior change program in Rwanda.²³ An important lesson learned is that cash benchmarking provides information that decision makers want, as the information makes it easy to relate program costs to changes in outcomes—especially in comparison to a low-overhead alternative. The US Agency for International Development is now supporting the use of cash benchmarking in a number of studies, for this reason.¹⁷

To illustrate the rationale for cash-benchmarked designs in the context of health care

and human services integration, imagine two interventions designed to address food insecurity. In the first intervention, a clinic implements food insecurity screening for people with a diet-sensitive medical condition such as diabetes. Those who screen positive meet with a counselor and receive information about local food pantries. The people generally have few other limitations (for example, they are able to shop and cook for themselves) and have sufficient knowledge of recommended foods to follow an appropriate diet. In this case, imagine that the intervention improves diet quality, compared with usual care, by improving food access. But imagine that comparing this intervention to an equivalent cash transfer reveals little difference in diet quality: Participants obtain healthy food from food pantries in the intervention arm and just purchase it themselves in the cash transfer arm.

The second intervention is a medically tailored meal delivery program for poor and medically complex people.²⁴ The functional limitations these individuals face and the complexity of the diets they are advised to follow may mean that even if recommended foods were affordable, adhering to the recommended diet would be difficult. Creating the tailored meals requires collaboration between treating clinicians and an organization that can reliably prepare and deliver specific meals. In this case, imagine that the participants in the meal program see greater improvements in diet quality, compared both with usual care and with a cash transfer.

If one were to use only usual-care designs without the use of a cash benchmark, then the above scenarios could be viewed as equivalent: In each case, the intervention improved outcomes compared with usual care. However, in the first case, the benefit of the intervention comes from the cash value of the food provided, rather than any specific benefit of health care and human services integration. In the second case, the close integration of health care and human services provides a benefit that cannot be obtained by cash alone. Making this distinction would be impossible without the use of a cash benchmark. And making such distinctions is critical in the context of integrated health care and human services interventions, because it indicates whether there is value in the integration of the services.

Why Is Cash Benchmarking So Important?

As the examples above illustrate, when one is considering integrated health care and human services interventions, the value that integration adds is the critical element. But why is it important to demonstrate that integration adds value?

Shouldn't the existence of some benefit over usual care be sufficient? Demonstrating benefit over usual care could be sufficient if that were the only consideration. However, that is rarely the case: The benefit of an intervention needs to be weighed against potential drawbacks and unintended consequences, which we discuss below. Assessing the impact of these downsides is often complex, time consuming, and costly. Therefore, having the high bar of the cash-benchmark design focuses stakeholders' attention on interventions whose benefits are more likely to outweigh their drawbacks.

Health care and human services integration has potential downsides.²⁵ First, by the nature of the integration, these interventions may medicalize problems that, while associated with poor health, do not represent illness or disease in a traditional sense. Once issues are medicalized, the presumption may be that they require health care services. This may deemphasize potentially more effective ways to address health-related social needs that lie outside the health care system—such as human services organizations that operate alone; public health approaches; and tax, employment, or labor policy changes that address the root causes of these needs.²⁵ For example, if housing instability is seen as a problem primarily because it increases health care use,²⁶ this may discourage the use of strategies that lie outside of the health care sector, such as city planning initiatives to increase affordable housing.

A second potential drawback is that health care systems may focus on human services interventions as a way to affect short-term health care costs. This could lead to narrowly focused efforts motivated by the desire for the greatest return on investment in the shortest period. For example, a program that addressed housing only for people experiencing homelessness at the time of hospital discharge to prevent a readmission within thirty days would overlook the effects of housing instability among people who had not recently been hospitalized or even been in contact with the health care system.²⁷

Third, a health care system's expansion into human services could come with high opportunity costs, as its attention could be diverted from its specialized medical skill set. For example, an integrated health care and human services intervention could sap personnel resources and reduce institutional bandwidth needed for cancer screening or immunization programs.

Finally, health care systems could lack the expertise needed to allow human services interventions to reach their full effectiveness. Health care systems also commonly have cost structures that make them an expensive context in which

to deliver an intervention. Therefore, owing to possibly less expert and more expensive implementation, health care system-integrated interventions may be less cost-effective than similar interventions delivered outside the health care system.

Because of these potential downsides, it is important to determine whether a health-related social needs intervention should occur with health care system or be entirely outside the health care sector. From a societal perspective, the key question is, How can scarce resources best be spent to improve population health? By providing a common denominator with which to compare intervention success, cash benchmarking helps answer this question in a way that a usual-care design cannot and can propel cross-sector comparative effectiveness work.

Additional Advantages Of Cash-Benchmarked Designs

Cash-benchmarked study designs have advantages beyond those listed above. People from racial/ethnic minority groups, those with low socioeconomic status, and other disadvantaged populations are underrepresented in research. Even if a usual-care study is ethically justifiable, eligible people may be unwilling to experience the burden and possible risks of participating when there is a substantial chance that they will receive no benefit from doing so. By offering something of value to both groups, cash benchmarking may help overcome this important limitation. This is a particular concern for integrated health and human services interventions, as the burden of health-related social needs falls disproportionately on racial/ethnic minority groups and people with lower socioeconomic status.^{4,10} Cash benchmarking could ease the recruitment of a more representative sample, enhancing the scientific value of the data gathered. Of course, this advantage needs to be weighed against the possibility of creating undue influence, if trial conditions are such that it is difficult to turn down an offer of participation. We recommend both working with members of the study population to understand what would be coercive when designing the study and, of course, obtaining Institutional Review Board approval.

One further advantage of cash-benchmarked designs is that they help “justify the paternalism” of non-cash transfer interventions.¹⁷ For example, imagine trying to decide between offering a low-interest loan and tax concessions to a supermarket chain in exchange for its opening a grocery store in a food desert (an area without healthy food retail options) and distributing a similar amount of money to residents of the food

desert as a cash transfer. Offering the loan and tax incentives may be the better approach if there are concerns that diversion of resources would dilute the effect of the cash transfer—that is, if politicians were concerned that the money would be spent on items other than food. However, there is a cost to this type of paternalism, and the cash-benchmark design quantifies it. A cash-benchmarked study may reveal that increasing the resources of the people in the food desert enables them to travel to other areas to shop or creates enough market demand within the neighborhood to attract a grocery store without special incentives. Given the advantages of cash-benchmarked designs, funders may request their use in the evaluations of programs that integrate health care and human services.

Limitations Of A Cash-Benchmarked Design

Of course, cash-benchmarked designs have limitations. One important limitation occurs in situations where cash transfers have an effect on the outcome but the natural history of the condition studied is not known. In this case, having only a cash-benchmark arm does not allow investigators to determine what would have happened under usual care. For example, imagine an intervention that seeks to reduce emergency department use. The intervention focuses on addressing transportation barriers, as these might keep people from attending primary care visits. Missing these visits leads to the exacerbation of chronic conditions, which in turn results in greater emergency department use. A cash-benchmarked study might randomly assign participants to a clinic-based program that arranges rides to appointments, versus receiving the cash value of the program. Such a study would permit comparing the ride program to cash. However, the benefit of the ride program over usual care might remain unknown, unless evidence was already available about the association between transportation barriers and emergency department use under usual care.

For most health-related social needs, their associations with poor outcomes under usual care is well documented, so this situation may be uncommon. However, if determining a contrast between the intervention of interest and usual care is scientifically meaningful, then a usual-care control group (or having usual care be a third study arm) may be necessary. Alternatively, investigators may be able to supplement a cash-benchmarked study with additional data by simply observing the natural history in a trial-eligible sample whose members do not actually participate in the trial. This would likely be a

more efficient use of resources, as interventional trials are typically more costly than observational studies. The trial data could be used to determine whether the program was effective beyond the cash value of the intervention, and combining the trial and observational data could provide evidence that one (or both) arms of the study were effective compared with usual care.

Controversies And Open Questions

As cash-benchmarking designs are relatively new, there remain controversies and open questions surrounding their use. Though there is not space to discuss all of them in this article, we highlight two important considerations. First, it can be challenging to understand the true costs of an intervention to set the appropriate value of the cash benchmark. Determining the cost of the portions of personnel time, administrative overhead, office space, and other resources used for an intervention can be quite difficult in the health care setting, where all of these factors may have other uses outside of the study (for example, for routine clinical care). Costing can be tricky in any context, and it is notoriously difficult to determine what the true cost of a health care service is.

Second, there may be trade-offs between the use of cash as a benchmark and cash transfers as an intervention in their own right. If cash benchmarks are interpreted strictly, then the amount of cash provided should equal the cash value of the intervention. However, this amount of cash might not be optimal: A higher or lower amount may be more cost-effective if the cash transfer were considered an intervention in its own right. Thus, when to interpret the use of cash as a benchmark, as opposed to another intervention of interest, remains an open question.

Conclusion

The science of addressing health-related social needs with integrated health care and human services programs has reached a critical stage. Effective interventions are badly needed, but the design of studies to evaluate them should be carefully considered. To make truly informed decisions, stakeholders need to be able to compare the costs and effects of interventions side by side. Given their low administrative overhead, cash-benchmark designs readily facilitate this, and they make clear the value (if any) that these interventions add. We believe that cash-benchmark designs are practical tools to make research on health and human services integration more useful for stakeholders and should be used more widely.

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NOTES

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