VIEWPOINT

Investing Wisely in Health Care Capital

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Health care expenditures increase for 2 reasons: patients consume more services, and the cost of those services increases. Costs of services have 2 components: operating costs and capital costs. Capital represents the total pool of funds expended by a health care organization to build, acquire, or upgrade physical assets such as property, buildings, technology, or equipment. In 2014, US health care capital expenditures exceeded the Organisation for Economic Co-operation and Development average, totaling US $88.8 billion, about 3% of US $3 trillion spent on all health care.[1,2] In the same year, Canada spent CAD $8.8 billion on health care capital, representing 4.1% of the CAD $214.9 billion spent on all health care, compared with 15% spent on physician services and 16% on drugs.[3] Perhaps because they are numerically smaller, capital expenditures, while clearly noticeable, usually generate less controversy compared with the well-known public debate about drug prices or physician and hospital fees.

However, capital spending shapes health care operating budgets over the long run, so efficient use of capital that achieves value is essential. For example, choosing to invest in improved communication technology and transportation for patients and health care personnel, instead of more hospitals and imaging machines, may lead to improved coordination of care, fewer hospitalizations, and less imaging. In the last 15 years, a substantial capital investment in digital radiology (ie, picture archiving and communication systems) has led to improved performance and reduction in labor and storage costs. One US hospital estimated that implementing a picture archiving and communication system achieved a productivity gain of 21 physician-years and savings of US $2.0 million annually.[4] This Viewpoint discusses the ways in which funds are raised for capital expenditures and offers suggestions for improving the efficiency of doing so to increase societal value derived from health care capital.

> Capital expenditures are an important driver of health care performance and should receive more attention as a potential value lever.

The lifetime of capital expenditures is longer (typically ≥5 years) than the usual operating budget time frame (typically 1 year). In the same way individuals choose to invest in stocks and bonds, organizations seek to maximize the value of capital investments (sometimes referred to as *return on invested capital*) while minimizing risk. Similar to home mortgages, health care organizations also consider the time it will take to recoup the amount invested and the cost of obtaining funds (either the cost of borrowing or the opportunity cost of using existing funds for other activities). These factors will drive the choice of instrument or financing vehicle used, including equity, debt, philanthropy, or more creative vehicles such as special purpose bonds and public-private partnerships.

The nature of the organization (government, private sector, religious affiliation, not for profit, or profit making) can substantially affect capital financing decisions. Governments can raise capital by taxation or issuing debt, directly approve and fund capital projects, and mandate planning guidelines so that the nature of projects meets current and future system needs. In many ways, state or provincial and federal governments are ideally suited to finance health care capital because their traditionally high credit ratings and low risks of insolvency allow them to borrow money at lower interest rates. Governments may also have a high-level or societal perspective; that is, they assess population needs across communities and across functions such as education, transportation, and taxation. They distribute capital in ways that accommodate a long-term perspective, a broad set of health system performance goals, and considerations around equity and fairness.

Nevertheless, there are a number of important limitations to government financing of health care capital, including influences of short election cycles, variability in political priorities, and challenges to the capacity of central bureaucracies especially in matching financing to local needs. The advantage of governments' access to low-cost borrowing may be offset by the absence of accountability for long-term results of capital decisions, particularly because politicians who make those decisions often leave office before the projects can be evaluated. Moreover, because governments generally must consult broadly with a wide variety of stakeholders, they often act slowly and make compromises, sometimes missing the optimal timing and choice for a capital investment.

In contrast, private-sector discipline generally can encourage fast decision making and also holds individuals who make investment decisions accountable. Private organizations tend to be more creative in health care capital decision making and attend more carefully to their return on investment. They are often better than government at managing risks, so investment projects are more likely to be on time and on budget. However, private organizations, whether they are for-profit or not-for-profit institutions, demand financial return, which may offset these benefits.

One recently developed concept is social finance, whereby a societal "good" is used as a metric to evaluate

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the investment in the form of a social impact bond. This instrument, often described as a hybrid of philanthropy and investment, is being used, for example, in Israel to attempt to reduce the incidence of type 2 diabetes.[5] The bank UBS made an investment (US $5 million) with the National Insurance Institute to reduce the incidence of type 2 diabetes in 2250 at-risk individuals in Israel through a number of programs (such as diet and lifestyle modification).[5] If the health outcome is achieved, the government repays the investors from the health care savings resulting from a lower incidence of diabetes. To date, however, this type of bond has rarely been used in US health care.

Philanthropy has always had an important role in health care. In 2014, health care philanthropy accounted for more than $1.5 billion in Canada and $9.6 billion in the United States.[6] Large gifts to health care centers have become common, and these gifts often fund both capital investments and other program expenditures. However, philanthropy tends to decline substantially during economic recessions, creating difficulties for organizations that rely on this source of funding. Philanthropy often follows the funding priorities of the donors rather than system needs; certain areas, such as mental health and care for marginalized populations, tend to be underfunded. Philanthropy favors large urban centers with prominent health care institutions, where donors disproportionately live. Also, because donations trigger tax savings and are often linked to matching government investments, they in fact represent partnerships between private unelected individuals (the donors) and the public, who lose tax revenue in this way. Public officials or the media seldom point out this fact, but sometimes controversy does occur.[7]

To better align health care capital investment with the changing needs of the health care system, more sophisticated analysis needs to be placed on capital investment decisions. To support improved capital planning and investment, better tools are needed such as detailed models to forecast future population health needs, relevant benchmarks for expected returns on capital investment, and a deeper understanding of how established investment mechanisms like bonds and emerging ones like social finance can support health care improvement. This is especially important for decisions about technology investments, locations for care (eg, acute care hospitals vs community-based services for patients with chronic diseases), and reconfiguring health care beyond individual patients to populations.[8]

Perhaps the most important step—particularly for situations in which governments are either the lead investor or the implicit guarantor—is to develop ways to be more explicit about the goals of investments and report progress against these goals. One of the most powerful tools for improving health system performance is the explicit and public reporting of performance against targets. When donors or investors consider whether to provide capital to an organization, a scorecard of their performance against previous investments will help provide guidance and act as a powerful incentive for the realization of the anticipated benefits of a capital investment. This approach could also include stronger links between capital investment and community needs in capacity-planning models, explicit links between improvements in health system outcomes and preferential tax treatment, and more capital to continue the shift from higher-cost to lower-cost settings, including a better ability to capture the monetary return from doing so.

Capital expenditures are an important driver of health care performance and should receive more attention as a potential value lever. Understanding the various ways capital investments are currently funded, determining the efficiency and value of those expenditures, and developing methods to enhance decision making may offer an opportunity to improve the health of populations in ways that rival those achieved from research in therapeutics. Just as policy makers are embracing a campaign to have physicians and patients choose wisely in making clinical decisions, health care leaders should be encouraged to invest wisely in health care capital. Recognizing that the stakes are high is a key step in this process.

ARTICLE INFORMATION

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