

# Innovations in Care Delivery to Slow Growth of US Health Spending

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**T**HE UNITED STATES NEEDS TO SLOW ITS RATE OF growth in inflation-adjusted per capita health spending by 2.5 percentage points annually without sacrificing health or slowing biomedical technology advances.<sup>1</sup> The consequences of failure may include shifting of funding away from resources for elementary and high school education, infrastructure (such as highways), and basic science research, as well as weakening the global competitiveness and financial health of US workers and their employers. One approach lies upstream—the prevention of disease by mitigating underlying environmental, social, and behavioral health risks. The most immediate progress is likely to come downstream from innovations that safely and compassionately lower health spending by reducing the cost of hospitalization for all patients and its unplanned occurrence for the 5% of individuals who incur half of health care expenditures in the United States.<sup>2</sup> Opportunities include preventing expensive health crises among medically fragile patients, helping patients in late stages of serious illness avoid dying in a hospital, increasing patient flow through hospitals to lower average fixed cost per hospitalization, and reducing hospital readmissions.

## Preventing Costly Health Crises Among Medically Fragile Patients

Many crises leading to unplanned hospitalizations among medically fragile patients are avoidable. Largely through their design of innovative care delivery models targeting prevention of such crises, creative clinicians have safely reduced annual total per capita health spending by 15% to 20% for Medicare Advantage enrollees.<sup>3</sup> They succeeded without adopting advanced electronic data management platforms and quality management methods used in other service industries such as airlines. Rather, they designed simpler innovations such as proactive monitoring and psychologically nuanced 24/7 support for medically unstable patients via teams that also include less costly health workers. Equally important, they found ways to assume full or substantial health insurance risk, thereby creating a seriousness of purpose and financial reward for their care innovation.

## Enabling Patients in Late Stages of Serious Illness to Avoid Dying in a Hospital

Medicare spends 25% of its budget on the 5% of beneficiaries who die during a given year.<sup>4</sup> Increasing evidence suggests that palliative care programs are improving the quality of life and lowering the costs of care for patients in late stages of serious illnesses. These programs rely on interdisciplinary teams for patient assessment, helping patients better anticipate their experience of both aggressive and conservative care and respecting patient and family goals of care across a range of nonhospital settings such as home, hospice, and nursing facility.

As with many care innovations, health professionals offering palliative care to their patients need training to feel confident in new clinical roles such as team participation, as well as flexible state scope-of-practice laws that allow them to work at their highest level of competency. Palliative care in particular needs media and consumer support for it to benefit all patients who would prefer it.

## Increasing Patient Flow Through Hospitals

When hospitalization cannot be prevented, innovative hospitals have begun applying systems engineering tools such as queuing theory to reduce the cost of hospitalization. Elective procedures are shifted to days of the week and nursing shifts when urgent and emergency admissions are historically low, keeping at least 1 operating room unscheduled to prevent wasteful postponement of scheduled admissions by emergency operations. Engineering applications likely represent the single largest group of discrete service innovation opportunities to improve the affordability of US hospital care. Pioneers such as Boston University Medical Center and Cincinnati Children's Hospital increased their patient flow by approximately 15% without proportionately adding staff or physical plant.<sup>5</sup> National diffusion could reduce total US per capita spending by an estimated 4% to 5% if hospitals pass savings through to consumers and health benefit plan funders.<sup>6</sup> One study suggested this approach also could help reduce mortality and other complications.<sup>7</sup>

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## Reducing Hospital Readmissions

Care delivery innovations can reduce health spending by improving communication and coordination surrounding hospital discharge. The Care Transitions Intervention is a program based on 4 pillars: medication self-management, a patient-centered personal health record, structured follow-up with a primary care physician, and alerting patients to certain “red flags” that signal impending health decline. Its centerpiece is a “transition coach,” typically an advanced practice nurse who helps patients and families take a more active role in care. A randomized trial demonstrated a significant reduction in hospital readmission rates and health spending.<sup>8</sup> Another successful innovation with positive trial results focused on discharge planning and follow-up, placing less emphasis on a personal health record.<sup>9</sup> Diffusion of these innovations requires effective partnerships with posthospital care sites and community services such as adult day health centers, community-based clinics, transportation services, home meal delivery services, the faith-based community, and health departments.

## Accelerating the Diffusion and Creation of High-Value Care Delivery Innovations

Capturing savings from these 4 care delivery innovations typically requires new payment incentives to compensate clinicians, hospitals, and health systems for implementation cost, such as the Center for Medicare & Medicaid Services' (CMS) recently issued \$1 billion Innovation Challenge. Savings capture will also require stronger incentives for patients with privately funded health benefits to seek care from high-quality physicians, hospitals, and health systems that excel in safely lowering per capita health spending. This is because, unlike Medicare, private payers typically cannot set payment incentives for health services at a level that captures for patients and their health benefits program funders a substantial share of savings from innovations.

Incentives alone are unlikely to suffice in an industry not yet proficient in modern performance management. Berwick<sup>10</sup> cites the example of 18th-century health care innovation diffusion leader James Cook, the British Navy's first long-voyage captain to attain 0 crew deaths from a weakly diffused 14th-century scurvy prevention innovation. Cook's psychologically nuanced diffusion strategy was to require the ship's officers to eat vitamin C-laden sauerkraut, thereby inducing robust demand among the rest of his crew. Similarly, we propose 3 “eat-the-sauerkraut” recommendations for spreading and creating care delivery innovations that could safely lower US health spending growth.

First, build on the success of US quality improvement learning collaboratives by developing “diffusion of innovation” collaboratives. In these diffusion “collaboratories,” successful early adopters using webinars and other social networking and learning technologies would mentor later adopters by sharing their challenges and solutions. Fund-

ing could come from the CMS, private payers, and foundations. The CMS could consider requiring such participation by accountable care organizations and patient-centered medical homes.

Second, institute rapid evaluation systems to capture lessons from failures and successes. Because service innovations are sensitive to their environments, evaluators should prioritize understanding how adopters customized an innovation to fit local circumstances. The 8- to 10-year completion time for evaluating the CMS' chronic care demonstration projects launched during 2000-2008 poorly matched the pressing need to lower Medicare spending growth safely.

Last, currently known care delivery innovations that lower health care spending safely represent a finite savings opportunity, commonly estimated to comprise 20% to 35% of current US health spending. Once these approaches are exhausted, all stakeholders will again face the consequences of national health spending increasing substantially faster than income. To continuously offset the cost-additive effects of an aging population and valuable biomedical technology advances, US educators will need to prioritize interprofessional training in systems engineering, management science, and behavioral science essential to spawning cost-moderating care delivery innovations more rapidly. Prioritization would expand the tiny current pipeline of young professionals explicitly trained to help patients attain their health goals more affordably.

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