

Factors Associated With Increased US Health Care Spending

Implications for Controlling Health Care Costs

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In this issue of JAMA, Dieleman and colleagues¹ report findings from their study in which they examined trends in US health care spending from 1996 to 2013. The authors evalu-



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ated the association between 5 factors—population growth, population aging, disease prevalence or incidence, service utilization, and service price and intensity of services—and health care spending over time and also analyzed trends overall and across major conditions. This report is a significant contribution to the literature because trends in health care spending over time, by major categories of spending, accounting for prevalence of disease, and across conditions have not been previously reported.

Dieleman et al report that, after adjusting for price inflation, health care spending on inpatient, ambulatory, retail pharmaceutical, nursing facility, emergency department, and dental care increased by \$933.5 billion between 1996 and 2013, from \$1.2 trillion to \$2.1 trillion. Changes in service price and intensity accounted for 50.0% (or an estimated \$583.5 billion) of the spending increase, but the association between the 5 factors and spending varied by type of care and health condition. Population growth (23.1% increase, an estimated \$269.5 billion spending increase) and aging of the population (11.6% increase, an estimated \$135.7 billion spending increase) combined represented more than 33% of the spending increase. Changes in disease prevalence or incidence were associated with spending reductions (2.4% decrease, an estimated \$28.2 billion decline in spending), and changes in service utilization were not associated with a statistically significant change in spending. The authors also report that across all health conditions, the greatest annualized growth rates were associated with emergency department care (6.4%) and retail pharmaceutical spending (5.6%).

The findings from this report have important implications for US policy, payers, hospitals and clinicians consumers, and others. First, the study again underscores that the United States is on an unsustainable growth path in terms of health care costs and must get costs under control, and highlights several of the potential levers. In terms of service price and intensity representing the major driver of costs, payers and hospitals and clinicians across the private and public sector must work to control increases in prices. Some states, such as Maryland and Vermont, have approached this through multipayer payment models at the state level. Maryland currently uses all-payer rate setting and

global budgets for hospital care and will expand that to all hospitals, clinicians, and post-acute care services by January 1, 2019.² Another approach would be payers, hospitals, and clinicians partnering at a local level to control price increases—for example, to establish a contract that minimizes price increases but that allows the hospitals and clinicians to be financially successful by meeting quality metrics and lowering total cost of care (eg, an accountable care-type contract).

The other components in service intensity that drive higher prices are scientific and technological advancements. The question is which of these advancements are truly associated with better health outcomes and which are expensive but deliver no or very limited patient benefit. Research- and evidence-based coverage policy can help address the technology component of costs. Another intervention that could decrease price would be competition for consumers based on transparent pricing and quality metrics for episodes of care or specific reference-priced services. This has worked for some high-end procedures (eg, orthopedic) and imaging^{3,4} but still has not become common or widespread, and data are limited that this approach will be broadly successful. The recently announced Centers for Medicare & Medicaid Services Innovation Center request for information solicited comments on these types of models.⁵

The report by Dieleman et al highlights that more than one-third of the annual increase in spending—that attributable to aging and growth of the population—is likely not modifiable, making it even more important to focus on the two-thirds of spending increases that is potentially modifiable. Disease prevalence and incidence vary by condition. For cardiovascular disease, the United States had decreased prevalence, but this was more than offset by service intensity and utilization. For diabetes, the increased prevalence, clearly related to the epidemic of obesity, is driving a portion of the increased costs. For instance, diabetes was the condition with the greatest absolute increase in spending (annualized rate of 6.1%, an estimated \$64.4 billion spending increase), with most of this increase related to increases in retail pharmaceutical spending. Various prevention initiatives related to diabetes may reduce the prevalence and the related spending increases, although the prevalence of obesity is not declining, and obesity remains the single most important risk factor for type 2 diabetes.

In terms of categories of spending, Dieleman et al determined that spending on ambulatory care, including outpatient hospital and emergency services, and pharmaceuticals

were some of the primary drivers of increase in cost. For outpatient services, there remains a significant payment differential between procedures performed at outpatient hospital centers (eg, a colonoscopy performed by a hospital-employed gastroenterologist) and those performed at physician offices or ambulatory surgical centers, with the former being far more expensive than the latter. Congress recently passed a statute that any physician group purchased by a hospital can no longer charge Medicare higher rates.⁶ This only applies to new acquisitions. Many private payers are also putting into place these “site neutral” payment policies.

Pharmaceutical spending is one of the major areas that must be addressed in the United States. Some potential approaches to address these cost increases include value-based purchasing in which payment for the drug is linked to health outcomes, reference-based pricing in which the price is set based on the reference product in a drug class (eg, the drug with the lowest or second-lowest cost in the class), indications-based pricing in which payment may be adjusted when the drug is used for indications with strongest evidence base on improved outcomes,⁷ and increased competition and negotiation (eg, between health plans and pharmaceutical companies or the government and pharmaceutical companies).

Presumably, the US health care system needs a tighter linkage between the health outcomes produced by a new drug and its price.

In terms of limitations, Dieleman et al note that their data end in 2013. Much delivery system change has occurred in the last 4 years, so updating this analysis with more recent data would be informative. In addition, the analysis was based on national data, but many of these trends may vary in state and local markets. The associations are also in the context of many other changes. For example, overall service utilization did not play a large role in increased spending, but these data were based on a period when many of the interventions (eg, accountable care organizations and new payment models) primarily have focused on decreasing utilization. So the question remains what the trends might have been without some of these interventions.

Overall, the report by Dieleman et al is a significant contribution to the literature and one of the most in-depth analyses of US health care spending and underlying associated factors. Payers, policy makers, hospitals and clinicians, and others should consider these trends while embarking on decreasing the costs of the US health care system and achieving a sustainable health system.

ARTICLE INFORMATION

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