Treading Water: The No-Growth Investment in Health Services Research

Emily J. Holubowich, MPP; Joseph R. Antos, PhD

There is a “perfect storm” brewing in the American healthcare system. Healthcare spending has grown faster than our economy for many years and is projected to double in as little as 10 years. In spite of what we spend on healthcare, research tells us that we only receive appropriate care half the time. We are simply not getting what we are paying for. Health services research provides the data and the evidence needed to make better decisions, design healthcare benefits, and develop effective policies to optimize healthcare financing, facilitate access to healthcare services, and improve healthcare outcomes.

Despite what we know and what we can learn from health services research, federal funding for this important field continues to erode. This article provides a primer on the federal budget process and summarizes findings from the Federal Funding for Health Services Research 2007. [AHDB. 2008,1(6):34-41.]

Ms Holubowich is director of government relations, Coalition for Health Services Research; Dr Antos is Wilson H. Taylor Scholar in Health Care and Retirement Policy, American Enterprise Institute, Washington, DC.

The coalition has been collecting annual budgetary data from the federal agencies that fund HSR. In the past 5 years, we have found that despite what we can learn from HSR, there has been an erosion of federal funding for this field, in part because of competing federal priorities, a constrained fiscal climate, and polarizing partisan politics. These trends have likely hindered the ability of the researchers to examine the healthcare system and identify innovative and effective solutions. If left unchecked, the declining investment in HSR may have further implications for the study of health and patient care in the future.

This article provides a primer on the federal budget process and summarizes findings from Federal Funding for Health Services Research 2007, the fifth annual report of HSR expenditures.

Federal agencies have not developed or adopted a uniform definition for HSR or standard categories for collecting and reporting data about reimbursement and funding methodologies, health disparities, patient safety, and chronic disease management. Therefore, questions remain about the breadth and scope of activities included in the funding totals presented in this article. Investments in what any one agency has self-reported as “health services research” may not be equivalent to what is reported by another agency. For example, budget numbers can reflect entire agency budgets, including over-
head costs or a rough estimate of dollars spent on HSR. Nevertheless, our data offer the best available estimate on the federal government’s investment in this area.

**Impact of HSR on Healthcare**

US healthcare has the potential to improve people’s health dramatically but often falls short and costs too much. HSR is used to understand how to better finance the costs of care, measure and improve the quality of care, and facilitate coverage and access to services. HSR is changing the face of healthcare by uncovering critical challenges our healthcare system faces. The 2000 Institute of Medicine report *To Err is Human* (which in part relied on HSR work) estimated that roughly 98,000 Americans die each year from errors in the hospital. HSR uncovered that disparities and lack of access to care in rural and inner cities result in poorer health outcomes. It also found that the rise in obesity in the past 2 decades accounts for 20% of the increase in health spending; obesity-related expenditures were estimated at $78.5 billion in 1998 and $92.6 billion in 2002.

HSR also seeks ways to address healthcare problems. It framed the debate over healthcare reform in Massachusetts—forming the basis for that state’s 2006 health reform legislation—and continues to frame the debate on the national stage. It offers guidance on implementing health information technology, such as e-prescribing, to reduce costs and medical errors. HSR has changed the paradigm of medical practice for cost-effective care, demonstrating that preventive services (eg, mammography) put into practice substantially reduce mortality and morbidity, at reasonable costs. HSR uncovered that disparities and lack of access to care in rural and inner cities result in poorer health outcomes. It also found that the rise in obesity in the past 2 decades accounts for 20% of the increase in health spending; obesity-related expenditures were estimated at $78.5 billion in 1998 and $92.6 billion in 2002.

**Key Points**

- Health services research is the link between research and patient care. It identifies best treatments and how most effectively to finance healthcare and control spending.
- Health services research has changed the paradigm for cost-effective care by demonstrating that preventive services can substantially reduce mortality and morbidity, at reasonable costs.
- Nevertheless, in real dollars, the purchasing power of health services research has declined because this research investment has not kept pace with inflation.
- Federal funding is focused on improving quality of care, but relatively little funding is provided to study what is driving healthcare costs, and how to improve the quality and efficiency of the healthcare system as a whole.

**The Federal Budget Process**

The Constitution designates the US Congress as the primary authority in setting taxation and borrowing policies for the federal government and in determining how resources are spent. Congress shares this “power of the purse” with the president and the executive branch. The president sets the tone at the beginning of each fiscal year by submitting a budget request to Congress, and has the power to alter congressional action by exerting veto authority over appropriations bills.

The federal budget process is prescribed by the Congressional Budget and Impoundment Control Act of 1974 and subsequent legislation. Annual budget decisions are made on the basis of a fiscal year beginning October 1 (Table 1). The key stages of the process—formulation of the president’s budget, congressional action, implementation of the budget, and audit and review—typically extend over at least 2.5 years. Federal agencies must deal with 3 different fiscal years at the same time: implementing the budget for the current fiscal year; seeking funds from Congress for the next fiscal year; and planning for the following fiscal year.

Although the budget timetable is established in statute, Congress generally fails to meet the deadlines. For example, the 1974 Congressional Budget Act provides for the House and Senate to reach a budget resolution (or an agreement by the House and Senate on an overall budget plan and spending cap) by April 15. In recent years, this deadline has rarely been met.
In the past 10 years, the House and Senate failed 4 times to reach agreement on a budget, meeting the April 15 deadline only 3 times (fiscal years 2000, 2001, and 2005). Congress often fails to complete the federal budget process before the October 1 start of the new fiscal year. In these situations, 1 or more continuing resolutions may be needed to sustain government operations. A continuing resolution extends federal funding at existing fiscal levels for some period (often weeks, but occasionally the entire fiscal year) if Congress and the president fail to enact spending bills. With the exception of 1989, 1995, and 1997, at least 1 continuing resolution has been enacted for each fiscal year since 1954. Since 1996, most continuing resolutions have provided interim funding for short periods of time, but in 2007 funding for many agencies’ spending bills—including those within the US Department of Health and Human Services that fund HSR—extended for the full year, holding agency budgets flat at 2006 levels.

In real terms, a yearlong continuing resolution places federal agencies in a holding pattern and budgetary bind, where their operating budgets lose purchasing power as funding levels are not adjusted to account for inflation. In addition, agencies may be unable to implement new initiatives, or if they do, must change funding priorities on a project basis when requested funds are not appropriated.

Federal funding for HSR is diffuse, both in terms of who funds it and how it is funded. The Agency for Healthcare Research and Quality (AHRQ) is the lead agency among the principal federal funders of HSR; AHRQ’s core mission is to improve the quality, safety, efficiency, and effectiveness of healthcare through research.

AHRQ and other federal agencies use various funding mechanisms to support HSR, which affect the types of research conducted and the degree of autonomy researchers have in their work (Table 2). For example, when a grant is awarded, “no substantial federal involvement with recipients is anticipated during the performance of a research activity.” Conversely, contracts are awarded when an agency’s purpose is to acquire goods or services for the direct benefit or use of the federal government. In these circumstances, the government has substantial and direct “hands-on” involvement with the awardees throughout the life of the project.

From information provided to the Coalition by the principal federal funders of HSR, we estimate that approximately $1.5 billion was spent on HSR and related activities in fiscal year 2007 (Table 3). Currently, less than 1 cent of every healthcare dollar is spent on HSR; and only about 4.5% of the federal government’s $33.2 billion health research budget was apportioned to HSR in 2006. Within this $1.5 billion investment, the balance of the government’s expenditure on HSR is heavily tilted toward clinical issues. For example, the National Institutes of Health’s HSR budget, which is primarily focused on identifying and overcoming barriers in moving research into practice, constituted roughly 61% of the federal investment in the field in 2007. Roughly 53% of the AHRQ’s budget was targeted for research on patient safety and healthcare quality; another 24% was targeted for research on healthcare effectiveness. This emphasis on clinical research is aligned with one of the field’s priorities—improving quality of care. But these efforts do not include research on ways to improve the quality and efficiency of the healthcare system as a whole, and relatively little funding is provided to study

### Table 1 Federal Budget Process Timeline

<table>
<thead>
<tr>
<th>Timeline</th>
<th>Action</th>
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<tr>
<td>First Monday in February</td>
<td>President submits budget to Congress</td>
</tr>
<tr>
<td>February 15</td>
<td>Congressional Budget Office submits report on economic and budget outlook to House and Senate Budget Committees</td>
</tr>
<tr>
<td>6 weeks after president submits budget</td>
<td>House and Senate committees submit their budget analyses to respective budget committees</td>
</tr>
<tr>
<td>April 1</td>
<td>Senate Budget Committee reports budget resolution</td>
</tr>
<tr>
<td>April 15</td>
<td>Congress completes action on budget resolution</td>
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<tr>
<td>May 15</td>
<td>House begins action on annual appropriations bills</td>
</tr>
<tr>
<td>June 10</td>
<td>House Appropriations Committee reports last appropriations bill</td>
</tr>
<tr>
<td>June 30</td>
<td>House completes action on appropriations bills</td>
</tr>
<tr>
<td>July 15</td>
<td>President submits midsession review of his budget to Congress</td>
</tr>
<tr>
<td>October 1</td>
<td>Fiscal year begins</td>
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what is driving healthcare costs or how to achieve much-needed improvements in efficiency.

Since the coalition first began reporting these data in 2003, federal funding for HSR has remained constant at $1.5 billion. In real dollars, however, the government’s investment in HSR has not kept pace with inflation, and the field’s purchasing power has declined to $1.34 billion as a result (Figure 1).2

This is when spending on healthcare overall has risen faster than the rate of inflation—from $1.4 trillion in 2000 to nearly $2.1 trillion, or $7026 per person, in 2006.16 If this trend continues, federal funding for HSR as a share of national health expenditures will decrease from its 2006 level of 0.07% to 0.04% in 2016.17

How much should the federal government invest in HSR? That depends on the value likely to be gained from additional research funding compared with other uses for the money—a judgment that is difficult to make in advance. To get a better sense of the level of concern about HSR funding, AcademyHealth—the professional society for HSR and health policy—interviewed 38 leaders in HSR and health policy who have served as federal agency executives, as well as members of Congress, senior congressional staff, state officials, employers, health plan executives, and foundation executives.18 The consensus was that federal funding for HSR should be increased from the current level of $1.5 billion to $5 billion. Interviewees recommended, on average, that the HSR funding should constitute 17% of the federal government’s health research budget.18 Rounding down to 15% equals $5 billion of the $33.2-billion research budget in 2006. Experts argued that an increase in HSR funding of this magnitude would ensure that purchasers, health plans, providers, and policymakers could move biomedical and clinical research innovations into practice more efficiently and effectively.

**Consequences of Lost Purchasing Power**

The plateaued federal investment in HSR and the resulting loss of purchasing power has, at the microlevel, compromised the ability of some federal agencies to fully achieve their missions, and at the macrolevel, hindered progress in generating more and better information about the US healthcare system.

Many of the sentinel studies that have changed the face of healthcare in the United States—for example, John E. Wennberg’s Dartmouth Atlas documenting geographic variation in healthcare delivery and outcomes19—are the result of ingenuity on the part of investigators who believed their ideas had the promise to clarify a phenomenon, improve methods and measurement, or make an otherwise unmanageable policy problem manageable. Yet, the past few years have
shown a decline in the number of, and funding for, grants that support such investigator innovation. Figure 2 and Figure 3 depict trend data for AHRQ’s research and budget.

The number of new and competing grants in fiscal year 2007 jumped 20% compared with 2006, the second highest number of awards in 5 years. However, based on 2008 estimates, AHRQ projects that the number of awards will fall from 156 in 2007 to 57 in 2008. These projections suggest that AHRQ will fund the fewest number of new and competing awards since we began collecting these data. Not surprisingly, AHRQ’s budget dedicated to funding new and competing grants and training grants also continues to decline; the projected budget may hit a low in 2008—$9.6 million and $8 million, respectively.

At the same time, funding for contracts has more than doubled at AHRQ, from nearly $68 million in 2003 to roughly $145 million in 2008. AHRQ dedicated 54% of its overall budget to contracted work in 2008, but less than 3% was available for new competitive grants. Greater funding for contracted work as a proportion of the overall agency budget translates into fewer competitive funding opportunities available to individual researchers, particularly as the agency’s budget remains virtually flat. According to surveys of researchers and analysts conducted by Academy Health, AHRQ grants comprise a smaller proportion of researchers’ external funding; in 2006, the share decreased to 42%.

The Coalition has not estimated the long-term impact of flat funding on the field or its researchers, but the steady erosion of investment could hinder the development of the next generation of scientists. Trends in educational programs show an increase in the absolute number of researchers graduating from HSR programs. These researchers require evidence of independent scholarship to build their careers, including research supported by “R” and “K” awards. Failure to fund such grants adequately may result in losing early-career researchers to research fields with more support. If left unchecked, declining federal investments in graduate and postgraduate education could threaten the ability to attract qualified researchers to HSR as a viable career path, and ultimately hinder the capacity to respond to the public and private sector research needs for more and better information.

**Future Trends Show Little Change**

Although we have not gathered from agencies their
enacted spending levels for 2008, we can estimate the federal government’s current investment based on the omnibus spending bill signed into law by the president in January 2008. AHRQ and the National Center for Health Statistics received small budget increases in 2008, but the overall investment in HSR remains constant at about $1.5 billion (Table 4).2,15,22

The president’s 2009 budget request cuts most discretionary spending for health and other domestic programs but would hold federal funding for HSR at roughly $1.5 billion, with slight rollbacks in AHRQ’s budget. Under this request, funding for AHRQ’s new and competing grants would further decline to a new low of 23 awards, including only 4 new awards for non–patient-safety-related HSR. And the number of ongoing projects would decline from 144 grants in 2008 to 129 grants in 2009.21

Leadership of the House and Senate Committees on Budget and Committees on Appropriations rejected the president’s budget as “dead on arrival” and at the time of this writing is developing spending bills that would hold federal funding for HSR at roughly $1.5 billion, with slight rollbacks in AHRQ’s budget. Under this request, funding for AHRQ’s new and competing grants would further decline to a new low of 23 awards, including only 4 new awards for non–patient-safety-related HSR. And the number of ongoing projects would decline from 144 grants in 2008 to 129 grants in 2009.21

Leadership of the House and Senate Committees on Budget and Committees on Appropriations rejected the president’s budget as “dead on arrival” and at the time of this writing is developing spending bills that would likely increase the investment in health and other domestic programs, if enacted. However, early this year, the president stated that he would veto any spending bills that exceeded the “reasonable and responsible” levels in his request.24 Given that neither the House nor the Senate has the two-thirds majority vote required to override a presidential veto, it is probable that Congress will pass a continuing resolution to sustain government operations at 2008 levels through February or March 2009 and complete its fiscal year 2009 appropriations work after the new administration takes office.

For 2010, the Office of Management and Budget—which assists the president in formulating the budget and monitoring the implementation of the enacted budget—has directed executive branch agencies to submit their budget requests after the new administration or a transition team is in place. In the meantime, agencies will complete a technical review of their previous and current year spending to establish baseline estimates for the next administration’s budget planning.21

The overall investment in HSR remains constant at about $1.5 billion.

Table 4 | Estimated Federal Funding for HSR, FY 2008, $ Million

<table>
<thead>
<tr>
<th>Agency</th>
<th>FY 2007 estimated</th>
<th>FY 2008 president request</th>
<th>FY 2008 final</th>
<th>FY 2009 president request</th>
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</thead>
<tbody>
<tr>
<td>Agency for Healthcare Research and Quality</td>
<td>319</td>
<td>329</td>
<td>334.6</td>
<td>325.6</td>
</tr>
<tr>
<td>CDC: National Centers for Health Statistics</td>
<td>109</td>
<td>110</td>
<td>113.6</td>
<td>124.7</td>
</tr>
<tr>
<td>CDC: Public Health Research</td>
<td>31</td>
<td>31</td>
<td>31</td>
<td>31</td>
</tr>
<tr>
<td>Centers for Medicare &amp; Medicaid Services</td>
<td>58</td>
<td>34</td>
<td>31</td>
<td>31</td>
</tr>
<tr>
<td>Health Services Research Administration:</td>
<td>8.7</td>
<td>8.7</td>
<td>8.6</td>
<td>8.7</td>
</tr>
<tr>
<td>Rural Health Research</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>National Institutes of Health</td>
<td>921</td>
<td>950*</td>
<td>965*</td>
<td>965*</td>
</tr>
<tr>
<td>Veterans Health Administration</td>
<td>64</td>
<td>64*</td>
<td>64*</td>
<td>68*</td>
</tr>
<tr>
<td>Total</td>
<td>1511</td>
<td>1523</td>
<td>1585</td>
<td>1554</td>
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</table>

*Expected figures if HSR maintains its current funding proportion of National Institutes of Health funding.
†Expected figures if HSR maintains its current proportion of overall VA Medical and Prosthetic Research funding.

CDC indicates Centers for Disease Control and Prevention.

Sources: References 2, 15, 22.

Conclusions

As our healthcare costs continue to rise, chronic diseases become more prevalent, diagnostic and therapeutic technologies proliferate, baby boomers reach Medicare eligibility, the numbers of veterans grow, and more Americans join the ranks of the uninsured, the need for HSR will only increase in the coming years. Yet in the immediate short term, fiscal constraints and competing priorities render dramatic budget increases unlikely, despite the growing awareness that more and better evidence is needed to improve health and healthcare.
To ultimately reign in costs and get better care at better value, the federal government will eventually need to increase its investment in HSR, the research itself and the researchers who generate it. In addition, federal agencies that fund HSR, and especially AHRQ as the lead agency, will need to reprioritize their research portfolios by redirecting a significant portion of this increased investment to study healthcare spending, financing, and organization. As we discussed, funding for these research topics in the past decade has lagged behind that of the quality and patient safety agenda. As a result, we remain ill-equipped to fully understand what is driving anddetailing the healthcare system and develop evidence-based solutions. A significant and more balanced investment will pay dividends in providing the essential tools to make much needed improvements in our healthcare system and stave off the “perfect storm” that threatens to drown the American economy. Until then, we’ll keep treading water.

For agencies’ individual health services research budgets, visit www.chsr.org to download Federal Funding for Health Services Research 2007.

References

Stakeholder Perspective appears on page 42
Payors: Our nation’s long-term fiscal outlook is grim. Large and growing structural deficits loom over the federal government, fueled primarily by healthcare spending. The Government Accountability Office notes that these rapidly rising healthcare costs are “our nation’s number one fiscal challenge…not just to the federal government, but to American business and society as a whole.” This is bad news for our nation. But the good news may be that this fiscal crisis and a growing acceptance of its reality and immediacy will bring greater awareness of, and demand for, health services research (HSR).

Peter Orszag, Director of the Congressional Budget Office, has reinvigorated interest in HSR on the national stage. Based on work pioneered by Dr. Jack Wennberg, Orszag has cited geographic variations in care as evidence of inefficiency and waste in the healthcare system. He has also promoted comparative effectiveness research to move toward better care at better value. Policymakers are listening. Comparative effectiveness research has become a key policy priority for many elected officials, including presidential hopefuls. As David Obey (D-WI), chairman of the House Committee on Appropriations, recently noted, it is “penny wise and pound foolish” to continue to reduce our commitment to HSR when entitlement spending grows unchecked.

HSR has been the stepchild of health research, writ large. The “search for the cure” mission of clinical research is compelling to the public and policymakers, who have funded that effort handsomely. In contrast, the potential of HSR to improve healthcare delivery and promote change has been underappreciated. In this new age of enlightenment about our nation’s worsening fiscal well-being, HSR may be on the verge of a renaissance as policymakers, payors, providers, and patients look for answers to hard questions about the availability, quality, and costs of healthcare.

The intense political attention focused on comparative effectiveness research has brought new visibility to a field of scientific study that has long stood in the shadows of clinical research. There is a growing willingness to invest in evidence that will help improve the value we get for our healthcare dollar. However, as important as comparative effectiveness research could be, other areas of research can pay off in terms of improving the performance of the healthcare system. Even with better knowledge about what works for which patients, there remains the challenge of converting that knowledge into effective care that is delivered efficiently. Financing healthcare is another major challenge. HSR can help improve the functioning of the insurance market, finding ways to make affordable coverage available to everyone.

PolicyMakers: There is a real risk that enthusiasm for comparative effectiveness research could tighten funding for other research areas that could have a more immediate payoff. There is also a real risk of overselling the promise of HSR, as scientific inquiry alone will not fix our healthcare system. Even with the best evidence, political will and public understanding are required to make the necessary, painful changes.

As noted in the article, fiscal constraints and competing budget priorities mean that HSR is unlikely to see dramatic budget increases in the near-term. Still, HSR research has led to a paradigm shift in Washington. Policymakers of all political persuasions are now willing to discuss serious health reform. And they appear more open to the idea that increased investment in HSR will pay dividends in the long-term. After nearly 40 years of minimal recognition and limited funding, the Dark Age seems to have passed; the Golden Age is upon HSR.

Joseph R. Antos, PhD
Wilson H. Taylor Scholar in Healthcare and Retirement Policy
American Enterprise Institute