



White Paper

Can Hospitals Mount a Recession Recovery? A Multi-Year Review of Hospital Operating Trends

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Executive Summary

The economy and the effects of healthcare reform have profoundly affected hospitals — from bottom lines to patient care planning and strategic decision making. Hospitals were not immune to the recession of 2007–2009, and their financial health has far-reaching consequences for the communities they serve — both the patients they care for and the people they employ. If hospitals lose money, they could be forced to cut back services or eventually go out of business entirely.

How have the last few years affected hospitals? And now that the economy seems to be enjoying some small improvement, are hospitals also breathing a sigh of relief? This paper uses hospital data to detail trends that can help answer these questions.

Profits in the Face of Recession

To understand hospital profitability and the effects of economic trends on hospital bottom lines, it's important to understand and evaluate the different statistics used to measure profitability.

Operating Margins Look Healthy

Operating margins measure how well hospitals adapt to available revenues. Hospitals match their expenses very closely to the revenue they take in (e.g., staffing based on expected patient census). This keeps operating margins relatively flat — through good and bad economic times. Indeed, despite a strong seasonal component

“The pain of the recession was widespread, and the percentage of hospitals with negative total margins peaked at about 55 percent in the third quarter of 2008.”

(hospitals typically make more money during the first two quarters and less money during the third and fourth quarters), hospital operating margins were only slightly affected by the recent recession, averaging just under 3 percent between 2005 and 2011 (Figure 1).

Total Profit Margins Tell a Different Story

However, hospitals don’t budget based on operating margin; they budget based on expected total revenue. So for their business, total margins and total revenues reveal much more than operating margins. Additionally, most hospitals are not for profit and a fair number are government facilities. These types of facilities subsidize operations with non-operating revenues. These non-operating revenues can come from a number of areas, including:

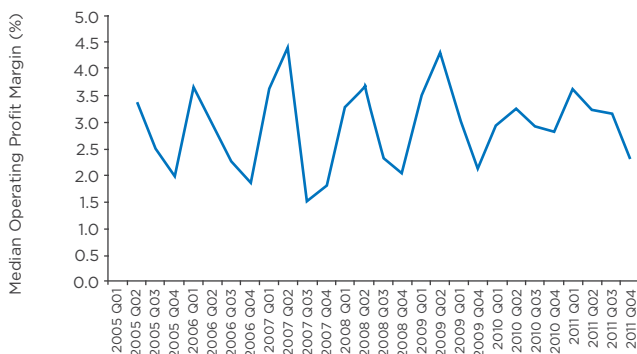
- Investment income (e.g., from hospital endowments): This includes recognized investment gains and losses
- Charitable contributions/donations
- Government appropriations for operations

Subsidies may sound like a promising way to add income, but these monies are not in a hospital’s control — and in a poor economy, all of them can quickly decrease.

Unlike operating margins, hospital total margins were strongly affected by the recession. Before the economic downturn, the median U.S. hospital had a total profit margin of 4–5 percent. During this time, non-operating revenues allowed hospitals to grow, add services, expand, and update their facilities and services without affecting bottom lines. That kind of support bottomed out during the recession, and in the third quarter of 2008, median total margins hit a low of -0.23 percent (Figure 2).

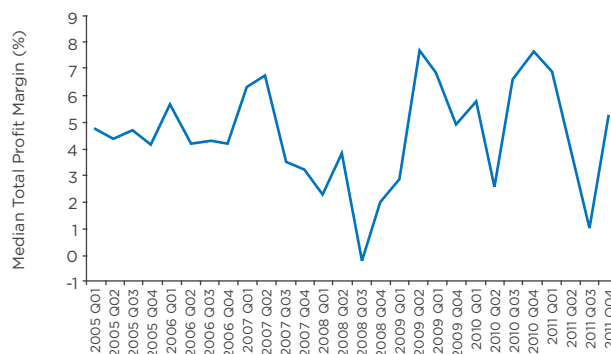
Total margins recovered somewhat in 2009 and 2010, but fell again the first three quarters of 2011. There was good recovery in the fourth quarter of 2011, with margins up to a median 5.32 percent, but even so, hospitals undoubtedly missed their targets for 2011 as a whole (Figure 2).

Figure 1: Hospital Operating Profit Margins Only Slightly Affected by the Recession



Source: ActionOI

Figure 2: Hospital Total Margins Strongly Affected by the Recession



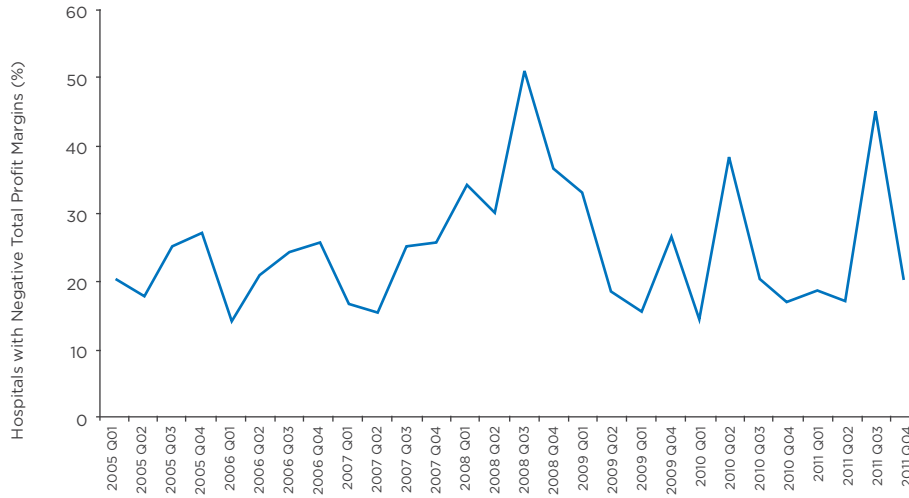
Source: ActionOI

Many Hospitals Are Losing Money

The hospital business does not yield high profits, and typically, even in good economic times, 20–30 percent of hospitals lose money in any given quarter. The pain of the recession was widespread, and the percentage of hospitals with negative

total margins peaked at about 55 percent in the third quarter of 2008. Hospitals recovered by the second quarter of 2009, but the proportion losing money jumped again in the second quarter of 2010 and third quarter of 2011. Many hospitals recovered profitability in the fourth quarter of 2011 (Figure 3). Only time will tell if this recovery continues into 2012.

Figure 3: Many Hospitals Are Losing Money



Source: ActionOI

How Do Uncertain Margins Relate to Other Hospital Finances?

How will negative profit margins affect hospitals going forward? We'll investigate three areas where falling profit margins could cause reductions: investment portfolios, capital spending, and working capital (e.g., less liquidity).

Reduced Investment Portfolios

If hospitals have been losing money, yet were making money from operations, we can assume they have had investment losses. This will reduce the size of their investments — either directly from investment losses or indirectly, when forced to use savings to subsidize operations or fund improvements.

Looking more closely at hospital investment portfolios, we see that there are typically two kinds of long-term investments:

- Endowments (money in trust for specific or general purposes)
- Retained earnings, including fundings of depreciation

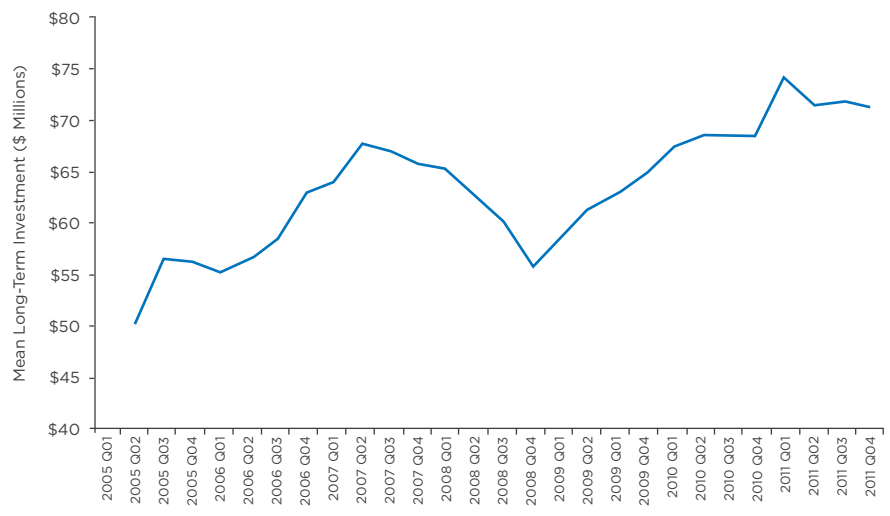
Having large investment portfolios is very helpful because:

- Hospitals can replace worn out buildings and equipment without going to the market to borrow cash
- When they do need to borrow, big investment portfolios yield strong bond ratings, allowing the hospital to borrow money cheaply
- In bad times, hospitals can dip in to their portfolios to subsidize operations

Figure 4 displays mean, long-term investment. Before the recession (up until early 2007), hospital investments were growing — from \$50 million per hospital in the first quarter of 2005 to \$67 million in the second quarter of 2007. Once the recession hit, hospital investments suffered greatly, bottoming in the fourth quarter of 2008. Hospitals then made a strong recovery; through the end of 2010, they recovered

all the investment money they lost and then some. But now we are seeing another possible downturn; investments dropped in the second quarter of 2011 and have been flat since.

Figure 4: Hospital Investment Portfolios Remain Flat



Source: ActionOI

Reduced Capital Spending — Hospitals Aren't Renovating and Updating

The response to dropping investments has been less new construction, resulting in aging facilities. Since the recession, hospitals have been less likely to renovate, add new buildings, update equipment, or start other improvement projects.

This is demonstrated by construction-in-progress figures (Figures 5 and 6). In an attempt to tell a complete story, we looked at both the mean and median figures. The mean (Figure 5) is driven by larger projects like replacing an entire campus, building new wings, etc. These are multi-year projects with lengthy planning and construction phases that might have started before the recession and continued through it. Mean construction in progress grew from \$8 million per hospital in 2005 to about \$15 million in 2007. It then remained flat during the recession (2007–2009), and fell more recently — to less than \$13 million at the end of 2011.

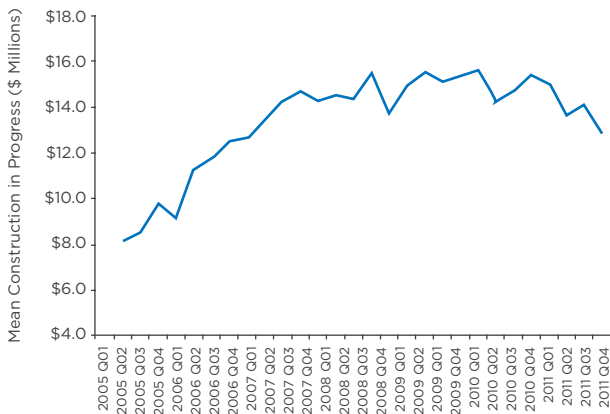
But this masks a reality — that the typical hospital is only doing small projects each year. The mean figures quoted above and shown in Figure 5 are driven up by a few very high values and don't reflect more typical projects. The median, on the other hand, indicates more typical, smaller-sized hospital projects. The typical hospital spends about \$2 million per year (Figure 6) on construction and improvement projects. This figure was growing before the recession began in 2007, fell during the recession, and has been flat for several quarters since.

Fewer Renovations Means Aging Hospitals

The result of this reduced spending is that hospital facilities are aging. From 2005 to 2008, the average age of a hospital facility was about 9.5 years. But from 2009 through 2011, it increased dramatically, to about 10.5 years (Figure 7). Eventually, this aging of hospitals will have negative consequences. When businesses that rely

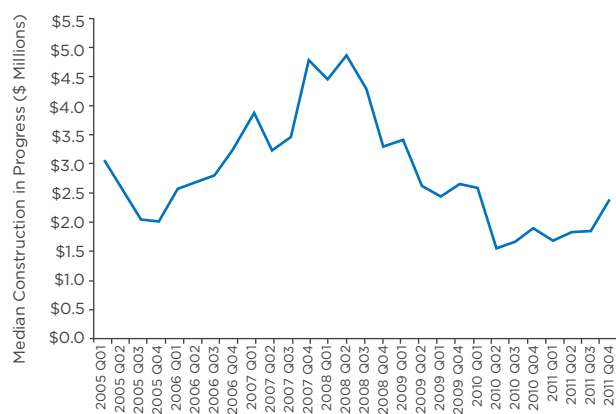
on updated facilities and equipment do not spend money maintaining, refurbishing, and renewing them, the businesses become more expensive to operate. In the case of hospitals, this could put patient care and safety at risk.

Figure 5: Hospitals Have Reduced Large-Scale Renovations and Expansions



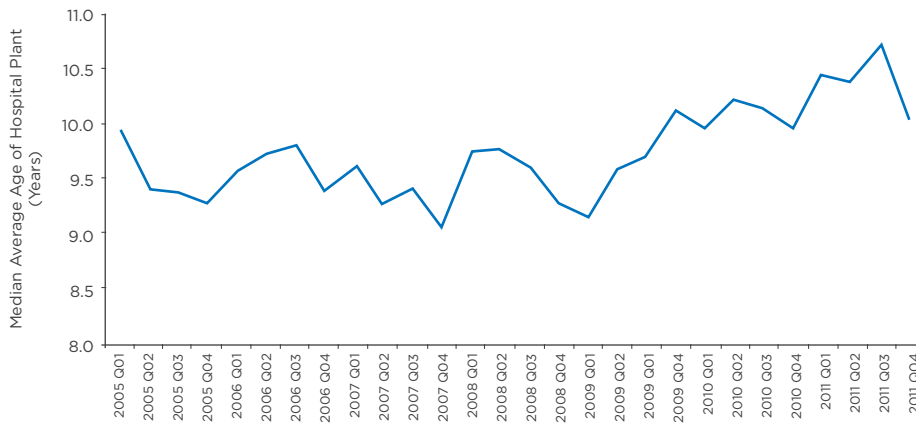
Source: ActionOI

Figure 6: Hospitals Have Also Reduced Smaller-Scale Renovations and Expansions



Source: ActionOI

Figure 7: Hospitals Are Aging



Source: ActionOI

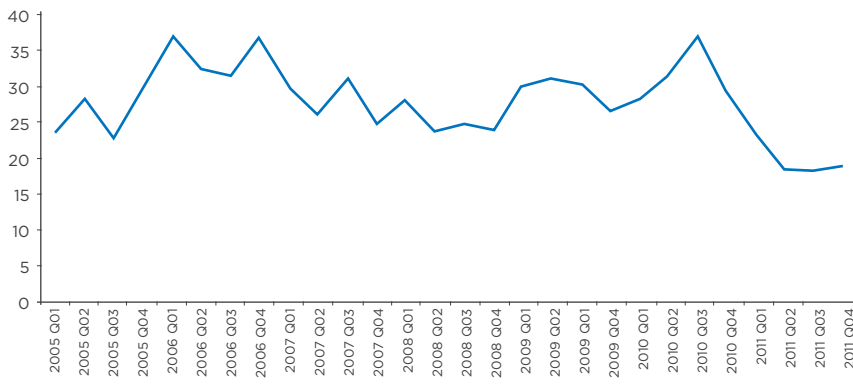
Reduced Working Capital

When hospitals are losing money, they control costs, but do not actually cut operations. Instead, they cut capital spending and dip into their reserves. And when hospitals spend their reserves, they may become strapped for working capital and have their liquidity squeezed.

Early in the 2007–2009 recession, hospitals were cash-strapped and short-term cash decreased to less than 25 days on hand (Figure 8). They were locked out of the asset-based paper market, a major source of short-term funding for some hospitals. Afterward they built up their cash positions, like many other businesses that hoarded cash during the recession. But in late 2010 and 2011, ready cash on hand decreased precipitously even as days cash on hand from all sources increased (Figure 9). Days cash on hand from all sources is the broadest measure of liquidity and shows everything hospitals have that could be turned into cash, including cash and equivalents, accounts receivables, inventory, and liquid investments.

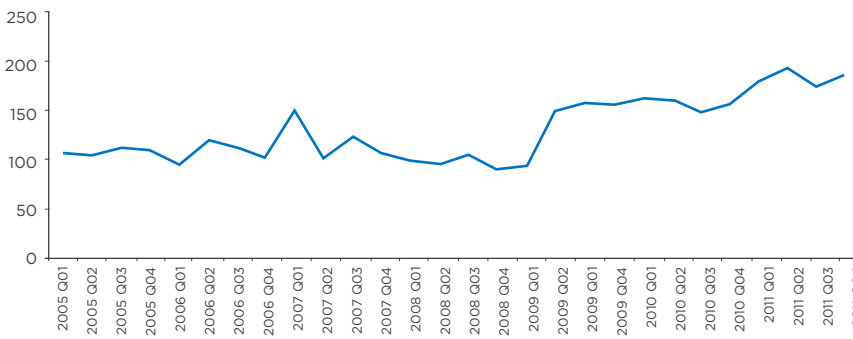
Some analysts consider it dangerous to operate on such a thin cash cushion. We will have to watch to see if there are long-term consequences of this practice.

Figure 8: Hospitals Have Less Quick Cash



Source: ActionOI

Figure 9: Hospitals Are More Liquid



Source: ActionOI

Other Notable Trends Impact Hospitals as They Attempt Economic Recovery

We have discussed the overall financial condition of hospitals through the recession of 2007–2009 and after — as the country appears to be in a slight economic recovery. We will now discuss some other notable trends that are already affecting hospitals and are sure to challenge their bottom lines:

- Declining patient utilization
- Increasing costs for uncompensated care
- Greater demands on collection efforts
- Growing share of Medicare and Medicaid inpatients
- Challenged reimbursement levels

Declining Patient Utilization

Despite a growing and aging population, fewer people seem to be seeking care at hospitals — either by delaying it or forgoing some care altogether. Through the 2000s, the U.S. population has been growing at about 1 percent a year, and it is undeniably aging.

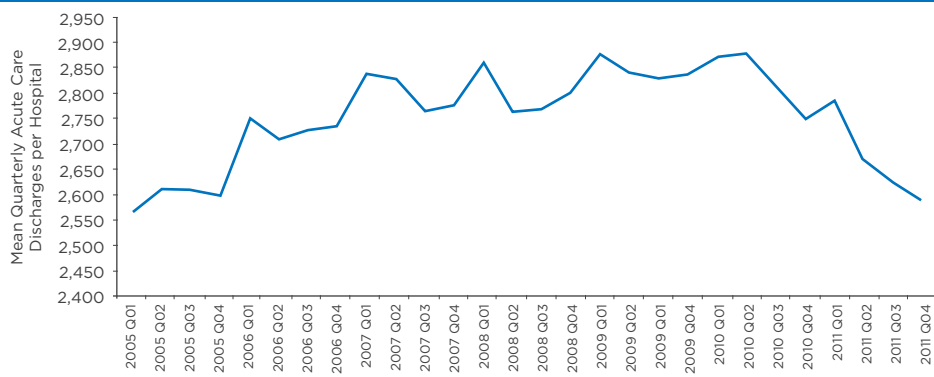
From 2005–2007, these increases were reflected in hospital utilization, and we saw a gradual rise in inpatient admissions. During the recession, this utilization leveled out. But once we entered economic recovery, the logically expected increase in demand for inpatient services did not materialize. In 2010 and 2011, there was a substantial drop in inpatient admissions, despite the increasing and

aging population. From the first quarter of 2008 to the last quarter of 2011, average quarterly admissions dropped about 9.5 percent in general acute care hospitals (Figure 10).

Looking at total inpatient admissions for all hospitals from another source, the Truven Health MarketScan® Hospital Drug Database, we see a similar utilization decline — a drop of about 6.9 percent between the first quarter of 2008 and the last quarter of 2011.

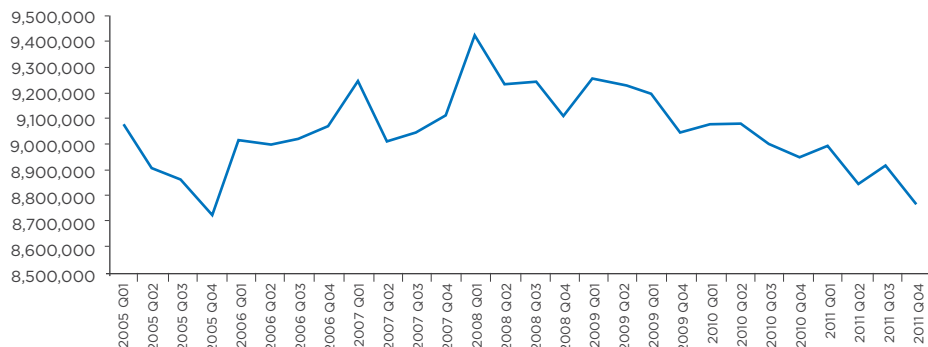
A notable exception in this trend was seen in major teaching hospitals, which have had more admissions even as community hospital admissions declined (Figure 12).

Figure 10: Inpatient Utilization Dropping for the Average Hospital



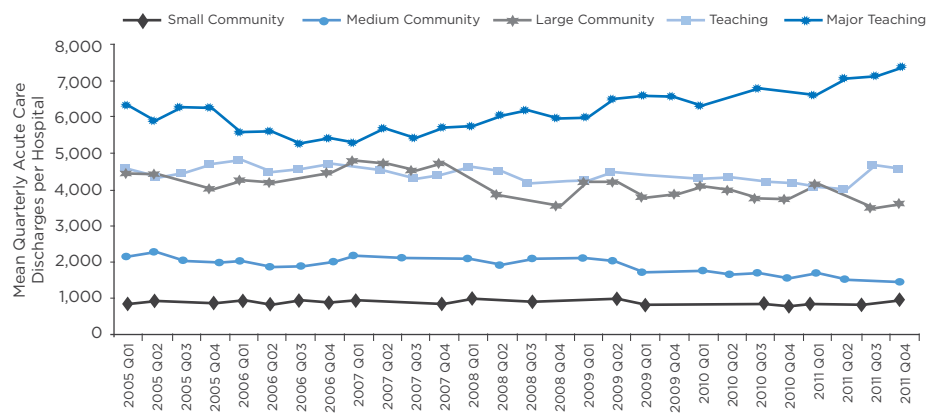
Source: ActionOI

Figure 11: Inpatient Utilization Dropping for All Hospitals



Source: MarketScan Hospital Drug Database

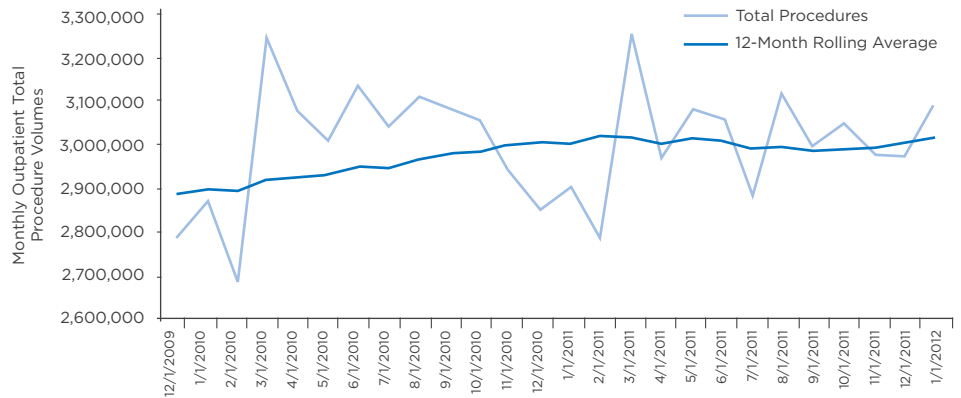
Figure 12: Hospital Inpatient Utilization Not Dropping at Major Teaching Hospitals



Source: ActionOI

The drops in inpatient utilization cannot be blamed entirely on more patients and procedures moving to outpatient settings as treatment technologies improve and protocols change. Although hospital outpatient volumes generally have the same seasonal pattern as inpatient volumes — bottoming early each year, overall we saw a statistically insignificant increase in outpatient volume over the long term — a mere 2 percent per year from 2009 through the beginning of 2012 (Figure 13).

Figure 13: Hospital Outpatient Utilization Flat



Source: MarketScan Hospital Drug Database

Increasing Costs for Uncompensated Care

Are hospitals being properly compensated for the care they provide? To answer this question, we can first look at what they are spending on uncompensated care, which on balance sheets is treated as a deduction from patient revenues.

Charity care expenses have increased slowly, but steadily. In 2005, for the typical hospital, charity care accounted for 1.5 percent of gross patient revenues. Today, this is about 2.5 percent. This has reduced top-line revenue by an additional 1 percent in the last six years (Figure 14).

But charity care is the smaller portion of uncompensated care; the bigger portion is bad debt. Much bad debt is incurred by uninsured patients, but it also comes from patients who have insurance — especially high-deductible insurance, but cannot pay the patient-responsibility portion of their bill.

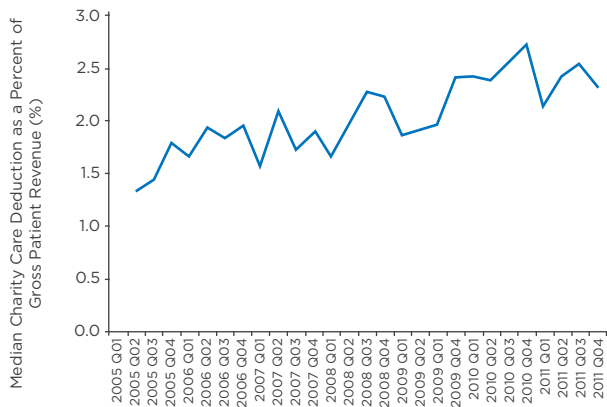
For many years, about 7 percent of net patient revenue was deemed uncollectable. From 2009–2011, this increased to more than 8 percent (Figure 15). We can only speculate on the causes of this increase. It could be that during the recession, COBRA and other special programs expired for the long-term unemployed and their families. We will have to watch this short-term increase carefully to see if it improves or becomes a longer-term trend.

Greater Demands on Collection Efforts

Uncollected care percentages cannot be blamed on faulty collections. In fact, there has been a steady decrease in the average collection period (net days in patient accounts receivable) over the last six years. The average collection period, which essentially tells us how long it takes hospitals to get paid for their services, fell from 55 to 43 days between 2005 and 2011 (Figure 16). Some of this may be due to

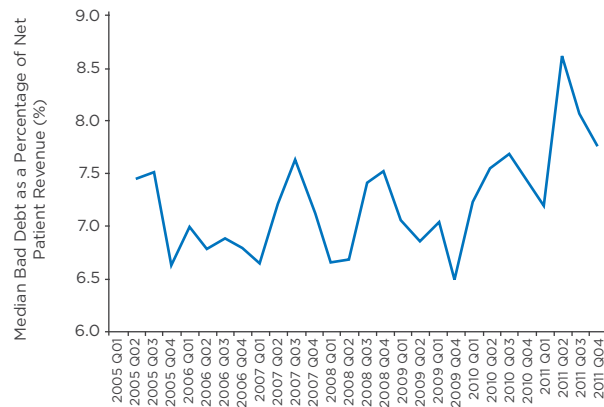
improvements in what are now standard electronic claims transactions and some may be due to intensified collections activity by hospitals under pressure to maintain cash flow.

Figure 14: Uncompensated Care Increasing: Charity Care on the Rise



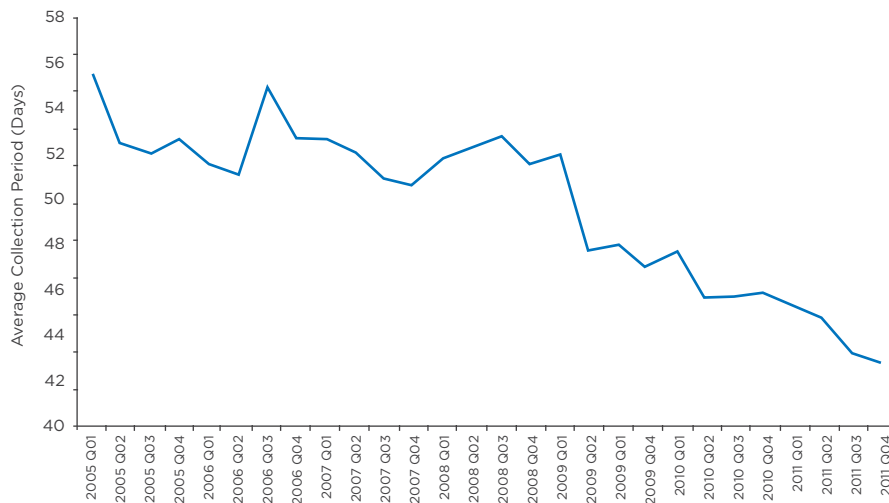
Source: ActionOI

Figure 15: Uncompensated Care Increasing: Bad Debt Grows



Source: ActionOI

Figure 16: Hospitals Have Intensified Collections

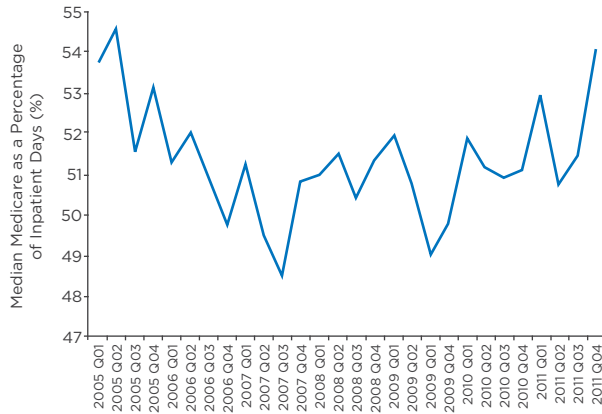


Source: ActionOI

Growing Share of Medicare and Medicaid Patients

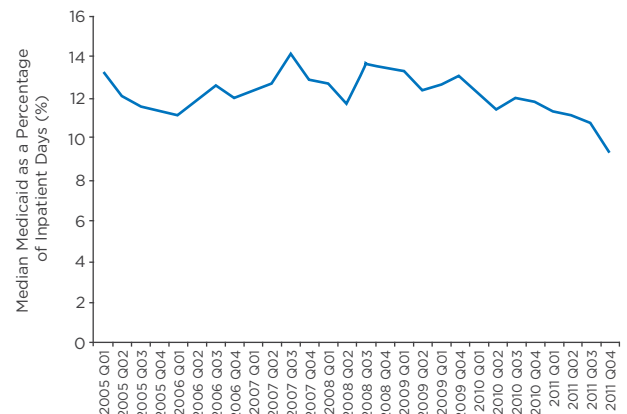
Another stress for hospitals is the increasing number of patients covered by Medicare and Medicaid, programs that tend to provide lower reimbursements for services rendered. The Medicare share of the typical hospital's patient census had declined from 2005–2007, but has since returned to earlier levels, about 54 percent (Figure 17). Meanwhile, the Medicaid share of the patient census has declined from about 13 to 10 percent (Figure 18). Regulations of the Patient Protection and Affordable Care Act (PPACA) should increase numbers eligible for Medicaid, possibly reversing this trend.

Figure 17: Hospitals Becoming More Dependent on Medicare



Source: ActionOI

Figure 18: Hospitals Becoming Less Dependent on Medicaid

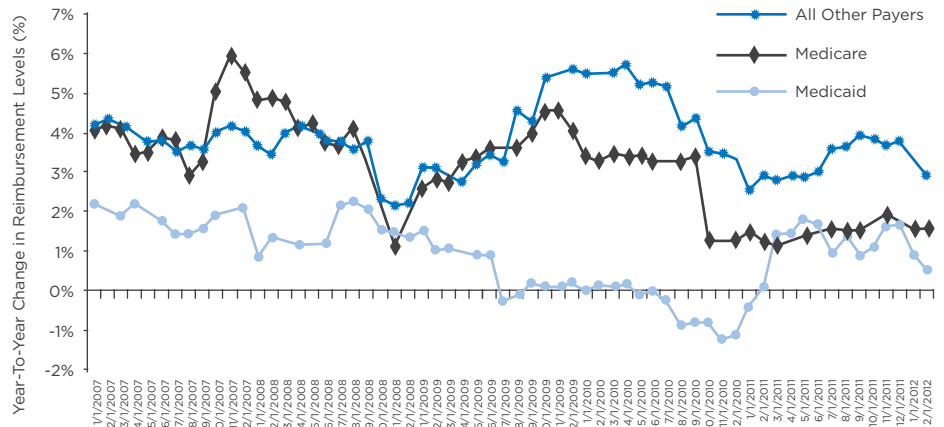


Source: ActionOI

Challenged Reimbursement Levels

The costs of providing care are increasing and not all payers are keeping up with these costs. Before the recession, Medicare and commercial payer reimbursement levels were increasing about 4 percent per year, and Medicaid levels were increasing about 2 percent year, according to the Bureau of Labor Statistics Hospital Provider Price Index (Figure 19). This measures what a hospital actually gets paid for a fixed bundle of services. It's a pure inflation measure.

Figure 19: Public Payers Squeezing Hospitals



Source: Bureau of Labor Statistics Hospital Producer Price Index

Medicare usually has a step-change in October each year as a new inpatient prospective payment system comes into effect. In 2008, a new payment system, MS-DRGs (Medicare severity-adjusted diagnosis-related groups) took effect, and it took the entire year for hospitals to learn to code properly for full reimbursement. That year there was a big change, with Medicare rates increasing only 1–2 percent — certainly below hospitals' increase in costs (Figure 19). There was a recovery the following year, but since October 2010, Medicare payment levels have only increased 1–2 percent year over year.

Medicaid payment rates usually change in July, the beginning of states' fiscal years. They were flat in 2009, actually decreased in 2010, and recovered partially in 2011.

So far in 2012, the year-over-year change in Medicaid reimbursement is less than 1 percent. All of these changes are from a very low payment level.

Commercial payers, on the other hand, still demonstrate much less control of costs, with reimbursements increasing 3–4 percent or more each year. But between the increasing percentage of patients with Medicare and Medicaid insurance and the tight reimbursements these programs provide, hospitals that are highly dependent on these programs are certainly feeling a squeeze in reimbursement.

Summary

Hospital operating profit margins look healthy, seeming to indicate that hospitals are running themselves well. But total profit margins, which rely on contributions, donations, and investments, are not so strong. Many hospitals are losing money. As a result, they're not spending to renew and improve their facilities. Nonetheless, hospitals are still quite liquid even though they are not holding a lot of short-term cash.

Looking forward, some trends that will challenge hospitals to remain financially healthy are reduced utilization; greater numbers of patients from whom they are not receiving payment (uncompensated care); and a squeeze on reimbursement rates, especially by Medicare and Medicaid — programs that cover a growing number of hospital patients.

This report is based on key operational and financial indicators for nonfederal, general, acute-care hospitals that contributed quarterly data to the Truven Health ActionOI® database, which contains data from more than 750 healthcare organizations across the U.S, and the Truven Health MarketScan® Hospital Drug Database, which contains fully integrated, de-identified, individual-level healthcare claims data for nearly 150 million patients since 1995. Hospital responses were weighted to make the sample comparable to the national distribution of all hospitals based on hospital class, location, ownership, and profitability. Because overall national economic conditions have stabilized, or at least improved slightly, since these data were reported, a number of these trends may improve.

About the Author

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Lead Scientist

At Truven Health, Dr. Koepke focuses on issues of healthcare finance and operational improvement. Before joining Truven Health, he analyzed trends in disease prevalence, healthcare utilization, and expense at Quintiles Informatics and Verispan LLC using hospital and provider administrative and claims data. Previous healthcare analytics experience included positions at the Chapin Hall Center at the University of Chicago, the Illinois Foundation for Quality Healthcare, the University of Illinois School of Public Health, and the Illinois Institute for Developmental Disabilities. In a second area of specialization, Dr. Koepke developed statistical software packages at SYSTAT and SPSS.



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