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LESSONS LEARNED IN LENGTH OF STAY (LOS)

USING ANALYTICS & KEY BEST PRACTICES TO DRIVE IMPROVEMENT

CRITICAL THINKING
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Overview

Healthcare systems will greatly enhance their financial status with a renewed focus on improving clinical performance, reducing clinical variation, and specifically reducing length of stay (LOS). In this article, we will address how LOS improvements result in reduced costs, improved efficiency, and potentially increase in revenues. As reimbursement for hospitals declines through penalties for poor outcomes (e.g., readmissions, hospital acquired conditions), increase in use of observation, and payment recovery audits, pressure mounts to increase the efficiency of the clinical enterprise. At the same time, the Affordable Care Act sets into motion a growing momentum for a greater percentage of hospital revenues to derive from alternative payment methodologies, such as shared savings within Accountable Care Organization (ACO) arrangement. These alternative payment methodologies further incentivize hospitals to improve their clinical efficiency.

A Historical Perspective

When Medicare was established in 1965, Congress adopted the private health insurance sector's "retrospective cost-based reimbursement" system to pay for hospital services. Under this system, Medicare made interim payments to hospitals throughout the hospital's fiscal year. At the end of the fiscal year, the interim payments were reconciled for "allowable costs" with cost reports filed by each hospital. This system incentivized hospitals to increase allowable costs as they were able to pass them through for reimbursement to Medicare. As a result, Medicare's hospital costs under this payment system increased dramatically from \$3 billion to \$37 billion annually (1967 to 1983).¹

In 1982, noting the success of several state rate regulation programs in controlling costs, Congress mandated the creation of a "prospective payment system" (PPS). Under this diagnosis-related groups (DRG) system, Medicare pays hospitals a flat rate per case for each inpatient hospital stay based on the DRG. The implementation of the DRG based system drove hospitals to reduce costs and inpatient utilization for each DRG. One of the primary measures of this improvement in efficiency is inpatient LOS (length of stay), which decreased steadily from 6.8 days to 4.6 days (late 1980's to early 2000's; see Figure 1).

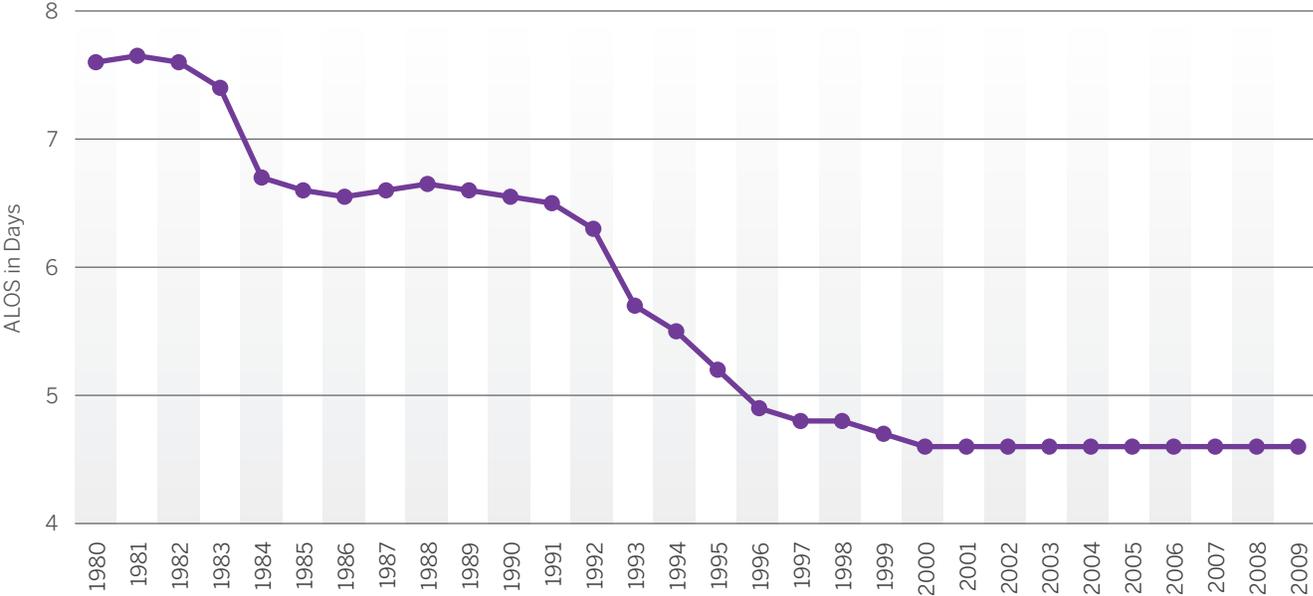
Hospital costs continued to increase – up to \$146 billion in 2010 (see Figure 2), however, the "rate of excess growth (see Figure 3) slowed with a number of policy changes impacting reimbursement.²

- Prospective Payment System (DRGs) – as detailed above.
- Changes in Cost Sharing - Medicare's inpatient hospital deductible has more than tripled in real terms, from \$273 in 1975 (in GDP-inflated 2005 dollars) to \$912 in 2005.
- Managed Care Programs – Growth in costs slowed in 2005 as a large number of Medicare enrollees switched into Medicare Advantage programs.

1. Office of Inspector General, Centers for Medicare & Medicaid Services. 2001. "Medicare Hospital Prospective Payment System: How DRG Rates Are Calculated and Updated"

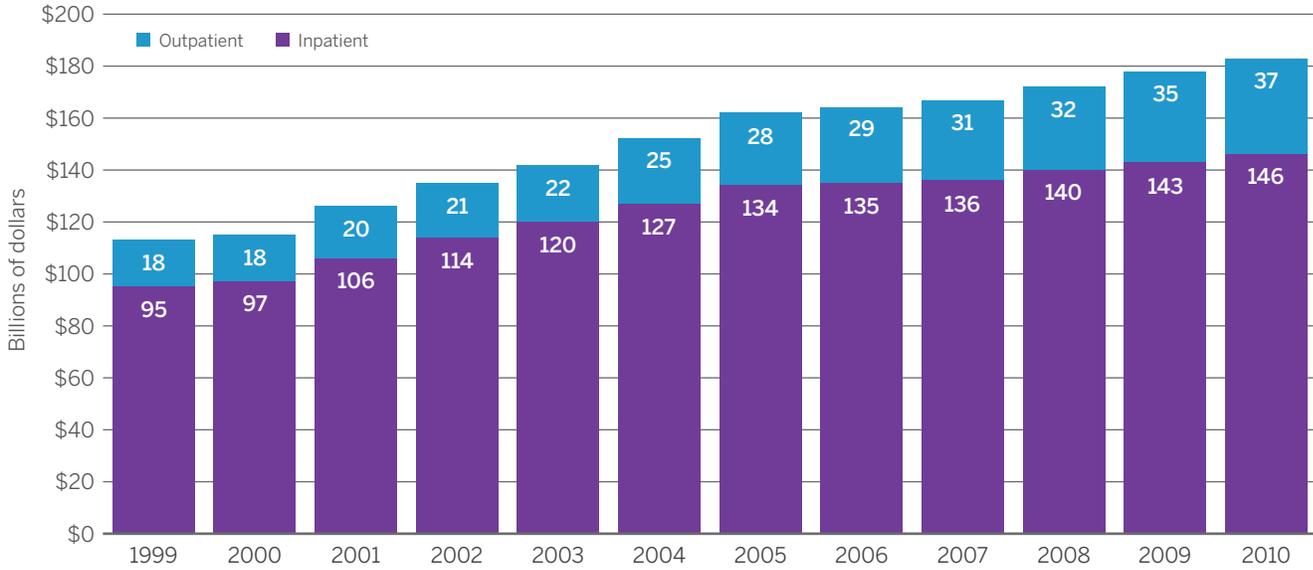
2. White, Chapin. May 2008. "Why Did Medicare Spending Growth Slow Down?" Health Affairs.

Figure 1: Decline in Hospital LOS – 1980 to 2009



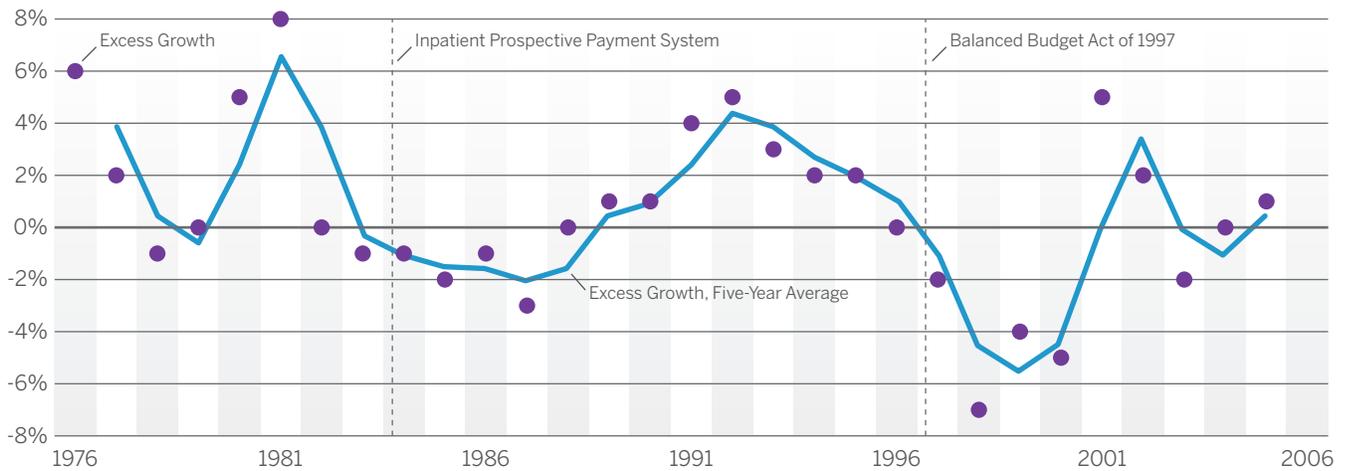
SOURCES: Information combined from - (1) U.S. Trends in Hospitalization and Generalist Physician Workforce and the Emergence of Hospitalists. J Gen Intern Med. 2010 May; 25(5): 453-459. (2) U.S. Department of Health and Human Services, Agency for Healthcare Research and Quality. HCUP Facts and Figures, 2009, exhibit 12.

Figure 2: Growth in Medicare's FFS Payments for Hospital Inpatient and Outpatient Services, 1999 to 2010



Source: Medicare Payment Advisory Commission. 2012. "Health Care Spending and the Medicare Program."

Figure 3: Annual Rate of Excess Growth in Medicare Hospital Spending, 1976 to 2005

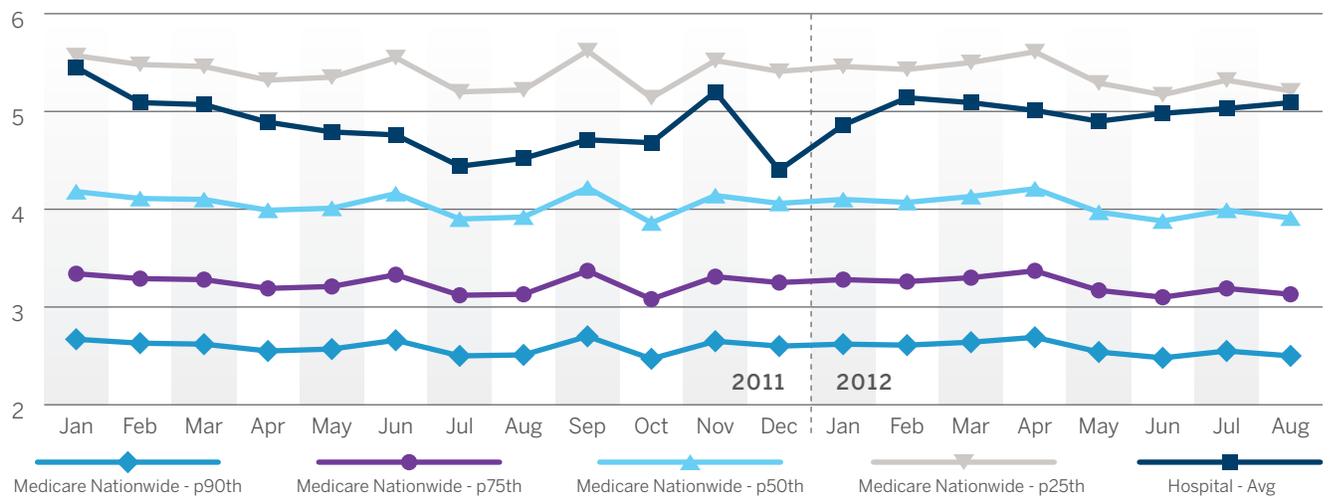


Source: Health Affairs

Using Analytics to Identify and Drive LOS Savings

The plateau in LOS since 2000 calls into question whether efficiency gains have been maximized. However, variability within DRG data shows that significant opportunity still exists to improve performance. This variability is evident across institutions and within institutions. Sophisticated data analysis tools now available can help institutions better understand how to leverage external and internal benchmarks to further drive opportunities in improvement.

Figure 4: Comparison of Sample Hospital LOS with Medicare Nationwide Benchmarks



Source: Total Benchmark Solution, LLC.

An external benchmark analysis (see Figure 4) can help an institution determine relative opportunity based on top performers in numerous categories – including local, state, national, or other custom peer groups.

On the other hand, internal benchmark analysis (see Figure 5) allows an institution to reveal internal variation, which can serve as a powerful lever for change. When physicians recognize that certain colleagues are achieving significantly greater performance within the same system, under the same financial and resource constraints, operating under the same “inefficiencies”, it helps them to overcome hurdles for change. For those physicians who believe that “their patients are sicker or more complicated”, the data can be severity adjusted in very discrete ways.

Quantifying LOS opportunity in financial terms based on an assessment of the likely improvement in costs based on reducing LOS can help administrators and clinicians alike grasp how their LOS performance translates to the bottom line.

Figure 5: Sample Internal Analysis of LOS Opportunity, Quantifying Financial Impact

Primary Physician	# Encounters	Accom. Costs (i.e., LOS) opportunity compared to the top 30th percentile		LOS Days opportunity compared to the top 30th percentile		
		% of Dept. Encounters (Discharges)	Accom Costs Opp High	LOS Days Opp High	Accom Costs Opp High / Encounter	LOS Days Opp High / Encounter
Physician A	231	17.95%	\$427,551	397.88	\$1,850.87	1.72
Physician B	139	10.80%	\$184,049	173.49	\$1,324.10	1.25
Physician C	109	8.47%	\$149,003	129.94	\$1,367.00	1.19
Physician D	182	14.14%	\$230,882	213.17	\$1,268.58	1.17
Physician E	190	14.76%	\$225,898	200.23	\$1,188.94	1.05
Physician F	121	9.40%	\$141,811	126.87	\$1,171.99	1.05
Physician G	83	6.45%	\$91,578	84.77	\$1,103.36	1.02
Physician H	121	9.40%	\$101,866	91.28	\$841.87	0.75
Physician I	17	1.32%	\$29,498	12.50	\$1,735.20	0.74
Physician J	27	2.10%	\$19,336	13.88	\$716.13	0.51
Physician K	19	1.48%	\$23,167	9.53	\$1,219.32	0.50
Physician L	27	2.10%	\$15,808	12.16	\$585.48	0.45
Physician M	6	0.47%	\$4,365	0.50	\$727.50	0.08
Department	1,272		\$1,644,813	1,466	\$1,293.09	1.15

Physicians with ≥ 50 encounters are enclosed in a red box

Physicians ≥ 1 standard dev. from the mean are highlighted in orange (≥ 2) or yellow (≥ 1)

- ≥ 2 std. dev. above mean
- ≥ 1 std. dev. above mean

Measuring variability using statistical methods (e.g., standard deviations from the mean) allows us to determine which physicians may indeed be “outliers” (i.e., greater than 1 or 2 SD from the mean) vs. those who may fall within the “norm” (i.e., less than 1 SD from the mean). Such an analysis can help to outline different actions that can be taken to improve outcomes: for example, for outliers, may need to sample some of their charts, and consider meeting with them 1:1 to discuss their outcomes and practice patterns; whereas for variability closer to the norm, the opportunity to improve is by improving standardization and systems.

LESSON LEARNED: Lack of reliable data can significantly limit LOS improvement efforts. As a result, it is challenging to make comparisons, identify realistic targets, and hold individuals and/or groups accountable.

LESSON LEARNED: In addition to having data, there needs to be a cogent plan for sharing the data with key physician groups and individuals. Such data sharing needs to be on an ongoing basis, and should feed into performance-driven contracts as well as requirements for re-credentialing.

LESSON LEARNED: The financial impact of improving LOS can be difficult to quantify. Rather than debating a specific “number”, hospital and clinical leaders should endeavor to improve performance to the point where real costs can be taken out of the system (i.e., nursing labor, supplies, testing, pharmacy) and/or beds turned over more quickly leading to increase in revenues.

Key Best Practices to Drive Improvement

- LOS Oversight – UR Committee or LOS Steering Committee:** This Committee provides the overall structure within which LOS effectiveness is discussed. The Committee helps to establish LOS targets for the institution, and serves to monitor the performance of physicians against those benchmarks. This Committee also helps to develop a process by which outlier physicians can be identified and held accountable for results.

LESSON LEARNED: At many institutions, the structure to address LOS is either missing or limited. Organizations should ensure that these committees are meeting regularly, with clear charters and reporting relationships, and that their charge includes specifically driving improvement in LOS.
- Multi-Disciplinary Rounds (MDRs):** The MDRs serve an important organizational function in bringing together the physician-nurse-case manager triad to discuss each of their respective patients on a daily basis. This leading practice ensures that the key team members are in synch about the care process and can quickly identify barriers to care coordination.

LESSON LEARNED: MDRs – as unwieldy as they can become with multiple additional disciplines joining – can be highly efficient. For example, in the best performing institutions, they often take no more than 1-2 minutes per patient.

LESSON LEARNED: Clinicians are often concerned about the amount of time that MDRs will take away from their clinical work. However, very shortly after implementation, they realize that MDRs can save them time by reducing subsequent need for communication.
- High LOS Case Review:** A group of clinical leaders -including representatives from medicine, nursing, and case management – should meet regularly to review “high LOS” cases. Such a review can be quite effective at finding and addressing barriers to discharge. The threshold for high LOS can be set differently by different organizations. The eventual goal is to review all cases greater than the projected LOS.

LESSON LEARNED: Organizations must not forget that this is an activity that will need to be ongoing. Inefficiencies in care are continually being reintroduced into the system.
- Proactively Targeting Discharge Dates - Anticipated Date of Discharge (ADOD):** Early during the hospitalization, organizations should assign a potential discharge date to each patient based on his/her primary diagnosis. This will help clinicians in understanding how efficient the care is expected to be for the typical patient.

LESSON LEARNED: “Don’t let perfect be the enemy of the good.” No patient is a typical patient, and we certainly don’t know in a prospective or real-time fashion which patient will fall out of the norm. However, using well established norms can help ground a clinical team’s shared expectations around care coordination.
- Discharge Appointments:** Establishing a set time for the patient and his/her family to anticipate discharge helps to bring the patient and family more squarely into the discharge planning process. This avoids last-minute delays in discharge that result from an unstated expectation that the patient or family member had about the inpatient stay; and also heads off the oft-stated concern of “family not available to take patient home.”

LESSON LEARNED: Surgical practitioners have long had a more standardized approach to the discharge process. Medical practitioners continue to feel that it is significantly more difficult for them to predict readiness for discharge. However, with a standardized discharge process in place - including anticipated discharge date along with an appointment for discharge, it’s possible to achieve some measure of predictability even for these patients.
- Discharge Checklist:** Creating a flowsheet of the essential steps that need to be completed prior to discharge is a helpful decision aide to the care team in ensuring that each item is taken care of in a timely manner. Checklists have been proven to aid the clinical flow process in numerous areas, but have not consistently been applied in the discharge process.

LESSON LEARNED: The essential tools of improvement should be brought into practice to help streamline complex clinical processes wherever possible.

LESSON LEARNED: The discharge checklist is a great tool to help ensure that patient’s post-discharge needs are also being met. This includes post-discharge appointment, interface with home care, and availability of medications.

Conclusion

Improving LOS is a long-sought-for outcome in US health-care institutions. The drivers for this have been various policy changes over the years that impact hospital reimbursement. Such pressures are only increasing in recent years as costs of care continue to rise, and reimbursements to hospitals declines. Within this White Paper, we have identified several best practices for improving LOS that organizations can leverage for their efforts, along with key lessons learned during our implementations of the same that can serve as a guidepost.

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