OFF THE BEATEN TRACK:

A ROAD MAP FOR EXPANDING SURGICAL CARE AT RURAL HOSPITALS

Sharing a Common Challenge: Sutter Amador Hospital

According to the American College of Surgeons, millions of Americans don't have access to a qualified surgeon in the event of a traumatic medical emergency. This problem is especially prevalent in rural areas, home to more than 14% of Americans.

Sutter Amador Hospital (SAH) sought to find a way to give its patients and community access to high quality, 24/7 acute care surgery services. The solution needed to be aligned with the hospital's mission, goals and culture.

Sutter Amador Hospital is part of the not-for-profit Sutter Health Network, which consists of 24 hospitals, five medical foundations and 34 outpatient surgery centers. The network operates integrated health care services in Amador County, Calif., 45 miles southeast of Sacramento, and provides 24,000 outpatient visits as well as care for 21,000 patients who come to its busy emergency department.

SURGICAL AFFILIATES
MANAGEMENT GROUP

The Reality of Acute Care Surgery Care for Millions of Rural Americans

While providing a range of much needed and high-quality health care services to its patients, at times SAH struggled with maintaining a cadre of available general surgeons. It was certainly not the only U.S. hospital to face this problem. According to "Looking for an Oasis," a 2012 study by the American College of Surgeons, more than 900 mostly rural counties have no access to a local surgeon, creating surgical deserts for about 9.5 million Americans. The problem continues to grow: Since 2010, 61 rural hospitals have closed, creating significant access problems for rural patients, most of whom are older, sicker and less affluent than their urban counterparts.

Patient care and outcomes often suffer because of this lack of access to surgeons. For example, patients getting one of the five most common orthopedic procedures at a critical-access hospital were 34% more likely to die within 30 days than those having the same procedure in a general hospital. Empirical evidence suggests that lack of experience and low volume of surgical procedures may create additional safety threats.

The Surgeon Landscape in Rural America

Why is there such a shortage of surgeons in rural America? There are many reasons. The American College of Surgeons notes that more than half of surgeons practicing in rural areas are nearing retirement. In addition, substantial numbers of new general surgeons choose to specialize, and because of the small number of patients in rural areas, there is not enough demand to support these specialty practices. Surgeons often choose to work in or near urban areas, where there are a wealth of professional opportunities for them and amenities, schools and resources for their families. Medical students who might consider rural surgery attend university-based surgical residencies in urban environments. Without exposure to and mentorship from rural practitioners, they often choose to stay in urban facilities.

Sutter Amador Hospital
Three-Year Performance Metrics

- » Inpatient, outpatient and total cases increased 250%
- » Volumes of laparoscopic procedures doubled and tripled
- » Average length of stay (ALOS) decreased
- » Hospital Case Mix Index (CMI) increased .0853%

General Surgery Data

Metric	2012 Pre-Program	2013 Partial Year	2014 Full Year	2015 Full Year
	Overall			
Inpatient Cases	129	248	266	296
Outpatient Cases	152	210	284	355
Total Cases	281	458	550	651
ALOS	6.45	4.99	5.26	5.68
CMI	2.0037	2.1106	2.3492	2.0890
Direct Cost/Case	10,327	10,393	10,794	10,324

Note: 2015 Data is YTD September 2015 and annualized for comparability. Direct cost per case is inflation adjusted based on overall CPI with 2012 as a base year.

Figure 1

The reality of the situation creates many challenges for hospitals and communities. Often elective surgeries are scheduled out of the area. Community residents may choose to simply travel to other locales for health care. Most troubling, even in emergencies, patients are often diverted 50 miles or more to other facilities.

Recognizing the seriousness of this situation for rural communities, some states are allocating funding to train and attract more surgeons to rural areas. For example, Minnesota supports rurally-focused

general surgery training and residence programs. The University of Minnesota recently developed a Rural Training Track and other universities in states including North Dakota and North Carolina have followed suit.

Changing the Paradigm: Sutter Amador and Surgical Affiliates Management Group

Committed to finding solutions, the leaders of SAH analyzed what they were losing and the hard costs of bringing on qualified surgeons. It was quickly recognized that surgical services add to a hospitals' bottom line. One rural surgeon generates roughly $2.7 million in revenue for a hospital at a cost of $1.4 million in wages, salaries and benefits. Surprisingly, and to the benefit of many, adding that surgeon also creates 26 local jobs.

SAH leaders began an intensive effort to address their need for qualified trauma surgeons. They had a strong and successful model to follow. In 2007, their affiliate hospital in the Sutter system, Sutter Medical Center, Sacramento (SMCS) launched a surgicalist program (also referred to as an acute care surgery program) through Surgical Affiliates Management Group, Inc. (Surgical Affiliates). A five-year study of the surgical hospitalist program published in the *Journal of American College of Surgeons* showed it had generated significant improvements, including:

» Length of stay for general surgery cases decreased by as much as 12% – from 6.5 days to 5.7 days.
» Complications were reduced 43% – from 21% to 12%.
» Readmissions decreased slightly. However, the key fact is that while length of stay decreased significantly, the readmission rate did not increase.
» Hospital costs decreased 31%, from $12,009 to $8,306, indicating potential savings of $2 million or more in a single year for a facility of this type and size.

Armed with an example of how the surgicalist program in this case had transformed hospital performance and addressed the surgeon shortage, SAH and Surgical Affiliates made a commitment to replicate this success at Sutter Amador, with 24/7 surgical teams and a collaborative and programmatic approach that would consistently improve both patient outcomes and hospital efficiency metrics.

The hospital had three challenges: 1) recruiting top-notch surgeons, 2) serving and retaining patients in its demographic, and 3) achieving long-term clinical and efficiency outcomes.

Hospital CEO Anne Platt collaborated closely with Surgical Affiliates President, Dr. Leon Owens, a respected trauma surgeon who had founded the company, to apply the same best practices that had transformed trauma care standards to acute care surgery.

Surgical Affiliates' team of experienced experts looked at the critical challenges facing SAH, including recruitment and the often difficult task of aligning physician and hospital goals. As the most experienced surgical hospitalist team in the U.S., the Surgical Affiliates team quickly realized what steps needed to be taken.

The first order of business was recruiting, specifically, finding physicians who sought work in a rural setting and committed to following the surgical hospitalist model, e.g., being comfortable with:

» Working under at-risk performance measures
» Collaborating with departments throughout the hospital to continually improve performance
» Decreasing variations in care, reducing readmissions and reducing complications by adhering to best practices in surgical care
» Ensuring stringent quality control and improvement

Results

Just three years into the program, SAH is already seeing significant outcome improvements and results. Refer to Figure 1 for noteworthy metrics.

The increase in volumes and improved metrics generated a positive ROI for the program.

Additional benefits include the ability to ensure 24/7 call coverage; a cap on skyrocketing payments to surgeons and locum tenens companies, thus ensuring greater predictability of expenses; and improvements in the overall responsiveness and timeliness of care.

And, another key metric in today's pay for performance world increased – patient satisfaction.

Anne Platt noted, "We now have a clinical partner that we can turn to with questions about further improvements, for help in refining our programs and in driving constant improvements in quality care and efficiency."

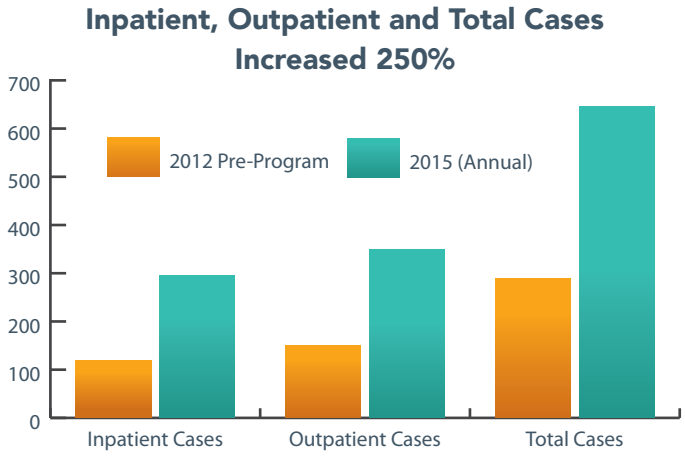

Figure 2

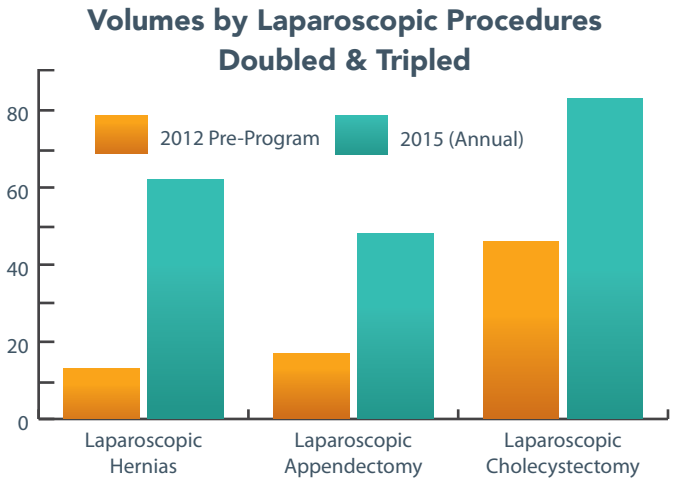

Figure 3

New Horizons for Sutter Amador

The success of the program has enabled SAH to look toward other advances. The hospital recently added an orthopedic surgicalist program and is considering applying to create a Level III trauma center.

Achieving this level of success took the alignment of all constituents' goals and a commitment to the new paradigm. Factors contributing to its success included that the program was full-service and led by surgeons who managed the integration and deployment. As a result, the surgicalist staff became part of the hospital's culture and team.

The need to bring quality surgical care to rural areas will not abate soon. However, as the Sutter Amador Hospital success highlights, the surgicalist hospitalist model works in a rural hospital environment to deliver acute care surgery 24/7 according to evidence-based guidelines, improving the quality of care, patient safety and hospital performance.

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ii. American College of Surgeons study, "Surgical Deserts in the U.S.: Places without Surgeons"
iii. *HealthLeaders*, "Rural Healthcare's Outlook is Heartening Despite Challenges," December 30, 2015
iv. *The Wall Street Journal*, "New Risks at Rural Hospitals," December 25, 2015
v. *New England Journal of Medicine*, "Physician Shortages in the Specialties Taking a Toll, March 2011 (http://www.nejmcareercenter.org/article/physician-shortages-in-the-specialties-taking-a-toll/)
vi. National Center for Rural Health Works study, "The Economic Impact of a Rural General Surgeon and Model for Forecasting Need," published Sept. 2010
vii. Ibid
viii. Ibid
ix. *The Journal of American College of Surgeons*, "Sustainability and Success of the Acute Care Surgery Model in the Nontrauma Setting," July 2014, Volume 219, Issue 1, Pages 90–98

Surgical Affiliates Management Group, Inc.
555 Capitol Mall, Suite 570
Sacramento, CA 95814

(800) 406-1120
info@samgi.com
www.samgi.com