

The Ambulatory Approach

Answering questions about the shift in cardiology from inpatient to outpatient procedures.

BY ANNE BEEKMAN, RN

There is no disputing the move toward outpatient procedures in the invasive cardiac procedural space. Percutaneous coronary intervention (PCI) shifted from 365,788 inpatient procedures in 2004 to 201,142 inpatient procedures in 2014.¹ This dramatic change represents a 45% decrease in inpatient procedures. Similar numbers can be seen in the electrophysiology service line; from 2004 to 2014, inpatient pacemaker implantations decreased by 49%, from 159,710 to 81,839.¹ According to the Physician/Supplier Procedure Summary report, 2014 was the first year that physicians were paid by Medicare for more outpatient than inpatient invasive cardiology procedures (Figure 1).¹

This outpatient shift highlights the maturation of PCI procedures and the implementation of best practices based on years of research and data. Procedures such as PCI are now performed with increased safety due to

the use of radial access, less contrast material, bleeding risk assessment, better anticoagulation options, and improved disposable products. In elective PCI, these improvements continued to shorten length of stay (to an overnight event for most patients). As a result, in 2008 the Centers for Medicare & Medicaid Services reclassified uncomplicated elective PCI procedures from inpatient to outpatient procedures.

SAFETY AND REGULATORY CONSIDERATIONS

The move to outpatient PCI procedures has been more of a paper or coding exercise than a clinical change. According to the Advisory Board, only 10% of programs have PCI patients who recover and are discharged in 8 hours or less.² Despite the change in coding practices, most elective PCI patients still stay overnight as outpa-

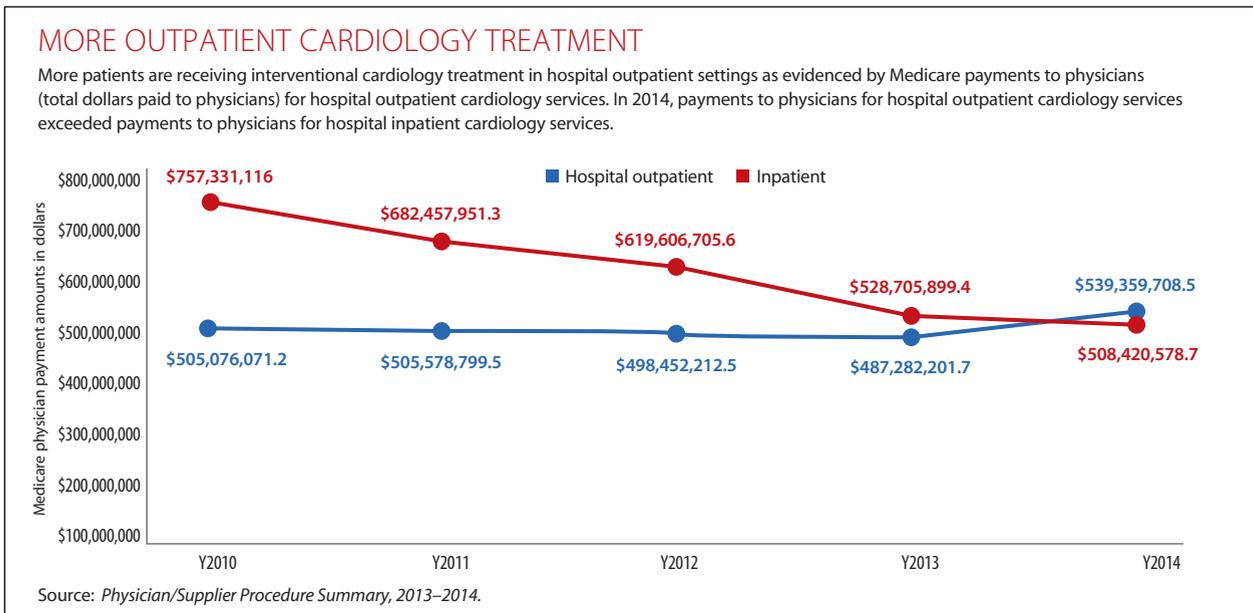


Figure 1. Medicare payments to physicians for hospital cardiology services. Reprinted with permission from Truven Health Analytics. Shifts in Cardiology Treatment. Media Health Leaders-Fact File. Accessed March 8, 2017.

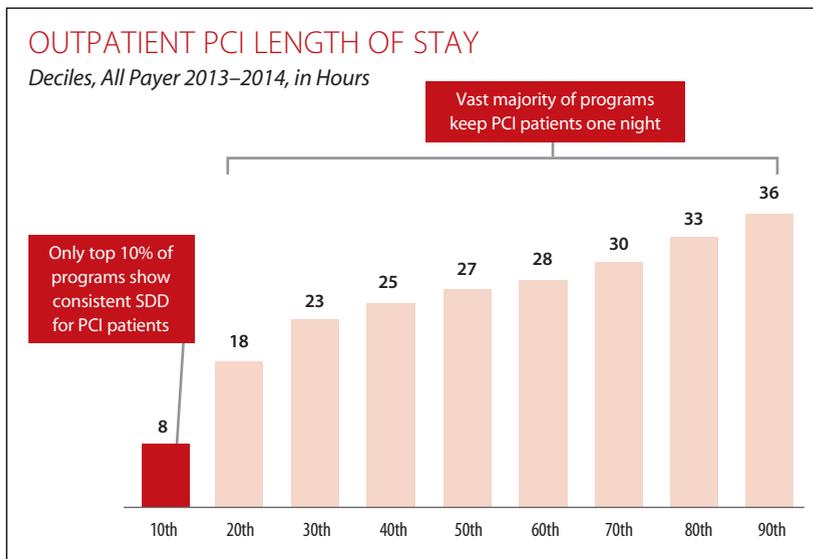


Figure 2. Outpatient PCI length of stay in hours. Reprinted with permission from Advisory Board. Why you should be working toward same-day discharges for PCI. <https://www.advisory.com/technology/crimson-continuum-of-care/members/expert-insights/same-day-discharge-for-pci>. Accessed March 8, 2017.

tients in inpatient hospital beds. The primary reason for the continued overnight stay is physician concern with the safety of same-day discharge (SDD) for PCI patients. Until this hurdle can be overcome, the ability to shift elective PCI outside the acute care hospital will not occur (Figure 2).

Criteria and research is available to help cardiologists understand the safety and economic implications of SDD for elective PCI patients. The most widely referenced SDD guidelines were released by the Society for Cardiac Angiography and Interventions (SCAI) in 2009.³ Programs that use these guidelines as a screening tool to determine SDD eligibility find approximately 20% to 40% of elective PCI patients are candidates for SDD. Having such variability in length of stay makes it difficult to effectively move this outpatient population to the ambulatory setting, where lengthy or overnight stays are not expected. Programs that achieve the SDD rate in the 80th to 90th percentiles use very streamlined criteria based on years of working with and adjusting SCAI's original guidelines. These programs determine discharge eligibility based on the patient's response to the procedure; they prep all patients to go home on the day of procedure, but the actual decision for discharge eligibility is not made until the procedure is complete. For many programs, until there is greater confidence in predicting SDD eligibility preprocedure, assignment to an ambulatory setting versus an acute care center will remain a challenge.

Patient safety and regulatory requirements drive the discussion regarding ability for PCI to migrate into the

ambulatory setting. State-by-state regulatory requirements must be carefully reviewed prior to embarking on ambulatory cath lab strategy. In addition to regulatory restrictions, other valid reasons exist as to why elective PCI still occurs almost exclusively in the acute care center. The barriers to moving elective PCI to the ambulatory setting are integration of cardiology programs with health systems, capacity in acute care cath labs, the growth of emergent and urgent PCI volumes operational issues around ambulatory cath labs, and the declining volumes of elective PCI work.

THE ECONOMICS OF AMBULATORY CATH LABS

Ambulatory cath labs were faced with challenges early on as reimbursement for diagnostic cath procedures was in a steady decline. During

the same time, ambulatory sites experienced a reduction in reimbursement while hospital reimbursement grew slightly. This economic picture led to many physicians either divesting in ambulatory labs or selling to the hospital system. The exception to this trend was ambulatory cath labs that performed both diagnostic cardiac and interventional peripheral procedures. Peripheral reimbursement in the ambulatory setting increased more favorably and earlier. As cardiology run cath labs began to decrease, the rate of integrated cardiology groups was steadily growing. These relationships contractually restricted the ability of employed physicians to compete directly with the health system employer. This changing landscape of reduced outpatient reimbursements for diagnostic cardiac procedures and integration of cardiologists with health systems created a negative economic picture for ambulatory PCI growth.

HOSPITALS ARE SLOW TO MOVE TO THE AMBULATORY SETTING

Most hospitals are experiencing an overall decrease in elective PCI volume, which has eliminated procedural capacity constraints in many cath labs. The development of an ambulatory cath lab is not a low-cost endeavor. Assuming there is available physical space in the ambulatory center for a cath lab suite, the cost of the x-ray, emergency equipment, and supporting gear can easily be \$2 million. But even when the acute care system has existing space in the hospital cath lab, moving diagnostic and PCI services to the ambulatory center becomes a difficult sell. Capital costs

TABLE 1. SAVINGS EXAMPLES: AMBULATORY SURGERY VERSUS HOSPITAL OUTPATIENT FACILITIES

Procedure	Market	Average Price:	
		Ambulatory Surgery Center	Hospital Outpatient Department
Cataract surgery	Charleston, West Virginia	\$2,932	\$5,762
	Evansville, Indiana	\$3,316	\$6,992
	Tulsa, Oklahoma	\$2,259	\$3,833
Knee arthroscopy	Fayetteville, North Carolina	\$7,658	\$11,575
	Charlotte, North Carolina	\$6,118	\$12,493
	Tulsa, Oklahoma	\$2,844	\$4,807
	Phoenix, Arizona	\$2,972	\$4,306

Source: Commercial Insurance Cost Savings in Ambulatory Surgery Centers. Reprinted with permission from Advancing Surgical Care Association. Miller S, Society for Human Resource Management. Study: using ambulatory centers reduces outpatient costs. <https://www.shrm.org/resourcesandtools/hr-topics/benefits/pages/ambulatory-centers-cost.aspx>. Accessed March 8, 2017.

are a consideration, but so is safe and effective staffing in the ambulatory setting. Any staffing model must ensure the cath lab team can function at a high level should an emergency occur and transport to the acute care center become necessary. This would require frequent exposure to acute events and/or simulation at regular intervals. Hospitals that are at cath lab capacity and have the staff and physician resources to cover ambulatory sites would be in the best position to consider ambulatory expansion for PCI.

The decline of predictable, elective PCIs has been replaced with a greater volume of urgent and emergent ST-segment elevation myocardial infarction (STEMI) and non-STEMI work. The impact of this change in patient population requires a cardiac interventionist and cath lab team to be near the hospital cath lab to manage frequent inpatient and ED add-ons. This has become such a priority that some hospitals staff the cath lab 24 hours a day, 7 days a week. The elective PCI patient is the intended patient for the ambulatory setting, but that volume has been declining. The reason for the decline in low-risk elective PCI has been attributed to improved medication management, drug-eluting stents, and appropriate use criteria.

THE CHALLENGE OF DECLINING ELECTIVE PCI VOLUME

The ambulatory setting needs the elective PCI volume to fund the business model. The hospital cath lab schedules use these same elective outpatients to begin their days until the inpatient rounds and test results are back and cath lab add-ons are generated. The inpatient add-ons from transfers, chest pain centers, and traditional inpatient units have grown to represent as much as 50% to 60% of the PCI volume in many cath labs. The reality of this scheduling situation is that the cardiac interventionists' case volume is heavily dependent on inpatient activity, making staffing an ambulatory center less appealing.

SUMMARY

The ambulatory setting consistently outperforms the hospital setting in the care of outpatients. The savings outlined in Table 1 highlight the work that has already been done in ophthalmology and orthopedics.⁴ Using claims data from 2015, one study estimates that 48% of procedures eligible for the ambulatory setting are performed in an ambulatory setting. If the additional 52% of eligible procedures were performed in an ambulatory site, the savings are estimated at \$41 billion.⁴

The challenges to moving elective diagnostic and interventional cardiac procedures from the hospital to the ambulatory setting are considerable. These challenges are equally countered by pressures to reduce the overall cost of care from both payers and consumers struggling with ever-growing out-of-pocket responsibilities. The ambulatory setting will be a natural progression for programs with the right regulatory requirements, mix of elective case volumes, capital funding, and physician and staff coverage. ■

1. Truven Health Analytics. Shifts in cardiology treatment. Media Health Leaders-Fact File. http://truven-health.com/Portals/0/Assets/fact-files/Shifts_Cardiology_Treatment_May_Fact_File_2016.pdf. Accessed March 8, 2017.

2. Advisory Board. Why you should be working toward same-day discharges for PCI. <https://www.advisory.com/technology/crimson-continuum-of-care/members/expert-insights/same-day-discharge-for-pci>. Accessed March 8, 2017.

3. Chambers CE, Dehmer GJ, Cox DA, et al. Defining the length of stay following percutaneous coronary intervention: an expert consensus document from the Society for Cardiovascular Angiography and Interventions. Endorsed by the American College of Cardiology Foundation. *Catheter Cardiovasc Interv*. 2009;73:847-858.

4. Miller S, Society for Human Resource Management. Study: using ambulatory centers reduces outpatient costs. <https://www.shrm.org/resourcesandtools/hr-topics/benefits/pages/ambulatory-centers-cost.aspx>. Accessed March 8, 2017.

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