Case Study #11—Using IGAM to Improve Documentation, Coding for TAVR and Structural Heart Procedures

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Editor's Note: This article is the eleventh installment in an ongoing series highlighting information governance case studies.

This case study highlights the use of the Information Governance Adoption Model's (IGAM)TM Analytics Competency and the three domains of the Certified Health Data Analyst (CHDA) skill set—Data Management, Data Analytics, and Data Reporting—as catalysts to improve documentation and coding related to structural heart procedures.

Sarasota Memorial Health Care System (SMHCS) is a not-for-profit county-owned healthcare system that is governed by a nine-member elected board. It began as a 32-bed hospital built in 1925 and is now one of the largest public health systems in Florida. SMHCS is anchored by an 829-bed hospital that is a Level II Trauma center. The main campus is located in the high-density center of Sarasota, FL and consists of the main hospital, a 44-bed comprehensive rehabilitation hospital, and a 16-bed adult and adolescent psychiatric hospital.

In addition to the main campus, the system also operates six urgent care centers, a free-standing emergency room, an outpatient surgery center, and seven outpatient healthcare centers. The urgent care and outpatient centers are geographically dispersed over SMHCS's service area which includes all of Sarasota County and parts of Manatee County in southwest Florida.

The SMHCS Clinical Documentation and Information Technology Governance Committee is chaired by the CIO and consists of multi-disciplinary representation including the chief medical officer, health information management (HIM) director, and clinical systems director as well as the directors of corporate finance, patient registration, patient financial services, laboratory, pharmacy, nursing, therapies, respiratory, food and nutrition, physician services, and revenue cycle.

This committee evolved from the Documentation Steering Committee that was originally organized to create infrastructure for strategic decision making related to the purchase, implementation, and deployment of information technology associated with clinical documentation within the electronic health record, ancillary documentation systems, document management of paper-based information, and integration of safety, data, and information integrity opportunities.

Over the last few years, this committee has evolved into its current form. Embracing the information governance (IG) philosophy regarding the management of all types of information throughout the enterprise, SMHCS is progressively moving toward establishing more detail, structure, and processes for IG-related projects that support the system's strategic, operational, regulatory, legal, risk, and environmental needs.

SMHCS' Structural Heart and Valve Clinic Team manages the care of people with complex valve disorders, such as aortic stenosis and mitral valve disease, and provides evaluation and support for inoperable or high risk patients who may be eligible for Transcatheter Aortic Valve Replacement (TAVR). The SMHCS Valve Clinic's clinical affiliation with Columbia University Medical Center provides 24/7 consultation between the SMHCS nationally recognized team of cardiovascular specialists and Columbia's Division of Cardiac Surgery, as well as accelerated access to clinical trials and the latest treatment options. SMHCS was one of the first sites in southwest Florida approved to offer TAVR and has performed more than 400 procedures since 2012. Other services offered include MitraClip and Watchman procedures. Medicare and most commercial insurers pay for TAVR on the basis of a two-tiered MS-DRG pairing.[1]

FY 2017 TAVR MS-DRGs

MS-DRG	MS-DRG Descriptions	Relative Weight	FY2017 Medicare Average Payment
266	Endovascular Cardiac Valve Replacement w MCC	8.5986	$50,053
267	Endovascular Cardiac Valve Replacement wo MCC	6.5575	$38,595

While clinically very successful, the SMHCS TAVR program reported an MCC capture rate of 39 percent for fiscal year 2016 compared to the 45 percent national average. Since the inception of the program, the cases were reviewed by the clinical documentation improvement (CDI) program and coded by HIM coding professionals in their normal workflows. Therefore, in order to identify possible opportunities for documentation and coding improvement for TAVR, Watchman, and MitraClip procedures, a collaborative multi-disciplinary team was established.

The membership of the Structural Heart Coding and Documentation Team was designed to combine expertise in relevant areas of clinical care, coding, documentation, workflow, auditing, and reimbursement:

- The structural heart clinical coordinator (ARNP) provides clinical expertise along with personal knowledge of each patient and physician.
- The advanced coding specialist (inpatient coder) member of the team provides coding understanding and experience.
- The CDI supervisor is an integral member of the Information Technology Governance Committee who handles many of the physician queries and acts as a translator between the coding and clinical members.
- The DNFC (discharged not final coded) coordinator's role is to understand and facilitate the necessary workflows designed by the team.
- The coding quality supervisor's role is to audit the work of the team and to validate results.
- The revenue cycle manager provides expertise on reimbursement and payment issues.
- The coding manager, who is CHDA certified, is responsible for data collection, reporting, and coordinating the team meetings.

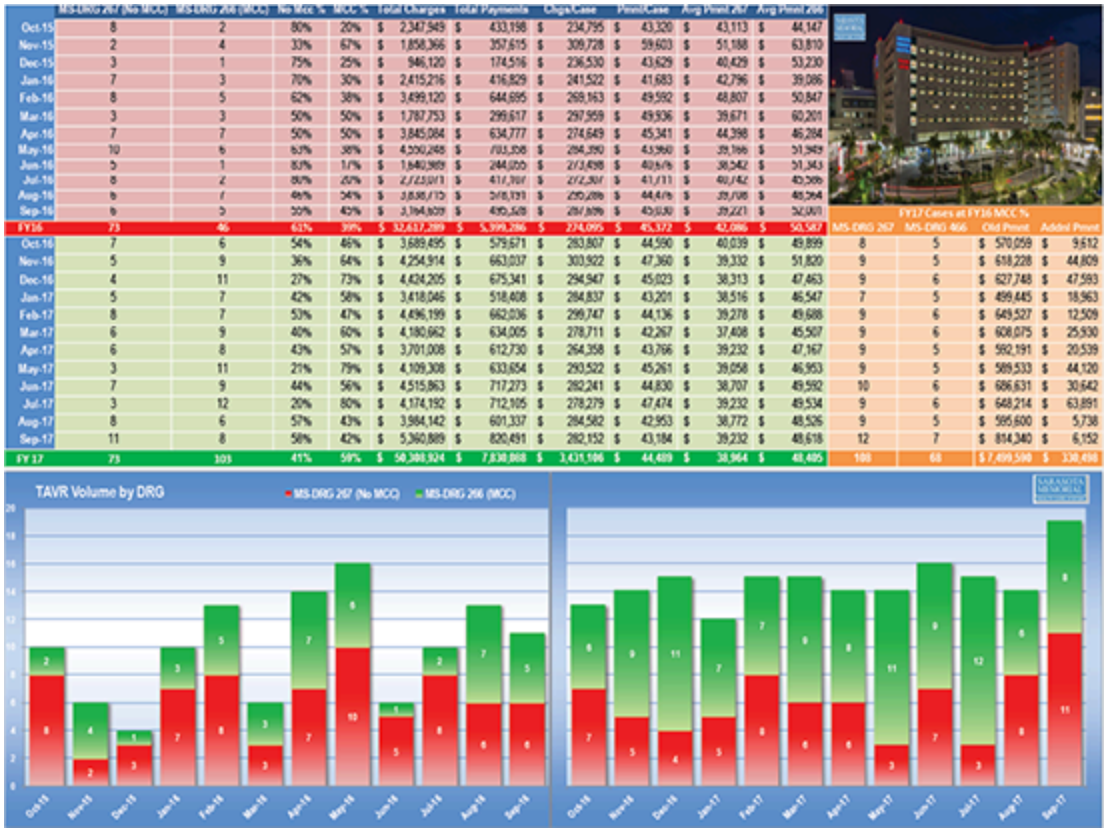
The team created a distinct workflow that identifies structural heart patients before admission. As soon as a patient appears on the schedule, the designated coding professional and CDI specialist partner together on both concurrent coding and clinical documentation review of the patient's medical record. The coding professional generates a working MS-DRG based on the existing documentation. Any gaps in documentation are addressed with physician queries composed by the CDI reviewer. Any clinical questions about the patient's condition or history are discussed with the clinical coordinator to ensure all comorbidities are documented and any discrepancies are clarified.

Monthly team meetings are centered on reviewing metrics, looking for discrepancies, trends, case discussion/review, and collaborative learning. Key performance indicators (KPIs) that are tracked include MCC capture rate, reimbursement impact, average charges per case, and average payment per case.

The KPIs are calculated from data exported from the coding abstract system. The source report queries the database for all accounts that contain a TAVR procedure code (02RF3KZ, 02RF38H, or X2RF332) for the specified time period. The following data elements are extracted for each account: visit number, discharge disposition, discharge date, length of stay, MS-DRG, procedure date, procedure codes and description, operating physician, total charges, and estimated payment. The report is then exported to an Excel spreadsheet for further manipulation and review.

To transform the data into useful information, this dashboard is maintained in the spreadsheet file (see the graphic below). The dashboard tracks and trends the case detail in one place. This information is reviewed at the monthly meetings and is reported up to senior leadership in revenue cycle and cardiology services.

SMHCS TAVR Coding and Documentation Outcomes Dashboard



	MS-DRG 267 (No MCC)	MS-DRG 266 (MCC)	No MCC %	MCC %	Total Charges	Total Payments	Charges/Case	Payment/Case	Avg Pymt 267	Avg Pymt 266
Oct-15	8	2	80%	20%	$ 2,347,949	$ 433,198	$ 234,795	$ 43,320	$ 43,113	$ 44,147
Nov-15	2	4	33%	67%	$ 1,858,366	$ 357,615	$ 309,728	$ 59,603	$ 51,188	$ 63,810
Dec-15	3	1	75%	25%	$ 946,120	$ 174,516	$ 236,530	$ 43,629	$ 40,429	$ 53,230
Jan-16	7	3	70%	30%	$ 2,415,216	$ 416,829	$ 241,522	$ 41,683	$ 42,796	$ 39,086
Feb-16	8	5	62%	38%	$ 3,499,120	$ 644,695	$ 269,163	$ 49,592	$ 48,807	$ 50,847
Mar-16	3	3	50%	50%	$ 1,787,753	$ 299,617	$ 297,959	$ 49,936	$ 39,671	$ 60,201
Apr-16	7	7	50%	50%	$ 3,845,084	$ 634,777	$ 274,649	$ 45,341	$ 44,398	$ 46,284
May-16	10	6	63%	38%	$ 4,200,248	$ 703,308	$ 284,350	$ 47,590	$ 39,766	$ 51,949
Jun-16	5	1	83%	17%	$ 1,840,989	$ 244,020	$ 273,498	$ 40,670	$ 38,542	$ 51,343
Jul-16	8	2	80%	20%	$ 2,723,013	$ 411,701	$ 272,301	$ 41,171	$ 40,142	$ 45,586
Aug-16	9	7	56%	44%	$ 3,838,713	$ 618,191	$ 255,914	$ 41,213	$ 39,598	$ 48,564
Sep-16	9	5	64%	36%	$ 3,364,809	$ 495,568	$ 280,401	$ 41,297	$ 39,221	$ 52,001
FY16	73	46	61%	39%	$ 32,637,289	$ 5,399,286	$ 274,095	$ 45,372	$ 42,086	$ 50,567
Oct-16	7	6	54%	46%	$ 3,689,495	$ 579,671	$ 263,807	$ 44,590	$ 40,039	$ 49,899
Nov-16	5	9	36%	64%	$ 4,254,914	$ 663,037	$ 303,922	$ 47,360	$ 39,332	$ 51,820
Dec-16	4	11	27%	73%	$ 4,424,205	$ 675,341	$ 294,947	$ 45,023	$ 38,313	$ 47,463
Jan-17	5	7	42%	58%	$ 3,418,046	$ 518,408	$ 284,837	$ 43,201	$ 38,516	$ 46,547
Feb-17	8	7	53%	47%	$ 4,496,199	$ 662,036	$ 299,747	$ 44,136	$ 39,278	$ 49,688
Mar-17	6	9	40%	60%	$ 4,180,662	$ 634,005	$ 278,711	$ 42,267	$ 37,408	$ 45,507
Apr-17	6	8	43%	57%	$ 3,701,008	$ 612,730	$ 264,358	$ 43,766	$ 39,232	$ 47,167
May-17	3	11	21%	79%	$ 4,109,308	$ 633,654	$ 293,522	$ 45,261	$ 39,058	$ 46,953
Jun-17	7	9	44%	56%	$ 4,515,863	$ 717,273	$ 282,241	$ 44,830	$ 38,707	$ 49,592
Jul-17	3	12	20%	80%	$ 4,174,192	$ 712,105	$ 278,279	$ 47,474	$ 39,232	$ 49,534
Aug-17	8	6	57%	43%	$ 3,984,142	$ 601,337	$ 284,582	$ 42,953	$ 38,772	$ 48,526
Sep-17	11	8	58%	42%	$ 5,360,889	$ 820,491	$ 282,152	$ 43,184	$ 39,232	$ 48,618
FY 17	73	103	41%	59%	$ 50,388,924	$ 7,830,868	$ 3,431,106	$ 44,489	$ 38,964	$ 48,485

FY17 Cases at FY16 MCC %			
MS-DRG 267	MS-DRG 266	Old Pymt	Added Pymt
8	5	$ 570,059	$ 9,612
9	5	$ 618,228	$ 44,809
9	6	$ 627,748	$ 47,593
7	5	$ 499,445	$ 18,963
9	6	$ 649,527	$ 12,509
9	6	$ 608,075	$ 25,930
9	5	$ 592,191	$ 20,539
9	5	$ 589,533	$ 44,120
10	6	$ 686,631	$ 30,642
9	6	$ 648,214	$ 63,891
9	5	$ 595,600	$ 5,738
12	7	$ 814,340	$ 6,152
103	68	$ 7,499,590	$ 330,490

The main component is the table that tracks MS-DRG frequency by month, the MCC capture rate, and the estimated reimbursement impact. To measure year over year impact, fiscal year 2017 case volumes were evaluated at the fiscal year 2016 MCC capture rate. Payment for current cases is then compared to current cases at the previous MCC capture rate. The result is the payment impact realized due to the efforts of the team. There are also graphs that track total charges by month as well as total payments by month.

Using Excel to create the dashboard allows for use of CountIf, AverageIf, and SumIf statements to evaluate concatenation fields in the imported data. These created fields combine discharge month, discharge year, fiscal year, and DRG to categorize accounts.

The team's work has resulted in an increase in the MCC capture rate for TAVR from 39 percent in fiscal year 2016 to 59 percent in fiscal year 2017. This gain is amplified by the fact that procedure volume has increased by 48 percent over the same period.

A formalized information governance program requires ongoing monitoring and measurement to ensure that program structures are being followed and the programs realize significant improvement. The IGAM Analytics Competency requires the ability to use data and information to achieve its goals and to realize the value of the information gathered, measured, and monitored. By creating a focused multi-disciplinary team, developing a process, and consistently reporting on the identified metrics, the SMHCS team has achieved their goals and has recognized a significant improvement in results. With the success of the Structural Heart Team, SMHCS is currently looking for additional opportunities to use multidisciplinary data analytics to make improvements to complex coding and documentation processes.

Note

1. Centers for Medicare and Medicaid Services. “FY 2017 Hospital Inpatient Prospective Payment System (IPPS) Final Rule.” www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/AcuteInpatientPPS/FY2017-IPPS-Final-Rule-Home-Page.html.

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