

Documentation and coding for trauma and surgical critical care: updates and tips

Jordan Michael Kirsch ¹, Samir M Fakhry ², Andrew Bernard ³,
Gail T Tominaga ⁴¹Surgery, Westchester Medical Center, Valhalla, New York, USA²Clinical Services Group, HCA Healthcare, Nashville, Tennessee, USA³Surgery, University of Kentucky Medical Center, Lexington, Kentucky, USA⁴Surgery; Trauma Service, Scripps Memorial Hospital La Jolla, La Jolla, California, USA**Correspondence to**

Dr Gail T Tominaga; tominaga.gail@scrippshealth.org

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ABSTRACT

Clinical documentation is an essential part of medical practice. Medical records serve as a durable testament of care provided and are fundamental to communication among providers. Medical records provide justification and support for healthcare coding and billing for providers and hospitals and also provide evidence in regulatory and legal proceedings. Here, the authors emphasize the importance of clinical documentation in support of both professional and hospital billing and address two areas of recent regulatory changes: Operative coding for hernia operation and professional coding for critical care. The important role of provider documentation in supporting organizational revenue and quality is also discussed.

INTRODUCTION

Physician and advanced practice provider (APP) documentation is essential to healthcare. Accurate clinical care, communication among providers, quality and performance improvement, regulatory and legal proceedings, and reimbursement rely on the medical record. Timely and thorough clinical documentation is particularly critical for billing purposes and delays can diminish its accuracy.¹

Reimbursement hinges on the precise and comprehensive description of clinical services provided. Physicians and APPs are most familiar with documentation for professional billing, measured in relative value units (RVUs). Professional billing translates to the work effort of individuals and groups. RVUs may be used to set performance targets, compensation, to justify recruitment, or to reward exceptional work effort. As acute care operation rightly directs its attention to the value of our unique professional work and the amount of work that one surgeon should perform, accurate measures of clinical work are becoming even more important.^{2,3}

Although providers often focus on RVU generation and individual clinical performance, their most important contribution may be the revenue paid to the organization for an encounter, analyzed by the Medicare Service-Diagnosis Related Group (MS-DRG) which is many-fold larger than professional fees generated. Hospital revenue is justifiably greater since RVUs analyze payment to an individual whereas DRG payment subsidizes all other components of the episode of care. Although an individual provider's documentation depicts their work, that same documentation also contributes significantly to reimbursement for the organization.

Acute care surgeons care for high volumes of seriously ill patients and therefore can make important contributions to hospital revenue.⁴

Though surgeons are aware of the importance of medical record documentation, many surgeons, especially those early in their career, think inadequately prepared.⁵ Recent changes in documentation requirements for billing professional services make it imperative that surgeons have an updated and solid understanding of the principles. This article reviews the pivotal role of clinical documentation in support of both professional and hospital billing, focusing on recent regulatory changes in two areas: Operative coding for hernia operation and professional documentation and coding for critical care. The important role of provider documentation in enhancing organizational revenue and maintaining quality standards is also discussed.

CONTEMPORARY HERNIA CODING

Hernia operation represents a significant portion of most acute care surgeons' elective and emergent operative volume and productivity. Key changes to the 2023 Current Procedural Terminology (CPT) codes made the coding for these procedures distinct from other general surgical procedures.⁶ Failure to adapt dictation and billing practices can lead to a substantial loss of productivity and reimbursement. The changes focus on two main areas: Coding of the procedure and elimination of the 90-day global period. Explanations of the rationale behind the changes are addressed in a recent American College of Surgeons Bulletin and are beyond the scope of this article.⁷

Epigastric, incisional, Spigelian, umbilical, and ventral have all been classified as "anterior abdominal hernias". Separate codes for open, laparoscopic, or robotic approaches, have been eliminated and a single set of new codes was created. Parastomal hernias now have two CPT codes for reducible and incarcerated/strangulated. Inguinal, femoral, and lumbar hernia coding remains unchanged. The mesh implantation code was removed, as it is assumed mesh is used in most repairs. The add-on code for infected mesh removal remains unchanged (11008) and a new one for removal of uninfected mesh was added (49623). The essential elements now include hernia size, initial or recurrent, and reducible or incarcerated/strangulated status. Summary of definitions of new CPT codes and work RVU (wRVU) are noted in tables 1,2. As a reminder, lysis of adhesions remains included with the hernia repair and a separate code for laparoscopic or open enterolysis

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Table 1 New 2023 anterior abdominal wall hernia CPT codes, approximate wRVUs, and global period. wRVUs may vary by region

Initial versus recurrent	Size	Reducible versus incarcerated or strangulated	CPT	wRVU	Global Period
Initial	<3 cm	Reducible	49591	6.23	0
		Incarcerated/strangulated	49592	8.85	0
	3–10 cm	Reducible	49593	10.73	0
		Incarcerated/strangulated	49594	14.08	0
	>10 cm	Reducible	49595	14.58	0
		Incarcerated/strangulated	49596	19.53	0
Recurrent	<3 cm	Reducible	49613	7.76	0
		Incarcerated/strangulated	49614	10.72	0
	3–10 cm	Reducible	49615	11.99	0
		Incarcerated/strangulated	49616	16.27	0
	>10 cm	Reducible	49617	16.77	0
		Incarcerated/strangulated	49618	23.71	0

CPT, Current Procedural Terminology; wRVUs, work relative value units.

is not appropriate. However, if the lysis is extensive and requires substantial time and effort, a –22 modifier, “increased procedural service” may be used. The amount of increased payment will vary by payer but is typically 15% to 20%.

One solution to make this transition easier is to take a cue from the Commission on Cancer and use synoptic operative reporting, in which a series of discrete fields are answered as part of the operative note.⁸ This is used to ensure all essential elements are included in each operative report. A well-written statement of increased complexity can be included to justify modifier-22 and decrease denials.

Hernia size should be measured prior to operation/dissection and may be reported from a CT scan. Multiple defects <10 cm apart should all be measured as a single defect. If ≥ 10 cm apart, the individual hernia diameters should be summed. The incarcerated/strangulated codes should be used for multiple hernias if one or more are incarcerated/strangulated and the recurrent code should be used if one or more of the hernias are recurrent. If no size is documented, the smallest size code is used.⁹

Recent CMS changes affecting professional coding and billing for MDs and APPs

For documentation, coding and billing, critical care is care rendered to critically ill or injured patients under specific conditions. Trauma and acute care providers provide significant amounts of critical care and managing a variety of seriously ill and injured patients and are able to generate significant charges for that work.^{10 11} Much of that care may qualify for time-based critical care CPT Evaluation and Management (E&M) codes

99291 and 99292. 99291 has a wRVU value of 4.5, the highest wRVU for any E&M code.

Based on current Centers for Medicare and Medicaid Services (CMS) requirements¹² all four of the following conditions must be met for a provider (physician or qualified non-physician provider (NPP)) to bill for critical care services (items in quotations are exact language from the CMS Carrier’s Manual):

1. Clinical condition: “Direct delivery by a physician or NPP of medical care for a critically ill/injured patient in which there is acute impairment of one or more vital organ systems such that there is a probability of imminent or life-threatening deterioration of the patient’s condition.”¹²
2. Treatment condition: “It involves high complexity decision-making to treat single or multiple vital organ system failure and/or prevent further life-threatening deterioration of the patient’s condition. Critical care may be furnished on multiple days and is typically furnished in a critical care area which can include an intensive care unit or emergency care facility.”¹²
3. Full attention condition: “...requires the full attention of the physician or NPP, for any given time period spent providing critical care services, the practitioner cannot provide services to any other patient during the same period of time.”¹²
4. Documentation of time condition: Including a statement such as: Critical care time of XX minutes excluding procedures.

Beginning in 2022, CMS introduced a number of changes that affect documentation, coding and billing for trauma and acute care operation. As one of the new requirements, an entire additional 30 minutes must be completed to “earn” CPT 99292. In

Table 2 New/revised 2023 CPT codes related to hernia repair, approximate wRVUs, and global period. wRVUs may vary by region

Procedure	Qualifier	CPT	wRVU	Global Period
Parastomal	Reducible	49621	14.33	0
Parastomal	Incarcerated/strangulated	49622	17.84	0
Mesh removal	Infected	11008	5.23	N/A
Mesh removal at time of hernia repair	Not Infected	49623	3.92	N/A
Implantation of mesh for delayed closure of defects	Due to soft tissue infection or trauma	15778	7.37	0
Suture or staple removal	Either/or	15853	0	N/A add on to E/M code
Suture AND staple removal	Both	15854	0	N/A add on to E/M code

CPT, Current Procedural Terminology; E/M, evaluation and management; N/A, not assayed; wRVUs, work relative value units.

other words, at least 104 minutes of qualifying critical care must be rendered for billing both 99291 and 99292:

...CPT code 99292 can only be reported by a practitioner in the same specialty and group when an additional 30 minutes of critical care services have been furnished to the same patient on the same date (74 min+30 min = 104 total min).¹²

Note that 99291 can only be used once by a practitioner and their partners in the same specialty under the same tax ID number:

CPT code 99291 will be used only once per date even if the time spent by the practitioner is not continuous on that date. Thereafter, the physician or NPP will report CPT code 99292 for additional 30-minute time increments provided to the same patient.¹²

Prior to the 2022 changes, CMS rules required that a practitioner complete 30 consecutive minutes to qualify for the 99291 E&M code. The new rules now allow multiple practitioners from the same practice to accumulate the necessary 30 minutes to qualify for 99291.

When one practitioner begins furnishing the initial critical care service but does not meet the time required to report CPT code 99291, another practitioner in the same specialty and group can continue to deliver critical care to the same patient on the same date. The total time spent by the practitioners is aggregated to meet the time requirement to bill CPT code 99291.

Once the cumulative required critical care service time is met to report CPT code 99291, CPT code 99292 can only be reported by a practitioner in the same specialty and group when an additional 30 minutes of critical care services have been furnished to the same patient on the same date (74 min+30 min = 104 total min).¹²

Another important change by CMS in 2022 relates to split/shared services. Prior to 2023, critical care was not eligible for split/shared services. A physician and an NPP could not collaborate on generating the same critical care E&M code (99291 and 99292). Under the new rules, billing for split/shared services for critical care is now allowed¹² under the following conditions:

1. No changes in how services qualify as critical care.
2. Critical care time is the sum of MD and NPP time spent providing critical care.
3. Whomever does >50% (substantive portion) of the critical care time bills for the critical care.
4. The new modifier -FS is required for all split/shared services coding.

The rules for split/shared services in non-critical care settings as originally introduced called for the “substantive portion” of care to be defined by history, or examination, or medical decision-making, or more than half of the total time for 2022 and only by “more than half the total time” for 2023 and beyond. The transition to using only time for the substantive portion has now been delayed and history, or examination, or medical decision-making, or more than half of the total time can still be used in the non-critical care setting pending a final decision from CMS.^{13 14}

In 2022 a new modifier (-FT) was added for critical care billing in the postoperative period (the “global” period) which may be provided by the same surgeon who performed the operation (or member of their practice) as long as the services meet the above-mentioned conditions.^{12 15 16} The new rules for 2022 and beyond now require a modifier (-FT) in such situations:

Preoperative and/or postoperative critical care may be paid in addition to the procedure if the patient is critically ill (meets the definition of critical care) and requires the full attention of the physician, and the critical care is above and beyond and unrelated

to the specific anatomic injury or general surgical procedure performed (for example, trauma, burn cases).

When the critical care service is unrelated to the procedure, **append the modifier -FT**: unrelated evaluation and management (E/M) visit on the same day as another E/M visit or during a global procedure (preoperative, postoperative period, or on the same day as the procedure, as applicable).¹²

A further change introduced in 2022 relates to the transfer of postoperative care from the surgeon to an intensivist and describes modifiers that must be used in that situation:

If care is fully transferred from the surgeon to an intensivist (and the critical care is unrelated), modifiers -54 (surgical care only) and -55 (postoperative management only) must also be reported to indicate the transfer of care.

The surgeon will report modifier -54.

The intensivist accepting the transfer of care will report **both modifier -55 and modifier -FT**.

As usual, medical record documentation must support the claims.¹²

The changes described above are meaningful and not the last changes in the coming years. Opportunities for trauma and acute care operation practices to remain financially viable remain substantial and continue to require careful monitoring of new developments from payers, frequent education of practitioners and coding/billing staff and careful documentation in support of all submitted charges. Adjustments to a team’s allocation of resources may be advantageous for some practices depending on their needs and the type of patients they encounter most frequently. As always, providing patients with high-quality, compassionate care remains the critical underpinning of any successful practice regardless of other considerations.

HOW PROVIDER DOCUMENTATION AFFECTS ORGANIZATIONAL REVENUE AND QUALITY

For most insurers, reimbursement to healthcare organizations for inpatient care is not analyzed by expenses. Instead, reimbursement for inpatient care is analyzed by prespecified payment rates according to diagnosis codes, MS-DRG’s. Each MS-DRG has an associated weight. Higher MS-DRG weight indicates a higher expected complexity of care and therefore conveys higher payment. Payments are fixed according to hospital-specific payment rates, regardless of expenses. MS-DRG weight is also used to calculate the case mix index (CMI). CMI is the value of all DRG weights across a population of inpatients, divided by the number of discharges. CMI is a sort of “mean DRG weight” and is used by CMS as an indicator of the complexity of care a hospital delivers.

Clinical coders carefully review the medical record, read entries of providers, and catalog diagnoses. Since MS-DRG weight analyzes payment, providers play an essential role in the financial health of an organization through their documentation. However, if providers do not explicitly document diagnoses in a form that a coder can identify as a certain MS-DRG, no such MS-DRG will be submitted. For example, if a provider is treating a patient for hypokalemia but only documents, “BMP reviewed, K replaced”, hypokalemia will not be coded and factored into billing. If a provider documents “low blood pressure, blood products given” rather than using the term “shock”, revenue will be lost. See [table 3](#). Explicit, accurate coding language must be used. Clinical coders are inherently conservative when coding for billing purposes because coding inappropriately can be met with penalties, loss of eligibility or membership with a payer or even legal ramifications.

Table 3 Clinical language versus diagnostic statements

Clinical language (not acceptable for billing)	Diagnostic statement (billable)
Hypotension, intravenous fluid resuscitation, vasopressors	Septic shock, hypovolemic shock, etc
K+—low, repleted, magnesium low—replaced	Hypokalemia, hypomagnesemia
ABG 7.22/68/44; will treat accordingly	Acute hypoxic respiratory failure, acidosis/alkalosis
Hypoxia, increased O2 requirements, slow to wean O2 to RA after operation	Acute hypoxic respiratory failure
Hemoglobin 5.2; transfused	Acute or chronic blood loss anemia
Emaciated; cachexia; labs with low total protein, low serum albumin; nutrition supplements started	Malnutrition (specify acuity: mild, moderate, severe)

ABG, arterial blood gas; RA, room air.

Not only must accurate codable diagnoses be used, but the diagnoses must be as specific as possible. What kind of shock? Hemorrhagic? Septic? Neurogenic? If not specified, a diagnosis of “Undifferentiated shock” might be coded and would not generate the appropriate MS-DRG and therefore the appropriate weight and reimbursement. What kind of respiratory failure? Hypoxic, hypercarbic or both? What kind of malnutrition? Mild, moderate or severe? What stage of chronic kidney disease (CKD)? Or is there acute kidney injury (AKI) on CKD? What type of heart failure? Acute or chronic? Systolic or diastolic? Each of those scenarios has a different MS-DRG weight because each is different in its complexity of care and reimbursement.

Non-physician and non-APP documentation does not code to billable MS-DRG’s. For example, “malnutrition” assessed and documented by dietitians will not be coded. Gait abnormalities documented by physical therapists will not be coded as MS-DRG’s. The physician or APP must include these diagnoses in their own documentation. Similarly, and perhaps even more surprisingly, findings by diagnosticians do not code as MS-DRG’s. “Adenocarcinoma” in a pathological report or “pleural effusion” in a radiology report will not be billed unless written by the provider in a note.

MS-DRG’s can be modified to a higher weight based on clinical factors. Increased DRG weight and therefore reimbursement

might be appropriate if a clinical case is more complex than average. For example, a young healthy patient with a tibia fracture might require one care pathway and group of resources, whereas a patient with a tibia fracture who also has decompensated systolic heart failure will require vastly more resources. Every patient will have a base MS-DRG, in this case, “tibia fracture”. By further documenting acute and chronic medical problems like those shown in table 3, the MS-DRG becomes “modified” to include the complication or comorbid condition (CC, e.g., acidosis, figure 1) or major complication or comorbid condition (MCC, for example, hemorrhagic shock). Each of the three levels (non-CC/MCC, CC, or MCC) carries its own weight and reimbursement. These three possible weights for any given MS-DRG are called triplets. A case scenario showing the impact of the documentation on converting a CC case to an MCC case is shown (figure 2). Clinicians must understand that being attentive to clinical documentation as a mechanism for achieving proper reimbursement is vital to the viability of healthcare organizations. Such payments are the resources we use to care for our patients. Without this revenue, organizations cannot maintain the necessary staff, facilities, and supplies.

Accurate diagnosis coding also affects quality measures. For example, patients with acute intra-abdominal infection who present with acute or chronic organ failure will have a longer

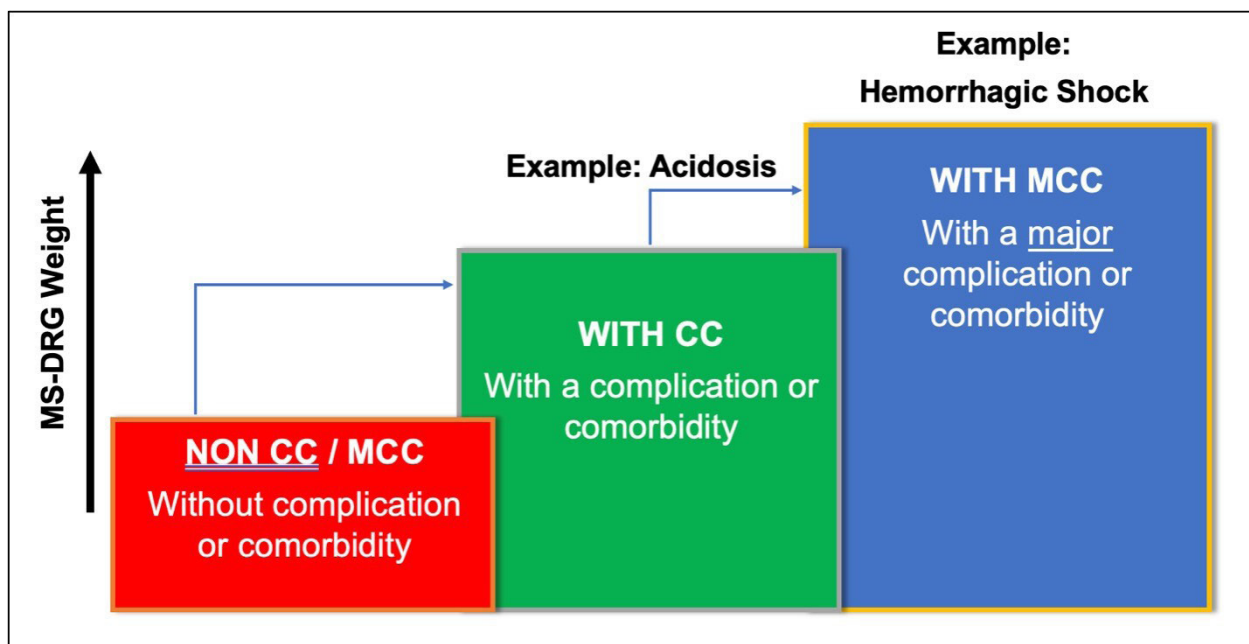


Figure 1 Documenting complications and comorbidities changes the DRG weight. Common acute and chronic medical diagnoses may constitute CC’s or MCC’s. If documented accurately, CC’s and MCC’s increase the base MS-DRG weight. CC, complication and comorbidity; MCC, major complication or comorbidity; MS-DRG, Medicare Service-Diagnosis Related Group.

Case Example: <i>Patient assaulted. Arrived as a trauma activation. Operated emergently: splenectomy and repairs of colon and stomach.</i>			
	Documentation as Written	Accurate Documentation	Financial Impact
Secondary Diagnosis	Liver laceration, serosal injury to colon & stomach, traumatic hemothorax, multiple rib fractures pulmonary contusion, ulna and spine fractures	Hemorrhagic shock & Acute hypoxic respiratory failure** **either would change weight	
DRG Change	Other OR Procedures for Multiple Significant Trauma w/ CC Weight 4.2054	Other OR Procedures for Multiple Significant Trauma w/ MCC Weight 7.4208	<i>Increased case weight by 3.2154</i>
Reimbursement	\$31,711.84	\$55,066.94	\$23,355.1 Increase

Figure 2 . Example of effect of accurate documentation of MCC's on MS-DRG weight. Patients with acute and chronic physiologic abnormalities like acute hypoxic respiratory failure and hemorrhagic shock are more complex and demand more healthcare resources. Accurately documented CC's and MCC's assures healthcare organizations gain the revenue necessary to provide care. CC, complication and comorbidity; MCC, major complication or comorbidity; MS-DRG, Medicare Service-Diagnosis Related Group; OR, operating room.

length of stay, more complications, and higher mortality than those who present without acute or chronic organ failure. Since quality dashboards and scorecards rely on the medical record, accurate quality measures require complete, accurate, and timely documentation.

Complexities of healthcare documentation and billing have increased. Providers should maintain a basic understanding of the principles of clinical documentation and should support efforts to achieve proper reimbursement. However, few providers can maintain a working knowledge of all the rules around coding. Coders are literal and err toward caution. To create a crosstalk between providers and coders, many organizations have developed clinical documentation integrity (CDI) teams. These teams, usually comprised of nurses, physicians, APPs, and other clinicians, review medical records and identify potential opportunities for better documentation. CDI teams use clinical queries to clarify ambiguous documentation. In doing so, CDI teams help clinicians learn, help coders accurately code case complexity and help organizations realize the reimbursement that is appropriate for the complexity of care they are delivering.

CONCLUSION

Clinical care, quality improvement, regulatory oversight and legal standards are all supported by clinical documentation. Since both RVUs and DRGs depend on documentation, neither providers nor organizations will achieve their full financial potential and therefore be best positioned to care for patients, if documentation is inadequate. Individuals, professional groups and organizations depend on each other, each succeeding through the other's success. Surgeons and surgical teams must be familiar with the principles of documentation and commit to diligently upholding these principles for providers and organizations to remain vital and patients to be served. Finally, maintaining a close relationship between physicians, professional billers and coders is essential to ensure optimal reimbursement and minimizing denials.

X Jordan Michael Kirsch @jordanmkirsch

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ORCID iDs

Jordan Michael Kirsch <http://orcid.org/0000-0001-8314-1180>

Samir M Fakhry <http://orcid.org/0000-0002-6781-0863>

Andrew Bernard <http://orcid.org/0000-0001-6026-1286>

Gail T Tominaga <http://orcid.org/0000-0002-4185-1739>

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