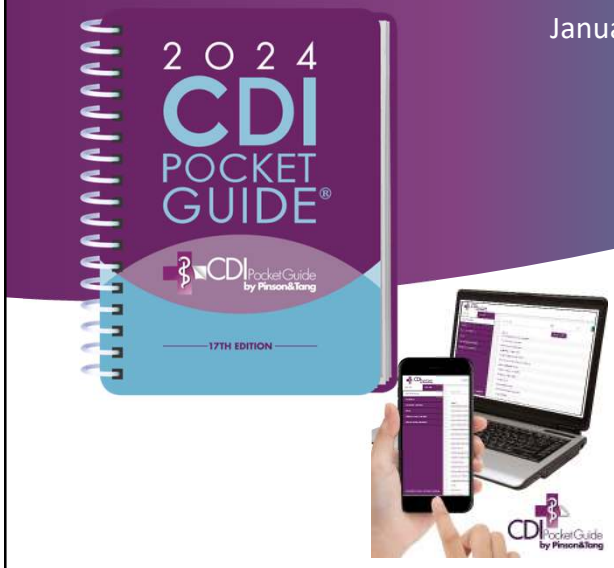

January 25, 2024

Traumatic Injuries & Fractures Part 1

Pinson&Tang

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About Us

Richard Pinson

MD, FACP, CCS, CDIP

Dr. Richard Pinson is a physician, educator, administrator, and healthcare consultant. He practiced Internal Medicine and Emergency Medicine in Tennessee for over 20 years having board certification in both.

Cynthia Tang

RHIA, CCS

Cynthia brings over 35 years of experience in coding and clinical documentation integrity, and health information management. For over 30 years she has traveled across the country implementing successful and sustainable coding and CDI programs in hundreds of hospitals.

CDI Pocket Guide by Pinson&Tang

We created the **CDI Pocket Guide®** in 2008 because we wanted to provide this information to all hospitals, large or small. At the time, the only way to receive training in this field was with large-scale, expensive consulting projects. We thought we could bring this pocketful of information with the clinical criteria to identify important diagnoses to any individual who was interested in working in the CDI and coding field. Our CDI Pocket Guide® quickly became a best-selling book and an industry standard, and many consider it to be their CDI "bible".

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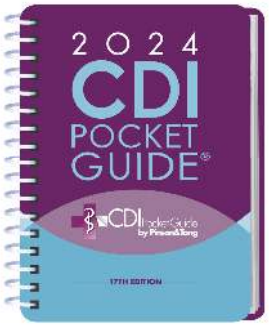

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Trauma
Part 1

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Agenda

- Injuries, Open Wounds, Fractures
- Official Coding Guidelines
- Selection of the Principal Diagnosis
- Multiple Significant Trauma DRGs
- Case Studies
- Q&A

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ICD-10 Classification

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Chapter 19: Injury, Poisoning, and Certain Other Consequences of External Causes (S00-T88)

S00-S99	**Injuries to body sites**
T07	Injuries involving multiple body regions
T14	Injury of unspecified body region
T15-19	Effects of foreign body entering through natural orifice
T20-T32	Burns
T33-T34	Frostbite
T36-T50	Poisoning and adverse effect of drugs and biological substances
T51-T65	Toxic effects of non-medicinal substances
T66-T78	Other and unspecified effects of external causes
T79	**Certain early complications of trauma**
T80-T88	Complications of surgical and medical care NEC

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ICD-10 Classification

Traumatic Injuries (S00-S99)

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Three main terms to describe traumatic injuries:

Term	Can be further specified and classified as
Injury	Abrasion, strain, sprain, contusion, dislocation
Open Wound	Laceration (cut), puncture wound, open bite, traumatic amputation, avulsion
Fracture	Closed (default) or open; displaced (default) or non-displaced

"Unspecified injury" codes should not be assigned when a more specific type of injury is documented.

OCG: "Codes titled 'unspecified' are for use when the information in the medical record is insufficient to assign a more specific code."

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ICD-10 Classification

Open Wounds with Penetration into a Cavity

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Unspecified open wounds (categories S01, S11…S91) may be no deeper than the subcutaneous tissue.

- If injuries to internal organs, **code also** any open wound with penetration into cavities.

Unspecified Open Wounds:

S01 Scalp
S11 Neck
S21 Thorax
S31 Abdomen, lower back, pelvis, external genitals
S41 Shoulder and upper arm
S51 Elbow and forearm
S61 Wrist, hand and fingers
S71 Hip and thigh
S81 Knee and lower leg
S91 Ankle, foot and toes

→

- Open wound
- Laceration (cut)
- Puncture wound
- Open bite

→

With **penetration** into thoracic cavity, peritoneal cavity, or retroperitoneum (MCC)

- With or without foreign body

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ICD-10 Classification

Open Wounds Penetrating a Cavity

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Gunshot wound of jejunum, cecum and right colon:

S36.498A, Other injury of other part of small intestine (CC)

S36.590A, Other injury of ascending [right] colon (CC)

Category S36, "Injury of intra-abdominal organs"

Code also any associated open wounds of abdominal wall and peritoneal cavity (S31.6-).

S31.639A, Puncture wound without foreign body of abdominal wall, unspecified quadrant with penetration into peritoneal cavity (MCC)

"Other injury" since not a blast injury, contusion, or laceration.

Stab wound of diaphragm:

S27.803A, Laceration of diaphragm

Category S27, "Injury of other and unspecified intrathoracic organs"

Code also any associated open wound of thorax (S21.-).

S21.319A, Laceration without foreign body of unspecified front wall of thorax with penetration into thoracic cavity (MCC)

Diaphragm is an intrathoracic organ.

It is not necessary to query for the foreign body, quadrant, or laterality of front wall of thorax.

OCG: Diagnosis codes are to be used and reported to their highest level of specificity documented in the medical record.

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Penetration into Body Cavities

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The peritoneal, thoracic, and retroperitoneal cavities are body cavities that contain (and protect) various organs and structures.

Thoracic (Chest)
The space enclosed by the ribs, sternum, and diaphragm, which contains the lungs, heart, and other structures.

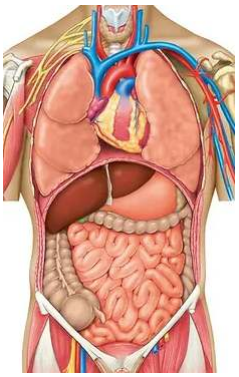
- Lungs
- Heart
- Pericardium
- Esophagus (upper 1/3)
- Diaphragm
- Pleura
- Tracheobronchial tree
- Thoracic aorta, SVC, IVC
- Thymus

Peritoneal (Abdomen):
The space between the parietal and visceral peritoneum, which covers most of the abdominal organs.

- Stomach
- Duodenum, first part
- Jejunum, Ileum
- Cecum
- Transverse colon
- Appendix
- Liver
- Gallbladder
- Spleen
- Pancreas (tail)

Retroperitoneal (Back & Pelvis)
The space behind the peritoneum, which contains the kidneys, adrenal glands, pancreas, and other structures.

- Kidneys
- Ureters
- Rectum
- Esophagus (lower 2/3)
- Duodenum, 2nd-4th parts
- Colon, ascending/descending
- Abdominal aorta, IVC
- Adrenals glands
- Pancreas (except tail)



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ICD-10 Classification

Gunshot Wounds

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Gunshot wound - see also Puncture, open
fracture - code as Fracture, by site
internal organs - see Injury, by site

GSW to the head is indexed to "Injury, intracranial" S06.9-, Unspecified intracranial injury.

- Not assigned to puncture wound or S06.8A-, Primary blast injury of the brain

  If with traumatic brain compression and herniation, code first the TBI (S06.2-, S06.3-, etc.)

  Code also any associated open wound of head (S01.-) and skull fracture (S02.-)

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ICD-10 Classification

Gunshot Wounds vs. Blast Injury

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Coding Clinic 2023 Third Quarter p. 8

Question: A patient presented to the emergency department with a gunshot wound to the abdomen with extensive internal injuries following a firearm assault. During surgical exploration, the provider noted a bullet hole in the mid-jejunum with significant "blast" injury, requiring removal of a segment of the small bowel. The surgeon documented, "Massive injury/blast injury to the cecum and right colon, requiring right hemicolectomy."

How should **gunshot wounds (GSW) described as blast injuries** of the jejunum, cecum and right colon be coded? When blast injuries are documented, how will one distinguish between primary and secondary?

Answer: Assign codes S36.498A, Other injury of other part of small intestine, initial encounter, for the GSW/blast injury to the jejunum, and S36.590A, Other injury of ascending [right] colon, initial encounter, for the gunshot/blast injury to the cecum and right colon….**Code also any associated open wounds of abdominal wall and peritoneal cavity (S31.6-).**

In ICD-10-CM, gunshot wounds are classified as puncture/penetration wounds, whereas injuries due to **explosions** are classified as blast injuries. While the documentation refers to "blast injury," **codes for primary blast injuries are reserved for injuries resulting from high pressures due to an explosion**. Codes for secondary blast injuries are reserved for penetrating injuries resulting from blast winds that propel fragments and debris.

S31.639A: Puncture wound without foreign body of abdominal wall, unspecified quadrant with penetration into the peritoneal cavity (MCC)

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Official Coding Guidelines

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Page 1:

*"Section I includes the structure and conventions of the classification and **general guidelines** that apply to the entire classification, and **chapter-specific guidelines** that correspond to the chapters as they are arranged in the classification.*

*Section II includes guidelines for **selection of principal diagnosis** for non-outpatient settings."*

C. Chapter-Specific Coding Guidelines

"In addition to general coding guidelines, there are guidelines for specific diagnoses and/or conditions in the classification. Unless otherwise indicated, these guidelines apply to all health care settings. Please refer to Section II for guidelines on the selection of principal diagnosis."

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Chapter Specific Guidelines

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Chapter 19: Injury, Poisoning, and Certain Other Consequences of External Causes (S00-T88)

Examples of Chapter-Specific Coding Guidelines for traumatic injuries and fractures:

- **Superficial injuries** such as abrasions or contusions are not coded when associated with more severe injuries of the same site.
- When a **primary injury** results in minor damage to peripheral nerves or blood vessels, the primary injury is sequenced first.
- Injury codes should not be assigned for injuries that occur as a result of a **medical intervention**.

Definition of Initial Encounter, Subsequent Encounter & Sequela

A – Initial Encounter: Used for each encounter where the patient is receiving active treatment for the condition. Active treatment for the injury includes such encounters as surgical treatment, emergency department encounters, and evaluation and treatment by a new physician for active treatment.

Default Codes:

- Any fracture not specified as closed or open is coded as closed.
- A fracture not documented as displaced or not displaced is coded as displaced.

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Selecting the Principal Diagnosis: Trauma

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Official Coding Guidelines

Chapter 19 chapter-specific coding guidelines for injuries and fractures state:

> *"The code for the most serious injury, as determined by the provider and the focus of treatment, is sequenced first."*
>
> *"Multiple fractures are sequenced in accordance with the severity of the fracture."*

OCG re: Chapter-Specific Coding Guidelines: *"In addition to general coding guidelines, there are guidelines for specific diagnoses and/or conditions in the classification...* ***Please refer to Section II for guidelines on the selection of principal diagnosis."***

Therefore, the guidelines for Selection of Principal Diagnosis (Section II.C) are applicable when assigning the principal diagnosis for injuries and fractures. The circumstances of admission, diagnostic workup, and the treatment provided always govern the selection of the principal diagnosis.

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Selecting the Principal Diagnosis: Trauma

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Official Coding Guidelines

Section II: Selection of Principal Diagnosis:

"The circumstances of inpatient admission always govern the selection of principal diagnosis. The principal diagnosis is defined in the Uniform Hospital Discharge Data Set (UHDDS) as "that condition established after study to be chiefly responsible for occasioning the admission of the patient to the hospital for care."

- Consider WHY the patient was admitted to the hospital and could not be in **observation** or go home.
- "**After study**" is important since it is not necessarily the admitting diagnosis but rather the diagnosis found after diagnostic workup or surgery that proved to be the primary reason for or focus of the admission.
- The condition, or at least signs or symptoms of it, must be **present on admission.**

See webinar "**Selecting the Principal Diagnosis**" in the CDI Pocket Guide® Unbound Edition

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Selecting the Principal Diagnosis: Trauma

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Circumstances of Admission and Treatment

Treatment:

When treatment is totally or primarily directed toward one condition, or only one condition would have required inpatient care, that condition would be designated as principal diagnosis.

Major surgical procedure: In most circumstances, the diagnosis for which a major surgical procedure is performed would be assigned as the principal diagnosis.

Circumstances of Admission:

- Condition would require inpatient admission
- Severity of each condition or greatest mortality or complication risk
- Complexity of care, evaluation, management
- Diagnostic procedures, number and types of consultants
- Intensity of monitoring (e.g., ICU, vital signs)
- Medications required, risks, route
- Plans for follow-up care

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Selecting the Principal Diagnosis

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Two or More: Co-equal

Two or More Diagnoses That Equally Meet the Criteria for Principal Diagnosis (OCG II.C)

"*In the unusual instance when two or more diagnoses equally meet the criteria for principal diagnosis as determined by the* ***circumstances of admission, diagnostic workup, and/or therapy provided*** *and the Alphabetic Index, Tabular List, or another coding guideline does not provide sequencing direction, any one of the diagnoses may be sequenced first.*"

When management is equally directed towards more than one condition and each condition would typically require inpatient care and meet the definition of principal diagnosis, any one of the diagnoses can be assigned as principal diagnosis.

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Examples

Principal Diagnosis

1. Patient admitted following MVC with a concussion without loss of consciousness, a distal right radius fracture requiring closed reduction and casting, and a traumatic right pneumothorax requiring a chest tube for 3 days.

   The most serious injury is the pneumothorax that was chiefly responsible for the admission of the patient to the hospital and would be sequenced as principal diagnosis. Neither the concussion nor the radius fracture would have likely required an inpatient admission.

2. Patient admitted following MVC with left femur fracture, left tibial fracture, and left medial malleolus fracture. Surgical procedures included ORIF of femur fracture, tibial shaft fracture, and medial malleolus fracture.

   The most severe injury is the femur fracture and the diagnosis associated with the principal procedure.

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MS-DRGs

MDC 24 Multiple Significant Trauma

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APR-DRGs 910, 911, 912, 930

Patients are assigned to these DRGs with principal diagnosis of significant trauma and two or more significant traumas of different body sites.

955	S	Craniotomy for multiple significant trauma	6.0902
956	S	Limb reattachment, hip and femur procedures for multiple significant trauma	3.8782
957-959	S	Other O.R. procedures for multiple significant trauma with MCC, CC, w/o CC/MCC	2.5324-7.2325
963-965	M	Other multiple significant trauma with MCC, CC, w/o CC/MCC	0.9559-2.7343

Significant trauma principal diagnosis +
- Significant head trauma
- Significant chest trauma
- Significant abdominal trauma
- Significant trauma of kidney
- Significant trauma of urinary system
- Significant trauma of pelvis or spine
- Significant trauma of upper limb
- Significant trauma of lower limb

The diagnosis & procedure lists are included in CDI Pocket Guide® Unbound Edition

Once the diagnosis criteria are met for multiple significant trauma, **certain procedure codes** will qualify for surgical DRGs 955-959.

If not a procedure code from MDC 24, it will be assigned to DRGs 981-989, OR Procedures Unrelated to PDX.

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MS-DRGs

MDC 24 Multiple Significant Trauma

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These DRGs require a separate, usually non-traumatic MCC or CC as a secondary diagnosis.

957-959	SURG	Other O.R. procedures for multiple significant trauma
963-965	MED	Other multiple significant trauma

Although many diagnoses included in the Significant Trauma body sites are CCs or MCCs, most of these will not qualify as an CC or MCC when included as a secondary diagnosis.

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Case Study 1

Principal Diagnosis

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17-year-old admitted on 5/25 following MVA with:

- Depressed left parietal bone fracture, left frontal bone fracture, skull base fracture
- Intraventricular hemorrhage with extension into SA space, increased ICP/cerebral edema requiring external ventricular drain, Ketamine, mannitol
- Pneumocephalus
- Right femoral head fracture, right hip dislocation, facial fractures, spinal fractures, right radial styloid fracture, right wrist dislocation.
- Bilateral pulmonary contusions
- Acute respiratory failure secondary to trauma requiring intubation and mechanical ventilation > 96 hrs. B/L chest tubes placed, bronch x 2, ECMO

GCS=3 on arrival. Developed shock treated with pressors and blood transfusions. Lactic acidosis. Shock bowel. Cranial artery vasospasm and traumatic intracranial aneurysm treated with intravascular coil intraarterial Verapamil + IV Milrinone. Pneumothorax. Decompressive craniectomy as potential life-saving procedure.

"Repeat imaging demonstrated devastating neurologic injury to the whole brain with central herniation as well as herniation through the craniectomy site and global anoxic injury." Family was notified and made decision to withdraw care on 6/4.

PDX assigned: S02.0XXA, Fracture of vault of skull, initial encounter for closed fracture. Is this the appropriate code?

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Case Study 1, continued

Principal Diagnosis

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PDX assigned: S020XXA, Fracture of vault of skull, initial encounter for closed fracture. Is this the appropriate code?

No, Diffuse TBI with LOC with death due to brain injury (S06.2X7A) is the PDX.

However, ECMO drives both the MS-DRG and APR-DRG assignment, not the PDX.

DRG: **003 ECMO or trach w MV >96 hrs or PDX exc face, mouth & neck w maj O.R.**
MS-DRG ver.41.0, Medicare IPPS/Medicare Managed Care
Weight: **21.3203** AMLOS: **36.5** GMLOS: **26.7** Cost Outlier: **N** Reimb: **$134,609.55**

1		S06.2X7A	Y - Ye Diffuse TBI w LOC w death due to brain injury bf consc, init
2	MC	J96.00	Y - Ye Acute respiratory failure, unspecified whether with hypoxia or hypercapnia
3	MC	S72.061A	Y - Ye Displaced articular fracture of head of right femur, initial encounter for closed frac
4	CC	S27.0XXA	Y - Ye Traumatic pneumothorax, initial encounter
5	CC	S27.322A	Y - Ye Contusion of lung, bilateral, initial encounter
6	MC	S06.A1XA	Y - Ye Traumatic brain compression with herniation, initial encounter
7	MC	T79.4XXA	Y - Ye Traumatic shock, initial encounter
★ 8		S02.0XXA	Y - Ye Fracture of vault of skull, initial encounter for closed fracture
1	OR	5A1522F	Extracorporeal Oxygenation, Membrane, Central
2	OR	009030Z	Drainage of Brain with Drainage Device, Percutaneous Approach
3	OR	0NB00ZZ	Excision of Skull, Open Approach
4		5A1955Z	Respiratory Ventilation, Greater than 96 Consecutive Hours
5		0BH17EZ	Insertion of Endotracheal Airway into Trachea, Via Natural or Artificial Opening

APR-DRG	9 - Extracorporeal Membrane Oxygenation (ECMO)
SURG	SOI – 4, ROM – 4

Note: ICD-10 codes assigned in these slides are for illustration purposes only and may not be complete.

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Case Study 2

Principal Diagnosis

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26-year-old male involved in a rollover accident with ejection from car, trapped under car, resulting in:

- Right 1st rib fracture, right posterior displaced 5 through 12 ribs
- Compression fractures T11-L2 vertebral bodies
- Grade 3 liver laceration with ruptured subcapsular hematoma without blush.
- Bilateral lung contusions, mildly displaced sternum and manubrium, hemopneumothorax, pneumomediastinum, requiring right-sided chest tube.

Hospital day 2 patient underwent right thoracotomy, surgical plating of ribs 5, 6, 7 and 8 posteriorly, and ribs 7 and 8 anteriorly, new chest tube. Consult for spine fractures, recommended to prevent bending, lifting and twisting for the next 8 weeks. Brace placed on the right wrist to prevent contracture. On hospital day 5 patient deemed appropriate for discharge, chest tube was removed.

PDX assigned code S22.5XXA, Flail chest, initial encounter for closed fracture. Is this the appropriate code?

Flail chest was not documented, although clinically indicated with multiple rib fractures (8): posteriorly (5-12), ribs 7-8 fractured anteriorly and posteriorly, with displacement of sternum indicates separation from multiple ribs. Required surgery.

Other possible principal diagnoses?

- Liver laceration
- Traumatic hemopneumothorax
- Lung contusions
- T11-L2 compression fractures

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Case Study 2, continued

Principal Diagnosis

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The **PDX** is multiple rib fractures (or flail chest if documented) – focus of admission and required surgery.

Traumatic hemopneumothorax (chest tube), liver laceration, lung contusions, compression fractures (observed) were not the focus of the admission or treatment.

Further specification of rib fractures to flail chest or grade 3 liver laceration to "moderate" laceration does not impact the MS-DRG.

DRG: **958 Other O.R. procedures for multiple significant trauma with CC**

Weight: **4.0448** AMLOS: **8.2** GMLOS: **6.7** Cost Outlier: **N** Reimb: **$25,537.57**

1		S22.41XA	Y - Ye Multiple fractures of ribs, right side, initial encounter for closed fracture
2	MC	S27.2XXA	Y - Ye Traumatic hemopneumothorax, initial encounter
3	CC	S36.113A	Y - Ye Laceration of liver, unspecified degree, initial encounter
4	CC	S22.089A	Y - Ye Unspecified fracture of T11-T12 vertebra, initial encounter for closed fracture
5	CC	S32.019A	Y - Ye Unspecified fracture of first lumbar vertebra, initial encounter for closed fracture
6	CC	S27.322A	Y - Ye Contusion of lung, bilateral, initial encounter
1	OR	0PS204Z	Reposition 3 or More Ribs with Internal Fixation Device, Open Approach
2		0B9N00Z	Drainage of Right Pleura with Drainage Device, Open Approach

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Case Study 2, continued

Principal Diagnosis

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APR-DRG	912 – Musculoskeletal and Other Procedures for Multiple Significant Trauma
SURG	SOI – 3, ROM - 2

Principal Diagnosis
S2241XA Multiple fractures of ribs, right side, init for clos fx

Secondary Diagnoses
S272XXA Traumatic hemopneumothorax, initial encounter
S36113A Laceration of liver, unspecified degree, initial encounter
S27322A Contusion of lung, bilateral, initial encounter
S22089A Unsp fracture of T11-T12 vertebra, init for clos fx
S32019A Unsp fracture of first lumbar vertebra, init for clos fx

Procedures
0PS204Z Reposition 3 or More Ribs with Int Fix, Open Approach(OR)
0B9N00Z Drainage of Right Pleura with Drainage Device, Open Approach

Query for "moderate" laceration of liver: Not necessary if MS-DRGs, but increased APR-SOI from 3 to 4.

APR-DRG	912 – Musculoskeletal and Other Procedures for Multiple Significant Trauma
SURG	SOI – 4, ROM - 2

Principal Diagnosis
S2241XA Multiple fractures of ribs, right side, init for clos fx

Secondary Diagnoses
S272XXA Traumatic hemopneumothorax, initial encounter
S36115A Moderate laceration of liver, initial encounter
S27322A Contusion of lung, bilateral, initial encounter
S22089A Unsp fracture of T11-T12 vertebra, init for clos fx
S32019A Unsp fracture of first lumbar vertebra, init for clos fx

Procedures
0PS204Z Reposition 3 or More Ribs with Int Fix, Open Approach(OR)
0B9N00Z Drainage of Right Pleura with Drainage Device, Open Approach

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Case Study 3

Principal Diagnosis

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44-year-old male MVA, struck a curb and collided into a tree, resulting in:

- Right Galeazzi fracture (radius fracture with ulnar dislocation)
- Left 5-7 rib fractures
- Hemoperitoneum with mesenteric fat stranding with concern for bucket handle injury
- Left humerus fracture; right fibular head fracture
- Right first MTP dislocation; right calcaneus fracture
- Acute kidney injury (baseline Cr. 1.2-1.3). Creatinine elevated to 1.5 on admission. Resolved with gentle IV hydration.

On trauma arrival, patient in cervical collar, hypoxic to 88% RA, hypertensive to 150 systolic, tachycardic to 105, GCS 15.

Given patient acuity, patient taken to the OR STAT for a diagnostic laparotomy.

3/2: Diagnostic laparoscopy converted to exploratory laparotomy, primary repair of mesenteric tear, abdominal washout and closure. Closed reduction of L humerus, R radius-ulna, and R metatarsal with splinting.

3/6 ORIF Right Radius; 3/6 ORIF Left Humerus.

PDX assigned to code S52.317A, Galeazzi's fracture of right radius, closed fracture. Is this the appropriate PDX?

Case Study 3, continued

Principal Diagnosis: MS-DRG

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DRG: **908 Other O.R. procedures for injuries with CC**

Weight: **2.0041** AMLOS: **5.1** GMLOS: **3.8** Cost Outlier: **N**

1		⚠ S36.893A	Y - Ye	Laceration of other intra-abdominal organs, initial encounter
2	CC	⚠ S22.41XA	Y - Ye	Multiple fractures of ribs, right side, initial encounter for closed fracture
3	CC	⚠ S52.371A	Y - Ye	Galeazzi's fracture of right radius, initial encounter for closed fracture
4	CC	⚠ S42.302A	Y - Ye	Unspecified fracture of shaft of humerus, left arm, initial encounter for closed fractur
5		⚠ S92.001A	Y - Ye	Unspecified fracture of right calcaneus, initial encounter for closed fracture
1	OR	0DQV0ZZ		Repair Mesentery, Open Approach
2	OR	0PSG04Z		Reposition Left Humeral Shaft with Internal Fixation Device, Open Approach
3	OR	0PSH04Z		Reposition Right Radius with Internal Fixation Device, Open Approach

Mesenteric laceration is the PDX: Most serious injury and required emergency surgery.

Galeazzi's fracture is not a serious injury.

DRG: **493 Lower extremity & humerus procedures exc hip, foot and femur w CC**

Weight: **2.4017** AMLOS: **5.2** GMLOS: **4.2** Cost Outlier: **N** Reimb: **$15,163.57**

1		⚠ S52.371A	Y - Ye	Galeazzi's fracture of right radius, initial encounter for closed fracture
2	CC	⚠ S22.41XA	Y - Ye	Multiple fractures of ribs, right side, initial encounter for closed fracture
3	CC	⚠ S36.893A	Y - Ye	Laceration of other intra-abdominal organs, initial encounter
4	CC	⚠ S42.302A	Y - Ye	Unspecified fracture of shaft of humerus, left arm, initial encounter for closed fractu
5		⚠ S92.001A	Y - Ye	Unspecified fracture of right calcaneus, initial encounter for closed fracture
1	OR	0DQV0ZZ		Repair Mesentery, Open Approach
2	OR	0PSG04Z		Reposition Left Humeral Shaft with Internal Fixation Device, Open Approach
3	OR	0PSH04Z		Reposition Right Radius with Internal Fixation Device, Open Approach

Case Study 3, continued

Principal Diagnosis: APR-DRG

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APR-DRG	911 – Extensive Abdominal or Thoracic Procedures for Multiple Significant Trauma
SURG	SOI – 3, ROM – 1

Principal Diagnosis
S36893A Laceration of other intra-abdominal organs, init encntr

Secondary Diagnoses
S2241XA Multiple fractures of ribs, right side, init for clos fx
S52371A Galeazzi's fracture of right radius, init for clos fx
S42302A Unsp fracture of shaft of humerus, left arm, init
S92001A Unsp fracture of right calcaneus, init for clos fx

Procedures
0DQV0ZZ Repair Mesentery, Open Approach(OR)
0PSG04Z Reposition Left Humeral Shaft with Int Fix, Open Approach(OR)
0PSH04Z Reposition Right Radius with Int Fix, Open Approach(OR)

Principal Diagnosis
S52371A Galeazzi's fracture of right radius, init for clos fx

Secondary Diagnoses
S2241XA Multiple fractures of ribs, right side, init for clos fx
S36893A Laceration of other intra-abdominal organs, init encntr
S42302A Unsp fracture of shaft of humerus, left arm, init
S92001A Unsp fracture of right calcaneus, init for clos fx

Procedures
0DQV0ZZ Repair Mesentery, Open Approach(OR)
0PSG04Z Reposition Left Humeral Shaft with Int Fix, Open Approach(OR)
0PSH04Z Reposition Right Radius with Int Fix, Open Approach(OR)

Same APR-DRG and SOI
whether mesenteric laceration
or Galleazzi's fracture is PDX.

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Case Study 4

Principal Diagnosis

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38-year-old female who suffered a "stab wound to left thoracoabdomen with hemothorax." Evaluation of the diaphragm was indicated given the thoracoabdominal location of the stab wound as well as evaluation for abdominal visceral injury. Taken to OR for diagnostic laparoscopy to evaluate diaphragm/visceral injury, and left chest tube placement.

Op Report: An incision was made over approximately the 5th rib and the pleura was entered bluntly. A finger was used to confirm injury into the *pleural cavity* and a large-bore chest tube was placed. There were two small injuries to the left diaphragm noted in the left lateral hemidiaphragm. The diaphragm was repaired with two 0 Prolene figure-of-eight sutures with good results.

Final Diagnosis:
- Left diaphragm injury with left hemopneumothorax: output >100mL serosanguinous, continue in place
- Metabolic acidosis secondary to hemorrhage: stable
- Acute blood loss anemia: due to traumatic blood loss

Question: What is the principal diagnosis? We felt the choices for PDX were hemopneumothorax, stab wound with penetration into thoracic cavity, or diaphragm laceration.

Stab wound penetrating thoracic cavity (S21.312A) was not coded and depending on the PDX could increase APR-SOI from 2 to 3. It seemed obvious that there was penetration into the thoracic cavity as we had a diaphragm laceration, but neither coder nor CDI was comfortable assuming this and neither queried it.

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Case Study 4, continued

Principal Diagnosis

Pinson&Tang

The **PDX** is S27.803A, Laceration of diaphragm**.**

DRG: **163 Major chest procedures with MCC** MDC: **4**
Weight: **4.7136** AMLOS: **10.3** GMLOS: **7.5** Cost Outlier:

1		⚠ S27.803A	Y - Ye Laceration of diaphragm, initial encounter
2	MC	⚠ S21.312A	Y - Ye Lac w/o fb of l frnt wl of thorax w penet thor cavity, init
3	MC	⚠ S27.1XXA	Y - Ye Traumatic hemothorax, initial encounter
4	CC	D62	Y - Ye Acute posthemorrhagic anemia
5	CC	⚠ E87.20	Y - Ye Acidosis, unspecified
1	OR	0BQT0ZZ	Repair Diaphragm, Open Approach
2		0B9P00Z	Drainage of Left Pleura with Draina…

Category S27, Injury of other and unspecified **intrathoracic organs:**
Code also any associated open wound of thorax" (S21.-).

Diaphragm is an intrathoracic organ.
"Pleural cavity" is part of the thoracic cavity.

APR-DRG	121 – Other Respiratory and Chest Procedures
SURG	SOI – 3, ROM – 2

Principal Diagnosis
S27803A Laceration of diaphragm, initial encounter

Secondary Diagnoses
S271XXA Traumatic hemothorax, initial encounter
★ S21312A Lac w/o fb of l frnt wl of thorax w penet thor cavity, init
D62 Acute posthemorrhagic anemia
E8720 Acidosis, unspecified

Procedures
0BQT0ZZ Repair Diaphragm, Open Approach(OR)
0B9P00Z Drainage of Left Pleura with Drainage Device, Open Approach

Without S21.312A, the APR-SOI = 2.

Question 1

Trauma vs. Medical Principal Diagnosis

Pinson&Tang

Pt admitted after an MVC with an L1 endplate fracture, no intervention other than pain management. Incidental finding on admission was acute on chronic systolic CHF and pleural effusions treated with thoracentesis.

The thrust of the care was the CHF/pleural effusion, but the MVC with fracture brought the patient in.

What would the appropriate principal diagnosis be?

The L1 fracture was assigned as the PDX.

The MVC and fracture is what brought the patient to the ED, but not necessarily why they were admitted.

The L1 fracture would have been observed and treated with pain meds and not require inpatient admission.

The patient required a thoracentesis for pleural effusions and treatment for acute on chronic systolic heart failure. The principal diagnosis in this situation would be the acute heart failure (I50.23) with pleural effusion (J91.8) and L1 fracture (S32.019A) as secondary diagnoses.

I50.23	Acute on chronic systolic (congestive) heart failure	292	Heart failure and shock with CC	0.8565	APR-194 2/2
S32.019A	Unspecified fracture of first lumbar vertebra, initial encounter for closed fr…	551	Medical back problems with MCC	1.7019	APR-347 2/2

Question 2

Multiple Fractures Sequencing

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Pt admitted s/p MVC with left acetabulum fracture, left pubic rami fracture, left rib fracture #8. These fractures were evaluated, orthopedic consult, pain control, fractures were all non-operative and orthopedics followed. There does not seem to be one fracture documented more severe or requiring more treatment than the other.

1) S32.422A, Displaced fracture of posterior wall of left acetabulum, initial encounter for closed fracture
2) S32.592A, Other specified fracture of left pubis, initial encounter for closed fracture
3) S22.32XA, Fracture of one rib, left side, initial encounter for closed fracture
4) S42.411A, Displaced simple supracondylar fracture (shoulder) without intercondylar fracture of right humerus.

If 1) S32.422A, Displaced fracture of posterior wall of left acetabulum is assigned DRG 536 without an MCC.

If 2) S32.592A, Other specified fracture of left pubis is coded as PDX, will change DRG to 535 with an MCC.

According to the OCG, multiple fractures are sequenced in accordance with the severity of the fracture.

Does anyone ever query for the severity when you have multiple fractures?

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Question 2, continued

Multiple Fractures Sequencing

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DRG: **536 Fractures of hip and pelvis without MCC**

Weight: **0.7871** AMLOS: **3.4** GMLOS: **2.8** Cost Outlier:

	GF	Code	POA	Description
	MCC	S32.422A	Y - Ye	Displaced fracture of posterior wall of left acetabulum, initial encounter for closed fracture
★	CC	S32.592A	Y - Ye	Other specified fracture of left pubis, initial encounter for closed fracture
	CC	S22.32XA	Y - Ye	Fracture of one rib, left side, initial encounter for closed fracture
	CC	S42.411A	Y - Ye	Displ simple suprcndl fx w/o intrcndl fx r humerus, init

A displaced fracture of the acetabulum is a more severe fracture and higher risk than left pubis fracture.

Fracture of one rib and supracondylar fracture are the least severe and may not require inpatient admission.

APR-DRG	341 – Fracture of Pelvis or Dislocation of Hip
MED	SOI – 3, ROM – 1

Principal Diagnosis
S32422A Disp fx of posterior wall of left acetabulum, init

Secondary Diagnoses
★ S32592A Oth fracture of left pubis, init encntr for closed fracture
S2232XA Fracture of one rib, left side, init for clos fx
S42411A Displ simple suprcndl fx w/o intrcndl fx r humerus, init

★ For APR-DRGs, if S32.592A is PDX, SOI decreases from 3 to 2.

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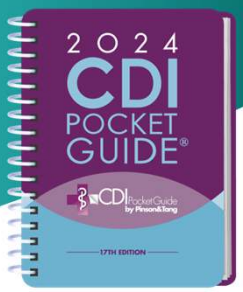
Q & A



Thank you for attending!

All attendees will receive an email with a CEU evaluation link within 24 hours following the live webinar

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