



# **CODING WITH TRI-CODE- PENETRATING INJURIES**

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# OBJECTIVES

- Review Coding Rules for Penetrating Trauma
- Discuss Example Cases of Penetrating Trauma Abstractions for Coding
- Determine Correct Abstraction and Entry of Penetrating Trauma for Accurate Coding

# CODING RULES

## AAAM Coding Rules:

- In general, penetrating trauma is not coded when the penetrating trauma affects deeper structures (e.g. bone, joints, vessels, solid body organs). The underlying trauma should be described with terminology that indicates an open injury.
- **EXCEPTION:** Penetrating injuries to the skull. If more than one site is injured by the same mechanism (e.g. thru and thru GSW through cerebrum and cerebellum), then code to one of the following penetrating injury codes.
  - From Page 31 – Abbreviated Injury Scale 2005 – Update 2008 - Copyright 2008 • Association for the Advancement of Automotive Medicine, Barrington, IL • USA)

# TRI-CODE NARRATIVE ENTRY RULES

- For areas outside of the head, state the penetrating trauma ONLY if it is not related to underlying injury.
- If an injury is caused by penetrating trauma, describe the injury as open.
- For open injuries, the terms “GSW” and “Stab” are equivalent to open.
- If coding a penetrating trauma and no further information is available or no underlying injuries are listed, state any blood loss with the penetrating trauma.

# EXAMPLES

## Example 1:

- GSW TO BACK
- Using this narrative alone without additional detail results in the following:

The screenshot shows the 'DI Coder' software interface. At the top, there are 'Edit' and 'Navigate' buttons. Below that is a logo and the text 'DI Coder'. The main area has two tabs: 'ICD10-CM/AIS 2005 - Code by Narrative' (selected) and 'ICD10-CM/AIS 2005 - Code by Lookup'. Below the tabs, there is an 'ISS' dropdown menu set to '1', and two buttons: 'Tri-Code' and 'Edit Codes'. A large text input field contains the text 'gsw back'. At the bottom, there is a table with the following columns: 'Edit', 'ICD10', '[ICD9]', 'ICD10 Description', 'Severity', 'ISS BR', 'Predot', and 'AIS Descr'. The table contains one row with the following data:

Edit	ICD10	[ICD9]	ICD10 Description	Severity	ISS BR	Predot	AIS Descr
<input type="checkbox"/>	T14.8		Other injury of unspecified body region	1	6	916000	penetrating inj
<input type="checkbox"/>							
<input type="checkbox"/>							

# EXAMPLES

## Example 1:


- Questions to ask:
  - Are there any details or more specific injury diagnosis in the medical record?
  - If there aren't any underlying injuries, is there a better description of the GSW with information about length or more detailed location?
- Review:
  - In the medical record, there is a ER description which states the following:
    - GSW lower back bullet lodged in buttocks
    - MTP initiated – 5 units of blood given
  - What the does the MTP clue the registrar?
    - Blood Loss
    - Average person has 9 to 12 units of blood – 5 units given indicates a blood loss > 20%

# EXAMPLES

## Example 1: Updated – ISS = 9

- GSW TO LOWER BACK resulting in > 20% blood loss

Edit Navigate

 DI Coder

ICD10-CM/AIS 2005 - Code by Narrative | ICD10-CM/AIS 2005 - Code by Lookup

ISS

gsw lower back with blood loss > 20%

Edit	ICD10	[ICD9]	ICD10 Description	Severity	ISS BR	Predot	AIS Description
<input type="checkbox"/>	S31.011A		Laceration without foreign body of lower back and pelvis with penetration ir	3	6	516006	abdomen penetrating inj with blood loss GT 20%
<input type="checkbox"/>							



# EXAMPLES

## Example 2:

Patient has the following injuries abstracted from the medical record:

GSW right shoulder

GSW to abdomen

Large laceration liver

Left renal vessel laceration

Splenic artery laceration

Pancreatic injury NOS

Large left kidney hematoma

Using the narrative as exactly stated, predict the overall Injury Severity Score:

ISS of 10

ISS of 17

ISS of 20

# EXAMPLES

## Example 2: Result ISS = 10

ICD10-CM/AIS 2005 - Code by Narrative | ICD10-CM/AIS 2005 - Code by Lookup

ISS: 10

GSW R shoulder  
GSW to abdomen resulting in peritoneum lac  
large liver lac  
L renal vessel lac  
L renal artery lac  
Splenic artery lac  
Pancreatic injury NOS  
Large L kidney hematoma

Edit	ICD10	[ICD9]	ICD10 Description	Severity	ISS BR	Predot	AIS Description
<input type="checkbox"/>	S41.011A		Laceration without foreign body of right shoulder, initial encounter	1	6	716010	penetrating inj shoulder NFS
<input type="checkbox"/>	S31.619A		Laceration wo foreign body of abdominal wall, NOS quadrant w penetration	1	6	516000	abdomen penetrating inj NFS
<input type="checkbox"/>	S36.113A		Laceration of liver, NOS degree, initial encounter	2	4	541820	liver lac NFS
<input type="checkbox"/>	T14.8		Other injury of unspecified body region	1	6	910600	soft tissue lac
<input type="checkbox"/>	S35.412A		Laceration of left renal artery, initial encounter	3	4	521404	other named abd arteries lac NFS
<input type="checkbox"/>	S35.291A		Minor laceration of branches of celiac and mesenteric artery, initial encount	3	4	521404	other named abd arteries lac NFS
<input type="checkbox"/>	S36.209A		Unspecified injury of NOS part of pancreas, initial encounter	2	4	542899	pancreas inj NFS
<input type="checkbox"/>	S37.022A		Major contusion of left kidney, initial encounter	3	4	541614	kidney contusion - subcapsular GT 50% surface/expanding; major; large

# EXAMPLES

## Example 2:

- What can be done to obtain a more accurate (and potentially higher) ISS.

Large liver laceration – This is an insufficient description of the liver laceration. AIS Assigned 541820.2.

S36.113A		Laceration of liver, NOS degree, initial encounter	2	4	541820	liver lac NFS
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Was the GSW related to the liver laceration? Did the description found in the medical record imply a more severe laceration?

- Both the GSW to abdomen and the liver laceration should clue the abstractor to further investigate documentation and discuss with the related provider.

# EXAMPLES

## Example 2:

Reviewing the documentation, in the OR report there was a repair of a 4 cm deep laceration to the hepatic lobe of the liver. This indicates a major liver laceration.

AIS 2005	Injury Description	⇒AIS98	⇐AIS98	FCI
541899.2	Liver NFS	541899.2	541899.2	5
	<b>Read coding rule for "Duct Involvement" (page 90).</b>			
541810.2	contusion; hematoma NFS	541810.2	541810.2	5
541812.2	subcapsular, ≤50% surface area, or nonexpanding; intraparenchymal ≤10cm in diameter; minor; superficial [OIS I, II]	541812.2	541812.2	5
541814.3	subcapsular, >50% surface area or expanding; ruptured subcapsular or parenchymal; intraparenchymal >10cm or expanding; major [OIS III]	541814.3	541814.3	5
541820.2	laceration NFS	541820.2	541820.2	5
541822.2	simple capsular tears; ≤3cm parenchymal depth; ≤10cm long; minor; superficial [OIS II]	541822.2	541822.2	5
541824.3	<b>&gt;3cm parenchymal depth;</b> major duct involvement; moderate [OIS III]	541824.3	541824.3	5
541826.4	parenchymal disruption ≤75% hepatic lobe; multiple lacerations >3cm deep; "burst" injury; major [OIS IV]	541826.4	541826.4	5
541828.5	parenchymal disruption of >75% of hepatic lobe or >3 Couinaud's segments within a single lobe; or involving retrohepatic vena cava/ central hepatic veins; massive; complex [OIS V]	541828.5	541828.5	5
541830.6	hepatic avulsion (total separation of all vascular attachments) [OIS VI]	541830.6	541830.6	5
541840.4	rupture	541840.4	541840.4	5

# EXAMPLES

## Example 2:

- Updated: ISS = 17

ICD10-CM/AIS 2005 - Code by Narrative | ICD10-CM/AIS 2005 - Code by Lookup

ISS **17** | Tri-Code | Edit Codes

GSW R. shoulder  
GSW to abdomen resulting in peritoneum lac  
**large liver lac 4 cm deep hepatic lobe**  
L renal vessel lac  
L renal artery lac  
Splenic artery lac  
Pancreatic injury NOS  
Large L kidney hematoma

Edit	ICD10	[ICD9]	ICD10 Description	Severity	ISS BR	Predot	AIS Description
<input type="checkbox"/>	S41.011A		Laceration without foreign body of right shoulder, initial encounter	1	6	716010	penetrating inj shoulder NFS
<input type="checkbox"/>	S31.619A		Laceration wo foreign body of abdominal wall, NOS quadrant w penetration	1	6	516000	abdomen penetrating inj NFS
<input type="checkbox"/>	S36.116A		Major laceration of liver, initial encounter	4	4	541826	<b>liver lac - major; disruption LEQ 75% lobe; multiple; burst</b>
<input type="checkbox"/>	T14.8		Other injury of unspecified body region	1	6	910600	soft tissue lac
<input type="checkbox"/>	S35.412A		Laceration of left renal artery, initial encounter	3	4	521404	other named abd arteries lac NFS
<input type="checkbox"/>	S35.291A		Minor laceration of branches of celiac and mesenteric artery, initial encounter	3	4	521404	other named abd arteries lac NFS
<input type="checkbox"/>	S36.209A		Unspecified injury of NOS part of pancreas, initial encounter	2	4	542899	pancreas inj NFS
<input type="checkbox"/>	S37.022A		Major contusion of left kidney, initial encounter	3	4	541614	kidney contusion - subcapsular GT 50% surface/expanding; major; large

# EXAMPLES

## Example 2:

- What else can be done to obtain a more accurate (and potentially higher) ISS.

GSW to shoulder – If the GSW affected one of the shoulder joints, this would also result in a more accurate assignment.

<input type="checkbox"/>	S41.011A		Laceration without foreign body of right shoulder, initial encounter	1	6	716010	penetrating inj shoulder NFS
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# EXAMPLES

## Example 2: Updated – ISS = 20

ICD10-CM/AIS 2005 - Code by Narrative | ICD10-CM/AIS 2005 - Code by Lookup

ISS            

open glenoid joint laceration  
 GSW to abdomen resulting in peritoneum lac  
 large liver lac 4 cm deep hepatic lobe  
 L renal vessel lac  
 L renal artery lac  
 Splenic artery lac  
 Pancreatic injury NOS  
 Large L kidney hematoma

Edit	ICD10	[ICD9]	ICD10 Description	Severity	ISS BR	Predot	AIS Description
<input type="checkbox"/>	S41.019A		Laceration without foreign body of NOS shoulder, initial encounter	2	6	710604	UE skin/subcutaneous/muscle lac - major; into subcutaneous
<input type="checkbox"/>	S31.619A		Laceration w foreign body of abdominal wall, NOS quadrant w penetration	1	6	516000	abdomen penetrating inj NFS
<input type="checkbox"/>	S36.116A		Major laceration of liver, initial encounter	4	4	541826	liver lac - major; disruption LEQ 75% lobe; multiple; burst
<input type="checkbox"/>	T14.8		Other injury of unspecified body region	1	6	910600	soft tissue lac
<input type="checkbox"/>	S35.412A		Laceration of left renal artery, initial encounter	3	4	521404	other named abd arteries lac NFS
<input type="checkbox"/>	S35.291A		Minor laceration of branches of celiac and mesenteric artery, initial encounter	3	4	521404	other named abd arteries lac NFS
<input type="checkbox"/>	S36.209A		Unspecified injury of NOS part of pancreas, initial encounter	2	4	542899	pancreas inj NFS
<input type="checkbox"/>	S37.022A		Major contusion of left kidney, initial encounter	3	4	541614	kidney contusion - subcapsular GT 50% surface/expanding; major; large

# EXAMPLES

Example 3:

Patient has the following injuries abstracted

- Stab wound left neck
- 2 cm hematoma right neck
- Laceration left internal jugular



# EXAMPLES

## Example 3: Result - What is the problem?

ICD10-CM/AIS 2005 - Code by Narrative | ICD10-CM/AIS 2005 - Code by Lookup

ISS       Tri-Code      Edit Codes

STAB WOUND L NECK  
2 CM HEMATOMA L NECK  
LAC L INTERNAL JUGULAR

Edit	ICD10	[ICD9]	ICD10 Description	Severity	ISS BR	Predit	AIS Description
<input type="checkbox"/>	S11.90XA		Unspecified open wound of NOS part of neck, initial encounter				
<input type="checkbox"/>	S10.93XA		Contusion of NOS part of neck, initial encounter				
<input type="checkbox"/>	S15.312A		Minor laceration of left internal jugular vein, initial encounter	2	1	320802	jugular vein internal lac NFS
<input type="checkbox"/>							
<input type="checkbox"/>							

Mentioning the stab wound separately assumes that all injuries are related and cancels penetrating and hematoma codes.

# EXAMPLES

## Example 3:

To correct this, the stab wound should be associated with the underlying injury and not attempted to code separately.

## Corrected narrative:

- 2 CM HEMATOMA L NECK
- STAB WOUND RESULTING IN LAC L INTERNAL JUGULAR

# EXAMPLES

## Example 3: Updated

ICD10-CM/AIS 2005 - Code by Narrative ICD10-CM/AIS 2005 - Code by Lookup

ISS

2 CM HEMATOMA L NECK  
STAB WOUND RESULTING IN LAC L INTERNAL JUGULAR

Edit	ICD10	[ICD9]	ICD10 Description	Severity	ISS BR	Predot	AIS Description
<input type="checkbox"/>	S10.93XA		Contusion of NOS part of neck, initial encounter	1	6	310402	neck skin/subcutaneous tissue/muscle contusion; hematoma
<input type="checkbox"/>	S15.312A		Minor laceration of left internal jugular vein, initial encounter	2	1	320802	jugular vein internal lac NFS
<input type="checkbox"/>							
<input type="checkbox"/>							

# EXAMPLES

## Example 4:

- Patient has a thru and thru GSW to the skull penetrating the right cerebrum and right cerebellum
- Major right cerebral occipital lobe laceration 4 cm
- Major right cerebellar lobe laceration 3 cm
- Occipital skull fx open with exposed tissue

## Questions:

- Should the penetrating description be included or just list the underlying injuries in this case?
- If the penetrating injury should be included, do you also need to list the other injuries?

# EXAMPLES

## Example 4:

The head penetrating injury exception applies in this case because the penetrating trauma involved multiple structures (skull, cerebrum, cerebellum).

If the penetrating trauma is NOT stated, the highest severity score in the head is an AIS of 4.

The screenshot shows the ICD10-CM/AIS 2005 software interface. At the top, there are two tabs: "ICD10-CM/AIS 2005 - Code by Narrative" and "ICD10-CM/AIS 2005 - Code by Lookup". Below the tabs, the "ISS" field is set to "16". There are also fields for "Tri-Code" and "Edit Codes". The main text area contains the following injury descriptions:

- Major right cerebral occipital lobe laceration 4 cm
- Major right cerebellar lobe laceration 3 cm
- Occipital skull fx open with exposed tissue

Below the text area is a table with the following columns: Edit, ICD10, [ICD9], ICD10 Description, Severity, ISS BR, Predot, and AIS Description.

Edit	ICD10	[ICD9]	ICD10 Description	Severity	ISS BR	Predot	AIS Description
<input type="checkbox"/>	S06.319A		Contusion and laceration of right cerebrum with loss of consciousness of NU	4	1	140686	cerebrum lac GT 2 cm
<input type="checkbox"/>	S06.379A		Contusion, laceration, and hemorrhage of cerebellum with loss of conscious	4	1	140472	cerebellum lac GT 2 cm length/depth
<input type="checkbox"/>	S02.0XB		Fracture of vault of skull, initial encounter for open fracture	4	1	150406	vault skull fx - complex; open w tissue loss
<input type="checkbox"/>							
<input type="checkbox"/>							

# EXAMPLES

## Example 4: Updated

- Corrected – Make sure to state the penetrating injury description. The highest severity assignment would be 5 resulting in an ISS of 25.

ICD10-CM/AIS 2005 - Code by Narrative | ICD10-CM/AIS 2005 - Code by Lookup

ISS: 25 | Tri-Code: | Edit Codes

Thru and thru GSW to the skull penetrating the right cerebrum and right cerebellum  
Major right cerebral occipital lobe laceration 4 cm  
Major right cerebellar lobe laceration 3 cm  
Occipital skull fx open with exposed tissue

Edit	ICD10	[ICD9]	ICD10 Description	Severity	ISS BR	Predot	AIS Description
<input type="checkbox"/>	S02.91XB		Unspecified fracture of skull, initial encounter for open fracture	5	1	116004	penetrating inj to skull; major; GT 2 cm penetration
<input type="checkbox"/>	S06.319A		Contusion and laceration of right cerebrum with loss of consciousness of NC	4	1	140686	cerebrum lac GT 2 cm
<input type="checkbox"/>	S06.379A		Contusion, laceration, and hemorrhage of cerebellum with loss of conscious	4	1	140472	cerebellum lac GT 2 cm length/depth
<input type="checkbox"/>	S02.0XXB		Fracture of vault of skull, initial encounter for open fracture	4	1	150406	vault skull fx - complex; open w tissue loss
<input type="checkbox"/>							
<input type="checkbox"/>							

# EXAMPLES

Example 4: What about the other question!!!!

- If the penetrating injury should be included, do you also need to list the other injuries?

Recommendation:

According to the AAAM rules, the other injuries in this case would not be stated. However, for completeness and detailed ICD10-CM assignments, state all head injuries listed.

Edit	ICD10	[ICD9]	ICD10 Description
<input type="checkbox"/>	S02.91XB		Unspecified fracture of skull, initial encounter for open fracture
<input type="checkbox"/>	S06.319A		Contusion and laceration of right cerebrum with loss of consciousness of NC
<input type="checkbox"/>	S06.379A		Contusion, laceration, and hemorrhage of cerebellum with loss of consciousness
<input type="checkbox"/>	S02.0XB		Fracture of vault of skull, initial encounter for open fracture
<input type="checkbox"/>			

# REVIEW

When working with cases with penetrating trauma:

- Determine underlying injuries to vessels, bone, joints, solid organs, and other deeper structures.
- If the penetrating injury is related to underlying injury do NOT state the penetrating injury on separate line. State the penetrating trauma with the underlying injury on the same line.
- If no underlying trauma is determine, state the penetrating injury with any tissue loss or blood loss noted in the medical record.
- Look for clues in the medical record to indicate blood loss (e.g. Mass Transfusion Protocol)
- For head injury, if the penetrating injury involves multiple structures, state both the penetrating injury along with related detailed injury descriptions.



# QUESTIONS

