IAI (Intra-Abdominal Injury) Study:
Kappa Form #2 (Inter-Observer Reliability)

Patient Stamp Here:

If No Patient Stamp:

PATIENT NAME:_____

MR #:_____ Date: _____

Complete this form:

- On a convenience sample of enrolled patients, blinded to the evaluation of the primary physician.
- **Prior to reviewing CT (if obtained).**
- **Within 60 min of 1st observer examination.**

Data Source: faculty or fellow physician

Name of person completing this form:

_____

GENERAL INFORMATION

Date of ED Evaluation

_____/_____/_____
(mm) (dd) (yyyy)

Time of Evaluation (24 hour clock, midnight = 00:00)

_____:_____ ☐ **Unknown**
(hh) (mm)

I. History

1. Injury Mechanism: *(select **only one** mechanism and answer all appropriate sub questions)*

☐ **Occupant in motor vehicle collision (MVC)** --→ *answer 1a – 1d below*					
1a. If in MVC (√ all that apply).	☐ Ejected from auto	☐ Rollover	☐ Death in same collision	☐ None of These	☐ Unknown
1b. Speed of the MVC (patient's vehicle)	☐ Speed **<** 20 mph	☐ Speed 20 - 40 mph	☐ Speed > 40 mph	☐ Speed unknown	
1c. Was the patient restrained?		☐ Yes → *answer 1d*	☐ No	☐ Unknown	
1d. Type of restraint system:	☐ Lap and shoulder harness	☐ Lap belt only	☐ Shoulder harness only		
	☐ Infant car seat	☐ Booster car seat	☐ Unknown restraint system		
☐ **Fall from an elevation** → Estimate height in feet:	☐ < 3ft	☐ 3-10 ft	☐ > 10 ft	☐ Unknown	
☐ **Fall down stairs** → Estimate number of stairs:	☐ 5 or less	☐ 6-15	☐ > 15	☐ Unknown	
☐ **Pedestrian or bicyclist struck by moving vehicle** → *answer 1e and 1f below*					
1e. Speed of moving vehicle:	☐ < 5-mph (patient bumped)	☐ 5 - 20 mph	☐ > 20 mph	☐ Speed unknown	
1f. Was patient run-over by moving vehicle:	☐ Yes	☐ No	☐ Unknown		
☐ **Bike collision or fall from bike while riding** → *answer 1g below*					
1g. Did handlebars strike the abdomen?	☐ Yes	☐ No	☐ Unknown		
☐ **Driver or passenger in motorcycle/ATV/motorized scooter collision**					
☐ **Object struck abdomen**	☐ Intentional (Assault)	☐ Accidental	☐ Unknown intentionality		
☐ **Unknown** mechanism					
☐ **Other** mechanism (describe):_____					

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II. Historical examination (i.e. complaints and symptoms)

1. Is the patient preverbal (unable to communicate because of limited verbal skills)?		☐ Yes	☐ No	
2. Does patient complain of **abdominal pain**?	☐ Yes→ *answer 2a and 2b*		☐ No	☐ Unable to assess
2a. Severity of abdominal pain by history:	☐ Mild (1 – 3)	☐ Moderate (4 – 6)	☐ Severe (7 - 10)	☐ Unknown
2b. Location of abdominal pain by history:	☐ Diffuse	☐ Localized	☐ Unknown	
3. **Vomiting/Retching** (at any time after injury)?	☐ Yes	☐ No	☐ Unknown	
4. Does patient complain of **shortness of breath/difficulty breathing?**	☐ Yes	☐ No	☐ Unable to assess	
5. Does the patient have a **distracting painful injury?** (injury causing significant pain that distracts patient from having a reliable abdominal exam; ex: femur fracture, dislocated joint, large laceration)		☐ Yes	☐ No	☐ Unable to assess

III. Mental Status

1. During your patient assessment was the patient ***intubated***?	☐ Yes	☐ No
2. During your patient assessment was the patient pharmacologically ***paralyzed***?	☐ Yes	☐ No
3. During your patient assessment was the patient pharmacologically ***sedated***?	☐ Yes	☐ No
4. Is there a clinical suspicion for ***alcohol or drug intoxication*** (not by laboratory testing)?	☐ Yes	☐ No

5. **Glasgow Coma Score at the time of your evaluation**: *Check one number in each column. For infants <u>≤</u>2 years use the description in parentheses*

Eye		Verbal		Motor	
☐ 4	Spontaneous	☐ 5	Oriented (coos/babbles)	☐ 6	Follow commands (spontaneous movement)
☐ 3	Verbal	☐ 4	Confused (irritable/cries)	☐ 5	Localizes pain (withdraws to touch)
☐ 2	Pain	☐ 3	Inappropriate words (cries to pain)	☐ 4	Withdraws to pain
☐ 1	None	☐ 2	Incomprehensible sounds (moans)	☐ 3	Abnormal flexure posturing
		☐ 1	None	☐ 2	Abnormal extension posturing
				☐ 1	None

5a. **Aggregate GCS** _____

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IV. Physical Examination

Thoracic Examination- (includes anterior or posterior portions of chest, including back)

1. Evidence of **thoracic trauma?**		☐ Yes→*answer 1a*	☐ No			
1a. Select all abnormalities:	☐ Erythema	☐ Abrasion	☐ Ecchymoses	☐ Subcutaneous air	☐ Laceration	☐ Other
1b. Were abnormalities primarily:		☐ Anterior chest		☐ Posterior chest	☐ Both	
2. Thoracic tenderness		☐ Yes	☐ No	☐ Unable to assess		
3. Left costal margin tenderness (consists of tenderness to any of the ribs 7 - 12)		☐ Yes	☐ No	☐ Unable to assess		
4. Right costal margin tenderness (consists of tenderness to any of the ribs 7 - 12)		☐ Yes	☐ No	☐ Unable to assess		
5. Does the patient have **absent/decreased breath sounds?**		☐ Yes	☐ No	☐ Unknown		
6. Does the patient have any **abnormal chest auscultation findings** (rhonchi, crackles, etc)*?*		☐ Yes	☐ No	☐ Unknown		

Abdominal Examination

7. Evidence of *abdominal wall trauma* (on visual inspection)?		☐ Yes → *answer 7a*	☐ No	☐ Unknown	
7a. Select all abnormalities?	☐ Erythema	☐ Abrasion	☐ Ecchymoses	☐ Laceration	☐ Other
8. Is a **seat belt sign present** (continuous area of erythema, contusion, or abrasion across the abdomen secondary to a lap belt restraint)?				☐ Yes	☐ No
9. Does the patient have **abdominal distention?**		☐ Yes	☐ No	☐ Unknown	
10. Are **bowel sounds absent?**		☐ Yes	☐ No	☐ Did not listen for bowel sounds	
11. Does the patient have **abdominal tenderness on palpation?**		☐ Yes→ *answer 11a & 11b*	☐ No	☐ Unable to assess	
11a Degree of abdominal tenderness:		☐ Mild (1 – 3)	☐ Moderate (4 – 6)	☐ Severe (7 - 10)	
11b. Location of abdominal tenderness (check the **most appropriate** *box):*		☐ Diffuse		☐ Above the umbilicus	
		☐ Below the umbilicus		☐ Peri-umbilical	☐ Unknown
12. Does the patient have **peritoneal irritation** (rebound or cough tenderness)?		☐ Yes	☐ No	☐ Unable to assess	

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Flank & Pelvic Examination

(Flank is defined as the area from the mid-axillary line to the spine and from the lower ribs to the pelvis)

13. Does the patient have **flank tenderness**?	☐ Yes	☐ No	☐ Unable to assess
14. Does the patient have **pelvic bone tenderness on palpation**?	☐ Yes→ *answer 14a*	☐ No	☐ Unable to assess
14a. Check all locations that are tender:	☐ Anterior superior iliac crests		☐ Superior pubis
	☐ Inferior pubis	☐ SI joints	☐ Unknown
15. Is the **pelvis unstable to lateral or vertical compression**?	☐ Yes	☐ No	☐ Unknown

Other Exam Findings

16. Do you think that the patient has **an injury that will require non-abdominal surgery (orthopedic fracture, complex laceration repair, repair of facial fracture, etc.)** within the next 24 hours?	☐ Yes	☐ No	☐ Unsure

Suspicion of Intra-abdominal Injury (IAI) (Regardless whether or not *CT obtained)*

17. Clinical suspicion for the presence of IAI identified on CT (regardless of whether a CT scan is obtained)**:**	☐ < 1%	☐ 1-5%	☐ 6-10%	☐ 11-50%	☐ > 50%
18. Clinical suspicion for IAI in need of acute intervention* (regardless of whether a CT scan is obtained)**:**	☐ < 1%	☐ 1-5%	☐ 6-10%	☐ 11-50%	☐ > 50%

**Acute intervention defined by : laparotomy, angiographic embolization of bleeding organ or other vascular structure, blood transfusion for abdominal hemorrhage, need for 2 or more nights of IV fluid hydration due to pancreatic or duodenal injury).*

19. Were you aware of any lab results at the time you recorded your suspicion? (hemoglobin, hematocrit, AST, ALT, lipase, amylase, OR urinalysis)	☐ Yes	☐ No

20. Was an abdominal CT obtained?	☐ Yes → *answer 20a*	☐ No	☐ Unknown
20a. If abdominal CT was obtained, was this data sheet completed before knowledge of the CT results?	☐ Yes	☐ No	

PLEASE PLACE COMPLETED FORM IN LOCKED COLLECTION BOX!!