Bladder Trauma Data Collection Sheet

If there was no traumatic injury with PENETRATION of the bladder **DO NOT** proceed

Date of injury: ____/____/____
Time of injury: ______________________________

Date of hospital arrival: ____/____/____
Time of hospital arrival: ______________________________

Age:____ Sex: M F Height:____ Weight:____ BMI:____

Date of discharge:
Discharge status: **DEAD** **ALIVE**

ICU length of stay (if known):

Comorbidities: **Diabetes** **Stroke** **Peripheral vascular disease** **Cirrhosis** **Drug abuse**
Alcoholism **Current smoker** **Hx of MI (last 6 months)** **Congestive heart failure**
**COPD** **End stage renal disease**

Trauma type: **BLUNT** **PENETRATING**
Blunt: **MVC** **MCC** **Auto vs. Ped** **Other MVC** **Fall from height** **Bicycle (not hit by car)**
**Sports** **Blunt assault** **Other**
Penetrating: **GSW** **Shot gun** **Stabbed** **Other**

Total ISS:

AAST grade kidney injury:
Which kidney: **R** **L** **Both**

Other Injuries:
Pelvis fracture: **Y** **N**
Rectal: **Y** **N**
Small bowel: **Y** **N**
Colon: **Y** **N**
Renal: **Y** **N** AAST grade:
Liver: **Y** **N** AAST grade:
Ureter: **Y** **N** AAST grade:
Spleen: **Y** **N** AAST grade:
Pancreas: **Y** **N** AAST grade:
Spinal Cord: **Y** **N**

Major vascular: **Aorta** **IVC** **Iliac vein** **Iliac artery** **Renal artery – R** **L**
Renal vein – R **L**
**Femoral vein** **Femoral artery** **Atrium rupture**

ER disposition: **Dead** **Trauma ward** **ICU** **Immediate OR**
Laparotomy:  Y       N
       Date of 1st laparotomy: ____/____/_____
       Time of 1st laparotomy:
       Was the abdomen left open: Y        N
       Date of final laparotomy: ____/____/_____

Thoractomy: Y      N
       Date of 1st thoractomy: ____/____/_____

Angiography: Y      N
       Date of angiography: ____/____/_____
       Time of Angiography:
       Was stenting or angioembolization done: Y       N

Embolization: Internal iliac complete – R   L       External iliac – R   L       Branch of internal iliac – R   L
       Renal artery complete – R   L       Renal artery selective – R   L       Perinephric artery
       Other
       Stent: Iliac artery – R   L       Renal artery – R   L       Other

REPEAT Angiography: Y      N
       Date of angiography: ____/____/_____
       Time of Angiography:
       Was stenting or angioembolization done: Y       N

Embolization: Internal iliac complete – R   L       External iliac – R   L       Branch of internal iliac – R   L
       Renal artery complete – R   L       Renal artery selective – R   L       Perinephric artery
       Other
       Stent: Iliac artery – R   L       Renal artery – R   L       Other

AAST bladder injury grade:
AAST (OIS) I – bladder contusion (DO NOT ENTER PATIENT)
AAST (OIS) II – Extraperitoneal < 2 cm
AAST (OIS) III – Extraperitoneal > 2 cm or intraperitoneal < 2 cm
AAST (OIS) IV – Intraperitoneal > 2 cm
AAST (OIS) V – Massive avulsion, involvement - ureter, trigone, bladder neck

Bladder injury specifics:
Involvement: Bladder neck         Urethra        Ureteral – R   L

What was the management in the first 4 days after injury: Conservative         Operative

Did the patient have bladder injury repair:  Y       N
       Date of repair: ____/____/_____
       Time of repair:
       Who did repair: General surgery         Acute (trauma) surgery         Urology

Orthopedic procedures:
       Date of ortho procedure: ____/____/____
       Procedure:
       Date of ortho procedure: ____/____/____
       Procedure:
       Date of ortho procedure: ____/____/____
Procedure:
Date of ortho procedure: ____/____/_____

Procedure:
Date of ortho procedure: ____/____/_____

Procedure:
Date of ortho procedure: ____/____/_____

Type of bladder injury:
- Intraperitoneal
- Extraperitoneal
- Both intraperitoneal and extraperitoneal
- Unknown

How was the initial diagnosis of bladder injury made?
- Intraoperatively in first 24 hours
- CT trauma without dedicated cystogram phase
- CT cystogram
- Cystogram plain
- Cystoscopy
- Other

What was the reason the bladder was repaired in the first 4 days:
- Intraperitoneal injury
- Discovered during laparotomy and repaired
- Urine was not draining well
- Hematuria and blood clots were blocking catheter
- Repaired at the time of pelvic fixation to prevent contamination of pelvic hardware
- Concomitant rectal or bowel injury
- Other

Did conservative therapy fail if it was tried for > 4 days? Y N

Were follow up X-rays done to check if the bladder injury had healed? Y N

X-rays follow up:
- CT cystogram
- Cystogram
- Cystoscopy
- Ultrasound
- None performed at facility
- None documented
- Other

Was there persistent urine leak: Y N

What was done to treat persistent leak:
- Bladder repair
- Continued catheter
- Urinary diversion
- Other

Were ADDITIONAL X-rays done to check if the bladder injury had healed? Y N

X-rays follow up:
- CT cystogram
- Cystogram
- Cystoscopy
- Ultrasound
- None performed at facility
- None documented
- Other

Was there persistent urine leak: Y N

What was done to treat persistent leak:
- Bladder repair
- Continued catheter
- Urinary diversion
- Other

Date of removal of Foley catheter: ____/____/_____

Was a suprapubic tube maintained: Y N Unknown

Was a bladder repair done initially or subsequently: Y N
Date of bladder repair: ____/____/_____
Check all that apply:
Suprapubic tube left
Single layer closure of bladder
Double layer closure of bladder
Coverage with flap:  Peritoneal  Omental  Gracilis muscle  Rectus muscle
Intraperitoneal injury
Extraperitoneal injury
Bladder neck injury
Prostate injury
Concomitant ureteral injury

Was ANOTHER bladder repair needed: Y  N
Date of additional bladder repair: ____/____/_____
Check all that apply:
Suprapubic tube left
Single layer closure of bladder
Double layer closure of bladder
Coverage with flap:  Peritoneal  Omental  Gracilis muscle  Rectus muscle
Intraperitoneal injury
Extraperitoneal injury
Bladder neck injury
Prostate injury
Concomitant ureteral injury

Was there a urinary tract related complication:  Y  N
Date of urinary tract complication: ____/____/_____
When did the complication occur:  Initial hospitalization  During readmission  Managed outpatient
Date of readmission for urinary tract complication: ____/____/_____
Complications:
UTI
Pyelonephritis or urosepsis
Peri-renal abscess
Urinoma
Persistent urinary extravasation
Renal failure
Soft tissue infection:  Groin  Perineum  Pelvis  Lower abdomen
Obstruction of catheter from blood clots or other
Urinary fistula:  Bowel  Skin, flank, abdominal wall  Other
Urethral stenosis
Incontinence
Neurogenic bladder
Other

Was there pelvic fracture complications:  Y  N
Complications:  Nonunion  Pelvic hardware infection  Pelvic osteomyelitis  Other

Management of complication:
Bladder repair
Pelvic washout
Removal of pelvic hardware
IV antibiotics > 1 week
Routine oral antibiotics or IV < 1 week
Dialysis
Urethroplasty
Soft tissue debridement
Percutaneous drain
Urinary diversion surgery
Continued catheter (Foley or suprapubic)
Other