APPENDIX C:
DATA COLLECTION: STANDARD OPERATING PROCEDURE

STANDARD OPERATING PROCEDURE
TRAUMA at UTH STUDY

Purpose / Background

The purpose of this SOP is to describe a standardized approach to filling out the data forms for the Trauma Research at UTH study

Scope / Applicability

This SOP is intended for the study staff: all data collectors, the research assistants and the principal researcher

Prerequisites / Supplies Needed

Trauma Data Sheet
Trauma Data Sheet: Hospital Utilization
Brought in Dead Sheet
Black pen
Orange stickers
Stapler
Clip board
Blood pressure apparatus, stethoscope
Timer
Alcohol breathalyzer machine
Cleaning wipes

Supply stock

Found in labelled box at clerk's desk
Principal researcher (number saved in research phone)

Inclusion criteria: Trauma data sheet

- All patients presenting to UTH casualty for the first time with injury as a result of trauma, irrespective of age

Inclusion criteria: Trauma data sheet & hospital utilization sheet

- All patients transferred to Female or Male Surgical Ward (FSW, MSW), including those discharged home and those admitted to in-patient wards

Inclusion criteria: Brought in Dead sheet

- ALL patients brought in dead

Exclusion criteria

- Patients with acute poisoning
- Patients attending for review or follow-up, ie not first time attenders

Note: Patients who die within casualty or MSW or FSW within 24 hours of arrival are noted in the Trauma Data sheet & Hospital Utilization sheet and not counted in the 'Brought in Dead' sheet. The Brought in Dead sheet is for those who have not passed through casualty

Definitions

- 'Trauma' refers to any bodily injury; ***Injury:*** the result of an act that damages, harms, or hurts; unintentional or intentional damage to the body resulting from acute exposure to thermal, mechanical, electrical or chemical energy or from the absence of such essentials as heat or oxygen (NHTSA, 2002)
- Possible causes include road traffic accidents, fall, animal bite, industrial accident, home accident, blunt injury, burns, stab, gunshot, assault and self-harm

Abbreviations

- UTH: University Teaching Hospital, Lusaka
- RTA: Road Traffic Accident
- SOP: Standard Operating Procedure
- BID: Brought In Dead

Storage of Completed Data Sheets

- Cover page: completed page to go into box labelled 'cover sheet' found at the casualty clerk's desk.
- Trauma data sheets: completed sheets to be stored in box labelled 'Trauma Data Sheet'/'BID' found at the clerk's desk
- Trauma data sheet: hospital utilization: this sheet is to be attached by staple to patient's file and the form updated when the patient discharged. Completed forms are placed in the 'Trauma Data Sheet'/'BID' box at the clerk's desk.
- Brought in dead sheet: the sheet is completed and placed in the box at the clerk's desk labelled 'BID"

STANDARD OPERATING PROCEDURE

COMPLETION GUIDELINE: TRAUMA DATA SHEET

General

ONLY black pens may be used – the computer will not read any other colour ink. Please use clipboard and pen provided.

Cover Sheet

- Check that data sheet has a study ID number sticker
- Fill in data collector number

  Note: all boxes should be filled in, eg: if you are data collector no 2, you should fill in '02'
- Fill in date and time. Fill in all boxes: 1 July 2011 is: 01/07/2011.

  Time is the 24-hr clock: eg, 01:05. Midnight is 00:00
- Fill in patient's name and hospital number
- Put this sheet in its own box (labelled 'Trauma Cover Sheet')

Checking boxes

- Place an 'X' through box. If checked in error, correct by placing a line through the entire statement, put your initials next to this and then mark the correct one
- Examples: ☒ (correct)

  Incorrect: ☑ ☐ ☐

Trauma Data Sheet page 1

- The study ID number will be attached to the sheet (sticker)
- Fill in data collector number (use all boxes, '0' in front of a single figure)
- Date, time and data number. All boxes to be filled in eg: 03/07/2011, 07:04, 06
- 1. sex

  check boxes
- 2. address

  check boxes for 4 districts: Chongwe, Kafue, Luangwa & Lusaka and free text section for districts not included. Free section for compound or suburb, free section for city or village

- 3. occupation
  check boxes: free text section if occupation not listed
- 4. place where injury occurred
  as for question 2
- Setting of injury: check boxes and free text if not included in list
- 5. method of transport to the hospital
  Check box; free text if not listed

Trauma Data Sheet page 2

- 6. Time of injury and patient arrival to hospital

a)Date b) time (approximate) c) approximate time of arrival to UTH

- 7. Cause of Injury – Traffic related incident only:

If not traffic related, check the 'no' box and go to question 8 – 'Other Trauma Causes'.

Choose the car that was involved: if the patient was a driver or passenger, which vehicle he or she was in; if a pedestrian, choose which vehicle struck the patient. 'SUV' is a 4x4 vehicle, included in the 'car' category. A small truck or van is a vehicle larger than a mini-bus but smaller than lorry. A lorry or large truck is a vehicle that transports containers, or the large shipping of goods from country to country.

Choose what position the patient was in when the accident happened – was he or she a cyclist, pedestrian, passenger etc. and if they were wearing a seatbelt. If not in a car (eg: a cyclist), check 'not applicable'. If the patient was brought in unconscious by the police and their role not clear, check 'unknown' (often these patients are pedestrians, so this may be 'not applicable')

Find out if anyone was killed in the same accident, and if there was more than one death on scene.

Choose the location of the child (if patient is a child). Was he/she in the vehicle? If the child was not inside the vehicle, and not a pedestrian or on a bicycle (these fall under 'not applicable'), check the box 'other' and fill in where the child was in relation to the vehicle (eg: holding the tailgate).

Fill in if the child was restrained (ie, 'seatbelt' or 'child seat') in the vehicle in any way. 'Not applicable' if on a bicycle, pedestrian, etc

- 8. Other trauma causes

Eg: a child with burns, check the box. If the cause is not included (eg: a person injured whilst repairing their car, fill in free text box). An accident at

home refers to accidental injury whilst at home (not at work) that is not included in the list: so a burn would fall under ‘burns’ but if someone fell off the roof repairing his own water tank, it is a home accident.

- 9. Intent of injury

  Did the patient harm him/herself on purpose (eg: wanted to commit suicide) or was it an accidental injury or an assault?
  Check box

Trauma Data Sheet page 3

- 10. Alcohol use

Check 'yes' or 'no' if clear on history (from relative or patient); if patient unaccompanied and not able to give history, eg: head-injured patient who smells of alcohol on his breath – check 'suspected'

- 11 & 12. Breathalyzer **(see SOP: Breathalyzer Operation)**

If alcohol use is suspected or confirmed, use the breathalyzer to get the alcohol level. The patient has to co-operate to provide an adequate breath specimen. The score is a 0.xxx figure. Fill in all boxes eg: '.010'

- 13. Area of significant injury

Check the box corresponding to the main area of injury, eg if stabbed in the chest, check 'chest'. If a poly trauma patient with multiple injuries eg, headinjury and pelvic fracture, check both boxes

- 14. Pulse on admission **(see SOP: Taking a Pulse)**

The pulse must be counted for a full minute. Fill all boxes in, eg '086'. If no pulse can be palpated, it should be counted by listening to the chest with a stethoscope. If the pulse is recorded by the casualty staff on admission, write in the score and move on to item 15.

KAMPALA TRAUMA SCORE

The Kampala Trauma score was devised in Kampala, Uganda in the late 1990's as a simple scoring system to determine the severity of injury the patient sustained and to group together variables that may influence their chances of survival. The score was validated in a study published in 2000 and has since been used in studies in Ethiopia, Egypt and Malawi.

- 15. Patient age
  1) Children < 5 years: record months and years of age for all children under 5 years.
  2) Children > 5 years: record without months. Fill all boxes in ie, '06' '00' for a 6-year old.
  3) Write in the score for the age, ie '1' if pt is less than 5 years or above 55 years old, '2' if 5 – 55 years

- 16. Systolic Blood Pressure on admission **(See SOP: taking a Blood Pressure).** Record the BP in the chart, if it has been done.

  Take the blood pressure on the leg if both arms are involved in trauma, eg bilateral fractures or burns. Use a pediatric cuff for children. Check the box for the range and write in the score number next to the range in the box provided

- 17. Respiratory rate

  Count the rate for a full minute, fill in the score next to the range

- 18. Neurological (AVPU) score **(See SOP: using the AVPU scoring system)**

  Check response and fill in score in

- 19. Number of serious injuries

  Count the injuries that will cause a patient to be admitted. Look in the patient's file for injuries sustained. Check box and fill in score

- 20. KTS total

  Add up the score, using all the boxes eg if it is 5, write '05'. The data supervisor needs to check the scoring and the addition and sign that he or she has done so. If the data is incomplete, review the patient's chart to see if some of the information is available.

Note: it is our priority to capture good data on all patients likely to be admitted to MSW and FSW (and on to surgical wards). For patients 'passing through' casualty that are going straight home afterward, this data is less critical. If some data is not captured for these patients, it should be stated by the data supervisor at the signature box. It is VERY IMPORTANT to get complete data on all admitted patients (to MSW/ FSW, G wards etc).

STANDARD OPERATING PROCEDURE

COMPLETION GUIDELINE: TRAUMA DATA SHEET: HOSPITAL UTILIZATION

Purpose / Background

The purpose of this SOP is to describe a standardized approach to filling out the hospital utilization data form for the Trauma Research at UTH study

Scope / Applicability

This SOP is intended for the following study staff: the research assistants and the principal researcher

Prerequisites / Supplies Needed

Trauma Data Sheet: Hospital Utilization
Black pen

Supply stock

Found in labelled box at clerk's desk
Principal researcher (number saved in research phone)

Form disposal

Completed forms are placed in the 'Trauma Data Sheet' box at the clerk's desk.

Hospital Utilization page 1

- The study ID number will be attached to the sheet (sticker)
- Fill in data collector number (use all boxes, '0' in front of a single figure)
- Date, time and data number. All boxes to be filled in

- . Patient disposition in first 24 hours: if the patient went straight home from casualty, this form is not filled out. If the patient was admitted to MSW / FSW and then sent home (the same day or the following morning), check the relevant box

Admitted to 'main ward' includes the G-wards, MICU, D01 or high cost or C wards.

Transferred to another hospital: for patients who elect for private treatment outside UTH.

Brought in dead/ died within 24 hours: these are patients who have passed through casualty/ MSW /FSW and then died (the hospital considers these patients to be 'brought in dead' but for the study purpose, these patients are included in the hospital utilization forms and the brought in dead forms filled out for those who do not pass through casualty.

Left against medical advice: those patients who abscond (at any time in their stay), whether or not they sign the file that they are intent in leaving before ready for discharge.

- 22. X-rays

Check all that apply. If none, check 'none'

- 23. Other imaging

This applies (together with 22) to the whole hospital stay. Only check 'none' if no imaging took place throughout the hospital stay

- 24. Patient status at 30 days

Check the appropriate box. Date of death – fill in all boxes. Free text cause of death. Date of leaving against medical advice; date of discharge – fill as applicable

- 25. Operation details

Check the appropriate box. Fill in the date of the 1st operation. On discharge, list number of operations during hospital stay, eg '02'. Time of theatre can be taken from the operation note. Fill in all boxes

- 26. Surgical site infection

Check appropriate box. 'Not applicable' if no surgical wound

- 27. Blood products

Check appropriate box

Hospital Utilization page 2

- 28. HIV status

Check appropriate box.

- 29. Chest Drain

Check the box if the patient had a ICD inserted

- 30. Primary Diagnosis

This is the main diagnosis the patient has

Fracture – minor: includes closed uncomplicated;

major: open fractures, patients referred to the orthopaedic team for management.

Burn – check box.

Laceration – complicated: this includes wounds that cannot be closed immediately or need grafting or plastic or opthalmology referral.

Simple: closed with simple sutures.

Contusion = bruising, soft tissue injury.

Abdominal injury: solid organ – liver laceration, ruptured spleen.

Abdominal injury: bowel (see op notes for injured organ).

Pneumothorax & haemothorax – for patients with ICD. If a 'haemo-pneumothorax', check heamothorax.

Urological injury includes urethral rupture, scrotal trauma and ruptured bladder (usually associated with pelvic fracture).

Closed head injury:minor eg: concussed.

Traumatic brain injury: neurosurgical consultation, CT of head done

- 31. Secondary Diagnosis

This is any other diagnosis the patient leaves hospital with.

Eg: admitted with a pelvic fracture, then chest injury noted & ICD inserted. 30. 'fracture – major', 31. 'fracture – major', 'haemothorax' checked

- Data supervisor signs after checking that the form is complete.

STANDARD OPERATING PROCEDURE

COMPLETION GUIDELINE: BROUGHT IN DEAD SHEET

Brought in Dead Sheet page 1

- Date of data collection, time and data collector number

Fill in all boxes.

- 1. Deceased age

As for the previous sheet: include months if aged below 5, fill in age in years and ‘00’ in months box if 5 years and above

- 2. Sex

Check the appropriate box

- 3. Address

Check district, free text if not listed

- 4. Date of injury

Leave blank if patient not a trauma patient

- 5. Time of injury

Leave blank if no trauma. Fill in all boxes if injured.

- 6. Place where injury occurred.

Check the appropriate district, fill in address. Check place of injury: leave blank if not a trauma death

- 7 & 8. Date of death, time of death

Fill in approximate date and time of death, fill in all boxes for all patients (even if death is not due to trauma)

Brought in Dead Sheet page 2

- 9. Place where death occurred

May not be the same place as the injury. Check option. Free text if not included

10. Traffic death

Check if this is a traffic death and what type of vehicle patient was in/ struck by, whether they were restrained or not and if anyone else died on scene.

- 11. Other causes of trauma death

Check all that apply

- 12. Alcohol use

Get history from relative if possible

- 13. History of trauma

For patients with no history of trauma (eg; medical causes), check ‘no’

- 14. Intent

Find out if patient was killed accidently or took his or her own life or were victims of assault

Data Supervisor checks that data is complete and then signs the form