Appendices
Appendix 1: Injury Surveillance Record Form

National Injury Surveillance Record Form, Bureau of Epidemiology, THAILAND

Injury Surveillance Record ☐ Hospital name ____________________________ Province ____________ Present ☐ 1 in this province ☐ 2 Not in this province ☐ 3 Unknown

First name ____________________________ Lastname ____________________________ HN ____________

See ☐ 1 Male ☐ 2 Female Date of Birth ____________ or Age ____________ Tyr ____________ Month or approximately ____________ Yr ____________

Occupation ☐ 1 Govt. Official ☐ 2 Police/Soldier ☐ 3 Govt. enterprise ☐ 4 Private company employee ☐ 5 Unemployed ☐ 6 Other(s) specified by the person

Date occurred ____________ Time occurred ____________

Date arrived at hospital ____________ Time arrived at hospital ____________

Location: District ____________________________ Province ____________

☐ 1 Home ☐ 2 Residential institution ☐ 3 School, Public admin area, hospital ☐ 4 Sport, athletic area ☐ 5 Street / Hi-way ☐ 6 Traffic and service area ☐ 7 Industrial and construction area ☐ 8 Farm ☐ 9 Others ____________________________

External causes of injury ☐ 1. Transport accidents

☐ 1.1 Type of injured person

☐ 1.2 Vehicle of the injured

☐ 1.3 Injured due to

☐ 2. Other causes of injury (Specify) ☐ 3. Unknown

Transportation of the injured to hospital ☐ 1. From injured ☐ 2. To hospital

☐ 2.1 By ☐ 3. Others

☐ 2.2 With referral letter ☐ 4. Others

Provinces ☐ 1. No person taking care ☐ 2. No

From health facility: Name ____________________________ Province ____________

☐ 2.1. By ☐ 3. Others

☐ 2.2. With referral letter ☐ 4. Others

First aid / care / while transport

Breathing care ☐ 1. Yes-appropriate ☐ 2. No-appropriate

Bleeding care ☐ 3. Yes-appropriate ☐ 4. No-appropriate


☐ 7. Others

☐ 8. Unknown

☐ 9. Unknown

Splen/slab ☐ 1. Yes-appropriate ☐ 2. No-appropriate

☐ 3. IV Fluid ☐ 4. Others


☐ 7. Others

☐ 8. Unknown

Type of injury cause ☐ 1. Blunt ☐ 2. Penetrating

☐ 3. Blunt and Penetrating ☐ 4. Other

Date disposition from E.R. ____________ Time ____________

BY ☐ 1. Dr. ☐ 2. Cn. ☐ 3. Oth. ☐ 4. Others

Date discharged from ward ____________

ICD-10 chapter 10: Sports and leisure time injuries

By ☐ 1. Dr. ☐ 2. Cn. ☐ 3. Oth. ☐ 4. Others

By ☐ 1. Dr. ☐ 2. Cn. ☐ 3. Oth. ☐ 4. Others

By ☐ 1. Dr. ☐ 2. Cn. ☐ 3. Oth. ☐ 4. Others

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Appendix 2: Emergency Medical Services Record Forms (Command and Control Centre Form)

Unit 11 (Appendix)

Bureau of Emergency Medical Service System
Memorandum Form of the Alarm Center and the Command and Control Center
The Alarm Center and the Command Control Center in zone...

1. General Data

<table>
<thead>
<tr>
<th>Date</th>
<th>Response Number of the Centre</th>
<th>Response number</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Response Number of the Centre</td>
<td>Response number</td>
</tr>
<tr>
<td></td>
<td>Receiving from</td>
<td>Type of incident</td>
</tr>
<tr>
<td></td>
<td>People through hot line</td>
<td>Traffic accident</td>
</tr>
<tr>
<td></td>
<td>People through other phone numbers</td>
<td>Falls</td>
</tr>
<tr>
<td></td>
<td>Citizen's aid</td>
<td>Electrocution</td>
</tr>
<tr>
<td></td>
<td>Medical staff</td>
<td>Fall over 5 meters</td>
</tr>
<tr>
<td></td>
<td>Patient</td>
<td>Fall from the high place</td>
</tr>
<tr>
<td></td>
<td>Fireman</td>
<td>Fall from the high place</td>
</tr>
<tr>
<td></td>
<td>Police</td>
<td>Fall from the high place</td>
</tr>
<tr>
<td></td>
<td>Other</td>
<td>Fall from the high place</td>
</tr>
<tr>
<td></td>
<td>Name of responding people</td>
<td>Type of incident</td>
</tr>
<tr>
<td></td>
<td>Telephone number</td>
<td>Type of incident</td>
</tr>
<tr>
<td></td>
<td>Zone</td>
<td>Type of incident</td>
</tr>
</tbody>
</table>

2. Data of Response Time

<table>
<thead>
<tr>
<th>Time</th>
<th>Total Time</th>
<th>Response Time 1</th>
<th>Arriving at the Scene</th>
<th>Leaving from the Scene</th>
<th>Reaching the Hospital</th>
<th>Arriving at the Base</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>minute(s)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>minute(s)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

3. Incident Type

<table>
<thead>
<tr>
<th>Type of Incident</th>
<th>Emergency event (Please specify)</th>
<th>Disaster</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traffic accident</td>
<td></td>
<td>Natural disaster</td>
</tr>
<tr>
<td>Suicide</td>
<td></td>
<td>Building collapse</td>
</tr>
<tr>
<td>Drowning</td>
<td></td>
<td>Bomb</td>
</tr>
<tr>
<td>Injured caused by things</td>
<td></td>
<td>Chemical and dangerous materials</td>
</tr>
<tr>
<td>Animal bite</td>
<td></td>
<td>Others</td>
</tr>
</tbody>
</table>

4. Patient Complaint Signals

<table>
<thead>
<tr>
<th>Advanced Life Support Level (ALS)</th>
<th>Basic Life Support Level (BLS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A serious gap</td>
<td>A little gap</td>
</tr>
<tr>
<td>Seizure</td>
<td>Patient trapped inside the vehicle</td>
</tr>
<tr>
<td>Loss of consciousness</td>
<td>All kinds of fever</td>
</tr>
<tr>
<td>Spinal injury</td>
<td>Other fractures of arms, legs, spine, etc.</td>
</tr>
<tr>
<td>Severe chest pain</td>
<td>General pain</td>
</tr>
<tr>
<td>Hypothermia</td>
<td>Fall lower than 5 meters</td>
</tr>
<tr>
<td>Sepsis</td>
<td>Spontaneous to stimulation</td>
</tr>
<tr>
<td>Apeia</td>
<td>Have an initial labour</td>
</tr>
<tr>
<td>Injury caused by accidents</td>
<td>A little injury</td>
</tr>
<tr>
<td>Emergency concerning high speed leader</td>
<td>Violent action</td>
</tr>
<tr>
<td>High risk</td>
<td>Trend of low violence</td>
</tr>
</tbody>
</table>

5. Commanding (approved by the head of the center)

<table>
<thead>
<tr>
<th>Name of Service Unit</th>
<th>Level</th>
<th>Advanced</th>
<th>Intermediate</th>
<th>Basic</th>
<th>Destination</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Hospital</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Communication with the receiving or through</th>
<th>Communication officer 1</th>
<th>Communication officer 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication officer 1</td>
<td>Communication officer 2</td>
<td>Communication officer 3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Service Unit’s Medical Staffs</th>
<th>Medical Staffs</th>
<th>Nurse</th>
<th>Rescue staff 1</th>
<th>Rescue staff 2</th>
<th>Data officer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Doctor</td>
<td>Nurse</td>
<td>Rescue staff 1</td>
<td>Rescue staff 2</td>
<td>Data officer</td>
<td></td>
</tr>
</tbody>
</table>

6. Response

<table>
<thead>
<tr>
<th>Response</th>
<th>Response Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treated</td>
<td>Cancelled</td>
</tr>
<tr>
<td>Treated, No Transfer</td>
<td></td>
</tr>
<tr>
<td>Treated, Dead</td>
<td></td>
</tr>
<tr>
<td>Treated, Dead on Transfer</td>
<td></td>
</tr>
</tbody>
</table>
Appendix 3: Emergency Medical Services Record Forms (Basic Life Support form)

Bureau of Emergency Medical Service System
Memorandum Form of the Basic Life Support

1. Service Unit

<table>
<thead>
<tr>
<th>Service Unit</th>
<th>Province</th>
<th>Zone</th>
<th>Receiving Command</th>
<th>Center Date</th>
<th>Center’s Response Number</th>
<th>Medical Staffs who gave service</th>
<th>Code</th>
<th>Code</th>
<th>Code</th>
</tr>
</thead>
</table>

Response number: ............

2. Date of Time

<table>
<thead>
<tr>
<th>Time</th>
<th>Recovering the Report</th>
<th>Commanding</th>
<th>Leaving from the Base</th>
<th>Arriving at Scene</th>
<th>Leaving from the Scene</th>
<th>Reaching the Hospital</th>
<th>Arriving at the Base</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Time</td>
<td>Response Time</td>
<td>minute (s)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of Kilometers</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Distance (Kilometers)</td>
<td>Total Distance (Km)</td>
<td>kilometer(s)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Distance to Hospital</td>
<td>kilometer(s)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

3. Patient Information

<table>
<thead>
<tr>
<th>Patient’s Name</th>
<th>Age</th>
<th>Gender</th>
<th>Patient’s condition</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Conscious:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Conscious</th>
<th>Conscious</th>
<th>Dull</th>
<th>Spontaneous to stimulation</th>
<th>Unconscious</th>
<th>Crazy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fast</td>
<td>Normal</td>
<td>Slow</td>
<td>Irregular</td>
<td>Apena</td>
<td></td>
</tr>
<tr>
<td>Laceration</td>
<td>Abrasion</td>
<td>Cut</td>
<td>Gun shot</td>
<td>Custion</td>
<td>Serious blood loss</td>
</tr>
<tr>
<td>Upper arms</td>
<td>Lower arms</td>
<td>Legs</td>
<td>Upper legs</td>
<td>Cervical spine / Spinal column</td>
<td>Face / Head</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Respiratory</td>
<td>Clear airway</td>
<td>Position</td>
<td>Oral airway</td>
<td>Pocket mask</td>
<td>Supply oxygen</td>
</tr>
<tr>
<td>Bleeding Control</td>
<td>No treatment</td>
<td>Manual pressure</td>
<td>Pressure dressing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Splinting</td>
<td>No treatment</td>
<td>Air splint</td>
<td>Splint</td>
<td>Other</td>
<td></td>
</tr>
<tr>
<td>CPR</td>
<td>No treatment</td>
<td>Treatment</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Basis Treatment Outcome</td>
<td>Uncooperative</td>
<td>Relieve</td>
<td>Stable</td>
<td>Worse</td>
<td>Dead</td>
</tr>
</tbody>
</table>

4. Criteria of Transferring to Hospitals (approved by the head of the center and the center)

Transfer to ER of: Hospital Time: Public Hospital | Private Hospital | Criteria | Treatable | Near | Health Insurance | Patient’s medical history | Destination chosen |
| Recorder: | Code | Rescue official | First aid official | Volunteer |

5. Transfer Evaluation (approved by the doctor and the nurse of the receiving hospital)

<table>
<thead>
<tr>
<th>HIN</th>
<th>Type of Incident</th>
<th>Level</th>
<th>Non urgent</th>
<th>Urgent</th>
<th>Emergent</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Respiratory</td>
<td>Unnecessary</td>
<td>No Treatment</td>
<td>Appropriate Treatment</td>
<td>Inappropriate Treatment</td>
</tr>
<tr>
<td></td>
<td>Bleeding Control</td>
<td>Unnecessary</td>
<td>No Treatment</td>
<td>Appropriate Treatment</td>
<td>Inappropriate Treatment</td>
</tr>
<tr>
<td></td>
<td>Fracture</td>
<td>Unnecessary</td>
<td>No Treatment</td>
<td>Appropriate Treatment</td>
<td>Inappropriate Treatment</td>
</tr>
<tr>
<td></td>
<td>Patient’s Name</td>
<td>Position</td>
<td>Doctor</td>
<td>Nurse</td>
<td>Others</td>
</tr>
</tbody>
</table>

6. Hospital’s Treatment Outcome

<table>
<thead>
<tr>
<th>Admit Duration</th>
<th>Recovery</th>
<th>Relieve</th>
<th>Transferred to other hospitals</th>
<th>Die at the hospital</th>
<th>Return home, Dead</th>
</tr>
</thead>
</table>

Please send this form back to the provincial Office Of Emergency Medical Service System before the 5th of next month.
Appendix 4: Emergency Medical Services Record Forms (Advanced Life Support Form)

Bureau of Emergency Medical Service System
Memorandum Form of the Advanced Life Support

1. Service Unit (Please send this form back to the provincial Office Of Emergency Medical Service System before the 5th of next month)
   
   Service Unit: [Insert Service Unit]
   Province: [Insert Province]
   Zone: [Insert Zone]
   Receiving Command Form: [Insert Command Form]
   Center Date: [Insert Date]
   Center's Response Number: [Insert Number]
   Medical Staffs who give service: [Insert Names]
   Code: [Insert Code]
   Code: [Insert Code]
   Code: [Insert Code]
   Code: [Insert Code]
   Response outcome: [Insert Outcome]
   Report Found: [Insert Outcome]
   No Report Found: [Insert Outcome]

2. Data of Time

<table>
<thead>
<tr>
<th>Time</th>
<th>Receiving the Report</th>
<th>Commanding</th>
<th>Leaving from the Base</th>
<th>Arriving at Scene</th>
<th>Leaving from the Scene</th>
<th>Reaching the Hospital</th>
<th>Arriving at the Base</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Time</td>
<td>Response</td>
<td>Time</td>
<td>minute</td>
<td>minute</td>
<td>minute</td>
<td>minute</td>
<td>minute</td>
</tr>
<tr>
<td>Number of Kilometers</td>
<td>Total</td>
<td>Distance</td>
<td>kilometer</td>
<td>Distance</td>
<td>Back</td>
<td>kilometer</td>
<td>Hospital</td>
</tr>
</tbody>
</table>

3. Patient

<table>
<thead>
<tr>
<th>Patient's Name</th>
<th>Age</th>
<th>Year</th>
<th>Gender</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Glasgow Coma Scale (GCS)</th>
<th>Eye Movement (4)</th>
<th>Motor (6)</th>
<th>Time</th>
<th>Pulse</th>
<th>Temperature</th>
<th>Respiratory Rate</th>
<th>Time/minute</th>
</tr>
</thead>
<tbody>
<tr>
<td>Verbal (5)</td>
<td>Total (15)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pupils</td>
<td>React to Light Y/N</td>
<td>RR</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RT Eye</td>
<td>mm</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LT Eye</td>
<td>mm</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Motor Power</td>
<td>Lt Arm</td>
<td>Lt Arm</td>
<td>Lt Leg</td>
<td>Rt Leg</td>
<td>Normal Power</td>
<td>Slowly Weak</td>
<td>Marked Weak</td>
</tr>
<tr>
<td>Power</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Abnormal Flexion</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Abnormal Extension</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4. Criteria of Transferring to Hospitals (approved by the head of the center)

<table>
<thead>
<tr>
<th>Transfer to ER of</th>
<th>Hospital Time</th>
<th>Public Hospital</th>
<th>Private Hospital</th>
</tr>
</thead>
<tbody>
<tr>
<td>Criteria:</td>
<td>Treatable</td>
<td>Nontreatable</td>
<td>Health Insurance</td>
</tr>
<tr>
<td>(If able to choose more than 1 item)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

5. Transfer Evaluation

<table>
<thead>
<tr>
<th>HIN</th>
<th>Type of Incident</th>
<th>Level</th>
<th>Non urgent</th>
<th>Urgent</th>
<th>Emergency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Respiratory</td>
<td>Unnecessary</td>
<td>No Treatment</td>
<td>Appropriate Treatment</td>
<td>Inappropriate Treatment</td>
<td></td>
</tr>
<tr>
<td>Bleeding Control</td>
<td>Unnecessary</td>
<td>No Treatment</td>
<td>Appropriate Treatment</td>
<td>Inappropriate Treatment</td>
<td></td>
</tr>
<tr>
<td>Fractures</td>
<td>Unnecessary</td>
<td>No Treatment</td>
<td>Appropriate Treatment</td>
<td>Inappropriate Treatment</td>
<td></td>
</tr>
<tr>
<td>Evaluator's Name</td>
<td>Position</td>
<td>Doctor</td>
<td>Nurse</td>
<td>Others</td>
<td></td>
</tr>
</tbody>
</table>

6. Hospital's Treatment Outcome

<table>
<thead>
<tr>
<th>Admit Duration:</th>
<th>days</th>
<th>Recover</th>
<th>Relieve</th>
<th>Transferred to other hospitals</th>
</tr>
</thead>
<tbody>
<tr>
<td>[Insert Duration]</td>
<td>[Insert Outcome]</td>
<td>[Insert Outcome]</td>
<td>[Insert Outcome]</td>
<td>[Insert Outcome]</td>
</tr>
<tr>
<td>[Insert Outcome]</td>
<td>[Insert Outcome]</td>
<td>[Insert Outcome]</td>
<td>[Insert Outcome]</td>
<td>[Insert Outcome]</td>
</tr>
</tbody>
</table>
Appendix 5: Provincial Injury Surveillance Coding System

Manual for Data Recording
Provincial Injury Surveillance, Bureau of Epidemiology
Ministry of Public Health, THAILAND

Variables, definition, data recording and utilization

1. Hospital
   Definition: Name of hospital operating the provincial injury surveillance
   Data Recording: Record the full or abbreviated name of the hospital or stamp the hospital’s name instead.
   Utilization: This field makes us know:
   1. Name of health facility that provides the treatment and collects the data
   2. Data source

2. Province
   Definition: Province where the hospital is located
   Data Recording: Record the full or abbreviated name of the province or stamp the province’s name instead.
   Utilization: It shows us the source of data.

3. H.N. (Hospital Number)
   Definition: Register number of patient issued by the hospital.
   Data Recording: Record the number in Arabic numerals format.
   Utilization: 1. If patient’s name is unknown, this data can be used instead.
   2. It is used as an index for searching the OPD card and patient admitting chart used for data verification or in-depth study.

4. Patient’s first name
   Definition: Patient’s first name
   Data Recording: Record the patient’s name and identify surname such as Mr., Mrs., Miss as well as title/rank, e.g. Pol. Capt...
   Utilization: In case there is an error involving HN, sex and occupation, prename can be used to verify the sex and occupation.
6. Patient’s last name
Definition: Patient’s last name
Data Recording: Record the patient’s last name
Utilization: In case there is confusion in individual patient, or mistaken HN, this data can be used to verify the accuracy with those variables.

6. Personal identification number (Will use in new version after 2006 only)
Definition: National ID number -13 digits.
Data Recording: Record the number in Arabic numerals format.
P.I.D. □ □ □ □ □ □ □ □ □ □ □ □ □ □ □
Utilization:
1. If patient’s name is unknown, this data can be used instead.
2. It is used as index for searching the OPD card and admitting chart used for data verification or in-depth study.

Remark: In 1st version of IS in 1995, not many patient will carry ID to hospitals so we decided not to include until carrying of ID card is popular enough.

7. Present Address
Definition: Present residence of patient where they have lived at least 3 months previously to the occurrence of injury.
Within province: means the patient live in the same province as the sentinel hospital at least 3 months previously to the occurrence of injury
Not in province: means the patient does not live in province where the sentinel hospital locates in. (They may be tourist or by passer of the province).
Unknown: means the patient or person taking the patient to sentinel hospital cannot provide the above information.

Data Recording: Put a mark ✓ in one of the following □ boxes by asking patients whether they live in this province at least 3 months or not. In case you cannot obtain this data from the patient, using the data contained in OPD card is allowed.
□ 1 in this province
□ 2 not in this province
□ N unknown

Utilization: 1. From this variable, we can identify the number of the injured whom resides in the province vs. outside of
province. Hence the claim that most injured people are tourist or people travel pass the province can be verified. It can be used for planning and evaluation of health education performance of the province whether it reached there population in the province.

2. It can be used for appropriate planning of the preventive measures.

8. Sex
   Definition The patient’s sex (biological)
   Data Recording Put a mark ✓ in one of the following boxes
     □ 1 Male □ 2 Female
   Utilization
     1. We can use this variable to check the accuracy of patient’s name.
     2. It makes us know the descriptive epidemiology of injury by sex.

9. Date of Birth (age of the injured)
   Definition Date, month and year of birth of the injured.
   Data Recording Ask the injured about date, month and year of birth and fill in the item of date of birth.
   If the injured did not know date and month of birth, ask only year.
   If they were not able remember their birth date, ask them or the person who transports the injured to hospital about their age and fill in the item Date of birth __/__/__
   Remark:
     • If the patient’s date of birth is entered, the injury surveillance software will automatically calculate the age.
     • If the injured do not remember his/her birth date, ask them or the person who transports patient to hospital about their age and fill in the item. (variable No. 10-12)

10-12. Age (patient’s age)
   Definition Patient’s age
   • In case of patient whose age is 1 year up, record age in year.
   • In case of 1 - 11 month children, fill in only month.
   • In case of patient whose age is under 1 month, record the number of day or fraction of month. The program classifies this case in the 1 month age group or under 1
If the injured and person who transports him to hospital cannot provide this data, the interviewer should estimate the injurer’s age and fill in the item approximately ........ year.

Data Recording
Ask the injured about his age and fill in the item.

........ Year .......... Month .......... Day

Utilization
1. This data makes us know the descriptive epidemiology of injury by age.
2. It also enables us to know the risk to injury by age group.
3. It is used as one of variables required for measure of probability of survival of the severely injured upon hospitalization.

13. Occupation
Definition
The occupation categorized here is differently from I.O. This categorization’s purpose is to aim at the organization that the injured attached to in his career and meant for recommending the preventive intervention to his organization.

01 Government Officials
All civil servants including pensioners, permanent and temporary employees of government

02 Police/Soldier
Polices and soldiers in all ranks in including pensioners permanent and temporary employees

03 Government Enterprise Officials
All government enterprise employees and officials as well as temporary employees

04 Private Company Employees
Person who works in private company excluding the unskilled workers.

05 Unskilled laborers
Person who is unskilled and live upon their physical work for wages, e.g. building laborer, agriculture laborer, messenger, housemaid etc.

06 Business/trading
Person who is as owner or shareholder, businessman Traders etc.

07 Agriculturist
Person who earns a living by farming or raising livestock as owner, shareholder or tenant

**08 Student** *

Person who is enrolled for study at a school, college or university, including other formal educational institute and pre-school nursery inside the school

**Others specify**

Other freelance professionals which is not included in above occupation, e.g. taxi driver, tricycle driver, priest, lawyer, craftsman, housewife and unemployed.

**Data Recording**

Put a mark in the box (Occupation)

- 01 Government Officials
- 02 Police/Soldier
- 03 Government Enterprise Officials
- 04 Private Company Employees
- 05 Unskilled laborer
- 06 Business/trading
- 07 Agriculture
- 08 Student
- Others ................ (Specify)

**Remark:** Due to hectic work in E.R., you may not be able to categorize the occupation correctly according to the recording manual. If such feeling occurs, please describe the injured person’s occupation in details in the IS record form and the coder will help categorize into appropriate coding for you.

For your information, there are more codes for occupation according to our coding manual as follow:

- 09 Priest, Monk, Nun, Brahman
- 10 Lawyer
- 11 Artist, Actor
- 12 Fisherman
- 13 Public driver
- 14 Skilled worker refers to worker who has skill in his career, e.g. mechanic, carpenter, plumber, painter, electrician, Hairdresser, dresser, tailor
- 15 Housewife refer to a married woman (without income)
- 16 Prisoner
- 99 Other refers to other professionals are not included in above list
- 00 Unemployed
□ N Unknown

Remarks: 1) The word 'working as hired' or 'employees' should be avoided. Otherwise there will be a big bunch of people in such category and we can not target our intervention precise enough.

Utilization
1. This data makes us know the distribution in terms of descriptive epidemiology of injury by occupations.
2. It also enables us to know the risk of injury by occupation group.
3. To identify the sector (organization) that the high risk group belongs to, in order to target the intervention project more specifically.

14. Date Occurred
Definition Date the patient was injured due to intentional injury or unintentional injury.
Data Recording Date : record in the Arabic numerals format
Month : record abbreviation of month in Thai
Year : record only last 2 digit of Buddhism era
Date/Month/Year:_/_.

Utilization This date makes us know the data for descriptive epidemiology of injury occurrence by date, month and year.

15. Time Occurred
Definition Time the patient was injured due to intentional injury or unintentional injury.
Data Recording Record the real time of injury or approximate time in Arabic numerals, e.g., 01.00
Time .............. (24 hr)

Utilization
1. This data makes us know the data for descriptive epidemiology of injury occurrence by hour.
2. It also enables us to calculate the time lapse between occurrence and the time patient receives treatment or the time use in transporting the injured to the hospital that operate the injury surveillance.

16. Date Arrived at Hospital
Definition The dates in which the injured patient reaches the hospital that operate the injury surveillance.
Data Recording Date : record in the Arabic numerals format
Month : record abbreviation of month in Thai
Year : record only last 2 digit of Buddhism era
Date / Month / Year _/__/____

Remark:
This data is required to fill in. If it is missing, that record will not be included in analytic tabulation.

Utilization
From this data, we can know the number of the injured patient seeking treatment from ER, classified by date or day in the week, which facilitate the allocation of manpower accordingly at ER.

17. Time Arrived at Hospital
Definition
The time of the day in which the injured patient reach the hospital that operate the injury surveillance...

Data Recording
Record the real time of arrival or approximate time in Arabic numerals format, e.g., 9:30
Time ............. (24 hr)

Remark:
This data is required to fill in. If it is missing, that record is not included in analytic tabulation.

Utilization
1. From this data, we know the number of the injured patient classified by time which will facilitate the management of manpower on duty in each shift.
2. We can use this data to calculate the time spent in transportation to the sentinel hospital, or time wasted since injured till arriving hospital.
3. It is also used with another variable to calculate the time spent for treatment in the sentinel hospital.

18. Location
Definition
The location by jurisdiction, of which injury event occurred, either unintentional or intentional.
Identify the district, province and type of place.

Data Recording
District ...... record full name of district
Province ...... record full or abbreviated name of province
District ..................... Province............................

Utilization
This data provide information of
1. The size and proportion of injury in the province
2. Number and proportion of injury occurred in the district of the province
19. Place of occurrence

Definition
Place where the injured were injured from unintentional or intentional injuries.
Places are categorized according to ICD-10 chapter 20 6

1. Home: refers to the place in where a person or family lives excluding residential institution e.g. dormitory, hospice
   Building and adjacent grounds include:
   - Apartment
   - Boarding-house
   - Caravan (trailer), park, residential,
   - Farmhouse
   - Home promises
   - House (residential)
   - Garage
   - Non-institutional place of resident
   - Private:
     - Home garden or yard
     - Garden, yard to home
     - Driveway to home, garage
   - Sport ground in home
   - Swimming pool in private house or garden

Excludes:
Abandoned or derelict house,
Home under construction but not yet occupied,
Institutional place of residence.

2. Residential institution: refers to the place where a group of people with the same characteristic lives. It is not for a family or person includes:
   - Children’s home
   - Military camp
   - Nursing home
   - Orphanage, reformatory
   - Penitoner’s home
   - Dormitory, Home for the sick
   - Prison
   - Old people’s home (Home for the elderly)
   - Reform school, etc.
3. School, other institution and public administrative area: refer to building (including adjacent grounds) used by the general public or by a particular group of the public such as:
   - Assembly hall
   - Campus
   - Church, temple, mosque *
   - Opera-house
   - Cinema, theatre, movie-house
   - Clubhouse, dancehall
   - School, kindergarten, college, university *
   - Library
   - Post office
   - Museum, gallery
   - Youth centre
   - Hospital *
   - Public hall
   - Theatre
   - Club
   - Youth center
   - Library
   - Driveway in hospital

Excludes:
   - Building under construction is to be record as ‘construction site’ coded as (7)
   - Residential institution e.g. dormitory coded as (2)
   - Sports and athletics area in school or educational institute are to be recorded as coded as sports and athletics area (4)

Remark:
If the selected choice is ☐ 3 School, other institution and public administrative area:
   - Church, temple, mosque *
   - School, kindergarten, college, university *
   - Hospital * The place of occurrence should be given the type of place and name
☐ School and public admin .................. (Specify place and name)

4. Sports and athletics area: refer to the public sports and athletics area.
Includes:
   - Football field, baseball field, hockey field, cricket ground, basketball court, golf course, squash-court, tennis court
   - Horse track, Skating rink
   - Riding school
- Public swimming pool
- Golf course, gymnasium, stadium
- Swimming-pool, public

**Exclude:**
- Swimming pool in private home
- Tennis court in private home
- Garden in private home (1)

5. **Street or highway:** refer to public road used for travel from one place to another and adjacent area.
   Includes:
   - Highway, freeway
   - Express way, motorway
   - Road
   - Alley
   - Pavement (shoulder of a road, footpath, side walk)

6. **Trade and service area:** refer to the place for buying and selling commodities and services.
   Includes:
   - Airport
   - Bank
   - Café, coffee shop, restaurant
   - Garage (commercial)
   - Gas station, petrol station
   - Hotel, brothel
   - Market
   - Office building
   - Radio station, television station
   - Station (bus, railway)
   - Shop (commercial), shopping mall
   - Supermarket
   - Department store
   - Warehouse

**Excludes:**
- Garage in private home (1)

7. **Industrial and construction area:** refer to building (and adjacent area) for mass production in small or large industry including the building and adjacent area under construction.
   Includes:
   - Building (any) under construction
   - Dockyard
   - Industrial yard
- Dry dock
- Factory:
  - Building
  - Premises
- Gasworks
- Industrial yard
- Mine
- Oil rig and other offshore installations
- Pit (coal, gravel, sand)
- Power station (coal, nuclear, oil)
- Shipyard
- Tunnel under construction
- Workshop

8. **Farm**: refers to any places for agriculture and livestock including farm building.  
   Includes:
   - Buildings and land under cultivation
   - Ranch (a large farm, especially in the Western)  
   **Excludes:**
   - Farmhouse and home premises of farm

9. **Other specify place**: refer to other places beyond the above lists:
   - Beach
   - Campsite
   - Canal
   - Caravan site (NOS)
   - Derelict house
   - Desert
   - Dock
   - Forest
   - Harbor
     - Mountain, hill, lake
     - Marsh
     - Military training group
     - Park (amusement, public)
     - Parking lot, parking place
     - Pond, or pool
     - Prairie (a large open area of grasses land in North America)
     - Public area (NOS)
     - Railway
     - River, sea, seashore
Data Recording

- Stream, swamp, water reservoir
- Zoo

Put a mark \( \checkmark \) in the box \( \square \) in front of the choices

1. Home *
2. Residential Institution
3. School, Public Admin Area
4. Sport, Athletic Area
5. Street/Way
6. Trade and Service Area
7. Industrial and Construction Area
8. Farm
9. Others \( \ldots \ldots \ldots \) (Specify) *

Remark:
- If the selected choice is others, the details of place of injury should be given clearly.
- If the recorders don't know or not sure to categorize in to which group, he or she may fill in the box of others (specify ...) and writes down the details of place of injury as much as she can so that the coders can classify in to correct group.

Utilization

1. The data provide the information of distribution of injury by place of injury.
2. It enables us to invent the suitable prevention method.

Remark:
If the selected choice is \( \square \) Home * the place of occurrence should be given the house owner

1.1 injured patient's home
1.2 others \( \ldots \ldots \ldots \) (Specify)

20. Intention

Definition

Intent in the occurrence of an injury whether it is intentional or unintentional, and whether it is self-inflicted or inflicted by another

Data Recording

Put a mark \( \checkmark \) in the box \( \square \) in front of the following choices

1. Accident
2. Self-harm
3. Assaults
4. Unknown

Remark:
The choice of unknown should be selected only in case of unconscious patient unable to provide the data or no data provider.
Utilization: We can use this data to
1. Identify what is the problem and cause,
2. Make a prevention and control program.

21. Occupational Injury
Definition: The injuries occur while working in the occupation.
For example, a doctor was wounded by a surgical knife while operating or taxi driver was injured from traffic accident.
These cases are considered as the occupational injury.
In other hand, a doctor having an accident while driving to work is not classified as occupational injury.

Data Recording: Put a mark \(\checkmark\) in the box \(\square\) in front of the following choices
- \(\Box\) 1 Yes
- \(\Box\) 2 No
- \(\Box\) 3 Unknown

Utilization: We can use this data to
1. Identify the problem and severity of major occupational injury,
2. Set the program for injury prevention and control or reduce the severity of injury by accessing to the particular target group classified by occupation,
3. Set the education and manpower development program conforming to the causes of injury most frequently found in particular occupation.

22. External cause of Injury
Definition: Circumstance and external cause that was most responsible for the injury or death to a patient whether the injury is intentional or unintentional (ICD-10, Chapter 20: external causes of morbidity and mortality, V01-V99) \(^4\)

Data Recording: Put a mark \(\checkmark\) in the box \(\square\) in front of the following choices
- \(\Box\) 1 Transport Accidents
- \(\Box\) 2 Other \(\ldots\ldots\ldots\ldots\ldots\ldots\) (Specify)
- \(\Box\) 3 Unknown

23. Transport Accidents
Definition: Injury involving a device designed primarily for, and being used at the time primarily for conveying persons or goods from one place to another including transport injury events occurred on or off a public highway, street or road such as pinched one’s hand in the car door or an accidental contact
with the exhaust pipe of a parking motorcycle causing in burns.

**Includes:**
- Assault by crashing of motor vehicle
- Event of undetermined intent
- Intentional self harm
- Transport accident due to cataclysm

**Data Recording**
Put a mark ✓ in the box □ in front of the following choices
□ 1. Transport accidents

24. **Type of Injured Person**

**Definition** refers to the injured person involved in the transport injury event.

- **Pedestrian** refers to any person involved in a transport injury event who was not at the time of the event riding in or on a motor vehicle or animal, e.g. one is struck by motorcycle while replacing a tire with the new one.
- **Driver** refers to an occupant of a transport vehicle who is operating it.
- **Passenger** refers to any occupant of a transport vehicle other than the driver or operator.
- **Unknown** refers to cases in which it is unknown whether the injured person was a pedestrian, driver or passenger due to patient unable to provide the data or no data provider.

**Data Recording**
Put a mark ✓ in the box □ in front of the choices
○ 01 Pedestrian
○ 02 Driver
○ 03 Passenger
○ N Unknown

**Utilization**
1. This variable provides the information of distribution of injury in terms of descriptive epidemiology by type of injured person.
2. We can use this data to set an education program for the relevant group.

25. **Vehicle of the Injured Person**

**Definition** refers to animal or device, designed for or being used for conveying persons or goods from one place to another, by which the injured person was travelling from one place to another, includes:
- Bicycle/tricycle (Pedal cycle)
Motorcycle
- Motor-tricycle (Three wheeled motor vehicle)
- Personal car (Sedan)
- Pick up/Van
- Heavy truck
- Trailer truck
- Buses
- Minibus
- Other refers to other vehicles which are other than above list or vehicle which is modified and used locally such as farm vehicle

Data Collection

Put a mark ✓ in the box □ in front of the choices

☐ 01 Bicycle/tricycle
☐ 02 Motorcycle
☐ 03 Motor-tricycle
☐ 04 Sedan
☐ 05 Pick up/Van *

☐ 06 Heavy truck (6 more than 6 wheels)
☐ 07 Trailer truck
☐ 08 Mini Buses
☐ 09 Buses
☐ Others ........ (Specify)

If the choice of ☐ 10 other ........ (Specify) is selected, the detail/type of vehicles should be specified such as taxi, train, animal, airplane, watercraft, or agricultural vehicle

☐ 10 Taxi
☐ 11 Train
☐ 12 Animal, animal drawn vehicle
☐ 13 Airplane, helicopter, glider
☐ 14 Watercraft
☐ 15 Agricultural vehicle
☐ 16 Motor plough with pick up attachment (E Tan)
☐ 17 Motorcycle with pick up attachment (Sky Lab)
☐ 99 Other refers to any vehicle other than the above

Remarks: If the injured is pedestrian, it is no need to collect this data

Utilization

- From this data, we can know the type and number of vehicle of the injured and counterpart that can be used for estimating the volume and severity of the problem resulting from each kind of vehicle.
26. **Injured due to**

**Definition**

refers to the mechanism of injury in the course of transportation. includes:
- Collision by or with ...........
- Fall from vehicle
- Vehicle over turned, sank
- Other ............. (Specify)

**Data Collection**

Put a mark ✓ in the box □ in front of the choices

- Collision by or with ... (Specify) (Code 01-19)
- Fall from vehicle (Code 20)
- Vehicle over turned, sank (Code 21)
- Other ............. (Specify) (Code 22, 23, 99)

**Remark:**

- If the choice of □ Collision by or with ... (Specify) is selected, the detail/type of vehicles should be specified such as motorcycle, pick up, taxi, or tree, lamppost, and etc.
- The choice of □ other ....... (Specify) refers to cases of vehicle burned
- If patient unable to provide the data or no data provider, so the detail in the text should be recorded as much as possible.

**Collision by or with vehicles**

- 01  Bicycle/tricycle
- 02  Motorcycle
- 03  Motor-tricycle
- 04  Sedan
- 05  Pick up/Van
- 06  Heavy truck (6 more than 6 wheels)
- 07  Trailer truck
- 08  Mini Buses
- 09  Buses
- 10  Taxi
- 11  Train
- 12  Animal, animal drawn vehicle
- 13  Airplane, helicopter, glider
- 14  Watercraft
- 15  Agricultural vehicle
27. Other Injuries

Definition

Causes of mechanism of intentional and non-intentional injury, e.g. fall, contact with industrial machinery, struck by thrown, project or falling object, sport injury, drowning and submersion, effect of foreign body, burn electric shock, contact with hot water, contact with venomous animate, exposure to forces of nature, exposure to noxious substance and assault excluding injury due to transportation.

Data Collection

Put a mark ✓ in the box □ in front of the following choices

2. Other Injuries .............. (Specify)

Write down the detail of relevant cause or injury mechanism such as contact with drive belt, finger pinched in mill, cut by scuffle or knife. In case the injury happened in sequence, such as a patient got an electric shock and fell down from lamppost, the series of happening should be written in details.

Utilization

1. This data provides the information of types and causes of injury from accident, self-harm and assault.
2. It is used for comparing number and rate of each kind incidents between them to rank the cause by severity
3. We can use this data to make and set the injury prevention and control plan.

Definition

Case in which cause of injury is unknown, such as patient unable to provide the data or no data provider.

Data Collection

Put a mark ✓ in the box □ in front of the following choices

22. External cause of injury
3. Unknown
**Risk Behavior**

**Definition**
Behavior which produces more risk or severity

**28. Alcohol (Risk1)**

**Definition**
Injured patient drank alcohol prior to injury this data can be obtained by asking the patient directly, observing from his movement and speaking, taking smell of alcohol or giving the ETOH test.

**Data Collection**
Put a mark ✓ in the box □ in front of the following choices
- □ 1 Yes
- □ 0 No
- □ 3 Unknown

**29. Alcohol level (Mg %)**

**Definition**
The blood alcohol concentration measured by breath analyzer or measured from urine or blood which sent to the laboratory

**Data Collection**
Should be filled in numeric .......... Mg%

**30. Drugs/medication (Risk2)**

**Definition**
Injured patient used drug acting on the nervous system or having an altering effect on the mind that makes the injured drowsy or inert leading to traffic injuries or other injuries such as methamphetamine, antihistamine. Specify the type of drug and its name.

**Data Collection**
Put a mark ✓ in the box □ in front of the following choices
- □ 1 Yes
- □ 0 No
- □ 3 Unknown

**31. Seat belt (Risk3)**

**Definition**
Injured patient used safety belt up to the standard regulated by Land Transportation Department in the course of injury.

**Data Collection**
Put a mark ✓ in the box □ in front of the following choices
- □ 1 Yes
- □ 0 No
- □ 3 Unknown
32. **Safety Helmet (Risk4)**
**Definition**
Injured patient wore the helmet up to the standard regulated by Land Transportation Department and fastened the chinstrap in the course of injury.

**Data Collection**
Put a mark ✓ in the box □ in front of the following choices
- □ 1 Yes
- □ 0 No
- □ 3 Unknown

33. **Transportation of the injured to hospital**
**Definition**
- □ 1 From Injured site or other
  - Refers to the injured taken to hospital by other person or coming by oneself without receiving treatment at any health facilities.
  - □ Person who transport
  - Refer to person who transports the injured hospital.
- □ 1 Emergency Medical Service Unit (EMS)
  - Emergency Medical Service Unit (EMS) refers to the medical mobile unit that rescues and provides pre-hospital care to the injured by health personnel, e.g. physician, nurse or other health personnel (excluding driver) during transportation to hospital.

34. **Foundation volunteers**
**Definition**
- □ 2 Charitable foundation volunteers refers to the volunteer of charitable foundation
- □ 3 Police
- □ 4 Others
- □ 0 No
  - Refers to a case coming to hospital by oneself
- □ N Not known
  - Refers to an unconscious patient unable to provide the data and no data provider

**Data Collection**
Put a mark ✓ in the box □ in front of the following choices
If the injured was taken to hospital by another person, please select by putting ✓ in □ front of the choice of person who transports the injured to hospital.

- □ 1 From Injured site or other
  - □ Person who transport
  - □ 1 Emergency Medical Service Unit (EMS)
35. **Name of health facility**

**Definition**
The health facility where the injured attending for treatment after injury.

36. **Province**

**Definition**
Specify the name of the health facility and province where it is located in.

37. **Ambulance**

**Definition**
The injured is transferred to another health facility by ambulance permitted by Police Department.

- **2** Transfer by
  - ☑ Ambulance
  - ☑ With person to take care during transfer. (Specify professional) person taking care the patient during transfer excluding the driver.
  - ☑ Specify who takes care the injured during transfer, e.g. relatives, doctor, registered nurse, technical nurse, midwifery, nurse aid, ward worker, special trained emergency personnel.
  - ☑ Not ambulance

  The patient is transferred from another health facility to hospital by vehicle which is not ambulance, e.g. pickup, minibus and etc.

38. **Referral letters**

2.2 **With referral letters**

Refers to a letter, containing patient's condition and treatment provided before transfer, facilities further treatment of the health facility to which the patient is referred.

- ☑ 1 Yes
- ☑ 2 No

Yes: contains patient's condition and/or treatment before transfer.
Data Collection

Put a mark ✓ in the box ☑ in front of the choice. If the injured is taken to hospital by ambulance, please select by putting ✓ in ☑ front of the choice of with person to take care or no person taking care.

☐ 2 From health facility: Name ....... Province .......

2.1 Transfer by

☐ Ambulance

✓ With person to take care during transfer .......(Specify professional)

✓ No person taking care

☐ Not ambulance

2.2 With referral letters

☐ 1 Yes

☐ 2 No

First aid/care while transportation

Definition

Pre-hospital care at scene or treatment provided by first health facility including removal and care while transport. The following is the detail of assessment of the first aid/care.

39. Breathing care

Definition

Clear the patient’s airway, position, suction of secretion, endotracheal intubations and care of the intubations and Oxygen (O₂) therapy, assist ventilation with Ambu-bag in the patient with respiratory insufficiency.

Proper airway care means that the patient has no airway obstruction, no sound of secretion obstructed in the airway, no cyanosis; assist ventilation in case of respiratory insufficiency of initial assessment when patient arrived. Improper airway care means that at initial assessment, there is respiratory obstruction, sound of secretion obstructed in the airway during respiration, tachypnea, and cyanosis.

No airway care: means that the patient need to have airway care but does not receive any care.

Not necessary means that the patient does not need airway care.

40. Bleeding care

Definition

The management to stop external bleeding from wound or fracture due to injury e.g. pressure, suture etc.
Proper stop bleeding means that the bleeding has been stop. There is no more blood loss and not life threatening.
Improper stop bleeding means that the procedure to stop bleeding is ineffective. There still has large amount of further bleeding.
No stop bleeding means that at initiate patient assessment there is no any procedure to stop bleeding even there is obvious need.
Not necessary means that there is no need to have any procedure to stop bleeding.

41. Splint/Slab
Definition

Immobilize the fracture in order to prevent damage to nearby soft tissue, vessels and nerves. In case of suspicious of spine fracture, the transportation should carry out with extreme caution. The patient should be carried on hard board, cervical support with sand bag, or collar to immobilize a broken skeletal (femur, spinal, etc.) or joint dislocated immediately.
Proper splint/slub means that the patient has been proper splinted to
1. reduce pain
2. prevent further damage
Facilitate proper transportation especially in the patient with suspected spine injury which has been fixed in hard board.
Improper splint/slub means that the patient has not been splinted properly. The patient still has pain, has movement at fracture site and is transported with difficulty, e.g. too short slab, splint and slub incorrectly. In case of suspicious of spine fracture, the hard board is too short, too soft, the head is not fixed.
No splint/slub that the fracture or spine injury have not been splinted/slub although they need to be.
Not necessary means that the patient has no need for splint/slub.

42. IV Fluid Resuscitation
Definition
Adequate fluid resuscitation for the patient who has blood loss or in shock before and during transfer
Proper IV fluid resuscitation means that the patient receives adequate amount of IV fluid which assessed from
1. The size of hypodermic needle: appropriate to resuscitate injured patient, if a shock result of injury which in an injured patient has lost a lot of blood, the hypodermic needle have to large enough to put drug or intravenous fluid (IV fluid) into patient. The No. of needle not more than 20G or the size has to bigger than No. 20
2. Site: proper site, not around the joint
3. Type of IV: proper type, e.g., RLS (Ringer Lactate)
4. Leakage: no leakage of IV fluid

Improper IV fluid resuscitation means that the patient does not receive properly care of the assess criteria.
No IV fluid resuscitation means that the patient does not receive appropriate IV fluid
Not necessary means that the patient has no need to receive IV fluid

Data Collection
Put a mark √ in the box □ in front of the best answer suiting to the condition of patient at ER.
□ 1 Yes-appropriate
□ 2 Yes-not appropriate
□ 3 Not-needed
□ 0 No

Utilization
This data enable us to assess the correctness and efficiency of first aid and pre-hospital care at scene and during transport.
Emergency room (ER)
(Record only injured who are to be R/O head Injury/observe/admit/dead at ER/refer)
The room where the patient received at the first aid or resuscitate or other required treatment upon arrival at hospital until their status is good enough to transfer for further treatment.
Vital signs and Glasgow coma scale at ER
Hx. Consciousness
(History of loss of consciousness, loss of memory)
The consciousness of patient prior to arrival at hospital (ER)
43. **Systolic blood pressure**
   
   SBP: Injured patient's systolic blood pressure (mmHg) at emergency room

44. **Diastolic blood pressure**
   
   DBP: Injured patient's diastolic blood pressure (mmHg) at emergency room

45. **Pulse rate**
   
   PR: Injured patient's pulse rate per minute at ER

46. **Respiratory rate**
   
   RR: Injured patient's respiratory rate per minute ER

47. **Glasgow coma scale (GCS)**

   **Definition**
   
   GCS: Injured patient's Glasgow coma scale ER
   
   Glasgow Coma Scale (GCS) was another one of the first scoring systems used. Division in 1974, it focuses on the important of central nervous system function and is used widely as a triage and prognostic indicator.
   
   Glasgow Coma Score
   
   - GCS is a measure of severity of head injury
   - GCS is scored between 3 and 15
   - A coma score of 3 being the worst, and 15 the best, it is composed of three parameters:
     - 1. Best Eye Response,
     - 2. Best Verbal Response,
     - 3. Best Motor Response, as given below:
       - A coma score of 13 or higher correlates with a mild brain injury,
       - A coma score of 9 to 12 is a moderate injury and,
       - A coma score of 8 or less a severe brain injury.

The VITAL SIGNS of the injured patient upon arrival at ER assessed by ER nurse (appendix: assessment of Glasgow Coma Scale)

Data Collection

R/O head injury refers to the patient who has injury to the head with any symptoms and signs which indicates that there may have injury to the brain, e.g. History of loss of consciousness, loss of memory, major wound to the face and head (exclude the minor wound to head and face, e.g. small punctuate would by hook or nail, small sharp cut would due to shaving)

- Fill in all blanks in the item of Hx Consciousness and specify the detail patient's consciousness. For
example, in case of patient who lost consciousness for 1 hour, it had to describe as patient was unconscious for 1 hour and could not recall the event. If this data is unavailable because of no data provider, it has to specify why cannot get this data.

- Respiratory rate: Record the real respiratory rate. If the patient is on respirator or assist ventilation with Ambu, write “respirator” or “Ambu”. The Ps (probability of survival) of this case cannot estimate. In item of coma scale, the score of each response should be fill in clearly that E = how much score, M = how much score and V = how much score

Seen at ER
VITAL SIGNS: BP.........mmHg Pulse......./min RR......./min
History of consciousness since occurred ..................................
Glasgow Coma Score ..............................................................

Remark:
For new version of national injury surveillance will be used in 2008 *
Glasgow Coma Score E= ...... V= ....... M= .......

Remarks:
Record this data only in the case of severely injured patient, e.g., patient who is referred to or from another facility or admitted to ward or dead at ER or observe ward or R/O head injury.

Utilization
1. We can use this data to estimate the severity of the patient upon arrival at ER
2. It is used as variable for calculating Ps (Probability of Survival) upon arrival at ER

48. Type of Injury Cause
Definition
Refers to the agent that causes injury. The wound should also observed
1. Blunt Refers to blunt trauma. The wound or the body is hit by hard object. The wound may be contused, avulsed or lacerated.
2. Penetrating refers to penetrating wound. The wound or the body is injured by the penetrating objects such as GSW, blast, knife, sharp objects
3. **Blunt and Penetrating** refers to the type of injury causes that are not clearly classified as being caused by blunt or penetrating means, such as drowning, foreign body in the esophagus or airway.

**Data Collection**
- Put a mark ✓ in the box □ in front of best answer indicating the condition of patient at the ER.
  - 1. Blunt
  - 2. Penetrating
  - 3. Blunt and Penetrating
  - 4. Other

**Utilization**
1. We use this data as variable for calculating Ps (Probability of Survival) upon arrival at the ER.
2. It is also used in evaluation of quality of service.

**Date disposition from ER**
49. **Date**
50. **Time**

**Definition**
- Date: The date that the patient was discharged from the ER.
- Time: The time that all treatment by doctor and nurse was finished.

**Data Recording**
- Date: Record in Arabic numerals format.
- Month: Record abbreviated name of month in Thai.
- Year: Record only last 2 digits of Buddhist era, e.g., 30 Mar 94.
- Time: Record both hour and minute in Arabic numerals, e.g., 01:30.
- Date: ******** Time: ******** hr

51. **Injured patient’s status from ER**
52. **Ward the injured patient was admitted to... ward**

**Definition**
1. **DBA (Dead before arrival):** The injured patient who died before receiving treatment from hospital or health facility (no vital signs on arrival at ER).
2. **Discharge:** The injured patient who recovered after treatment and was discharged with doctor’s permission.
3. **Refer:** The injured patient who was referred with referral letter to another health facility which has the capacity to provide treatment suitable to the condition of the patient.
4. Against advice: the injured patient who refused to treat at ER even though he was advised by health personnel and signed in the document of refusal of treatment whether the hospital issued the referral letter or not.

5. Escape: the injured patient who escaped from hospital after treatment or without treatment.

6. Dead at ER: the injured patient who dead at ER.

7. Observed or admitted to ... ward: the injured patient was admitted to ward with admission number of sentinel hospital.

Remark:
In case of admission to observe ward, the time of disposition must be time that the patient was discharged from observe ward. If the patient was admitted to ward, the name of admitted ward should be filled in.

**Data Recording**

Put a mark ✓ in the box ☐ in front of choices of ER outcome.

☐1 Discharge
☐2 Refer
☐3 Against advice
☐4 Escape
☐5 Dead at ER

Utilization

1. We can use this data to estimate time that patient spent at ER or total time including time spent at ER and observe ward.
2. It also shows the condition of patient after receiving primary care.
3. We also used it to assess the capability of hospital in providing trauma care at ER.

53. **Final diagnosis** (Specify organ and injury in detail)

**Definition**

Final diagnosis: the injured patient was diagnosed by doctor. Coding, each diagnosis was classified according to International Statistical Classification of Diseases and Related Problems (ICD 10) 10th Revision, volume 1B: chapter 19 (WHO, Geneva 1992, 2004)³.

Body region (BR): the body region is injured, classified by the ISS score (Injury Severity Score)
The 6 ISS body regions are head or neck, face, chest, abdominal, extremities, and external.  

**Abbreviated Injury Scale (AIS):** is the first widely implemented injury severity scale used in practice. AIS was the first conceived three decades ago (it was developed in 1971) as a system to define the severity of injuries throughout the body. Its original purpose was to fill a need for a standardized system for categorizing the type and severity of injuries arising from vehicular crashes. The severity levels ranging from 1 (least severe) to 6 (most severe).  

| 54. Diagnosis1 | Body region of diagnosis1 | Diagnosis1 |
| 55. BR1        | Body region of diagnosis2 | Diagnosis2  |
| 56. AIS1       | Body region of diagnosis3 | Diagnosis3  |
| 57. Diagnosis2 | Body region of diagnosis4 | Diagnosis4  |
| 58. Body region2 | Body region of diagnosis5 | Diagnosis5  |
| 59. AIS2       | Body region of diagnosis6 | Diagnosis6  |
| 60. Diagnosis3 | Body region of diagnosis7 | 1. The recorder should fill in patient's diagnosis when the doctor recorded the result of final diagnosis. Recorder may add the injury which written down in the physical examination record by doctor and record other major injury from medical record document by other doctor e.g. surgeon (operative record). The details only swelling, pain and tenderness should be avoided because it does not facilitate the assessment of injury severity.
2. Record all diagnosis of organ injury found in each case. In case there were more than 6 diagnosis, record only the six most severe.
3. Describe the injury and organ of injury, e.g.
   - Lacerated would at left forearm, contusion of anterior chest wall, major lever laceration, right tibia open |
fracture, 40% 2nd burn.
4. If the injured organ is in pair, record separately in 2
diagnosis and give the detail of each diagnosis. For
example, both legs left and right femur were broken and
doctor recorded the diagnosis as fracture femur, bilateral
right comminuted the diagnosis should be
1. Fracture femur, Lt (left)
2. Fracture femur, Rt. (right) comminuted
5. In admit case, the staff at ER does not record the
diagnosis because diagnosis at ER is not clarified as much as
final diagnosis. It should be recorded by the responsible
person or coder (medical record personnel or nurse at
ward) based on final diagnosis (discharge diagnosis or
operative diagnosis of the doctor.)
6. In case of patient died at ER or referred to another
hospital, the data recorder records the diagnosis of this
case according to the diagnosis given by the doctor at ER.
The data recorder does not fill in the blank of
(BR......AIS......) because it is for person responsible for
coding to fill in
Final diagnosis 1-6
<table>
<thead>
<tr>
<th></th>
<th>(BR..... AIS.....)</th>
<th></th>
<th>(BR..... AIS.....)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>..................</td>
<td>4</td>
<td>..................</td>
</tr>
<tr>
<td>2</td>
<td>..................</td>
<td>5</td>
<td>..................</td>
</tr>
<tr>
<td>3</td>
<td>..................</td>
<td>6</td>
<td>..................</td>
</tr>
</tbody>
</table>

Utilization
1. This data provide the information of the organ injury
used for studying the relationship of organ injury and type
of injury.
2. We can use it to estimate the severity of injury in each
case.
3. It is used as variable for estimating the probability of
survival in each case.
We can use it for outcome evaluation.

72. Date discharge from ward
Definition The date, month and year that the patient was discharged
from ward
Data Recording Date: record in Arabic numerals format
Month: record abbreviated name of month in Thai
Year: record only last 2 digit of Buddhism era
Date .......... / ....... / .........

73. Ward outcome
Definition Recording the outcome of treatment and date that the
patient was discharged from ward.
1. Improve
The injured patient who recovered after treatment and was discharged with doctor's permission
2. Refer
The injured that referred with referral letter to another health facility which has capacity to provide treatment suiting to the condition of the patient.
3. Against advice
The injured that refused treatment, even though he was advised by health personnel and signed in the document of refusal of treatment whether the hospital issued referral letter or not.
4. Escape
Refers to the injured who escaped from hospital after treatment or without treatment.
5. Dead
Refers to the injured who died while receiving treatment at ward.
6. Ask to go back to die at home
Refers to the injured whom doctor decide that it was hopeless to survive and relative ask to go back to die at home

<table>
<thead>
<tr>
<th>Data recoding</th>
<th>Put a mark ✓ in the box □ in front of choice of ward outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Improve</td>
<td></td>
</tr>
<tr>
<td>2 Refer</td>
<td></td>
</tr>
<tr>
<td>3 Against advice</td>
<td></td>
</tr>
<tr>
<td>4 Escape</td>
<td></td>
</tr>
<tr>
<td>5 Dead</td>
<td></td>
</tr>
<tr>
<td>6 Ask to go back to die at home</td>
<td></td>
</tr>
<tr>
<td>7 Admitted</td>
<td>.................................(Specify)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Utilization</th>
<th>Use this data to</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1. Estimate the severity of injury</td>
</tr>
<tr>
<td></td>
<td>2. Assess the capability of hospital in providing trauma care</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Recorder Name</th>
<th>The recorders' name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Definition</td>
<td>The recorder should write his or her full name and last name not signature because the signature sometime is not readable, in case there is an error of recording, we can inquire with the recorder.</td>
</tr>
</tbody>
</table>
Recorder Name
1.......................... 2..........................