Injury surveillance:

Establishing an injury surveillance system

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Introduction to injury surveillance

Definition:
Injury surveillance is the continuing scrutiny of all aspects of occurrence and patterns of injury that are pertinent to effective prevention and control.

Attributes of a surveillance system

- Simplicity
- Flexibility
- Acceptability
- Reliability
- Utility
- Sustainability
- Timeliness

Improving or building a surveillance system

- Process needs careful planning and organization
- Can involve several agents
- It is a cyclic process
- Design should take into account basic attributes of the system
- Follows 12 steps!
Designing and building a surveillance system

Starting point

Define/redefine objectives

Identify data sources and systems

Assess available resources

Sensitise/orient stakeholders

State data needs

Draft form and formulate data collection system

Process data

Design output for dissemination

Implement and train

Monitor and evaluate

1. Identifying stakeholders
   - identifying who wants to do injury surveillance
   - involving all potential stakeholders

2. Defining system objectives
   - addressing why an injury surveillance system is necessary
   - defining the type of surveillance required

3. Defining “a case”
   - case definition is always linked to surveillance objectives

4. Identifying data sources
   - consider multiple definitions of a problem
   - data can already exist but have different purposes
   - determine whether or not data is collected consistently
   - consider data accessibility

Potential data sources

<table>
<thead>
<tr>
<th>No Injury</th>
<th>Mild</th>
<th>Moderate</th>
<th>Severe</th>
<th>Fatal</th>
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</thead>
<tbody>
<tr>
<td>Household (community) survey</td>
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<tr>
<td>Health clinic records</td>
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<td>Doctors (GPs)</td>
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<tr>
<td>Emergency departments</td>
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<tr>
<td>Ward admission</td>
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<td>ICU admission</td>
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<tr>
<td>Death certificate</td>
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</tbody>
</table>
Disability, self/home treatment and all other severity levels: household survey

Other medical treatment: sentinel practitioner networks

Hospital treatment and discharge: ED register

Hospital admissions: discharge certificates, injury admissions registry

Deaths: vital statistics, medico-legal examinations

Validity/Reliability Data sources and the injury pyramid

Designing and building a surveillance system

Step 5: assessing available resources
- expertise of personnel
- existence of supplies, equipment
- consider institutional environment

Step 6: informing and involving stakeholders
- invite stakeholders – clarify data ownership
- consider multiple needs and uses of information
- state potential benefits of participating and using the system

Step 7: defining data needs
- the core minimum data set
- the core optional data set
- supplementary data sets
  - the supplementary minimum data set
  - the supplementary optional data set

Core minimum data set (MDS)

- Identifier
- Age
- Sex
- Intent
- Place of occurrence
- Nature of activity
- Mechanism of injury
- Nature of injury
### Core optional data set (ODS)
- Race/ethnicity
- Date of injury
- Time of injury
- External cause
- Residence
- Alcohol use
- Other psychoactive substance
- Abuse
- Severity
- Disposition
- Incident summary

### Supplementary data sets
#### Land-mines:
- displacement status
- cause of injury (anti-personnel mine, cluster bomb)
- was area known to be mined?
- was the area marked?
- had person received mine awareness training
- were there other victims in the same blast?

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### Designing and building a surveillance system

#### Step 8: collecting the data
- choosing locations for surveillance
- data collection forms
  - who collects them within each institution
  - design of data collection forms
  - coding or classification of the data

#### Step 9: establishing a data processing system
- establishing protocols for data collection and transmission
- define data processing mechanisms
  - electronic
  - manual
Designing and building a surveillance system

Step 10: designing and distributing reports
- consider timeliness
- consider audience
- consider data to be reported

Step 11: training staff and activating the system
- knowledge of procedures among staff involved
- attempt activation as exercise
- documents stating procedures should be available

Step 12: monitoring and evaluating the system
- consider other system attributes
- evaluation aimed at
  - quality of data
  - flow of information
  - established processes of reporting

Types of evaluation:
- retrospective
- process
- system environment
Designing and building a surveillance system

Summary

1. Establishing and evaluating an injury surveillance system should follow a series of steps
2. WHO provides technical and normative guidance to Member States on how to implement such systems
3. Such systems can integrate landmine injury as a mechanism of injury