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## *Section B: Morbidity Coding Systems, Part 1*

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# *Selected Morbidity Codes*

- Coding the injuries
  - International Classification of Diseases
- Coding their severity
  - KABCOU
  - Abbreviated Injury Severity Score (AIS), Injury Severity Score (ISS)
  - Revised Injury Trauma Score (RTS), Trauma Revised Injury Severity Score (TRISS)

## *Selected Morbidity Codes*

- Coding how they happened
  - ICD, ICECI, NOMESCO
- Coding their mid- and long-term consequences
  - DALYs, QALYs, HALYs, HeaLYs, ICIDH, ADLS
- See mortality session and web appendix to this session—  
Morbidity Codes

# *Coding System*

- In general coding system should be
  - Exhaustive and exclusive
  - Simple to use and reliable
  - Flexible yet consistent

# *International Classification of Diseases (ICD-CM)*

- World Health Organization but country-specific
- Periodic revisions, currently 9th version (10th version under development)
- Coding follows strict rules outlined in documentation
  - Great level of detail
  - Requires training
- Codes injury information and cause of injury (chapters XVII and supplement E, respectively on ICD9-CM)

## *ICD9-CM Examples*

- Diagnostic (800–999)
  - Closed fracture of the base of the skull with cerebral laceration and contusion and less than one-hour loss of consciousness: 801.11
  - Major laceration of liver: 864.4
- External causes (E800–E999)
  - Driver in motor vehicle traffic accident involving collision with another vehicle: E813.0
  - Burn caused by ignition of clothing in private dwelling: E893.0

## *Int'l Classification of External Causes of Injury (ICECI)*

- Long version/short version
- Short version—designed for ED settings
- Collects information on
  - Where injury happened
  - Activity when injury happened
  - Intent of injury (if intentional, by whom)
  - Detailed mechanisms of injury
  - Safety equipment used
  - Narrative



# *Police Reports*

- KABCOU
  - Killed, incapacitating injury, non-incapacitating injury, possible injury, no injury, unknown if injured
- Others
  - Death, hospital admission, medical attention, other, none
- Poor validity when hospital records are checked (misclassification issues)

# *Threat to Life Measures*

- Abbreviated Injury Severity (AIS)
  - Anatomical severity descriptor plus locates injury body region, type, and specific anatomic structure involved, level of injury
  - For example, 751030.2 shoulder dislocation
  - Offsprings: ISS, NISS, RTS

# *Threat to Life Measures*

- Trauma and Injury Severity Score (TRISS)
  - Adds physiological parameters to AIS scores in three most severe body regions
  - $TRISS = f\{AIS, \text{Glasgow coma scale, systolic blood pressure, respiratory rate}\}$
  - Can compute probabilities of survival

# *Selected Consequences*

- International Classification of Functioning and Disability (ICIDH)
  - Codes information on impact at the body, individual, and societal levels
  - Impact of environmental factors
  - Does not indicate source of disability
- Health outcomes
  - Functional Independence Measure (FIM)
  - Activity Daily Living (ADL), IADL
  - Short Form-36 (SF-36)
- Health outcomes that are preference based (quality-of-life compatible or QALYs)
  - Quality of well-being
  - HALYs
  - DALYs