WP5 – Injury Disability Indicators
Towards a standardised methodology for measuring the burden of disability due to injury

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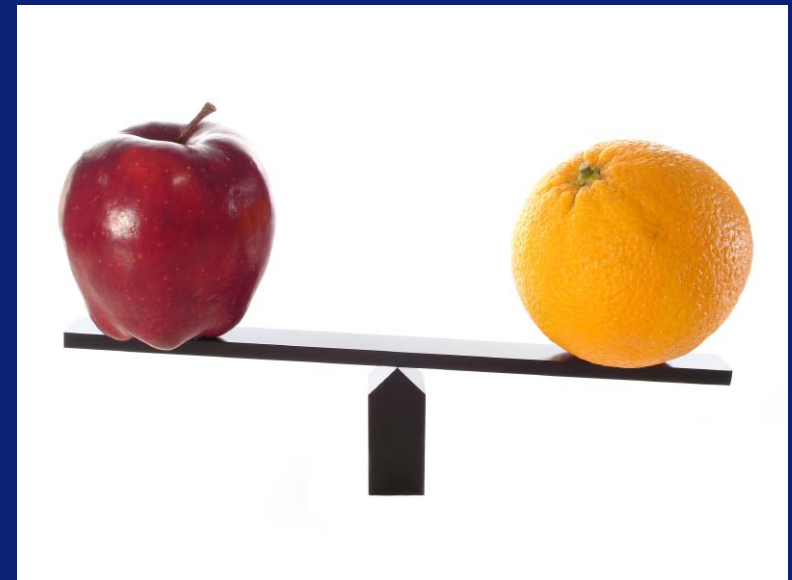**Department of Public Health, Erasmus MC**

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Years lived with disability (YLD)

To calculate the disability component of the DALY data are required on:

- Incidence
- Age distribution of the cases
- Disability weights
- Duration of the health state

Standarised methodology needed!

WP5 Injury Disability Indicators

- Inventory of available methods to assess the disability component of injury

- Key questions

  a) Which injury cases should be included?

  b) How to distinguish cases by injury diagnoses?

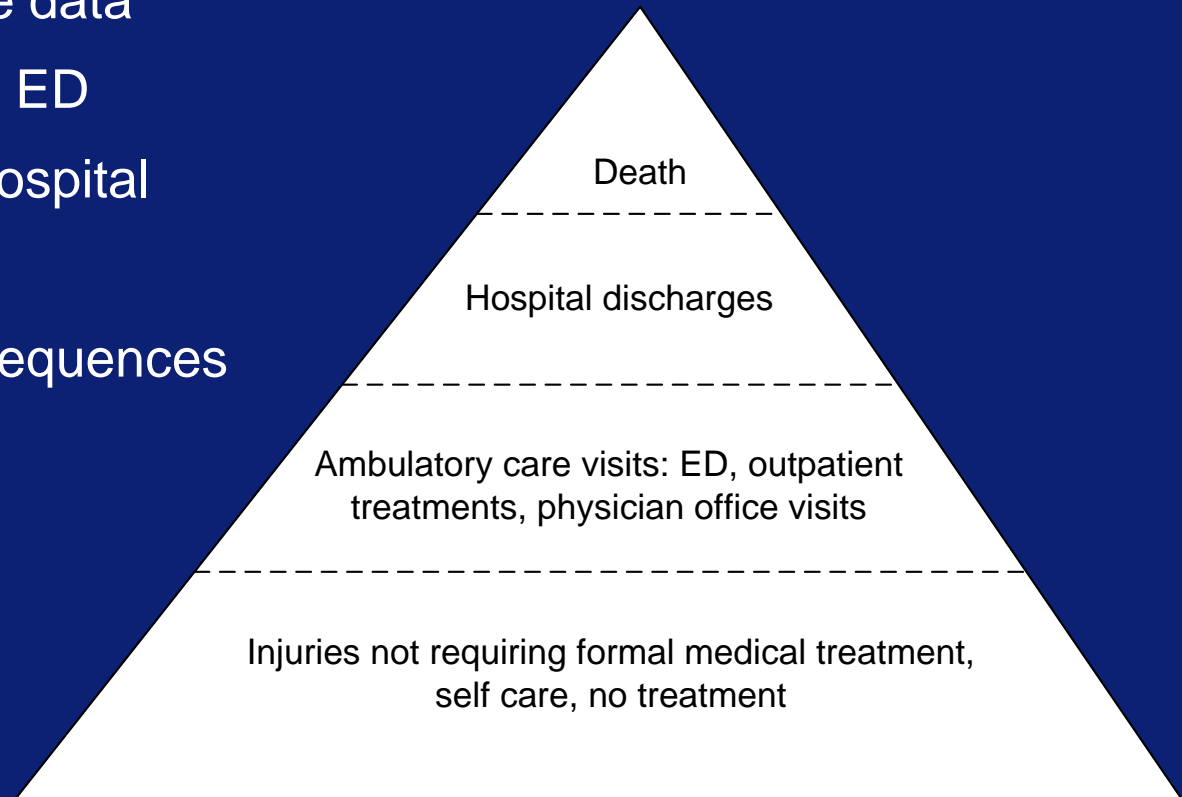 c) How to link injury diagnosis to disability information?

Q1. Selection of injury cases

Hospital based incidence data

- Patients treated at the ED

- Patients admitted to hospital

Underestimation of consequences

of less severe injuries

(e.g. low ED denisty)

Representativeness?

Q2. Distinguish cases by injury diagnosis

Linkage of data to disability information

Homogeneous groupings

- Age

- Gender

- Injury location

- Injury type
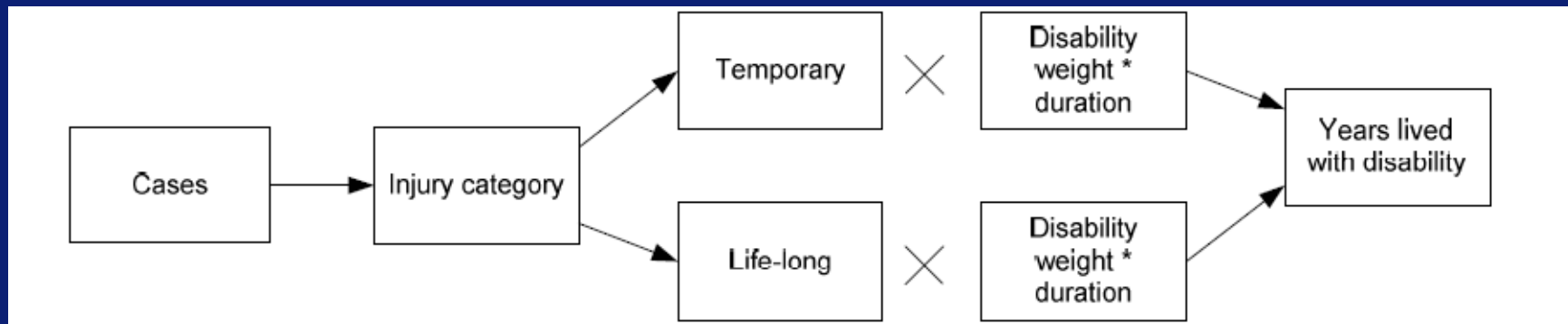
- Admission to hospital (yes/no)

Anatomical classification?

Comparison ICE, Barrell matrix and EUROCOST -> EUROCOST

Q3. Link diagnosis to disability information

- Linkage of injury diagnosis to disability information

- 1) the proportion of injury cases with lifelong consequences

- 2) the disability weight of temporary and lifelong consequences

Deriving disability weights

Two distinct methods to render disability disability weights:

- Empirical approach using EQ-5D or other intrument

  (Polinder et al., UK Burden of Injury Study etc.)

- Panel study approach

  (Global Burden of Disease study, Dutch disability weights study, etc.)

Injury group	Disability weight	
	ED	HDR
Concussion	0.015	0.100
Other skull-brain injury	0.090	0.241
Open wound head	0.013	0.209
Eye injury	0.002	0.256
Fracture facial bones	0.018	0.072
Open wound face	0.013	0.210
Fractures/dislocations/sprain/strain vertebrae/spine	0.133	0.258
Whiplash/neck sprain/distortion cervical spine	0.073	§
Spinal cord injury	§	0.676
Internal organ injury	0.103	0.103
Fracture rib/sternum	0.075	0.225
Fracture of clavicula/scapula	0.066	0.222
Fracture of upper arm	0.115	0.230
Fracture of elbow/forearm	0.031	0.145
Fracture wrist	0.069	0.143
Fracture hand/fingers	0.016	0.067
Dislocation/sprain/strain shoulder/elbow	0.084	0.169
Dislocation/sprain/strain wrist/hand/fingers	0.027	0.029

Implementation recommended by WP5
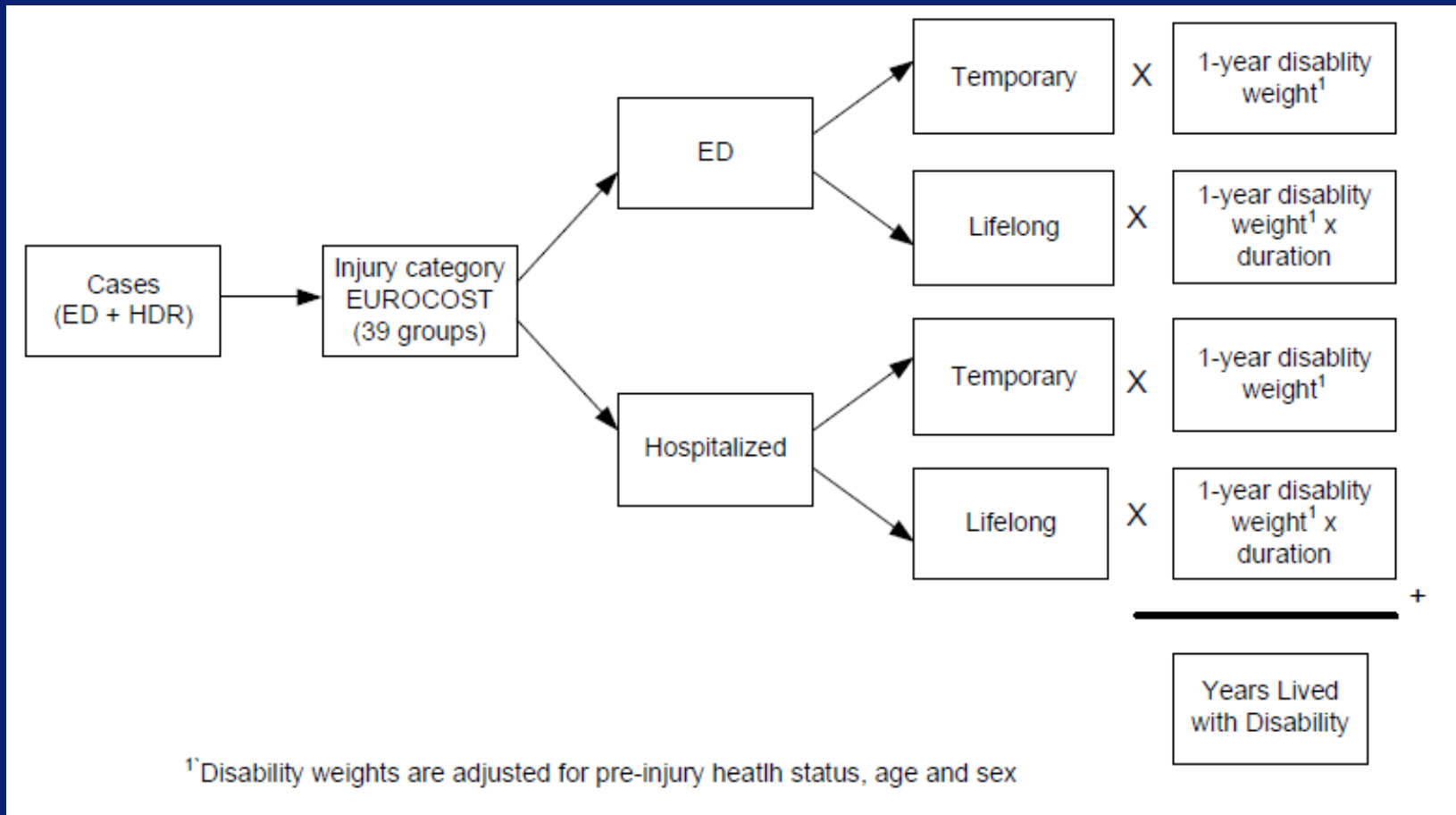
Application in Dutch disease ranking estimates

Incidence data

- Hospitalized (n=63.000)

- ED treated (n=460.000)

- GP consultations (n=710.000)

-> incidence same

-> higher ranking all injuries

-> home and leisure injuries in top 10

31.100 YLL, 76.300 YLD