

## INCIDENCE OF PHYSICAL INJURIES TO CHILDREN AGED 0-14 YEARS REQUIRING TREATMENT

### GENERAL CONSIDERATIONS

<i>Issues</i>	Physical injuries
<i>Type of indicator</i>	Health outcome (expressed as a static measure of rate)
<i>Rationale</i>	<p>Children are amongst the most vulnerable groups to injury, both in the home and on the street for a range of reasons: because of the tendency for the world around them to be designed and structured with little regard for children's safety; because of the limited development of their own risk perceptions and behaviours; and because of their inherent physical vulnerability.</p> <p>Successful intervention to reduce risks of injuries to children should be reflected in the injury rate. This can already be seen in some countries, where injury rates from some causes (e.g. road traffic, occupational injuries) have fallen as a result of improved technologies, policies and awareness raising. The annual rate of change in the injury rate thus provides a useful indicator of the direction and trajectory of policy impacts.</p> <p>Expressed as a static measure of rate, this indicator provides a general measure of these risks, based upon injury rates to children under 5 years of age.</p>
<i>Issues in indicator design</i>	<p>Injuries take many different forms, and occur in many different ways. Non-fatal injuries may also be treated by, and reported to, many different authorities – and many may not be reported at all. One of the major difficulties in developing this indicator is thus to ensure consistency in the definitions and the reliability of the data used.</p> <p>Injury rates also vary substantially between different age ranges and by gender (boys tend to be more injury prone than girls). Careful definition of the sub-population range is therefore essential if the risks to children's health are to be represented effectively. The indicator should also usefully be stratified by gender.</p> <p>An age range of 0-14 years is used for this indicator, since risks from physical injuries (albeit often from different causes) extend throughout the child's life.</p>

### SPECIFICATION

<i>Definition</i>	Incidence of physical injury to children aged 0-14 years by gender
<i>Terms and concepts</i>	<p><b>Physical injury:</b> unintentional injury of sufficient severity to require medical attention.</p> <p><b>Total number of children aged 0-14 years:</b> total resident population of children aged 0-14 years, at the time of survey.</p>
<i>Data needs</i>	<p>Incidence of unintentional physical injuries to children aged 0-14 years, by gender and external cause</p> <p>Total number of children aged 0-14 years, by gender</p>

<i>Data sources, availability and quality</i>	<p>Data on the number of childhood injuries should usually be available from routine medical statistics (e.g. hospital admissions/discharges). Data on external causes of injury are fundamental to prevention policy and planning, and essential for this indicator, but are likely to be weak and unreliable because of differences in referral rates, diagnosis and reporting methods. Where these data are not available, special surveys may be needed.</p> <p>Data on the total number of children aged 0-14 years should be available from national censuses and should be broadly reliable.</p>
<i>Level of spatial aggregation</i>	Health district
<i>Averaging period</i>	Annual
<i>Computation</i>	<p>As a measure of effect, the indicator can be computed as:</p> $1000 * (Cinj / Ctot)$ <p>where: <i>Cinj</i> is the number of reported cases of injury to children aged 0-14 years;  <i>Ctot</i> is the total population of children aged 0-14 years</p>
<i>Units of measurement</i>	<p>Rate per 1000 children (as a measure of exposure)  Annual percentage rate of change (as a measure of action)</p>
<i>Worked example</i>	<p>As a measure of exposure: assume that in one area, over one year, 1090 reported injuries occur amongst a population of 37'600 children aged 0-14 years. In this case the value of the indicator is calculated as:</p> $1000 * (1090 / 37600) = 29.0 \text{ injuries per 1000 children}$
<i>Interpretation</i>	<p>This indicator provides a simple and direct measure of the incidence of physical injuries to children. As a measure of health outcome, an increase in the incidence of childhood injuries may be interpreted as evidence of increased levels of risk; a reduction implies the reverse.</p> <p>Care is, however, needed in making interpretations because of likely inadequacies in the available data and the range of other factors which may affect injury rates. Significant differences in reported rates may occur either geographically or over time, for example, because of differences in reporting methods and referral rates - e.g. due to differences in accessibility of the health care services. Rates of injury are also affected by often subtle variations in cultural, lifestyle and behavioural factors (e.g. in play behaviour of children, in the design and layout of homes and play areas, in parental attitudes to supervision). Where possible, the indicator should therefore be interpreted in the context of other cultural information.</p>
<i>Variations and alternatives</i>	More specific versions of this indicator should be used where possible (classified by ICD code), relating to specific causes of injury (e.g. from falls, traffic accidents, physical assault, burns and scalds).
<i>Examples</i>	<p>WHO <i>Environmental health indicators: framework and methodologies</i></p> <ul style="list-style-type: none"> <li><b>Injuries to children</b></li> </ul>
<i>Useful references</i>	Manciaux, M. and Romer, C.J. 1991 <i>Accidents in childhood and adolescence</i> . The role of research. Geneva: WHO.