

CHILDREN AGED 0-14 YEARS LIVING IN HOUSEHOLDS WITHOUT BASIC SERVICES FOR WATER SUPPLY, SANITATION AND HYGIENE	
GENERAL CONSIDERATIONS	
<i>Issues</i>	Diarrhoeal diseases
<i>Type of indicator</i>	Exposure (proximal)
<i>Rationale</i>	<p>To a large extent children are most at risk in their own home. This is not only because they spend much of their time there, but also because it is there that they are often in most intimate contact with risk factors. This is especially true in the case of diarrhoeal diseases, for it is at home – or in the immediate vicinity of home – that they are most likely to be exposed to contaminated water or food, or to human and animal wastes. The availability and quality of facilities for drinking water, food storage and handling, personal hygiene and waste removal thus have an important influence on risks of diarrhoeal disease.</p> <p>This indicator is designed to assess risks of diarrhoeal diseases based on an assessment of these essential services.</p>
<i>Issues in indicator design</i>	<p>The major difficulty in developing this indicator is to devise a consistent definition of basic services. Perceived basic needs tend to vary from one country to another, depending on local conditions, experience and expectations. It is also not enough simply to have basic facilities connected to, or provided in the home: these facilities also have to operate reliably. Water supplies, for example, need to be sufficient to meet family needs; waste collection must be regular and must dispose of the waste safely; excreta disposal facilities must operate correctly, and must not cause contamination elsewhere. Defining services in these terms is often difficult. Another difficulty in many cases is lack of reliable data due either to inadequate data collection, or to deliberate misreporting.</p> <p>An age range of 0-14 years is used for this indicator because the various risks from lack of access to these facilities tend to persist throughout the child's life.</p>
SPECIFICATION	
<i>Definition</i>	Percentage of children aged 0-14 years living in households lacking basic sanitation, water supply and waste disposal services in the home
<i>Terms and concepts</i>	<p>Adequate sanitation services: facilities that provide for the controlled disposal of human excreta in ways which avoid direct human exposure to faeces, or contamination of food and local water supplies by raw faeces. Suitable facilities might range from simple but effective pit latrines, to flush toilets with sewerage. All facilities, to be effective, must be correctly constructed and properly maintained and available within the home or within 50 metres of the home. Shared or public toilets are normally not considered to be adequate.</p> <p>Adequate water supply services: facilities that provide a safe and reliable supply of water, of potable quality, within the home. To be regarded as safe, water must be free from harmful or distasteful contaminants, either naturally or as a result of treatment. Supplies must also be continuous (i.e. running for 24 hours per day) and sufficient to meet the needs of the user for drinking and hygiene. The minimum volume required may be defined as 20 litres per person per day.</p> <p>Adequate solid waste disposal facilities: regular and reliable services that provide for the collection (where appropriate) and safe disposal, of domestic solid wastes. Services might comprise: domestic solid waste treatment</p>

	<p>facilities (e.g. composting plants); domestic bin- or bag-collection systems; contained, community solid waste collection points (e.g. closed waste skips); or controlled solid waste disposal sites (e.g. contained community landfills or incinerators). Facilities should be available within a short walking distance (10 minutes) of the home.</p> <p>Note that households should have all three sets of services to be considered adequately provided. Thus households lacking any one of these facilities is considered inadequately served.</p>
<i>Data needs</i>	<p>Number of households with basic sanitation, water supply and waste disposal services</p> <p>Total number of children aged 0-14 years by household</p>
<i>Data sources, availability and quality</i>	<p>Data on service provision are usually available from the relevant service providers or their regulatory authorities (e.g. local authorities, environmental ministries). Where these data are lacking, special surveys may be necessary to estimate the extent of service provision for a sample of households.</p> <p>Data on the total number of children and number of households are usually available in aggregate form from national censuses, and should be broadly reliable. Alternatively, estimates can be made through sample household surveys.</p>
<i>Level of spatial aggregation</i>	Local authority district
<i>Averaging period</i>	Annual
<i>Computation</i>	<p>The indicator can be computed as a simple percentage:</p> $100 * [(C_{tot} - C_{serv}) / C_{tot}]$ <p>where: C_{tot} is the total number of children</p> <p>C_{serv} is the number of children in households with basic services</p>
<i>Units of measurement</i>	Percentage or percentage change per year
<i>Worked example</i>	<p>As a static measure of exposure: assume that an area contains 3640 children aged 0-5 years, of whom 2010 live in households with basic services, as defined above. In this case, the value of the indicator is calculated as:</p> $100 * (3640 - 2010) / 3640 = 44.8\%$
<i>Interpretation</i>	<p>This indicator provides a measure of the number of children living in households without basic services. As a measure of exposure, therefore, it can be interpreted as an indicator of the number of children at risk from diarrhoeal diseases due to inadequate sanitation and other facilities in the home. An increase in the indicator implies an increased risk; a reduction in the indicator can be interpreted as a decreased risk.</p> <p>Care is needed in interpretation because of possible uncertainties in the available data. Comparisons between different areas should also be undertaken with caution because of differences in the definition of basic services and in reporting methods.</p>
<i>Variations and alternatives</i>	<p>This indicator may be designed in different ways to reflect local circumstances and data availability. The range of basic services included, for example, and the level of service specified as a threshold, can both be varied according to need. In some cases (e.g. where the availability of the various services differs greatly), it may be more useful to define separate indicators for different amenities. In this context, four established and useful indicators are:</p> <ul style="list-style-type: none"> • access to safe (or improved) water sources • access to adequate (or improved) sanitation facilities • sound hygiene practices

	<ul style="list-style-type: none"> • access to solid waste facilities <p>For some applications, it may also be more appropriate to report the indicator in the inverse way – i.e. as the percentage of children that have access to these services. In addition, the indicator may justifiably be restricted to a narrower age range (e.g. 0-4 years), in order to focus on risks to pre-school children, who spend more of their time at home.</p>
<p><i>Examples</i></p>	<p>UN <i>Indicators of sustainable development</i></p> <ul style="list-style-type: none"> • Basic sanitation: percentage of population with adequate excreta disposal facilities • Waste water treatment coverage <p>WHO <i>Catalogue of health indicators</i></p> <ul style="list-style-type: none"> • Access to sanitary means of excreta disposal • Access to safe drinking water <p>WHO <i>Environmental health indicators: framework and methodologies</i></p> <ul style="list-style-type: none"> • Proportion of the population with access to adequate excreta disposal facilities • Percentage of households receiving piped water to the home • Percentage of the population with access to an adequate amount of safe drinking water in the dwelling or within a convenient distance from the dwelling • Percentage of population served by regular waste collection services <p>WHO <i>Environmental health indicators for the European Region</i></p> <ul style="list-style-type: none"> • Percentage of the population with access to adequate excreta disposal • Percentage of the population supplied from a public water supply • Percentage of the population with access to safe drinking water • Percentage of the population with access to adequate excreta disposal
<p><i>Useful references</i></p>	<p>UN 1996 <i>Indicators of sustainable development. Framework and methodologies</i>. New York: UN.</p> <p>WHO 1996 <i>Catalogue of health indicators: a selection of health indicators recommended by WHO programmes</i>. Geneva: WHO (under revision).</p> <p>WHO 1999 <i>Environmental health indicators: framework and methodologies</i>. Geneva: WHO. (Available at http://www.who.int/docstore/peh/archives/EHIndicators.pdf)</p> <p>WHO 2002 <i>Environmental health indicators: development of a methodology for the WHO European region</i>. Bonn: WHO.</p> <p>WHO and UNICEF 2000 <i>Global water supply and sanitation assessment. 2000 report</i>. Geneva: WHO/UNICEF.</p>