Cases reported as food poisoning

Overview

Acute and chronic illnesses and death due to contaminated food continue to be serious public health concerns in developing countries, with a disproportionally high burden borne by children under five (Kirk et al., 2010 [1]). In addition to health concerns, foodborne illnesses also have serious economic consequences in terms of lost wages and productivity (Henson, 2003 [2]). The number cases reported as food poisoning is one of the four food safety indicators described in the Guiding Framework, which also includes Foodborne Disability Adjusted Life Years (DALYs), foodborne disease burden, and number of deaths due to foodborne illness [3]. As with the other indicators in this group, the ‘cases of food poisoning’ indicator assesses the safety of food systems by quantifying the harmful health outcomes associated with consumption of contaminated or unsafe food products. Unlike the other previously mentioned indicators, however, this measure tends to be collected on a smaller-scale and quantifies the number of cases, rather than focusing on the outcomes associated with incidence, such as death or disability.

Method of Construction

Cases reported as food poisoning can be measured at multiple levels and calculated over various timeframes, to suit individual project or research needs. If data are collected from individual survey or clinic records, it is necessary to be explicit about how food poisoning was defined because symptoms are not necessarily standardized or unique to food-based pathogens.

Uses

The number of cases reported as food poisoning can be used to understand the human health implications of exposure to foodborne hazards due to failings along various parts of the food supply chain. Disaggregation of data by demographics of interest, such as age or sex, can also reveal groups that are at particular risk for poisoning (Kasilo & Nhachi, 1994 [6]). Within the community setting, it can also be useful in evaluating and comparing the risk of foodborne pathogens as compared to other communities or health hazards.

Strengths and Weaknesses

One strength of this indicator is that in many cases hospital and clinic records may already contain information regarding local cases of food poisoning (Tagwiiyi et al., 2016 [7]). Also, this indicator requires less complex data to calculate than foodborne DALYs and captures a broader set of impacts of food contamination on the population than an indicator like deaths due to foodborne illness. However, one of its major weaknesses is that obtaining accurate information can be challenging due to underreporting, misreporting, ambiguity of symptoms, and the fact that many foodborne pathogens can go unidentified (Frenzen, 2004 [8]).
Additionally, measuring cases of food poisoning does not provide any information on specific pathogens that caused illness, making it a less effective indicator for identifying foodborne illness prevention priorities.

Data Source

Hospital and/or clinic records may already include information on reported food poisoning. Additionally, some country-level health ministries provide food poisoning statistics. Data for this indicator could also be requested in individual or household surveys with a question or series of questions related to the symptoms of food poisoning.

Links to guidelines

There are no links to guidelines to show for this indicator.

Links to validation studies

There are no links to validation studies to show for this indicator.

Links to illustrative analyses

- Chen et al. (2013). “Analysis on Food Poisoning Incidents of the Greater Level in Gansu Province.” [9]

Unit of Observation

- Individual

Food Security Components

- Safety

Food Composition Database Required?

- No