| Information topic | Details |
|---|---|
| Indicator name | **Notifications of campylobacteriosis, cryptosporidiosis and giardiasis with recreational water as a risk factor** |
| Domain and topic | Recreational water quality: Water-borne diseases related to recreational water quality |
| Indicator definition | Annual number of notifications of campylobacteriosis, cryptosporidiosis and giardiasis with recreational water contact reported as a risk factor, excluding cases that were overseas during the incubation period. |
| Data source | - Institute of Environmental Science and Research Ltd. (ESR). National Database of notifiable diseases (EpiSurv).<br>- Population estimates. Statistics New Zealand. Available from http://nzdotstat.stats.govt.nz/wbos/index.aspx (accessed March 2017) |
| Numerator | Annual number of notifications of campylobacteriosis, cryptosporidiosis and giardiasis with recreational water contact reported as a risk factor (excluding number of notifications with overseas travel history during the incubation period) |
| Denominator | Population estimate by year, age group and gender |
| Methodology | Campylobacteriosis, cryptosporidiosis and giardiasis are notifiable in New Zealand. All cases diagnosed by doctors and/or laboratories are required to be notified to the medical officer of health in the region, who notifies the case to the national data collection (EpiSurv) administered by ESR, or directly to EpiSurv for further investigation.<br><br>As part of the notification process of campylobacteriosis, cryptosporidiosis and giardiasis, information is collected on certain risk factors. For enteric disease, these risk factors include whether the individual had, during the incubation period:<br>- consumed untreated surface water, groundwater or rain water participated in water activities in a stream, river and/or beach<br>- recently travelled overseas.<br>It should be noted that the risk factors are not confirmed as the cause of the disease; several risk factors may be recorded, and for a number of risk factors the majority of responses may be 'unknown'. For this analysis, cases that had been overseas at some point during the incubation period were excluded from the analysis, as they were unlikely to have contracted the disease within New Zealand. |
| Time period and time scale | Annual; from 2005 onwards |
| Population coverage | national |

| Information topic | Details |
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| Measures of frequency | - Annual number of campylobacteriosis, cryptosporidiosis and giardiasis notifications with recreational water contact reported as a risk factor<br>- Age-adjusted rate of campylobacteriosis, cryptosporidiosis and giardiasis notifications with recreational water contact reported as a risk factor per 100,000 population |
| Confidence interval methodology | Byar's approximations for calculating the 95% confidence interval for rates of events were used (Eayres 2008). Statistically significant differences for the time trend for age-adjusted rates from 2005 onwards were noted. |
| Limitations of indicator | - Not all notifiable diseases that have a possible contamination route through water were analysed for this indicator, i.e. salmonellosis, typhoid/paratyphoid fever, hepatitis A, yersiniosis, shigellosis, gastroenteritis.<br>- Risk factors are not confirmed as the cause of the disease. |
| Limitations of data source | - This indicator only includes notified cases and will be underestimating the total burden of these diseases. Most un-notified cases will be undiagnosed (i.e. the person who was ill did not see a doctor or the diagnostic test was not performed).<br>- Cases that did not report a risk factor may not be included in the relevant analyses. |
| Created by | Environmental Health Indicators New Zealand, Centre for Public Health Research, Massey University, Wellington |
| Related indicators | - Notifications of campylobacteriosis, cryptosporidiosis and giardiasis (excluding cases who were overseas during incubation period)<br>- Notifications of campylobacteriosis, cryptosporidiosis and giardiasis with untreated water as a risk factor |
| For more information | ESR. Annual Surveillance Summary. Available from https://surv.esr.cri.nz/surveillance/annual_surveillance.php (accessed March 2017) |
| References | Eayres D. (2008). *Technical Briefing 3: Commonly used public health statistics and their confidence intervals*. York: Association of Public Health Observatories. |