

Information topic	Details
Indicator name	Notifications of potentially waterborne diseases
Domain and topic	Water: Waterborne diseases
Indicator definition and units	Annual number of notifications of campylobacteriosis, cryptosporidiosis and giardiasis, excluding cases that were overseas during the incubation period
Data source	• EpiSurv notifications surveillance database - the Public Health and Forensic Science (PHF Science – formerly ESR). • Population estimates. Statistics New Zealand
Numerator	Annual number of notifications of campylobacteriosis, cryptosporidiosis and giardiasis (excluding number of notifications with overseas travel history during the incubation period)
Denominator	Population estimates by year, age group, prioritised ethnicity and gender
Methodology	Data collection Campylobacteriosis, cryptosporidiosis and giardiasis are notifiable diseases 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 PHF Science, or directly to EpiSurv for further investigation. Confidence interval 95% confidence intervals were calculated based on the methodology outlined in APHO (2008). Confidence intervals are presented as error bars on graphs. Interpreting graphs (including district graphs) Crude rates are suppressed for counts less than 5 or populations less than 30, due to unreliability of the estimate with small numbers. Age-standardised rates are suppressed for overall counts less than 20, or if any age-band of the calculation has a population less than 30, due to unreliability of the estimate with small numbers. For district graphs, tests for statistical significance with the national rate have used adjustments for multiple comparisons. All comparisons made are conservative (ie, the p value is slightly overstated) because the New Zealand estimate contains the DHBs, so the New Zealand and every DHB estimate are positively correlated. This means that in some instances, we are less likely to find a significant difference that exists.

Metadata

Time period and time scale	Annual, from 2001 onwards
Population coverage	National
Spatial Coverage	National, by district and by IUR classification
Measures of frequency	Age-adjusted rate of campylobacteriosis, cryptosporidiosis and giardiasis notifications per 100,000 population
Limitations of indicator	Not all notifiable diseases that have a possible contamination route through water were analysed for this indicator. For instance, salmonellosis, typhoid/paratyphoid fever, hepatitis A, yersiniosis, shigellosis, gastroenteritis are not considered.
Limitations of data source	Notifications only cover those who visited a GP or hospital for treatment and are likely to underestimate the actual rate of disease in the population. Most unnotified cases will be undiagnosed (i.e. the person who was ill neither saw a doctor nor visited a hospital, or the diagnostic test was not performed).
Related indicators	Notifications of potentially waterborne diseases with untreated water as a risk factor Notifications of potentially waterborne disease with recreational water contact as a risk factor Faecal indicator bacteria at recreational bathing sites Access to safe drinking water
References	Eayres D. (2008). Technical Briefing 3: Commonly used public health statistics and their confidence intervals. York: Association of Public Health Observatories