

**Table 1:** Disability weights used for the estimation of the burden of yersiniosis in New Zealand, 2022.

Disease state	GBD 2013 equivalent	Disability weight (95% uncertainty interval)	Reference
AGI (do not visit GP and recover = community cases)	Diarrhoea, mild	0.074 (0.049–0.104)	27
AGI (visit GP and recover = GP cases)	Diarrhoea, moderate	0.188 (0.125–0.264)	27
AGI (hospitalised and recover = hospitalised cases)	Diarrhoea, severe	0.247 (0.164–0.348)	27
ReA (community)	Mild osteoarthritis	0.023 (0.013–0.037)	27
ReA (visit GP)	Moderate osteoarthritis	0.079 (0.054–0.11)	27
ReA (hospitalised)	Severe osteoarthritis	0.165 (0.112–0.232)	27
EN	Symptomatic other skin and subcutaneous diseases	0.011 (0.005–0.021)	27

GBD 2013 = *Global Burden of Disease Study 2013*; AGI = acute gastrointestinal illness; GP = general practitioner; ReA = reactive arthritis; EN = erythema nodosum.

**Table 2:** Input values and distributions for the estimation of the burden of yersiniosis in New Zealand, 2022.

Model input	Input value or distribution	Mean value (95th percentile credible interval)	Source
<b>Gastroenteritis</b>			
Notified cases of yersiniosis, 2022	1,294	-	13
Proportion of cases with specimen supplied on request	Beta(19,3)	0.86 (0.70–0.97)	15
Proportion of GP cases with specimen requested	Beta(261,863)	0.23 (0.21–0.26)	30

**Table 2 (continued):** Input values and distributions for the estimation of the burden of yersiniosis in New Zealand, 2022.

Model input	Input value or distribution	Mean value (95th percentile credible interval)	Source
Proportion of cases presenting to a GP	Beta(66,233)	0.22 (0.18–0.27)	15
Duration, community cases (days)	Custom	2.2 (2.2–2.7)	15
Proportion of cases hospitalised	Beta(27,128)	0.17 (0.12–0.24)	Current study
Duration, GP cases (days)	Log-normal(19.3,18.0), truncated (1,120)	18.8 (3.0–63.8)	Current study
Duration, hospitalised cases (days)	Log-normal(18.2,20.1), truncated (2,60)	15.7 (2.7–48.7)	Current study
Disability weight, community cases	Pert(0.04,0.74,0.12)	0.074 (0.049–0.104)	27
Disability weight, GP cases	Pert(0.105,0.189,0.305)	0.189 (0.125–0.264)	27
Disability weight, hospitalised cases	Pert(0.139,0.249,0.402)	0.249 (0.164–0.348)	27
Proportion of GP cases resulting in death	Uniform(0.00007,0.0003)	0.0002 (0.00011–0.00029)	Current study
Age at death	Uniform(50,80)	65 (51–79)	Current study
<b>Reactive arthritis (ReA)</b>			
Proportion of GP cases developing ReA	Beta(8,132)	0.057 (0.025–0.101)	Current study
Proportion of ReA cases requiring GP visit	Beta(10,36)	0.213 (0.109–0.339)	31
Proportion of ReA cases requiring hospitalisation	Beta(2,45)	0.043 (0.005–0.115)	31
Duration, all ReA cases (years)	Exponential(0.608)	0.608 (0.015–2.24)	24
Disability weight, community cases	Pert(0.011,0.023,0.046)	0.023 (0.013–0.037)	27
Disability weight, GP cases	Pert(0.047,0.080,0.127)	0.080 (0.054–0.110)	27
Disability weight, hospitalised cases	Pert(0.097,0.167,0.270)	0.167 (0.112–0.232)	27

**Table 2 (continued):** Input values and distributions for the estimation of the burden of yersiniosis in New Zealand, 2022.

Model input	Input value or distribution	Mean value (95th percentile credible interval)	Source
<b>Erythema nodosum (EN)</b>			
Proportion of GP cases developing EN	Beta(4,136)	0.029 (0.008–0.062)	Current study
Duration, all EN cases (days)	Uniform(21,28)	24.5 (21.2–27.8)	26
Disability weight, all cases	Pert(0.004,0.012,0.029)	0.012 (0.005–0.021)	27

GP = general practitioner; ReA = reactive arthritis; EN = erythema nodosum.

**Table 3:** Annual incidence and disability-adjusted life years (DALYs) for yersiniosis and sequelae in New Zealand, 2022.

Disease and disease subcategories	Incidence (cases in 2022 year) <sup>a</sup>	YLD <sup>a</sup>	YLL <sup>a</sup>	DALYs <sup>a</sup>
Gastroenteritis, mild	23,376 (16,527–32,800)	11.6 (6.6–19.0)		
Gastroenteritis, moderate	6,295 (5,188–8,012)	61.6 (8.9–216)		
Gastroenteritis, severe	225 (150–312)	2.4 (0.4–8.0)		
Gastroenteritis, fatal			34.0 (0–98.5)	
<b>Gastroenteritis, total</b>	<b>29,896 (22,328–40,562)</b>	<b>75.7 (21.5–231)</b>	<b>34.0 (0–98.5)</b>	<b>110 (33.1–233)</b>
ReA, mild	277 (114–514)	4.0 (0.08–17.4)		
ReA, moderate	79 (25–172)	3.9 (0.07–17.3)		
ReA, severe	16 (1–50)	1.6 (0.007–8.5)		
<b>ReA, total</b>	<b>373 (159–682)</b>	<b>9.5 (1.2–30.3)</b>		
<b>EN, total</b>	<b>186 (49–411)</b>	<b>0.14 (0.03–0.38)</b>		
<b>Total</b>		<b>85.3 (28.4–242)</b>	<b>34.0 (0–98.5)</b>	<b>119 (41.5–243)</b>

YLD = years of life lived with disability; YLL = years of life lost; DALYs = disability-adjusted life years; ReA = reactive arthritis; EN = erythema nodosum.

<sup>a</sup>Figures in brackets of the 95th percentile credible interval.