

Parameter	Symbol	Value	Reference
Birth rate of human (Zimbabwe)	$\mu_b$	$6.02 \cdot 10^{-4} \text{ week}^{-1}$	[1]
Death rate of human (Zimbabwe)	$\mu_d$	$3.08 \cdot 10^{-4} \text{ week}^{-1}$	[1]
Recruitment rate of human	$\Pi_H$	$\mu_b \cdot (S(0) + I(0) + R(0)) \text{ week}^{-1}$	
Rate of loss of natural immunity	$\omega$	$0.0238 \text{ week}^{-1}$	[2, 3, 4]
Minimum transmission rate of hyper-infectious Bacterium	$\beta_{H0}$	Estimated	
Minimum transmission rate of low-infectious Bacterium	$\beta_{L0}$	Estimated	
Amplitude of seasonality	$\delta$	Estimated	
Half saturation constant (low-infectious bacterium)	$K_L$	$10^6 \text{ cells \ ml}$	[5, 6]
Half saturation constant (high-infectious bacterium)	$K_H$	$K_L \div 700 \text{ cells \ ml}$	[7, 6]
Natural recovery rate of human	$\gamma$	$1.4 \text{ week}^{-1}$	[8, 9]
Death due to cholera infection	$\mu_c$	Estimated	
Rate of contribution to HI <i>V. cholerae</i> in aquatic environment	$\xi$	Estimated	
Rate of decay from hyper-infectious to low-infectious bacterium	$\chi$	$33.6 \text{ week}^{-1}$	[7]
Net death rate of non-HI vibrios in the environment	$\delta_L$	$\frac{7}{30} \text{ week}^{-1}$	[6, 10, 11]

## References

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