J. Math. Biol. (2016) 73:257–258
DOI 10.1007/s00285-016-1004-6

Mathematical Biology

ERRATUM

Erratum to: Dynamics of stochastic epidemics on heterogeneous networks

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Published online: 20 April 2016

Erratum to: J. Math. Biol. (2014) 68:1583–1605 DOI 10.1007/s00285-013-0679-1

In the original publication of the article, Equation (30), Appendix A and Appendix B are incorrect. The correct versions of these equations are given below.

Equation (30) reads

$$\begin{aligned}\mathrm{Mean}(I) &\to \tilde{I}e^{rt}, \quad \text{for} \quad r = \tau\left(\frac{g''}{g'} - 1\right) - \gamma,\\ \frac{\mathrm{Var}(I)}{\mathrm{Mean}(I)^2} &\to \frac{g'^2(g''' + (\tau+1)(g''+g'))}{(g'^2 - g''^2)((\gamma+\tau)g' - \tau g'')}.\end{aligned}$$

it should read

$$\begin{aligned}\mathrm{Mean}(I) &\to \tilde{I}e^{rt}, \quad \text{for} \quad r = \tau(\frac{g''}{g'} - 1) - \gamma,\\ \frac{\mathrm{Var}(I)}{\mathrm{Mean}(I)^2} &\to \frac{\tau g'(2g'''(\gamma+\tau)^2 + (\gamma+2\tau)((\gamma+\tau)g' - \tau g''))}{(\gamma+\tau)(\gamma+2\tau)(g' - g'')((\gamma+\tau)g' - \tau g'')}.\end{aligned}$$

The online version of the original article can be found under doi:10.1007/s00285-013-0679-1.

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Appendix A reads

$$\begin{aligned}\sigma^2_{[I](t)} =& \frac{\tilde{I}}{g'^2\gamma(\gamma+r)(2\gamma+r)}\Big(-\gamma\tau e^{-2\gamma t}(e^{t(\gamma+r)}-1)\\ &\times\Big(\frac{g'\tau(e^{t(\gamma+r)}-1)\times(g''(\frac{\gamma+r}{\gamma+r+\tau}+\tau)+\frac{g'''(\gamma+r)}{\gamma+r+2\tau}-g'\tau)}{\gamma+r}\\ &+(g''-g')\big(\gamma g'+\tau(g''-g')\big)\Big)+(\gamma+r)2\tau e^{rt}\\ &\times\Big(-\frac{g'\tau(1-e^{rt})(g''(\frac{\gamma+r}{\gamma+r+\tau}+\tau)+\frac{g'''(\gamma+r)}{\gamma+r+2\tau}-g'\tau)}{r}\\ &-\frac{g'\tau e^{-\gamma t}(e^{t(\gamma+r)}-1)(g''(\frac{\gamma+r}{\gamma+r+\tau}+\tau)+\frac{g'''(\gamma+r)}{\gamma+r+2\tau}-g'\tau)}{\gamma+r}\\ &+e^{-\gamma t}(g'-g'')(\gamma g'+\tau(g''-g'))\\ &+(g''-g')\big(\gamma g'+\tau(g''-g')\big)\Big)\\ &-\gamma e^{-2\gamma t}\big(\gamma g'+\tau(g''-g')\big)\big(\tau(g''-g')e^{t(\gamma+r)}\\ &+\gamma g'+g'r+g'\tau-g''\tau\big)\\ &+g'^2\gamma(\gamma+r)e^{rt}\big(\gamma+\tau(\frac{g''}{g'}-1)\big)\Big),\end{aligned}$$

it should read

$$\begin{aligned}\sigma^2_{[I](t)} =& \frac{\tilde{I}}{(2\gamma+r)}\Big(\frac{\tau e^{-2\gamma t}(e^{t(\gamma+r)}-1)}{\gamma+r}\Big(\frac{\tau^2(g'-g'')(e^{t(\gamma+r)}-1)(g'-\frac{g''\tau}{\gamma+\tau}+\frac{\gamma g'''}{\gamma+2\tau}+g''')}{g'^2(\gamma+r)}\Big)\\ &\frac{\tau e^{-2\gamma t}(e^{t(\gamma+r)}-1)}{\gamma+r}\Big(\frac{g''}{g'}-1\Big)\Big(\gamma+\tau\Big(\frac{g''}{g'}-1\Big)\Big)+e^{rt}\Big(\gamma+\tau\Big(\frac{g''}{g'}-1\Big)\Big)\\ &+\frac{2\tau e^{rt}}{\gamma}\frac{\tau^2(g'-g')e^{\gamma(-t)}(e^{t(\gamma+r)}-1)(g'-\frac{g''\tau}{\gamma+\tau}+\frac{\gamma g'''}{\gamma+2\tau}+g''')}{g'^2(\gamma+r)}\\ &-\frac{2\tau e^{rt}}{\gamma}\frac{\tau^2(g'-g'')(e^{rt}-1)(g'(\gamma+2\tau)(\gamma+\tau)-g''\tau(\gamma+2\tau)+2g'''(\gamma+\tau)^2)}{g'^2r(\gamma+\tau)(\gamma+2\tau)}\\ &+\frac{2\tau e^{rt}}{\gamma}\Big(\frac{(g'-g'')e^{\gamma(-t)}(g'(\gamma-\tau)+g''\tau)}{g'^2}+\Big(\frac{g''}{g'}-1\Big)\Big(\gamma+\tau(\frac{g''}{g'}-1)\Big)\Big)\\ &\times\frac{e^{-2\gamma t}(g'(\gamma-\tau)+g''\tau)(\gamma g'+\tau(g''-g')e^{t(\gamma+r)}+g'r+g'\tau-g''\tau)}{g'^2(\gamma+r)}\Big),\end{aligned}$$

The final term in Appendix B reads:

$$\hat{\mathbf{G}}_{[SI],[SI]} = \big(-g'\tau+g''(\tau+(\gamma+r)/(\gamma+r+\tau))+g'''(\gamma+r)/(\gamma+r+2\tau)\big)/g'.$$

it should read

$$\hat{\mathbf{G}}_{[SI],[SI]} = \tau(g''-g')(g'''-g''+g')/g'^2+\tau\gamma(g''-g')\big(g''/(r+\gamma+\tau)+g'''/(r+\gamma+2\tau)\big)/g'^2.$$