ERRATUM

Erratum to: Impact of Imitation Processes on the Effectiveness of Ring Vaccination

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In Section 2, under the scenario of case 2: where the vaccine may work in time to prevent infection, $(\lambda + \omega < \sigma + \delta)$, there was an error in the payoff to vaccinate (Eq. 6). The probability that the individual was not infected prior to the vaccine becoming effective was incorrect; the given probability was $(1 - p)^{\lambda+\omega-\delta}$ when it should have been $(1 - p)^{\lambda+\omega-\sigma}$. The correct payoff to vaccinate function is

$$
\begin{aligned}
P_V = {} & (L - r_{\text{vac}} - r_{\text{inf}}) \Big\{ [1 - (1 - p)^{\lambda+\omega-\sigma}] \\
& + [(1 - \varepsilon)(1 - p)^{\lambda+\omega-\sigma}(1 - (1 - p)^{\delta-(\lambda+\omega-\sigma)})] \Big\} \\
& + (L - r_{\text{vac}}) \Big\{ [\varepsilon(1 - p)^{\lambda+\omega-\sigma}(1 - (1 - p)^{\delta-(\lambda+\omega-\sigma)})] + (1 - p)^{\delta} \Big\}
\end{aligned}
$$

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Table 1 Parameter definitions and baseline values for the corrected version

Parameter	Definition	Baseline value
Q	Number of contacts of the index case	10 or 100
p	Transmission probability per edge per day	0.05
ω	Incubation period	5 days
σ	Latent period	4 days
δ	Infectious period	5 days
λ	Time between decision to vaccinate and attainment of protective immunity	1 day
ε	Vaccine efficacy	0.95
r_{vac}	Penalty due to being vaccinated (e.g. adverse events, potential monetary cost)	0.024
r_{inf}	Penalty due to being infected (e.g. disease complications)	0.3
L	Baseline payoff	1
P_V	Payoff to vaccinate as soon as index case exhibits symptoms	
P_N	Payoff not to vaccinate	

Due to the correction in the payoff to vaccinate, a new set of parameter values were used and are listed in Table 1. The overall conclusion of the model did not change, with the Figures being very similar to previous. The only notable change was in the sensitivity analysis. The distribution of secondary infections and vaccinators no longer remains bimodal for a range of values for the probability of transmission, p (Figs. 1, 2). The distribution of secondary infections and vaccinators does remain bimodal for a small range of values for vaccine efficacy, ε (Figs. 1, 2).
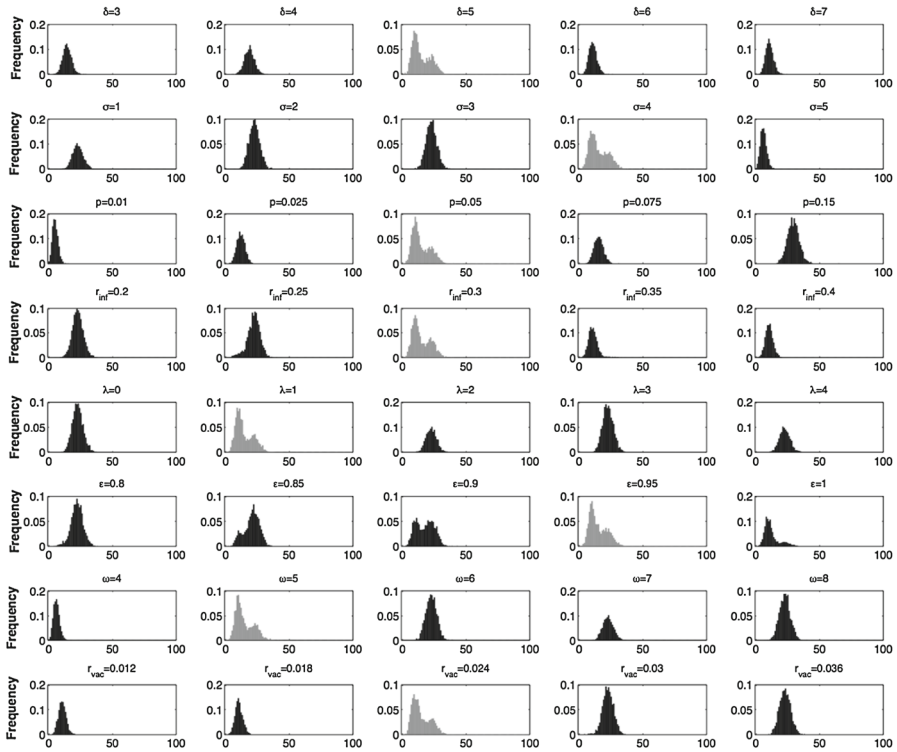
Fig. 1 The distribution of the infected individuals under full imitation for the case of $Q = 100$ for the parameters $\lambda, \varepsilon, \omega, r_{\text{vac}}, r_{\text{inf}}, p, \sigma$, and δ. The baseline parameter values are used to generate the gray distributions and black distributions represent variations from the baseline
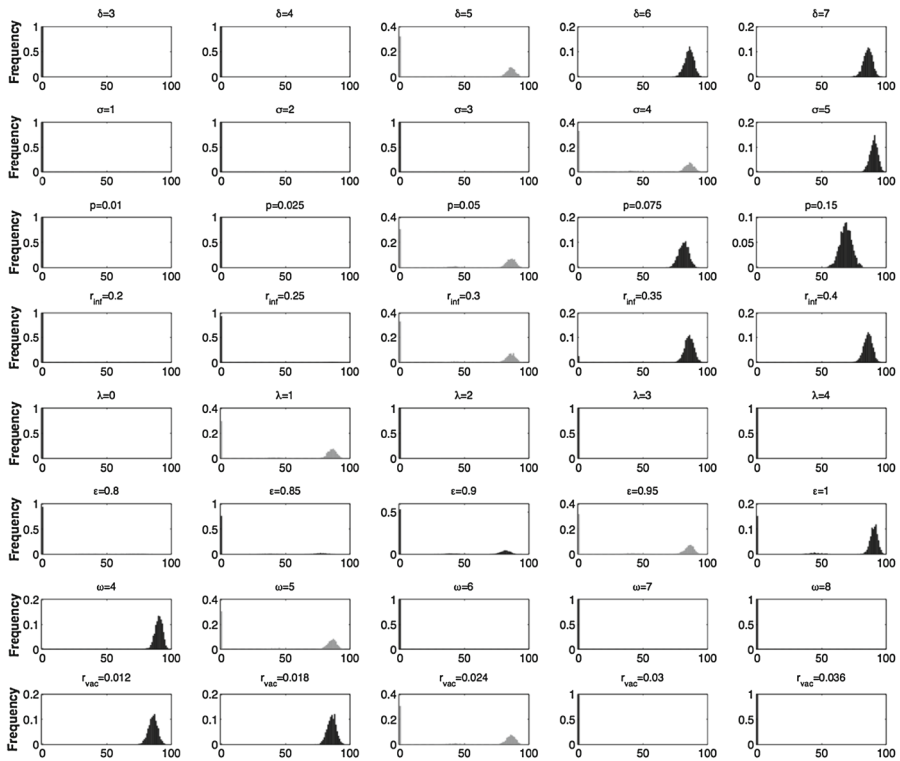
Fig. 2 The distribution of the vaccinated under full imitation for the case of $Q = 100$ for the parameters $\lambda, \varepsilon, \omega, r_{vac}, r_{inf}, p, \sigma$, and δ. The baseline parameter values are used to generate the *gray* distributions and *black* distributions represent variations from the baseline