**Table S1** *Efficacy of untargeted and targeted control, as measured by the rate of reduction in parasite transmission with number of individuals of host species i treated ($C_i$)*

| Key host type | Untargeted control | Targeted control |
|---|---|---|
| Pure super-abundant | $-\dfrac{C_i}{\sum_j H_j}$ | $-\dfrac{C_i}{\sum_j H_j p_j}$ |
| Pure super-infected | $-\dfrac{C_i NT}{\sum_j H_j}$ | $-\dfrac{C_i}{\sum_j H_j p_j}$ |
| Pure super-shedder | $-\dfrac{C_i NT}{\sum_j H_j}$ | $-\dfrac{C_i NT}{\sum_j H_j p_j}$ |
| Mixed super-abundant & infected | $-\dfrac{C_i \sqrt{NT}}{\sum_j H_j}$ | $-\dfrac{C_i}{\sum_j H_j p_j}$ |
| Mixed super-abundant & shedder | $-\dfrac{C_i \sqrt{NT}}{\sum_j H_j}$ | $-\dfrac{C_i \sqrt{NT}}{\sum_j H_j p_j}$ |
| Mixed super-infected & shedder | $-\dfrac{C_i NT}{\sum_j H_j}$ | $-\dfrac{C_i \sqrt{NT}}{\sum_j H_j p_j}$ |