

**Table 4. Transition rates between ancestral/mutated state at 3 key ciprofloxacin resistance sites estimated with corHMM. Transitions are coded from row state to column state.**

	No_mutations	gyrA_259	gyrA_248	parC_239	gyrA_248/ gyrA_259	parC_239/ gyrA_248	gyrA259/ gyrA_248/ parC_239
No_mutations	NA	2.58	43.79	0.00	NA	NA	NA
gyrA_259	100.00	NA	NA	NA	0.00	NA	NA
gyrA_248	100.00	NA	NA	NA	100.00	100.00	NA
parC_239	NA	100.00	100.00	NA	NA	NA	100.00
gyrA_248/ gyrA_259	100.00	NA	NA	100.00	NA	0.00	NA
parC_239/ gyrA_248	NA	NA	100.00	NA	NA	NA	100.00
gyrA259/ gyrA_248/ parC_239	NA	NA	NA	NA	7.49	72.49	NA