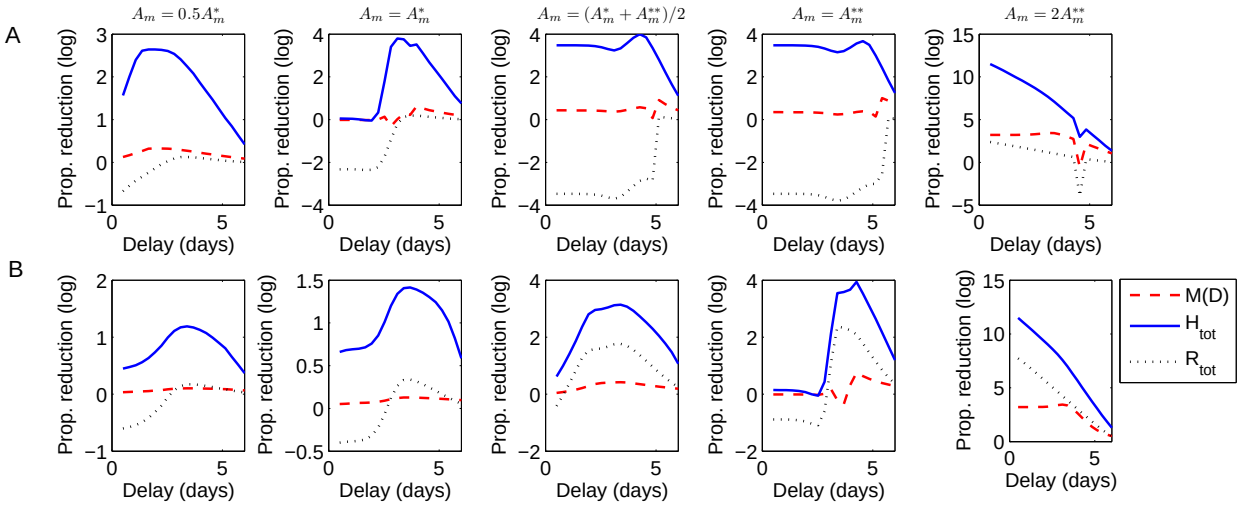

Figure S1: **Effects of antibiotic therapy as a function of the time of treatment onset.** A) $c = 2.2$ (high cost of resistance, as in Table **??**). B) $c = 0.1$ (small cost of resistance). Other parameters as in Table 1. Infections were simulated for 30 days. The different lines depict the proportional reduction (on a log-scale) in different infection measures, relative to no-treatment: $M(D)$ refers to final immune memory, H_{tot} to cumulative immunopathology, and R_{tot} to overall resistance. We see a maximum effect at intermediate delays for moderate doses below and within the critical range $[A_m^*, A_m^{**}]$, signalling the benefit of host immunity involvement in clearance. This benefit does not apply when aggressive doses are deployed.