S7 Fig. Error in the probability of a major outbreak when the infection rate is estimated. If the probability of a major outbreak is estimated with  $\beta$  unknown but the number of presymptomatic infected individuals at the time of estimation known, then there can be less error than due to presymptomatic infection alone. Here,  $\beta$  is estimated via maximum likelihood estimation, and constrained to within x% of the true value (representing prior knowledge about the value of  $\beta$ ). Constructed from 10,000 outbreaks simulated until four deaths have occurred using the SEIR model.

