

INFERENCEAL PROBLEMS IN EMERGING EPIDEMICS -- THE IMPORTANCE OF VARIABILITY

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The development of an epidemic depends both on medical and social factors. It is important how the infection progress in infected individuals but also how it is transmitted to other individuals in a population. We will illustrate the importance of different sources of individual (biological and social) variability in simple, but often used, models of epidemic spread. This has important implication when making inference for emerging epidemics. If the infectious agents is "new" the basic parameters, which will decide how the epidemic spreads, will probably be unknown. We will consider what can be learned (and what not) from observations (at population level) of such epidemics. We will also discuss what kind of surveillance data that are needed to understand and predict the future progress of an epidemic.