THE SHAR MODEL AND ITS EFFECTIVE INFECTION RATE: ANALYTICAL RESULTS ON SEVERE *vs* ASYMPTOMATIC INFECTION

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One of the simplest epidemiological models is the famous SIR model in which we assume three types of individuals in our system: susceptible, infected and recovered. But what if, for example, we study an epidemic in which there are infected individuals who do not have symptoms? How can we model this? To get around this challenge we assume two types of infected individuals, symptomatic and asymptomatic, which then allows us to define the SHAR model. We then move on to study the infection rate of the SHAR model: the effective infection rate in the SIR model infered from more complex parameter combinations in the SHAR model [1].

References

[1] Raquel Filipe, *et al* (2016) *Effective infection rate in SIR-type models from models with symptomatic and asymptomatic infection*, Proceedings of the 16th International Conference on Computational and Mathematical Methods in Science and Engineering, ISBN 978-84-608-6082-2, 483-490.