Impulsive multigroup SIS model for spread of modeling multidrug-resistant bacteriae

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In the talk we present a system of SIS models coupled by impulses at fixed times in the way that it can describe the transfer of patients between healthcare facilities. The first aim for his considerations is to provide analytical background for numerical simulation of multidrug-resistant bacteriae spread based on admission/discharge data from insurance provider for Saxony and Thuringia (Germany) for years 2010 - 2016 considered in [1]. Dynamical properties developed at possibly high level of generality allow to examine statements hypothesize in [1] and can be easily applied for other settings.

References: