

Modelling a collective health behaviour in a social network: The case of dental routine visiting

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Our health seeking behaviour is influenced by our friends and families. We develop an Agent Based Model that represent such effects in a case of dental routine visit. Based on simple rules at the individual level we observe emergence of a collective behavior with an oscillatory pattern for demand for dental routine visits at the societal level. We show that the oscillatory pattern is strongly dependent on the number of effective peer contacts and the social network structure. The results show a rapid growth in the oscillation amplitude as the number of effective peer connections increase. We compare and validate our results by looking at trends of Google search queries for about 110 US cities which represent public attention to dental care.