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Routine Dental Checkup Visit and the Effect of Word-of-Mouth: An Agent Based Modeling Approach

Seyed Peyman Shariatpanahi

University of Tehran

Iran

An Agent Based Model for collective behavior of routine dental visit in a social network is proposed using AnyLogic Software. Considering a six month period between two successive visits for an individual patient, the number of visits per month shows an oscillatory behavior over time. This behavior is highly dependent on the number of effective connections in the network and becomes clearer as the number of contacts between agents increases. In addition it is shown that the normal rate (excluding the effect of the social network connections) that an individual go for the dental visit can affect the period time of the oscillations. This result is compared with an experimental result from the ElderSmile program operated by the Columbia University College of Dental Medicine and shows a very good agreement.

This talk is based on a joint work with Maryam Sadeghipour, Mohammad Hosein Khoshnevisan, Arezoo Ebne Ahmadi, and Mohammad Amin Khoshnevisan.

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