Abstract Submitted
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Spreading of infectious diseases considering age contact patterns for Latin America ANA PASTORE Y PIONTTI, MARCELO F.C. GOMES, LUCA ROSSI, ALESSANDRO VESPIGNANI, Department of Physics, College of Computer and Information Sciences, Bouve' College of Health Sciences Northeastern University — The dynamics of infectious diseases strongly depends on the structure of the social contact patterns among individuals. In order to have an accurate estimate of the impact of epidemic outbreaks and which effective control measures to take, we need an appropriate description of these patterns. A simple way to improve the homogeneous mixing assumption is to introduce age contact patterns. Here we follow the approach of Fumanelli et al (PLoS Computational Biology, 8(9):e1002673, 2012) to estimate the age mixing patterns of virtual populations using highly detailed census data for Argentina, Brazil and Mexico. Considering age contact matrices for these countries we study the epidemiological relevant quantities and their relation with the sociodemographic data. Our results show that even for the same country the impact of epidemics outbreaks could be very different when we consider age contact matrices. This results can be explained as a result of a change in the average age of the population in the different regions of the countries. This study also provides the first estimates of contact matrices for Latin American countries.

Ana Pastore y Piontti
Dept of Physics, College of Computer and Information Sciences,
Bouve' College of Health Sciences Northeastern University

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