

**MEASURES OF DISASSORTATIVENESS AND THEIR APPLICATION TO DIRECTLY TRANSMITTED INFECTIONS**

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The extent to which individuals mix assortatively, i.e. contact those with similar characteristics to them, influences epidemic spread. We propose a measure of disassortativeness to summarise contact structures for directly transmitted infections. We discuss the properties of this measure. Methods of estimation for serological survey data and contact survey data are described. We apply our method to age dependent contact structures estimated from serological and contact survey data for several European countries. Models and estimated disassortativeness measures for each country are compared, and implications for the spread of infection is discussed.