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Mathematical Modeling of a MERS-CoV Nosocomial Outbreak

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Middle East Respiratory Syndrome-coronavirus (MERS-CoV), a virus with a high fatality rate, is spreading in the Middle East, especially in Saudi Arabia (SA) which is its point of origin. It has also spread to South Korea (SK), where it was transferred by a visitor to the Arabian Gulf region. A MERS-CoV index case may cause a nosocomial outbreak that out-spills to the community. MERS-CoV's nosocomial outbreaks are common in SA and SK. In a collaboration with researchers and health officials in Saudi Arabia and Canada we are constructing a model to depict the MERS-CoV nosocomial outbreak in a SA hospital. We are using the model to estimate different parameters related to the outbreak and to test the effect of the infectious disease control plan in that hospital. This model will assist to derive lessons from this particular nosocomial outbreak to inform and update infection control policy. In this talk, I am going to present the latest results in that project.

[*]Speaker.

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