

COV/EDI/20/12 - Network models for infection control through testing and contact tracing

Testing and contact tracing will play a key role in containment of COVID-19 outbreaks after the acute period. No method of contact tracing is perfect. In addition to undetected cases, some contacts will be incorrectly identified (false positives) and some will not (false negatives). We investigate the effect of testing and contact tracing on successful containment of outbreaks with network epidemiological models. Previous studies considered large, structureless populations. This formulation is inappropriate for the Scottish mixed urban and rural/remote population. We investigate the extent to which previous results apply in the Scottish setting and whether different approaches are warranted