

Impact of School Closures

Warwick

16/4/2020

1) Warwick Social Contact Survey estimates that about 50% of school age children's contact time is at school. If we assume that the time spent at school becomes time spent at home then secondary cases drop to ~60% (not as much because of repeated infection in the home environment).

If we account for the displacement of contacts due to the recent social distancing announcements this may drop slightly. My simplest estimates suggest ~58%.

2) Feeding this into our age-structured model for the UK, this predicts a maximal reduction of about 5% in ICU cases; although the precise numbers depend of the transmission from asymptomatic infection (relative to symptomatic cases) in children (x-axis) and the assumed reduction due to social-distances (coloured lines). My expectation is that the relative transmission rate from asymptomatic infections is less than 25%, which would suggest a very modest change from adopting school closures.

The results also show that the predicted impact on ICU is made far more complex by the additional transmission (to older individuals) that could results from school closures.

