

Social contacts in the UK from the CoMix social contact survey

Report for survey week 53

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Data up to 29th March 2021*

Summary

- Mean contacts for adults appear to be rising towards the end of the third lockdown, particularly in the 18-29 year old age group, though rates of contact do appear to be increasing for older adults (30-59 years) as well. The increase appears to be associated mainly with an increase in contacts in the work and educational setting.
- Adult contacts have remained much lower than pre-pandemic levels, throughout the epidemic. Exiting the first lockdown, contact patterns increased very slowly until August, when a more rapid increase in contacts occurred. Exiting the second lockdown, adult contact rates increased as soon as the restrictions were lifted.
- It appears that contacts are beginning to increase towards the end of the third lockdown. This would be more consistent with behaviour seen when exiting the second lockdown (rapid increase in contacts) rather than the first (slow increase in contacts).

Main

Recorded mean contacts were between 2-3 per person per day during the first lockdown in March 2020 (Figure 1). They remained low for roughly 2 months after the first lockdown was lifted until August 2020, when they increased to between 4-5 contacts per person per day. In September 2020, contacts in adults began to decline. In contrast, contacts for children increased sharply due to reopening schools. Contacts for adults reduced during the second lockdown. Once the restrictions were lifted, contact levels increased rapidly, in contrast to the delay seen after lifting the first lockdown and despite the imposition of a tightened Tier system of restrictions in England. During the second lockdown schools remained opened and this is seen in the higher level of contacts when adults and children are combined (Figure 1). During the Christmas period mean contacts were consistent with the low levels seen during the first lockdown. This pattern continued throughout the third lockdown until schools were reopened. Towards the end of the third lockdown, we are starting to see an increase in contacts amongst adults, this includes data up to the 29th of March and therefore does not include data after the third lockdown ended.

The increase in contacts among adults appears to be most clear in the age group 18-29 (Figure 2), though there are some increases in the working age adults (30-59). The increase in contacts in younger adults seems to be mostly attributable to an increase in contacts in the work or educational settings (Figure S1). Contacts for children remain high at just less than 10 contacts per day (Figure 3). There is some suggestion that mean reported contacts in London and the Midlands has remained constant whereas reported contacts may have increased slightly in the remaining regions and countries over recent weeks. Patterns are difficult to discern and could be due to relatively small numbers. In addition, it should be stressed that any geographical variation in mean recorded contacts remains small, with values all lying between 2 and 3 contacts per person per day (Figure 4).

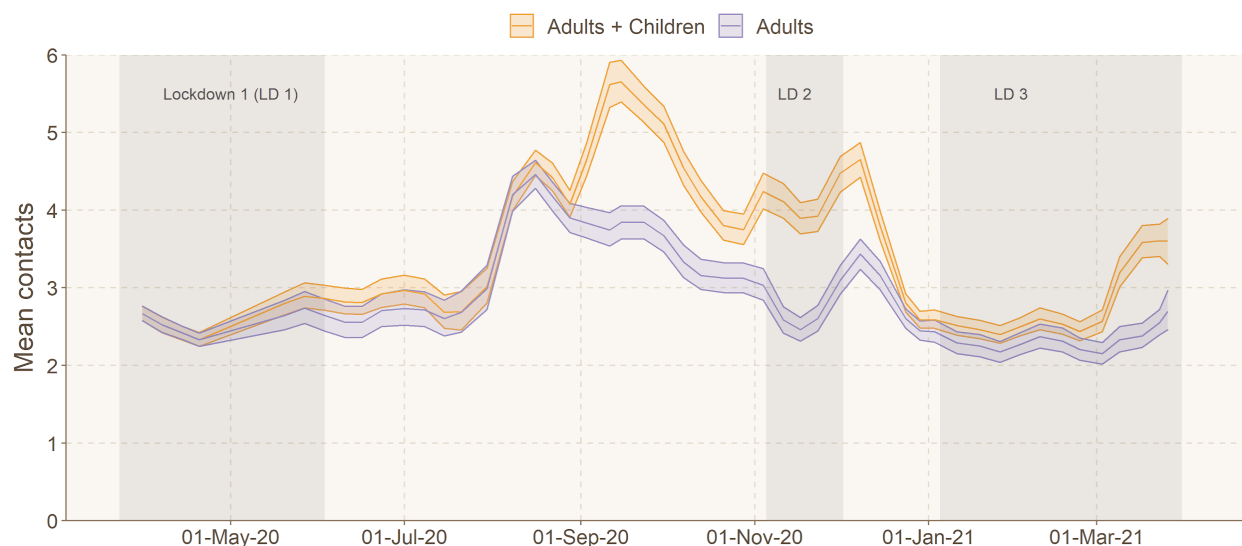


Figure 1: Mean contacts since the 23rd March 2020 for adults and adults and children. Uncertainty calculated using bootstrapping. Contacts truncated to 50 contacts per participant. Observations are smoothed over two weeks to account for panel effects. Date on x axis refers to the midpoint of the survey period.

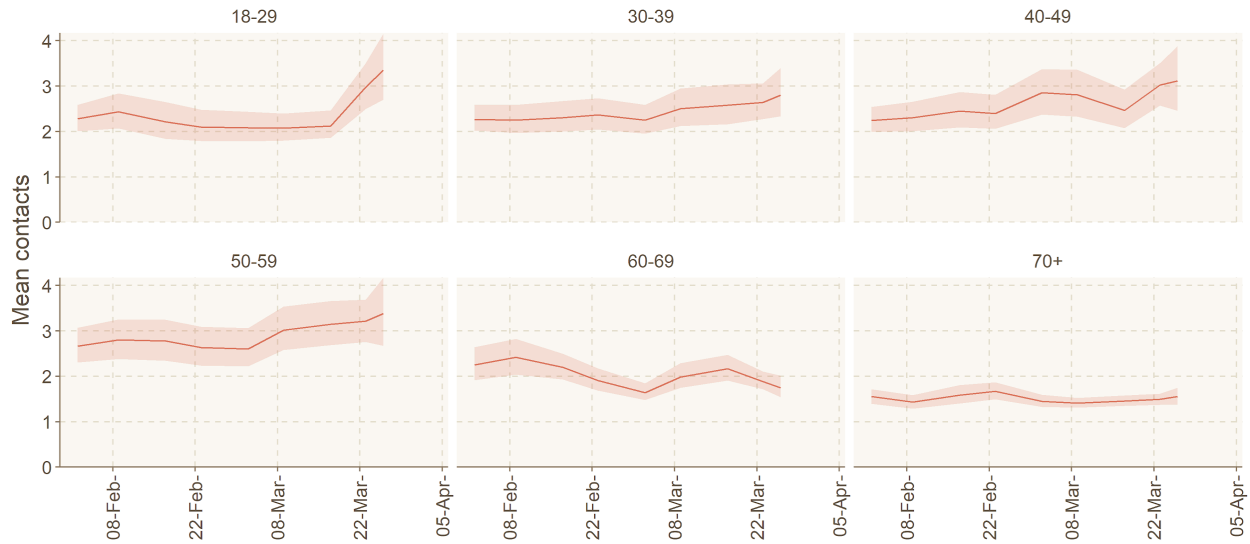


Figure 2: Mean contacts in all settings by age-group for adults over time. Uncertainty calculated using bootstrapping. Contacts truncated to 50 contacts per participant. Observations are smoothed over two weeks to account for panel effects. Date on x axis refers to the midpoint of the survey period.

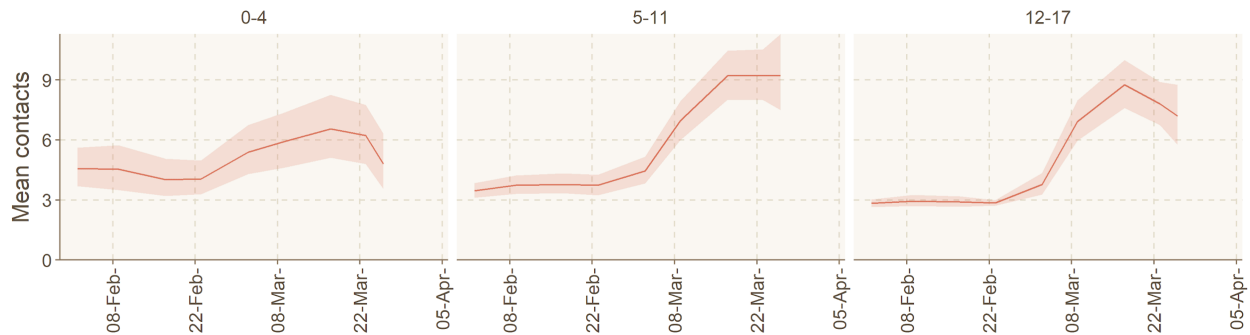


Figure 3: Mean contacts in all settings by age-group for children over time. Uncertainty calculated using bootstrapping. Contacts truncated to 50 contacts per participant. Observations are smoothed over two weeks to account for panel effects. Date on x axis refers to the midpoint of the survey period.

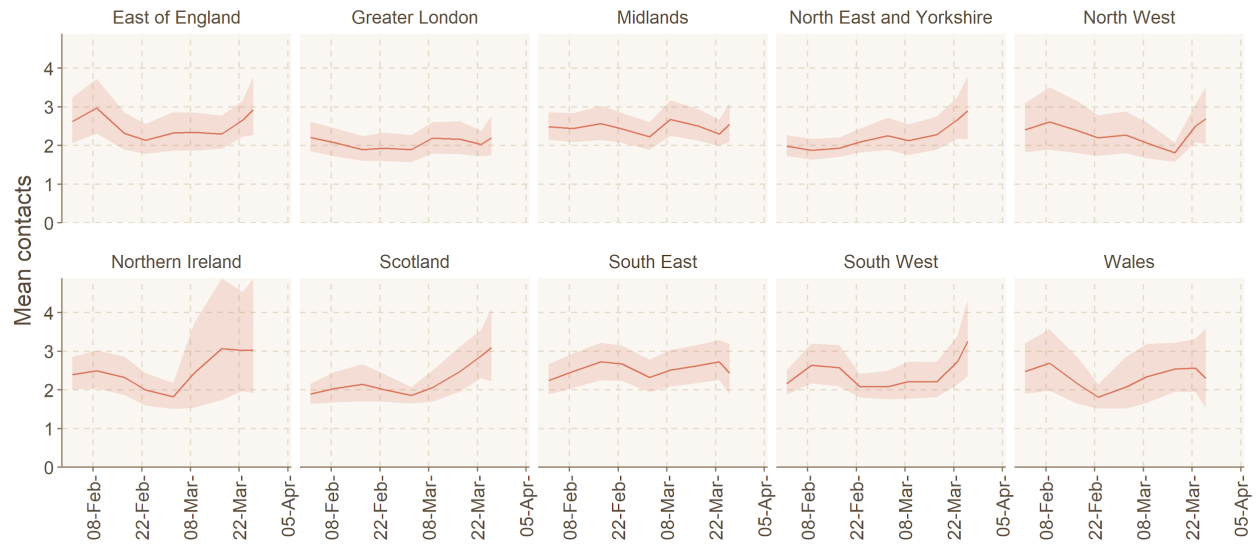


Figure 4: Mean contacts in all settings in adults for UK nations and English regions over time. Uncertainty calculated using bootstrapped. Contacts truncated to 50 contacts per participant. Observations are smoothed over two weeks to account for panel effects. Date on x axis refers to the midpoint of the survey period.

Methods

CoMix is a behavioural survey, launched on 24th of March 2020. The sample is broadly representative of the UK adult population. Participants are invited to respond to the survey once every two weeks. We collect weekly data by running two alternating panels. Parents complete the survey on behalf of children (17 years old or younger). Participants record direct, face-to-face contacts made on the previous day, specifying certain characteristics for each contact including the age and sex of the contact, whether contact was physical (skin-to-skin contact), and where contact occurred (e.g. at home, work, while undertaking leisure activities, etc). Further details have been published elsewhere [1]. The contact survey is based on the POLYMOD contact survey [2].

We calculated the mean contacts using 1000 bootstrap samples. Bootstrap samples were calculated at the participant level, then all observations for those participants are included in a sample to respect the correlation structure of the data. We collect data in two panels which alternate weekly, therefore we calculated the mean smoothed over the 2 week intervals to give a larger number of participants per estimate and account for panel effects. We calculated the mean number of contacts in the settings home, work and school (including all educational establishments, including childcare, nurseries and universities and colleges), and “other” (mostly leisure and social contacts, but includes shopping). We look at the mean contacts by age, country, and region of England. The mean number of contacts is influenced by a few individuals who report very high numbers of contacts (often in a work context). The means shown here are calculated based on truncating the maximum number of contacts recorded at 50 per individual per day.

Funding

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References

1. Jarvis CI, Van Zandvoort K, Gimma A, Prem K, CMMID COVID-19 working group, Klepac P, et al. Quantifying the impact of physical distance measures on the transmission of COVID-19 in the UK. BMC Med. 2020;18: 124.
2. Mossong J, Hens N, Jit M, Beutels P, Auranen K, Mikolajczyk R, et al. Social contacts and mixing patterns relevant to the spread of infectious diseases. PLoS Med. 2008;5: e74.

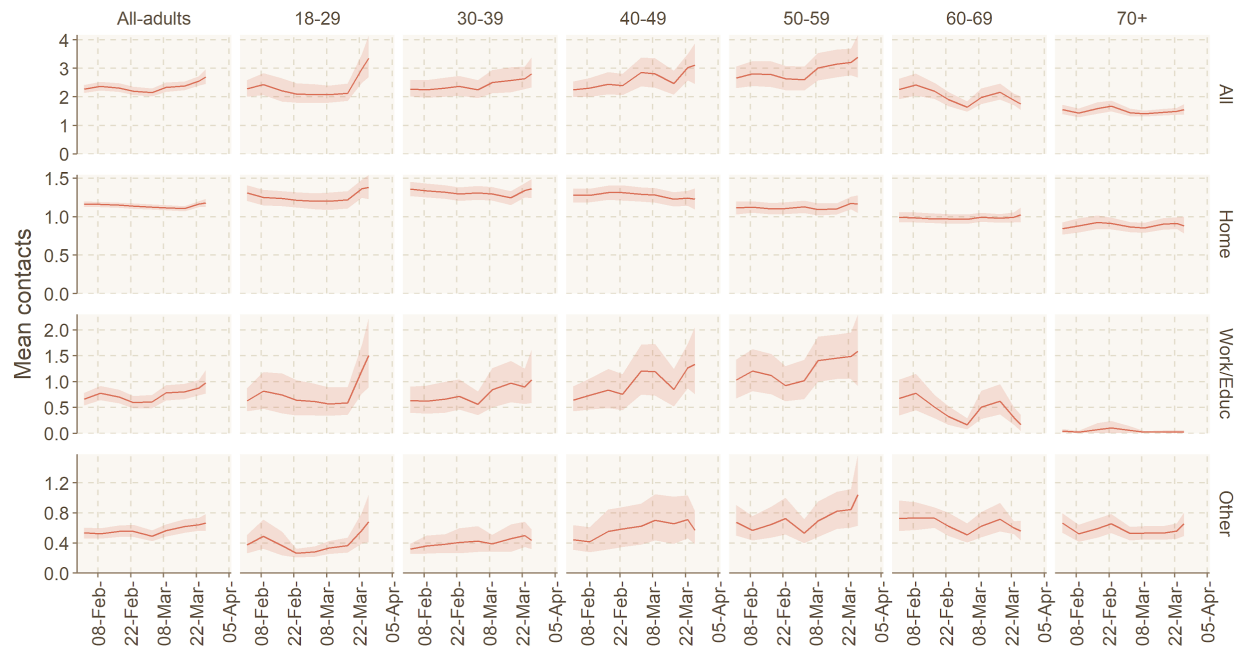


Figure S1: Setting-specific mean contacts by age-group for adults over time. Uncertainty calculated using bootstrapping. Contacts truncated to 50 contacts per participant. Observations are smoothed over two weeks to account for panel effects. Educ = educational setting. Date on x axis refers to the midpoint of the survey period.

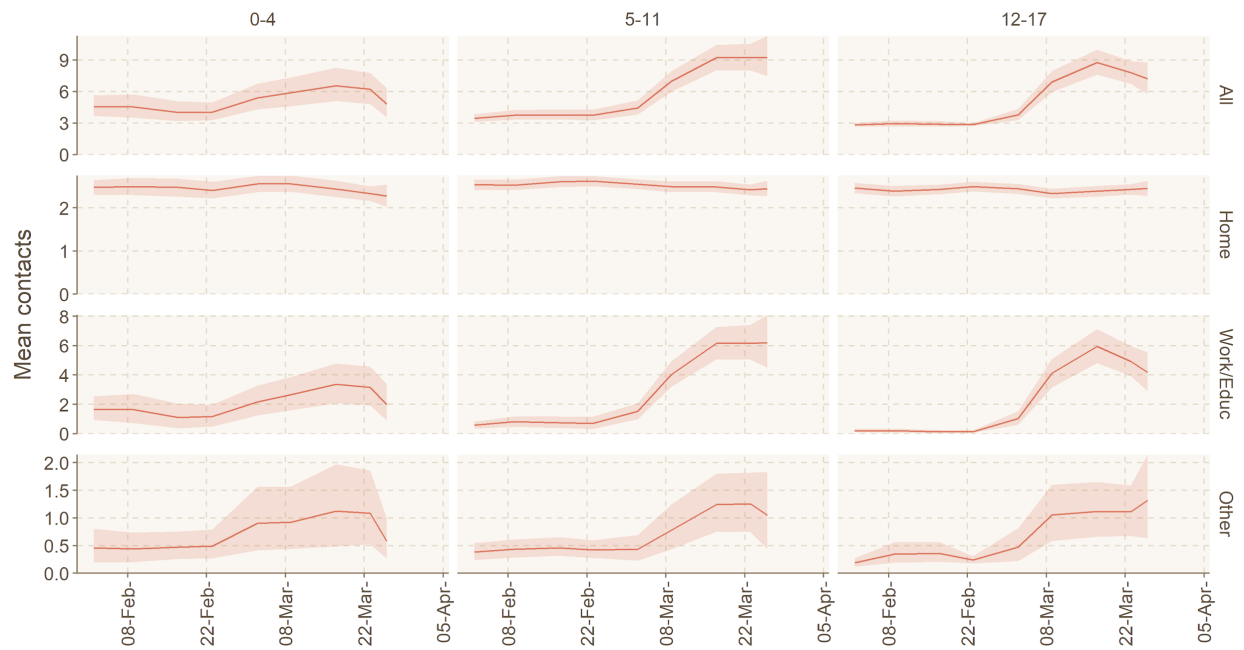


Figure S2: Setting-specific mean contacts by age-group for children over time. Uncertainty calculated using bootstrapping. Contacts truncated to 50 contacts per participant. Observations are smoothed over two weeks to account for panel effects. Educ = educational setting. Date on x axis refers to the midpoint of the survey period.