Social contacts in the UK from the CoMix social contact survey
Report for survey week 78

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Summary

- Mean contacts for children remain higher as schools are now open. Mean reported contacts for ages 12-17 years are similar to before the summer break. Mean reported contacts for ages 5-11 years are slightly lower.
- The overall reported contact rate for adults is similar to levels seen over the last month
- The wearing of face-coverings has decreased over all age groups since the easing of restrictions in July. However, this decline appears to have halted in older adults (60+ years). The decline in the use of face- coverings appears to be continuing in younger age groups (18-59 years).
- This decline in facemask appears to have occurred more strongly in supermarket settings, with less than 50% of younger adults (18-29 years) having reported wearing a mask versus around 75% of older adults (60+ year)
- Contacts for those attending work continue to be higher than those not attending, though there does not appear to be a larger absolute difference in the leisure (other) contacts of those attending work versus those who do not, with both having less than 2 leisure contacts per person per day.

Main

Mean reported contacts this week are similar to those seen last week (Figure 1). Contacts for adults have been similar for the last several weeks, with greater fluctuations seen in the ages 18-29, mostly driven by work and educational settings (Figure 1, 2, 3). Contacts for children, increased last week with schools opening, and very similar levels were reported this week (Figure 1, Figure 4). Reported contacts for children ages 5-11 are slightly lower than those seen when schools were last open (Figure 4), and this is present in both school and leisure contacts (Figure 5). Contacts for 12-17 year olds are near identical to those prior to the summer holidays (Figure 5).

The wearing of a face-covering (mask) has fallen steadily in young and middle-aged adults since the easing of restrictions in England on July 19th. Less than 70% of adults aged 18-59 who made at least one contact outside the home reported wearing a mask on the day of the survey (Figure 6). A lower proportion of the entire sample reported wearing a facemask on the day of the survey (around 60%), though this includes people that may have stayed home all day and not seen anyone other than household members. We considered the proportion of participants (who had at least one contact outside of the home) wearing facemasks in the following settings: work, public transport, supermarket, walking outside, leisure. Nearly 50% of employed participants wore masks when they attended work (Figure 7 A). The proportion of participants wearing a facemask on public transport was considerably lower at less than 25% since April 2020 (Figure 7B). Less than 50% of 18-29 year old wore masks whilst at a supermarket compared to 75% for those 60+, with those aged 30-59 close to 70% (Figure 7E). Very few participants wore a mask whilst walking outside or undertaking leisure activities (Figure 7D, 7F).

Those who attended work report consistently higher contacts compared to those whose work is open, but they did not attend (Figure 8). Though there does not appear to be such a strong difference in other contacts for those attending and not attending work (Figure S2), though the overall level of other contacts is much smaller at less than 2 contacts per person per day.
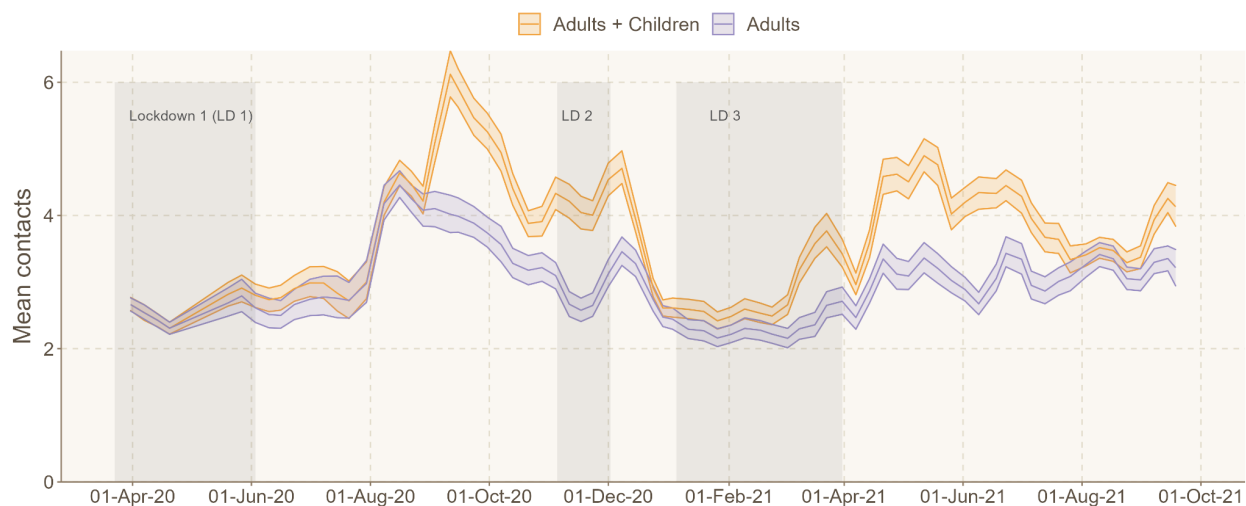
Figure 1: Mean contacts in the UK since the 23rd March 2020 for adults and children (all participants) and adults only (18 year +). Uncertainty calculated using bootstrapping. Contacts truncated to 50 contacts per participant. Observations are smoothed over two weeks to account for panel effects. Date on x axis refers to the midpoint of the survey period.
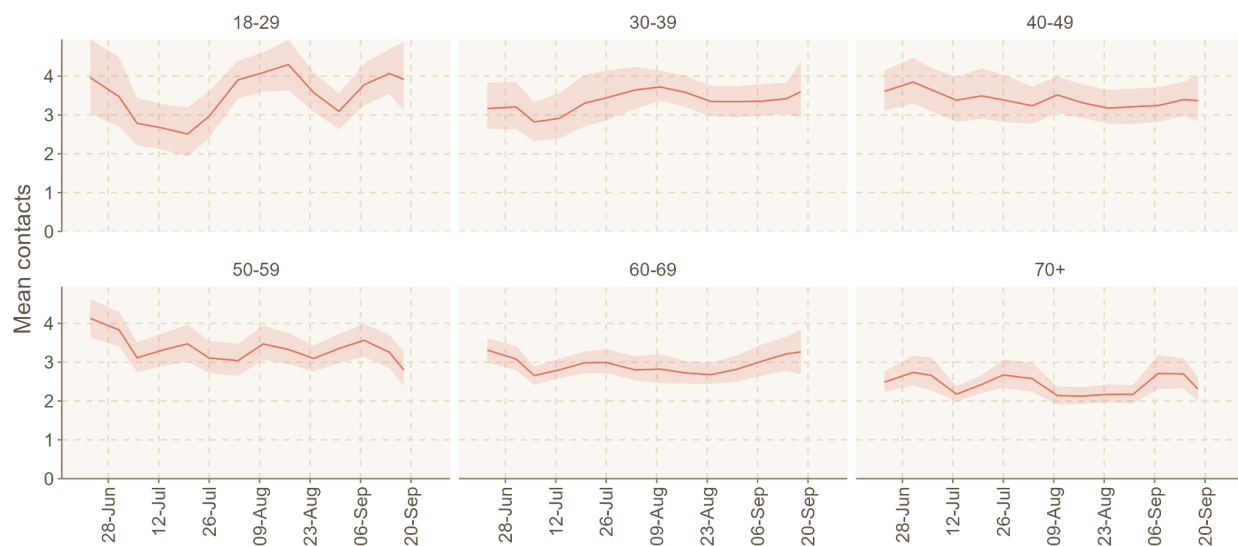

Figure 2: Mean contacts in all settings by age-group for adults over time. Uncertainty calculated using bootstrapping. Contacts truncated to 50 contacts per participant. Observations are smoothed over two weeks to account for panel effects. Date on x axis refers to the midpoint of the survey period.
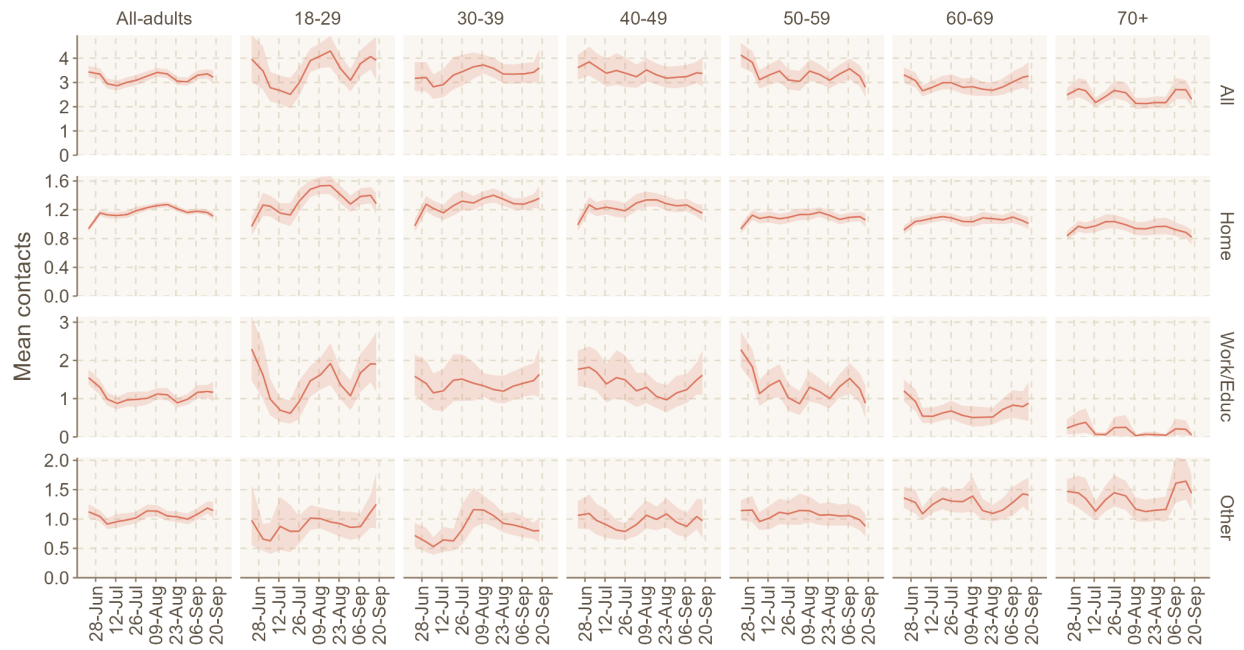
Figure 3: Mean contacts by settings and by age-group over time. Uncertainty calculated using bootstrapping. Contacts truncated to 50 contacts per participant. Observations are smoothed over two weeks to account for panel effects. Date on x axis refers to the midpoint of the survey period.
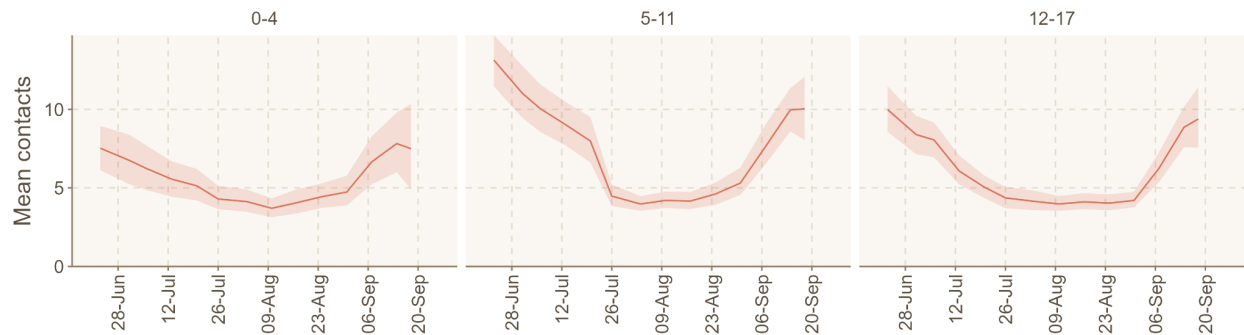

Figure 4: Mean contacts in all settings by age-group for children over time. Uncertainty calculated using bootstrapping. Contacts truncated to 50 contacts per participant. Observations are smoothed over two weeks to account for panel effects. Date on x axis refers to the midpoint of the survey period.
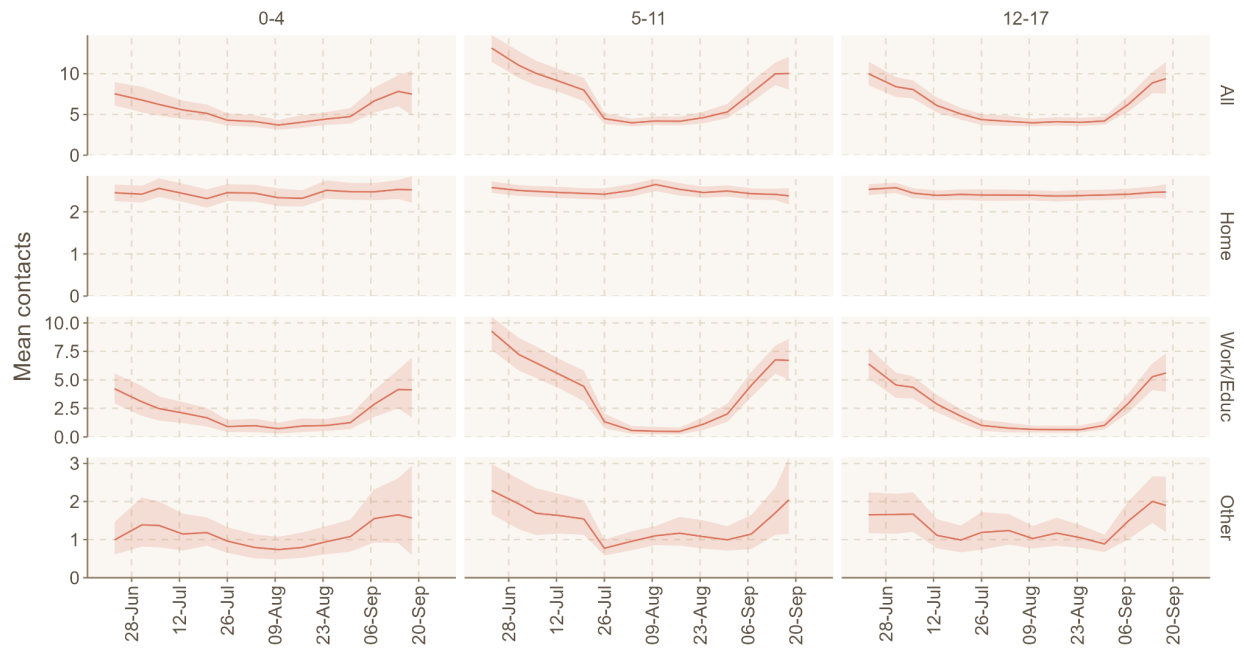
Figure 5: Mean contacts by setting and age-group for children over time. Uncertainty calculated using bootstrapping. Contacts truncated to 50 contacts per participant. Observations are smoothed over two weeks to account for panel effects. Date on x axis refers to the midpoint of the survey period.
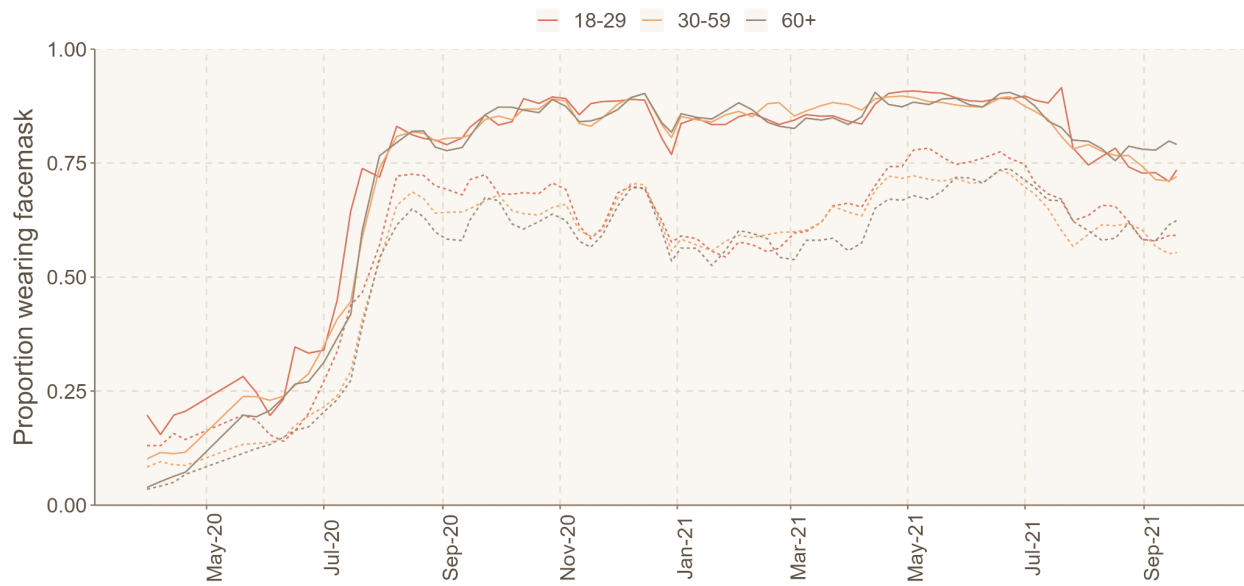
Figure 5: Proportion of adults wearing a face mask over time (Solid line = with at least one contact outside of the home, dotted line = all participants). Date on x axis refers to midpoint of the survey period.

A: Work/Education

18-29 — 30-59 — 60+

B: Public transport

18-29 — 30-59 — 60+

C: Supermarket

18-29 — 30-59 — 60+

D: Walking outside

18-29 — 30-59 — 60+
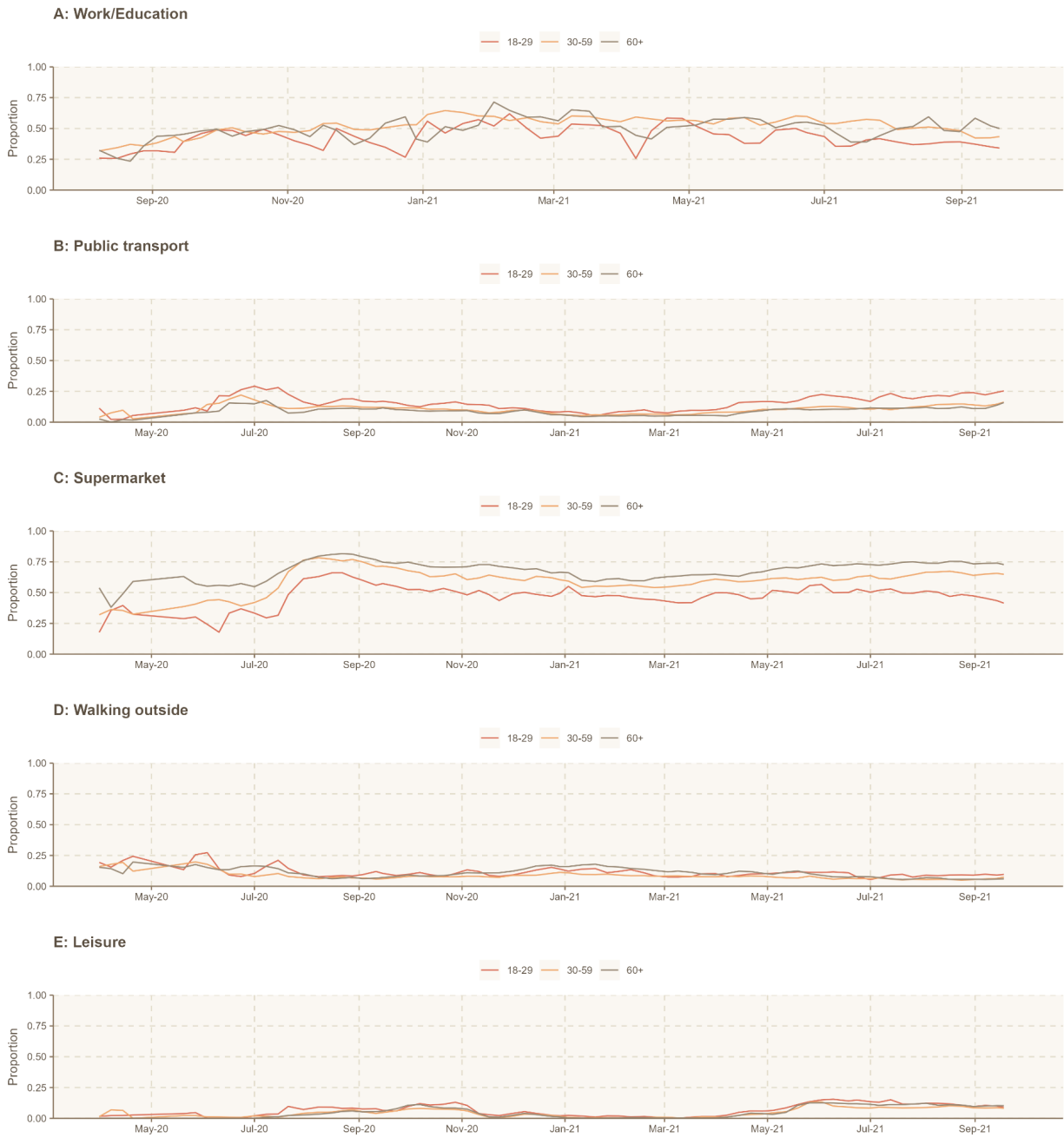
E: Leisure

18-29 — 30-59 — 60+

Figure 6: Proportion of adults wearing a face mask over time in different settings for those with at least one contact outside of the home, dotted line = all participants). Date on x axis refers to midpoint of the survey period.
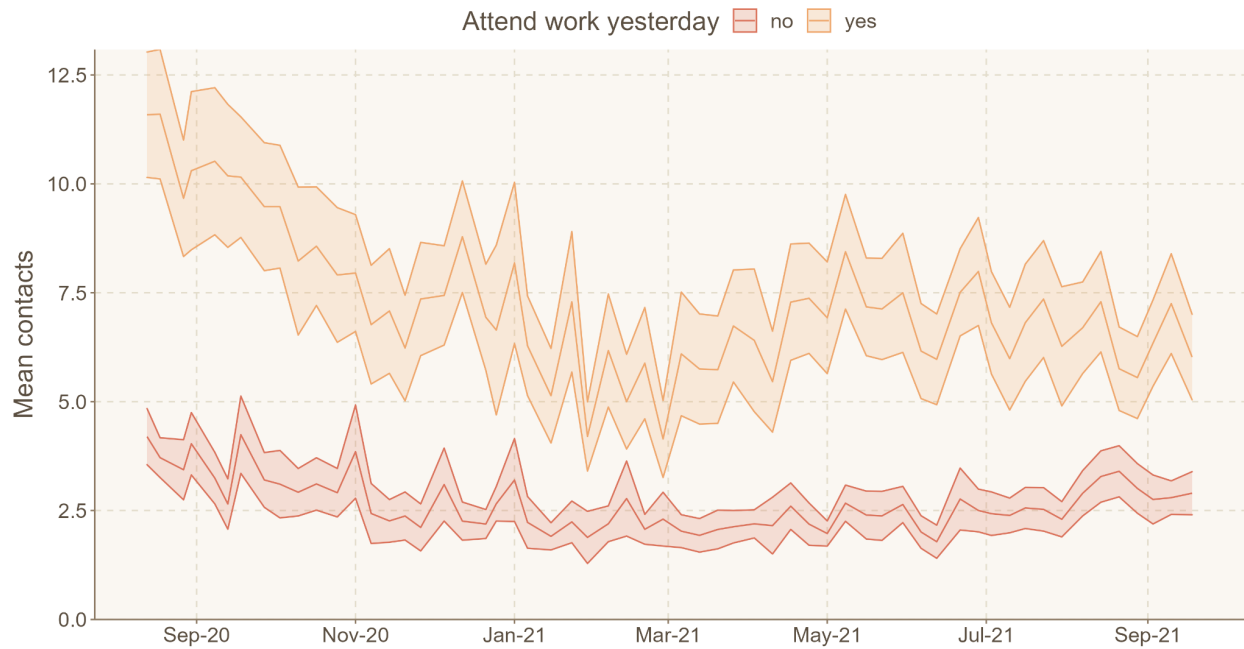
A: All contacts

Figure 7: Mean contacts in the UK since August 2020 for individuals attending or not attending work on the day of the survey for people that are employed and their work is open. 95% Uncertainty interval calculated assuming a standard normal mean of two times the standard error of the mean. 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. Participant's 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 used a post-stratification method to assign weights, based on the World Population Prospect population estimates for the UK by age and gender, when calculating the mean number of contacts. 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. We compared the mean reported contacts for the most recent data of the survey to the mean contacts reported during ten time periods over the previous year which represent different levels of restrictions.

Participants were asked whether they were in isolation or quarantine on the day they reported contacts. They were also asked whether they wore a facemask on the day of reported contacts, we filtered to participants who had at least one contact outside of the home. We calculated the proportion who said yes for both these categories over those who responded.

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.

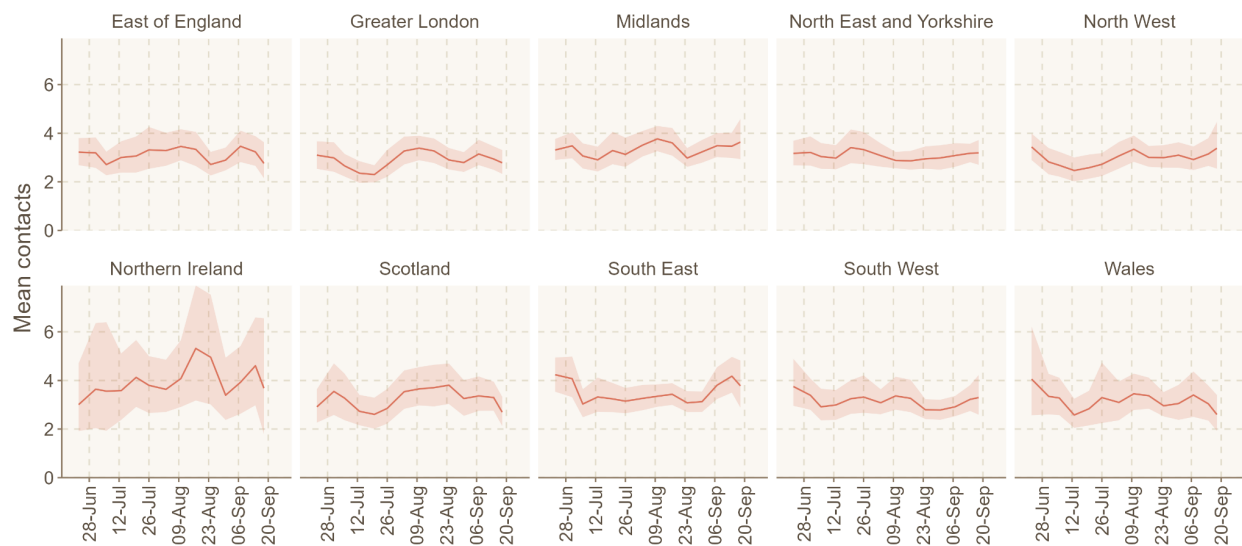# Additional graphs and tables

Figure S1: Mean contacts in all settings in adults for UK nations and English regions 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.
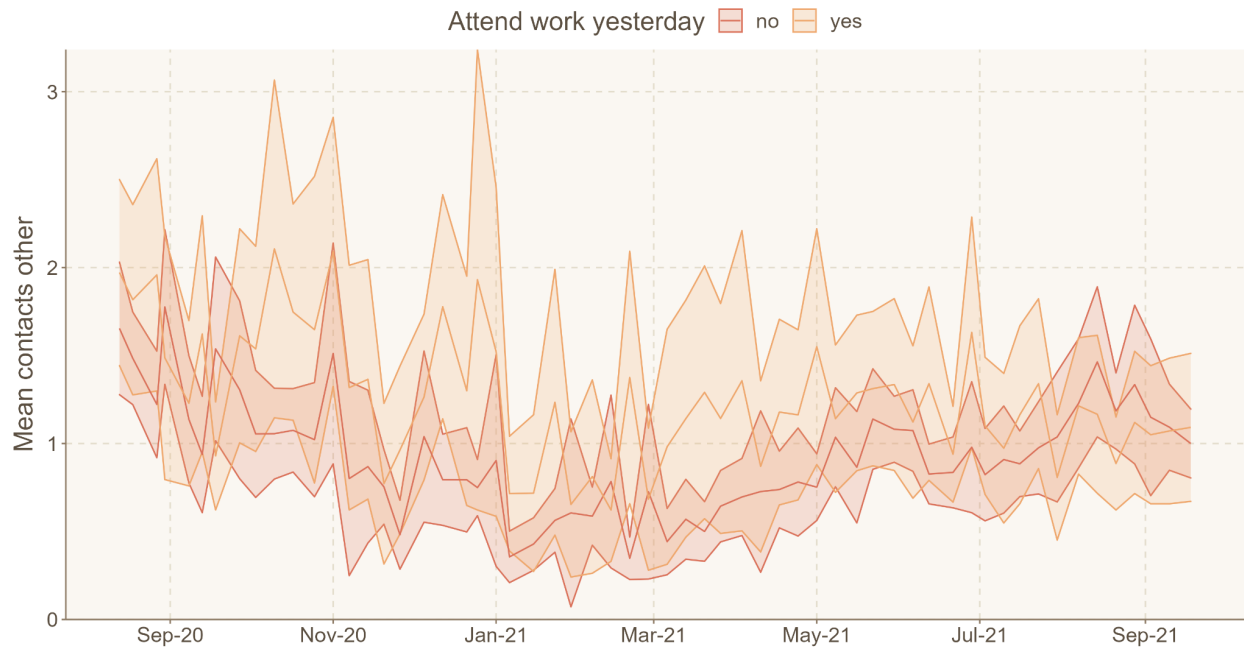
B: Other contacts

Figure S2: Mean other contacts in the UK since August 2020 for individuals attending or not attending work on the day of the survey for people that are employed and their work is open. *95%* Uncertainty interval calculated assuming a standard normal mean of two times the standard error of the mean. 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.