

Social contacts in the UK from the CoMix social contact survey

Report for survey week 81

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Data up to 13 October 2021*

Summary

- Mean contacts for children have decreased over the last few weeks, which corresponds with an increase in the proportion of school-age children who are isolating.
- The overall reported contact rate for adults remains largely consistent with the levels seen in the previous two months.
- The decline in face mask usage in Wales noted last week persists at approximately 75%.
- Face mask usage in England amongst those 18 to 29 years old who have reported contacts outside of the household continues to decrease.
- Reported contact rates for those attending work continue to be more than twice that of those workers who did not attend their workplace.

Main

Contacts for adults have been similar for the last few months, with greater fluctuations seen in the 18-29 year olds, mostly driven by changes in contacts in work and educational settings (Figure 1, 2, 3). Mean reported contacts for adults this week are similar to those seen in the last three weeks (Figure 1), though children's contacts at schools have decreased (Figure 1, Figure 4, Figure 5). Contacts remain quite consistent across the regions of England (Figure S1). As expected the largest driver of children's contacts is the pattern of school terms, which mostly affects contacts in the educational setting, but also results in higher contacts in other settings (mostly social and leisure), as shown in Figure 5.

The decrease in children's contacts corresponds with an increase in isolating school-aged children, however, the overall fraction is much lower than in July, when contacts, as well as cases were expected to quarantine or isolate (Figure 6, 7). The proportion of children aged 12 to 17 who are isolating is now approximately the same as the proportion of children 5 to 11 at just under 10%. The fraction of adults in isolation/quarantine has remained steady at less than 5% (Figure 6).

The proportion of face mask-wearing in respondents from Wales does appear to have fallen over recent weeks (Figure 8). In England, the proportion of participants 18 to 29, among those who report contacts outside the home, continues to decrease to levels not seen since early in the pandemic (Figure 9). The levels of mask-wearing in older age groups appears to have stabilised, with the elderly (60+) maintaining higher levels of mask wearing than middle-aged adults (30-59 years).

Those who attended work over the last year have reported consistently higher contacts compared to those whose work is open, but they did not attend (Figure 10). The proportion of people whose work is open has increased moderately since the end of the third lockdown and is now at levels seen consistently during the Autumn of 2020 (Figure 11A). Despite this, only around half of the employed participants reported attending work in person when it was open (Figure 11B).

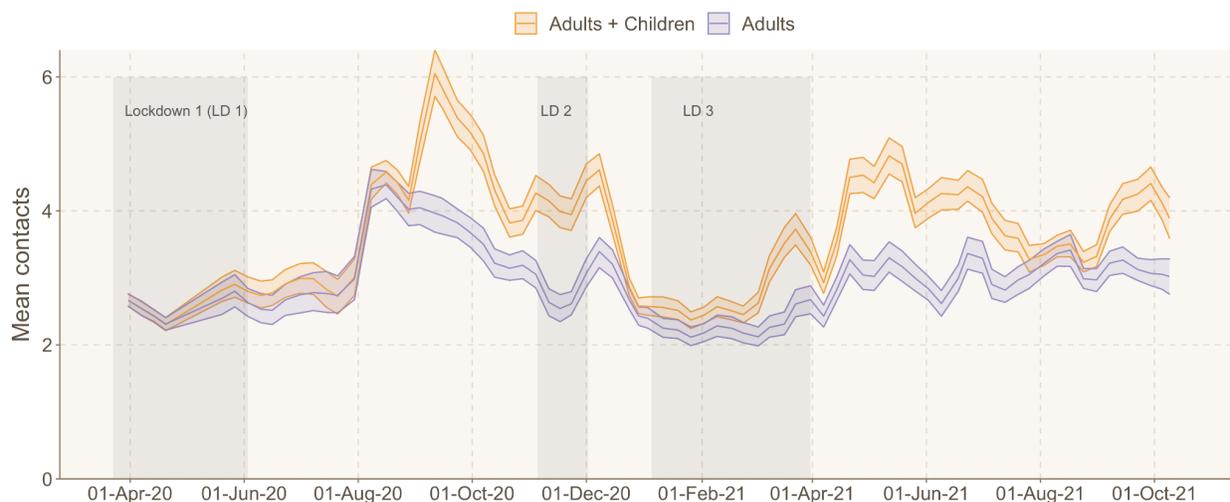


Figure 1: Mean contacts in the UK since the 23rd March 2020 for adults and children (all participants) and adults only (18 year +). Uncertainty calculated using bootstrapping. Contacts truncated to 50 contacts per participant. Observations are smoothed over two weeks to account for panel effects. Date on x axis refers to the midpoint of the survey period.

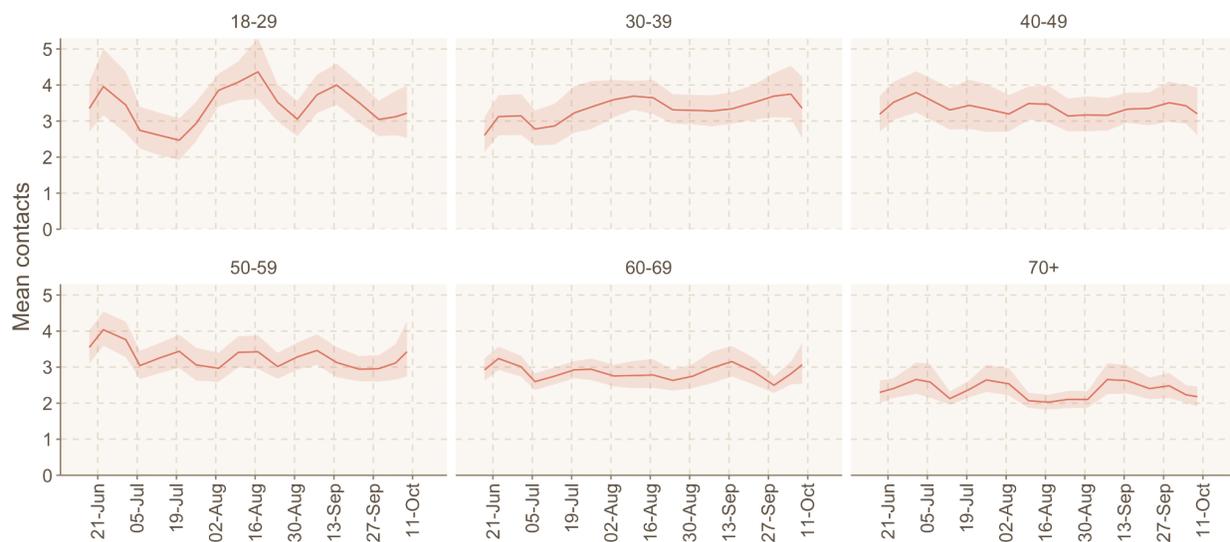


Figure 2: Mean contacts in all settings by age-group for adults over time. Uncertainty calculated using bootstrapping. Contacts truncated to 50 contacts per participant. Observations are smoothed over two weeks to account for panel effects. Date on x axis refers to the midpoint of the survey period.

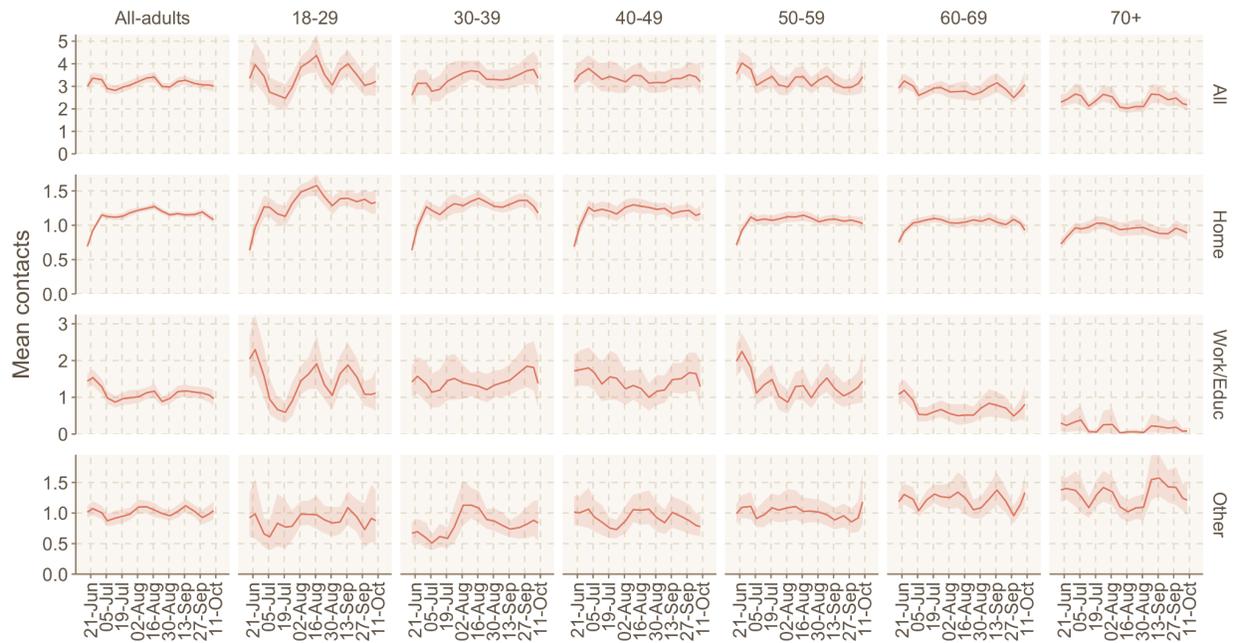


Figure 3: Mean contacts by settings and by age-group over time. Uncertainty calculated using bootstrapping. Contacts truncated to 50 contacts per participant. Observations are smoothed over two weeks to account for panel effects. Date on x axis refers to the midpoint of the survey period.

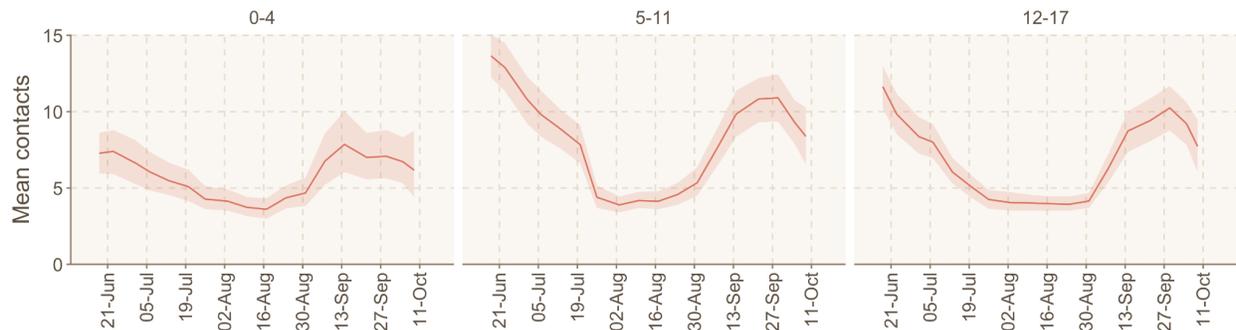


Figure 4: Mean contacts in all settings by age-group for children over time. Uncertainty calculated using bootstrapping. Contacts truncated to 50 contacts per participant. Observations are smoothed over two weeks to account for panel effects. Date on x axis refers to the midpoint of the survey period.

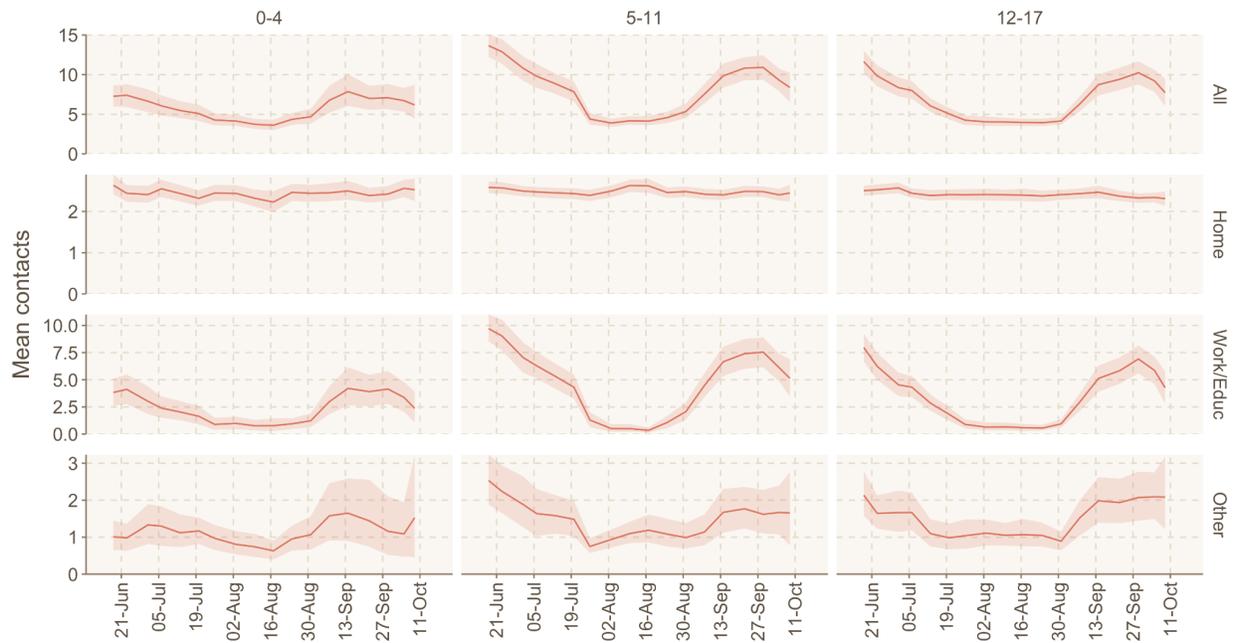


Figure 5: Mean contacts by setting and age-group for children over time. Uncertainty calculated using bootstrapping. Contacts truncated to 50 contacts per participant. Observations are smoothed over two weeks to account for panel effects. Date on x axis refers to the midpoint of the survey period.

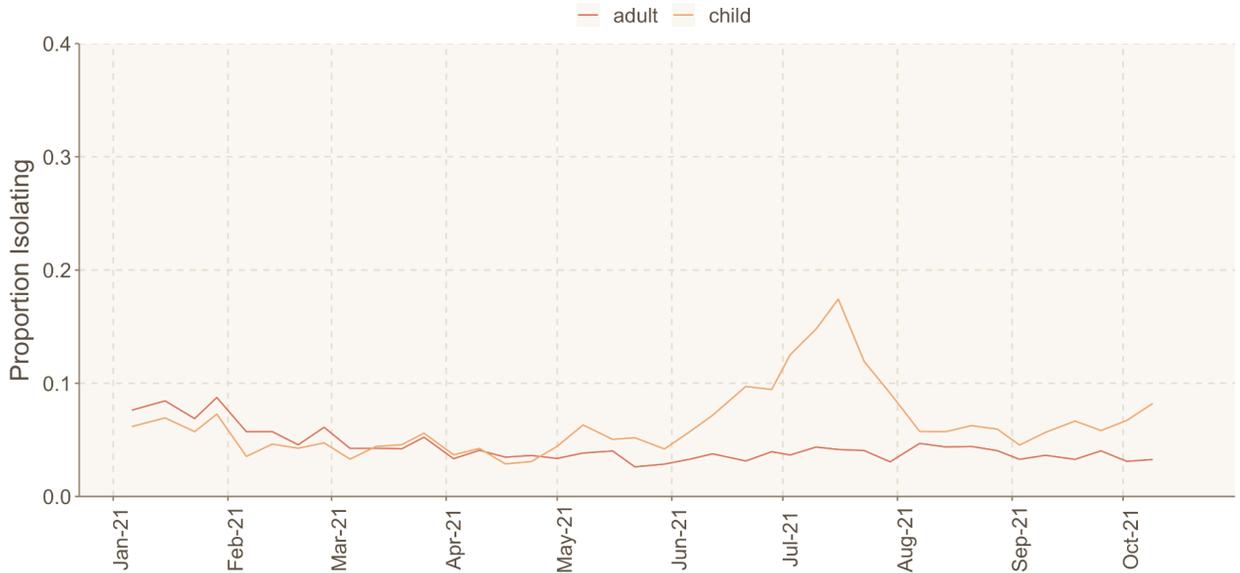


Figure 6: Proportion of adults or children in isolation or quarantine. Observations are smoothed over two weeks to account for panel effects apart from the most recent week of data. Date on x axis refers to the midpoint of the survey period.



Figure 7: Proportion of school-aged children in isolation or quarantine. Observations are smoothed over two weeks to account for panel effects apart from the most recent week of data. Date on x axis refers to the midpoint of the survey period.

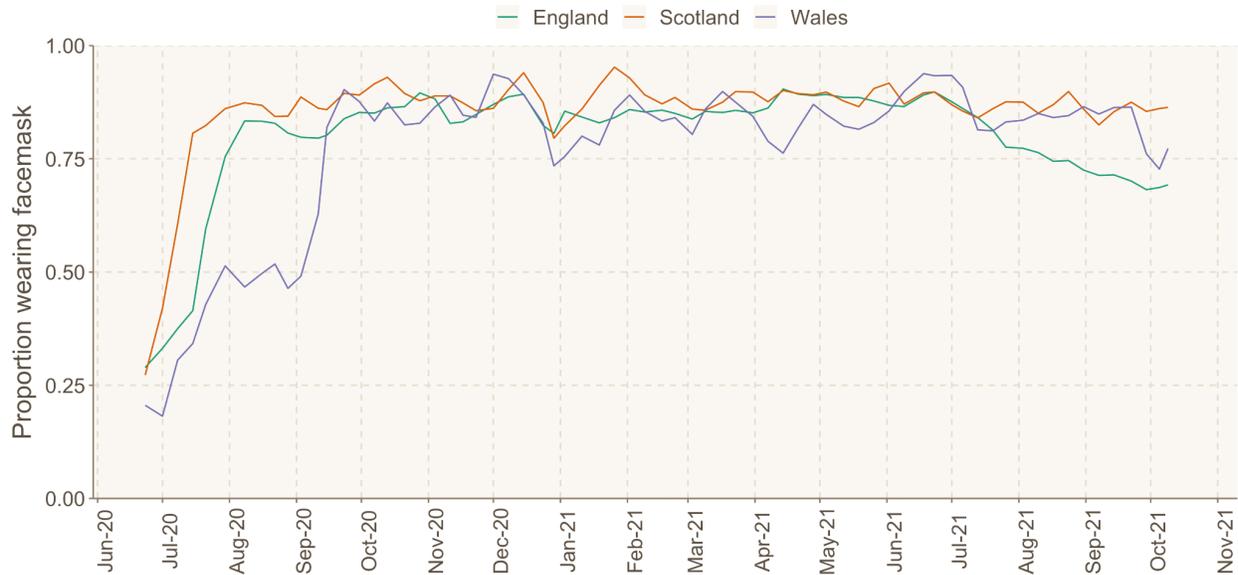


Figure 8: Proportion of adults wearing a face mask over time by country (with at least one contact outside of the home). Observations are smoothed over two weeks to account for panel effects apart from the most recent week of data. Date on x axis refers to midpoint of the survey period.

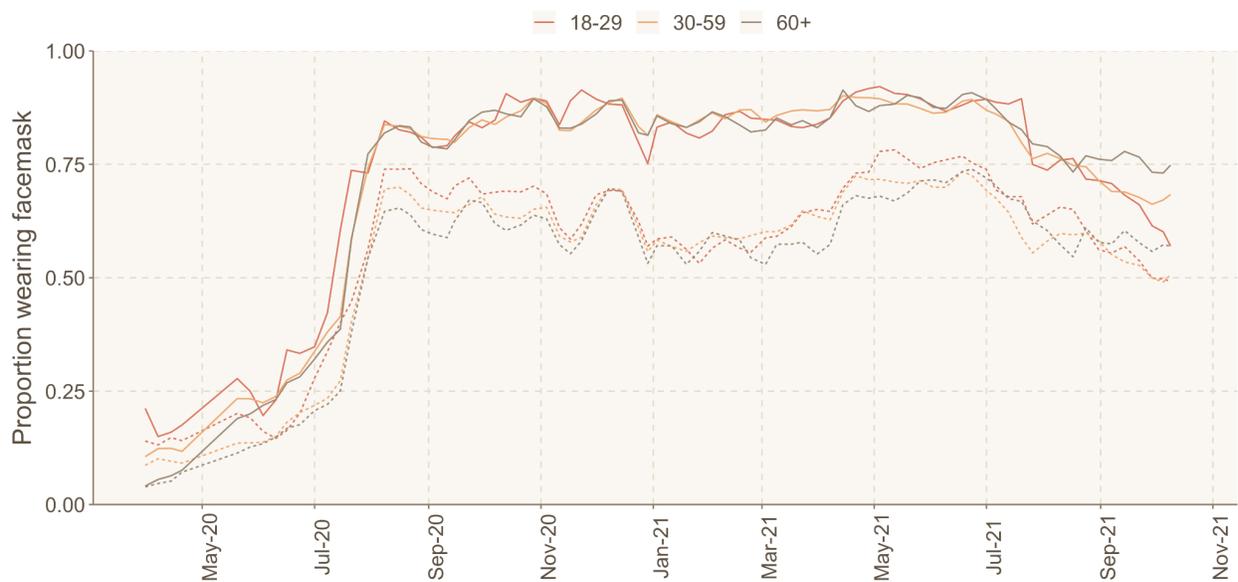


Figure 9: Proportion of adults wearing a face mask over time in England (Solid line = with at least one contact outside of the home, dotted line = all participants). Date on x axis refers to midpoint of the survey period.

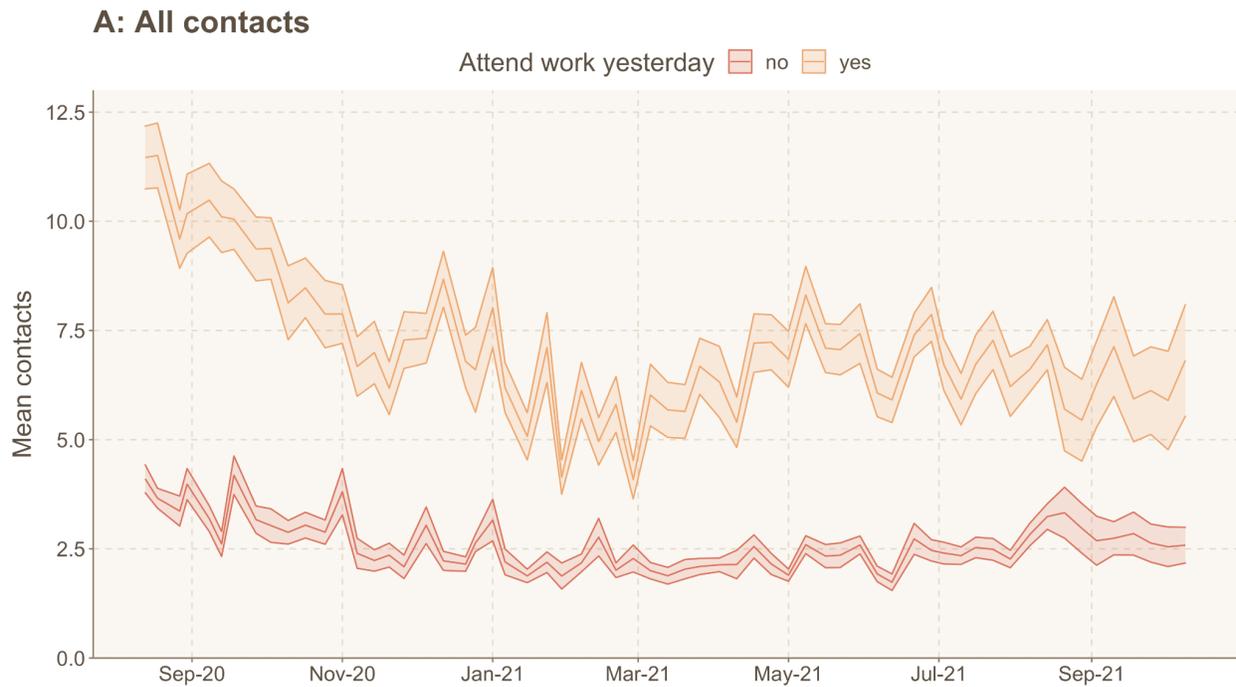


Figure 10: Mean contacts in the UK since August 2020 for individuals attending or not attending work on the day of the survey for people that are employed and their work is open. 95% Uncertainty interval calculated assuming a standard normal mean of two times the standard error of the mean. Contacts 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.



Figure 11: Proportion of adults A: With their work place open B: attending work in person. Date on x axis refers to 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 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.

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.

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.

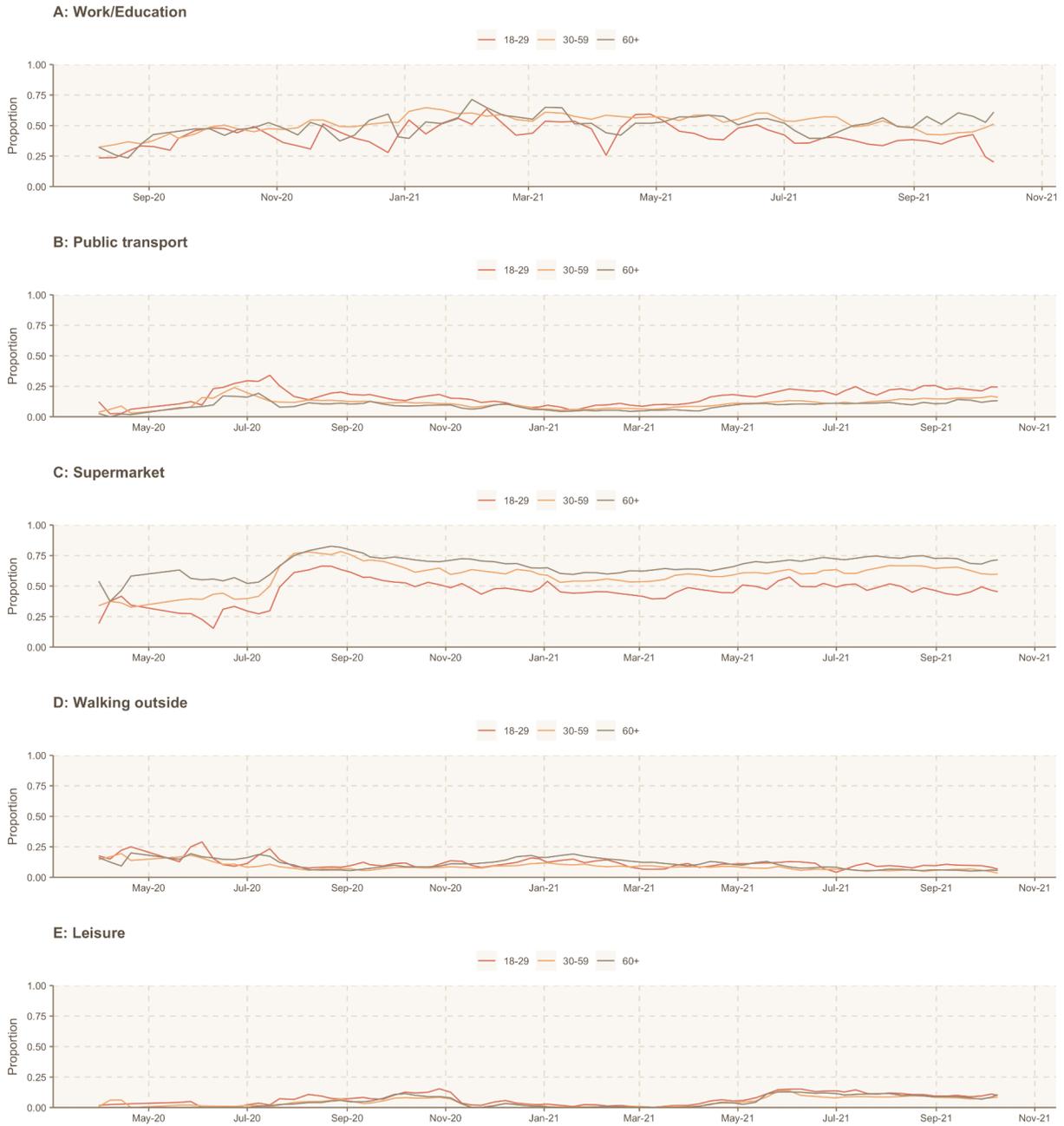


Figure S2: Proportion of adults wearing a face mask over time in different settings for those with at least one contact outside of the home, dotted line = all participants). Date on x axis refers to midpoint of the survey period.

