Social contacts in the UK from the CoMix social contact survey
Report for survey week 92

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Summary

- The mean number of contacts reported by adults has stayed mostly constant during December at just below 3 contacts per day after reducing slightly prior to December.
- Contacts for 18-29 years old were higher in the most recent week and this appears to be due to an increase in other (mostly social) contacts.
- Mean contact rates in adults aged 30-59 have dropped mostly driven by reductions in work and/or educational contacts. This was most evident in the 40-59 age group.
- There has been an increase in the percentage of children aged 5-11 reported to be in isolation to 12% compared to 6% in the 1st week of December.
- The increase in percentages in isolation is also seen in those aged 12-17 and 18-59 but these are not as large, and those age 60+ decreased compared to early December.
- Wearing face coverings (masks) remains high after increasing from early December at above 80%, though we see some decrease amongst 18-29 years old in the most recent week.

Main

Mean reported contacts for adults during the week 22nd to 28 December was reported as 2.7 per day (95% CI 2.5 to 2.9) (Figure 1). Participants aged 40-49 reported the lowest mean number of contacts (2.1 per day; 95% CI 1.8 to 2.6), which was driven by a drop in work and educational contacts (Figure 2 and 3). 18 to 29 years old participants reported the highest contact rates (3.7 per day; 95% CI 2.9 to 4.6) which appears to be due to an increase in other (mostly social) contacts (Figures 2 and 3). Contacts remain quite consistent across the regions of England, with Scotland (1.9; 95%CI 1.5 to 2.5) slightly lower than England but consistent with previous weeks (Figure S1). Reported contacts in Wales were higher than seen in previous weeks (3.6; 95% CI 2.1 to 5.7) though there is quite large uncertainty and smaller numbers of participants for this estimate (Figure S1). While there is some variation in the mean number of contacts in Northern Ireland this is likely due to low participation in the region. The lowest reported mean number of contacts by region in England was 2.3 (95% CI 1.9 to 2.8) in North West and the highest was 3.2 (95% CI 2.4 to 4.2) in the South West.

The fraction of participants in isolation/quarantine has increased in the 5 to 11 years olds though it continues to fluctuate across all age group with current percentages as follows; 12.0% of children aged 5 to 11, 6.3% of children aged 12 to 17, 8.2% of adults aged 18 to 59, and 1.6% of adults over 60 (Figure 4). The percentage in isolation/quarantine varies by region and is much for 5-11 years old in London at 27% for the past two weeks, though there are smaller number when breaking down by region and age group

Reported facemask use increased from the start of December in England, and remains high across all nations (Figure 5). Although there was an apparent drop for Wales in the latest week, this is consistent with patterns in the data seen over the last few months and is probably due to small sample sizes. In England, there is some variation in reported usage of face-coverings by age with a drop this week of reported use amongst 18-29 years olds (Figure 6).

Those who attended work have continued to report consistently higher contacts compared to those whose work is open, but they did not attend, though the difference between the mean number of contacts reported is decreasing (Figure 7).
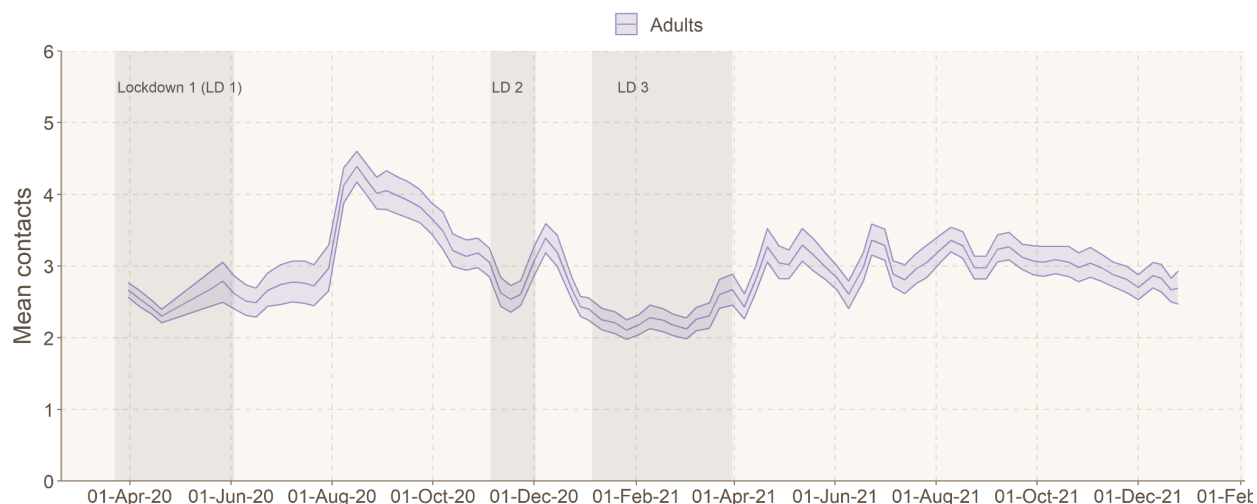
Figure 1: Mean contacts in the UK since the 23rd March 2020 for adults. Uncertainty calculated using bootstrapping. Contacts truncated to 50 contacts per participant. Observations are smoothed over two weeks to account for panel effects. Date on x axis refers to the midpoint of the survey period.
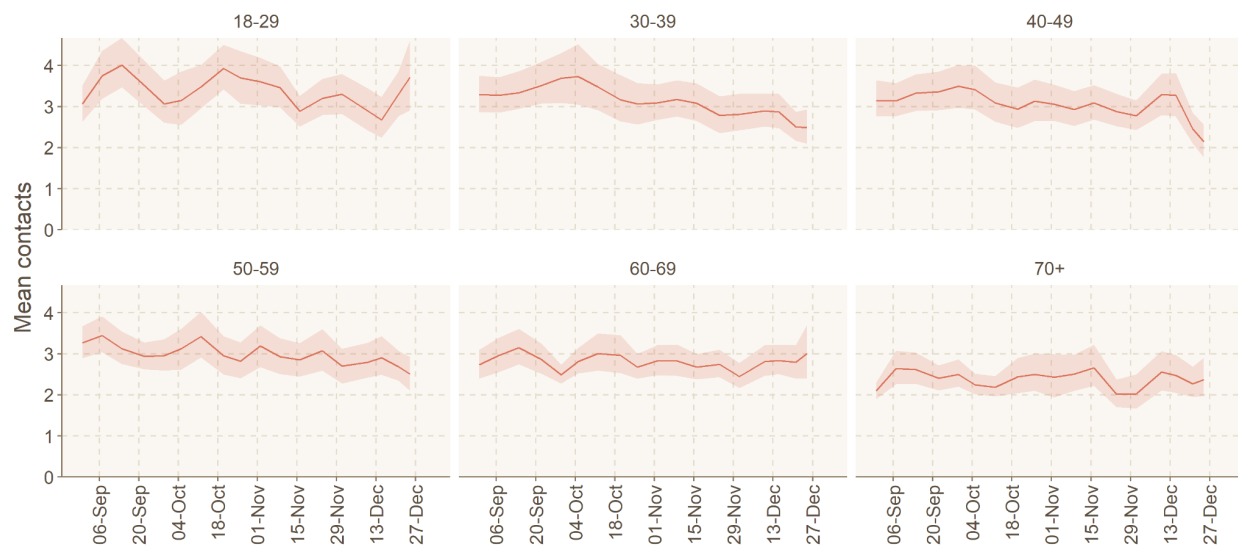

Figure 2: Mean contacts in all settings by age-group for adults over time. Uncertainty calculated using bootstrapping. Contacts truncated to 50 contacts per participant. Observations are smoothed over two weeks to account for panel effects. Date on x axis refers to the midpoint of the survey period.
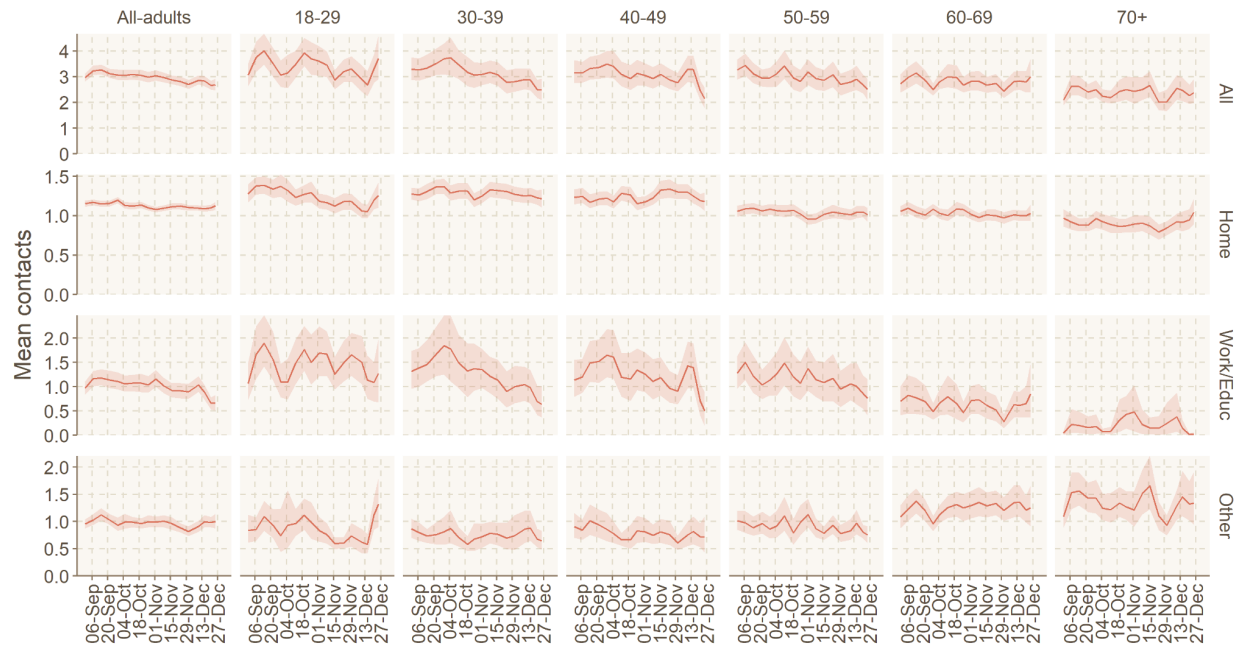
Figure 3: Mean contacts by settings and by age-group over time. Uncertainty calculated using bootstrapping. Contacts truncated to 50 contacts per participant. Observations are smoothed over two weeks to account for panel effects. Date on x axis refers to the midpoint of the survey period.
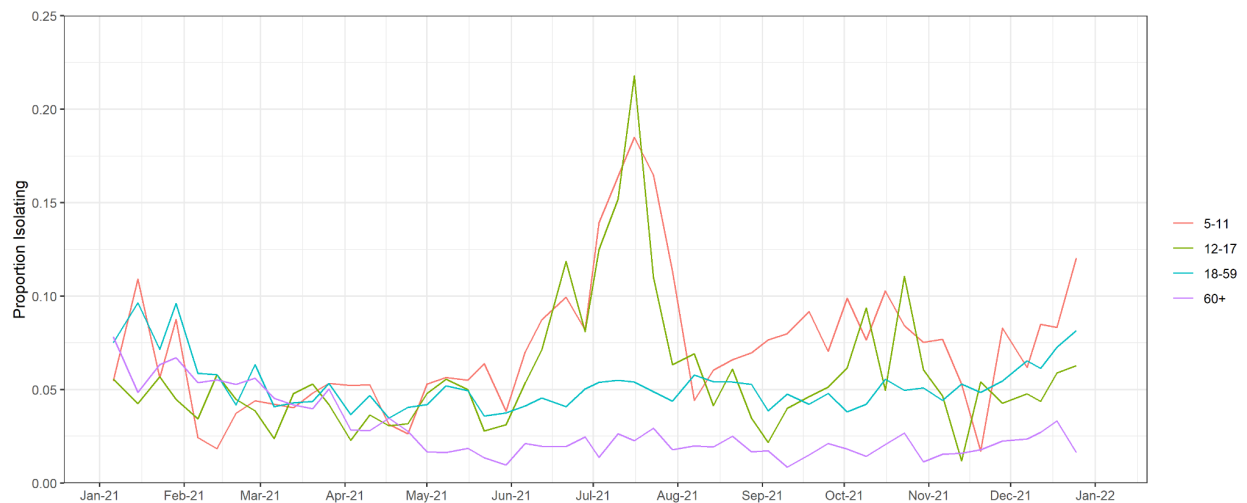

Figure 4: Proportion of adults or children in isolation or quarantine. Observations are smoothed over two weeks to account for panel effects apart from the most recent week of data. Date on x axis refers to the midpoint of the survey period.
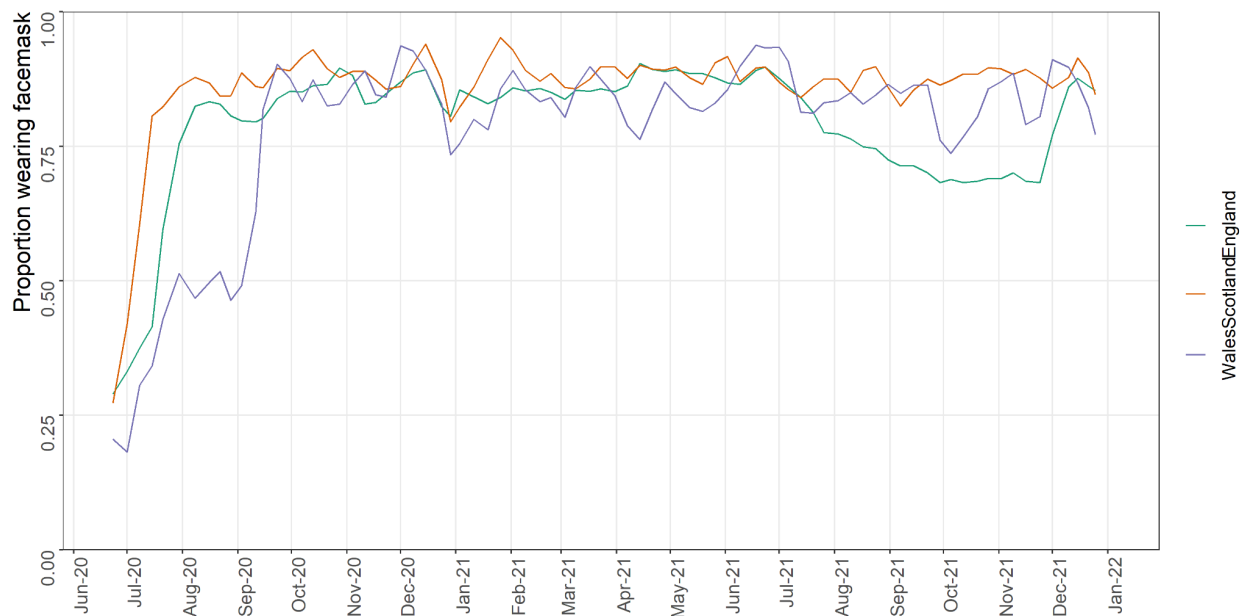
Figure 5: Proportion of adults wearing a face mask over time by country (with at least one contact outside of the home). Observations are smoothed over two weeks to account for panel effects apart from the most recent week of data. Date on x axis refers to midpoint of the survey period.
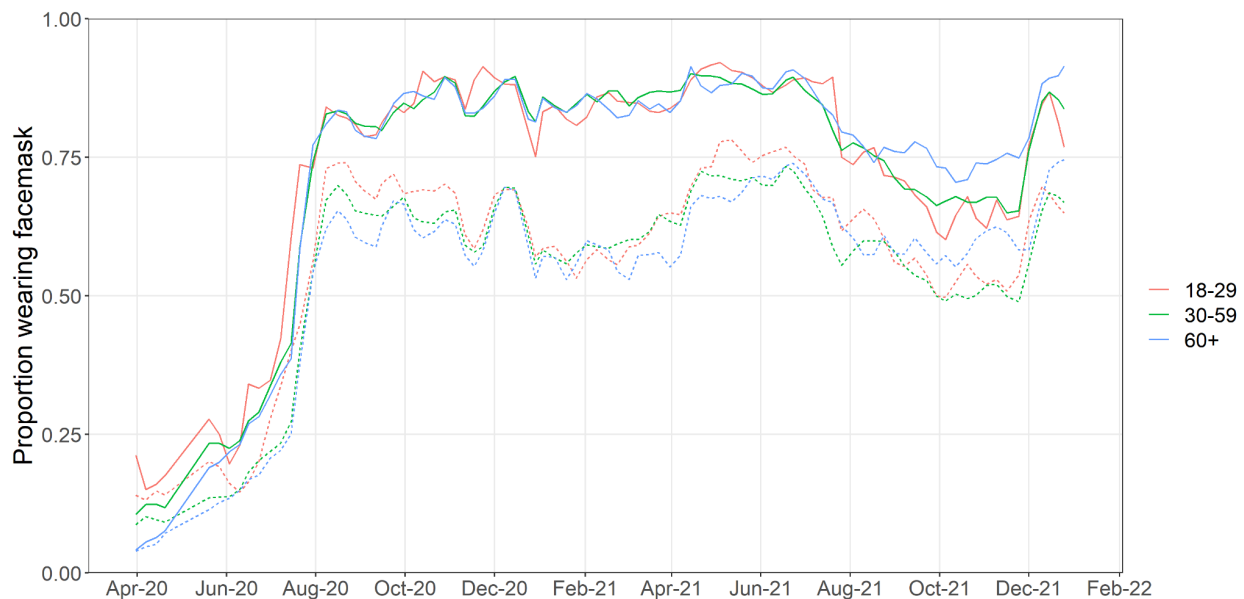

Figure 6: Proportion of adults wearing a face mask over time in England (Solid line = with at least one contact outside of the home, dotted line = all participants). Date on x axis refers to midpoint of the survey period.
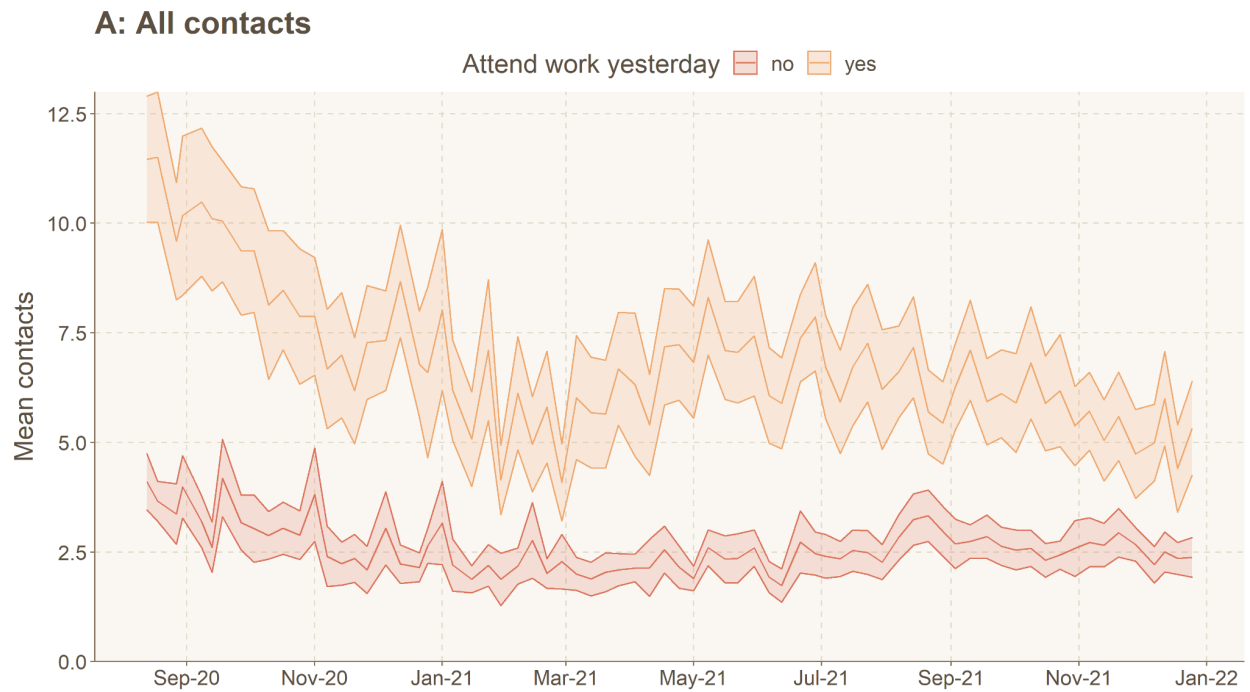
A: All contacts

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.
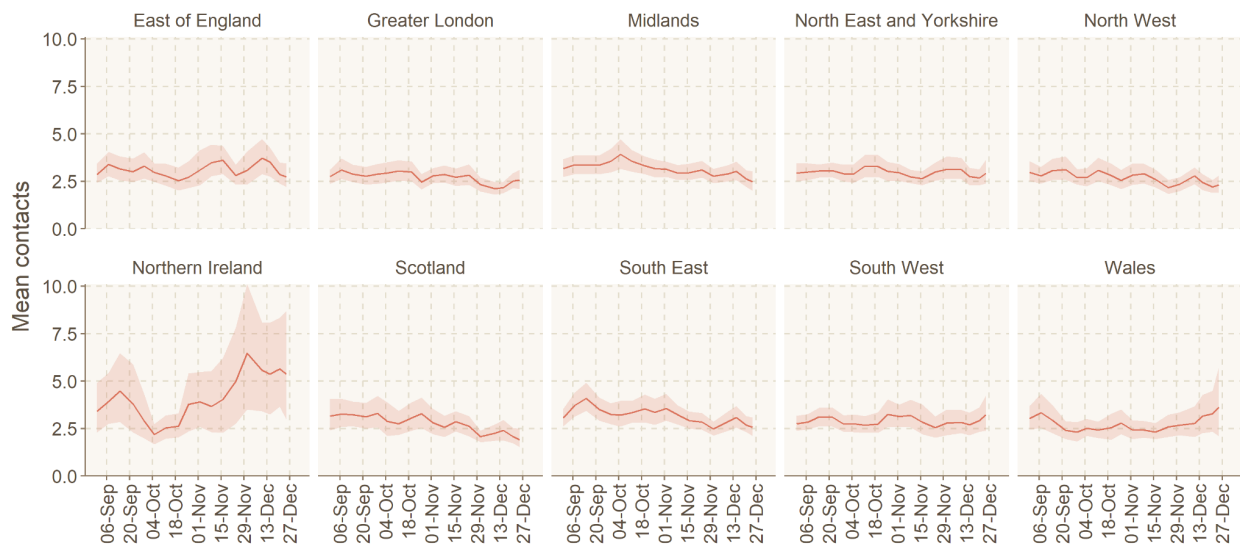
Additional graphs and tables

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.