Social contacts in the UK from the CoMix social contact survey
Report for survey week 100

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NOTE: The CoMix study will stop in the first week of March. This is the penultimate routine report, the final routine report is anticipated for the 8th of March.

Summary

- Data collection coincided with the half-term school holidays for many (though not all) areas. There appears to have been a fall in mean adult recorded contacts, coincident with this half-term break.
- Overall, reported contacts from children is also reduced, but this is difficult to interpret given that not all schools were closed at the time of the survey, as Spring half term break occurs in different weeks in different areas of the UK.
- There are still high levels of individuals reporting being in isolation or quarantine, though this is falling for primary-school aged children, in particular.
- The large drop in the use of face-masks In England, that occurred when Plan B restrictions were lifted, may be stabilising at levels seen before Plan B measures were put in place. There is no evidence of such a fall in use in Scotland, though there may be some fall in use of masks in Wales.
- Adults who attended their workplace continue to report approximately twice the mean number of contacts than employed adults who did not attend their workplace.

Main

There appears to have been a small reduction in mean reported contacts for adults over the survey weeks. This is coincident with the half-term holiday period (Figures 1-3). Contacts remain quite consistent across the regions of England and different nations of the UK, though trends are difficult to discern for Northern Ireland due to a small sample size (Figure S1). Recorded contacts for school-aged children has fallen, but this is complicated by some being on their half-term break (Figure 4). The Spring half term breaks occur at different times in different regions in the UK. The mean contacts for children during Spring half term break represent an average of some children still in school and some not at school, it is therefore not directly comparable to other school holiday periods where the break are more aligned. The percentage of children aged 5 to 11 who are in isolation has fallen rapidly over recent weeks, but remains around 5% (Figure 5). Around 7-8% of older children and adults (<60 years) and around 2% of the elderly (>60 years) report isolating, figures that have remained fairly stable over recent weeks (Figure 5).

The fall in the reported use of face-coverings in English adults, since the lifting of restrictions appears to be stabilising at roughly the level observed before Plan B measures came in place in December (Figure 6). Facemask restrictions remain in Scotland and Wales and usage has remained high in both these countries, though may be falling somewhat in Wales (Figure 6). The drop in facemask use in England has been seen in all adult ages, with those age 60+ falling the least and those in 30-59 falling the most (Figure 7).

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 8). This difference may have narrowed somewhat over the last week, which might be linked to the half-term vacation.
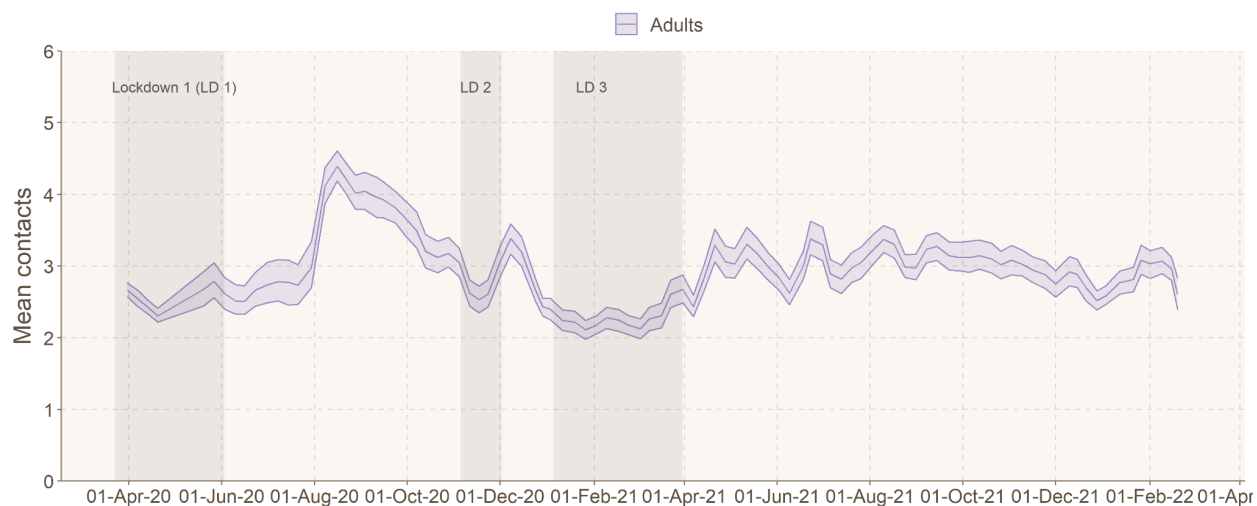
Figure 1: Mean contacts in the UK since the 23rd March 2020 for adults. Uncertainty calculated using bootstrapping. Contacts truncated to 50 contacts per participant. Observations are smoothed over two weeks to account for panel effects. Date on x axis refers to the midpoint of the survey period.
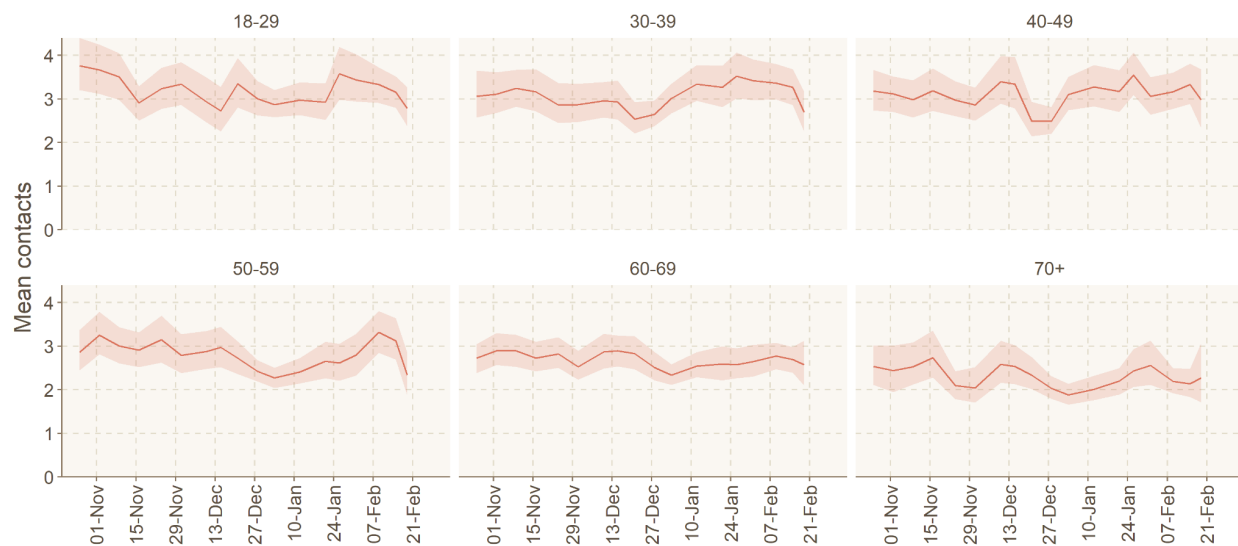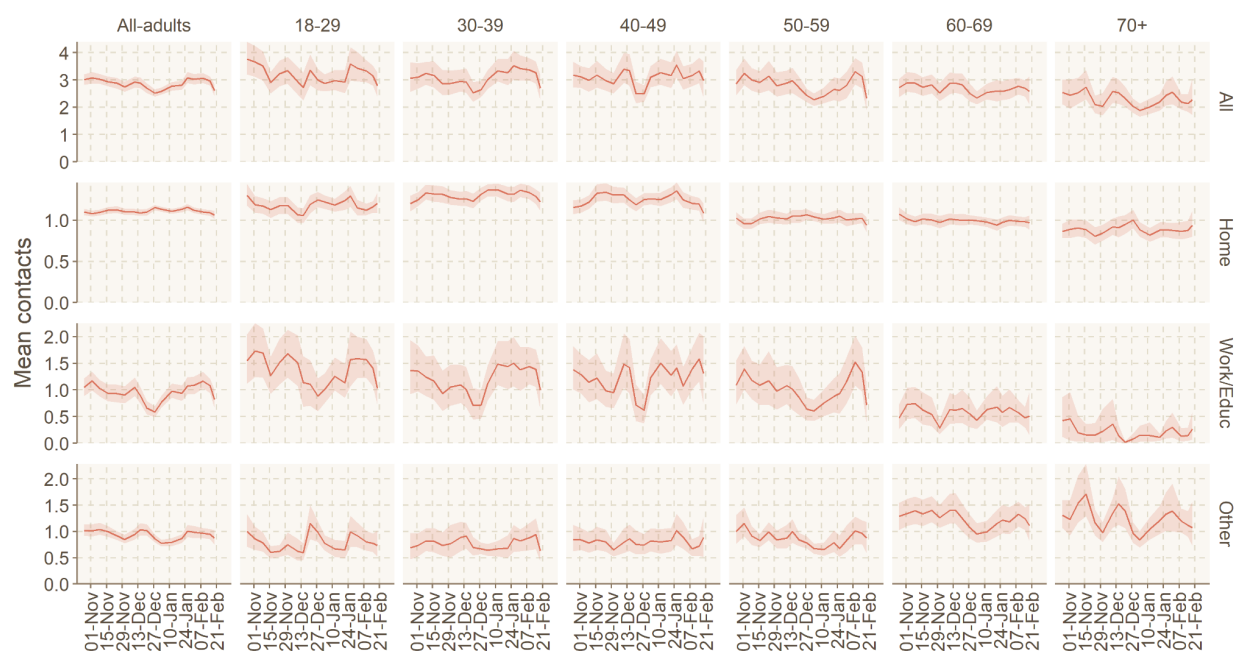

Figure 2: Mean contacts in all settings by age-group for adults over time. Uncertainty calculated using bootstrapping. Contacts truncated to 50 contacts per participant. Observations are smoothed over two weeks to account for panel effects. Date on x axis refers to the midpoint of the survey period.

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.
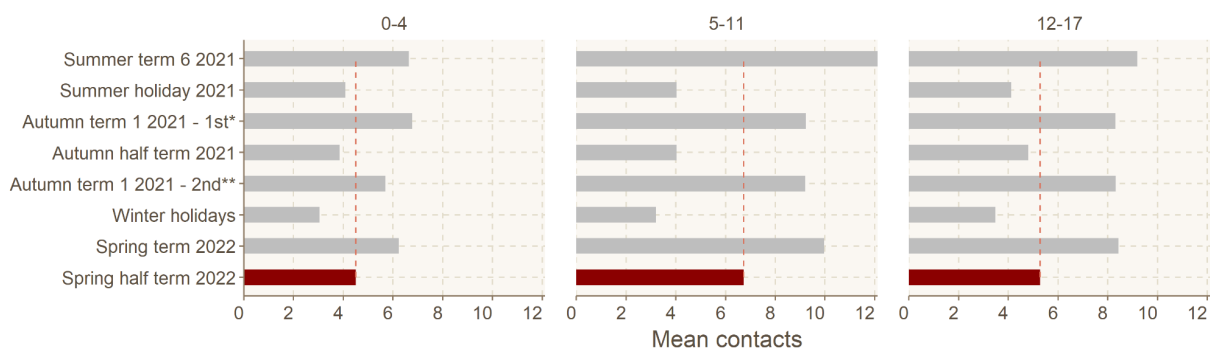

Figure 4: Comparison of mean contacts from the autumn half term to previous school term and holidays periods by age for children. Current period highlighted in red with dashed line for easier comparison to previous periods. * Autumn term 1 2021 - 1st half Includes data from 1st September to 28th September 2021 inclusive. ** Autumn term 1 2021 - 2nd half includes data from 3 November to 21 December 2021 inclusive. Spring term includes data from 6th January 2022 to 16th of February 2022 inclusive.
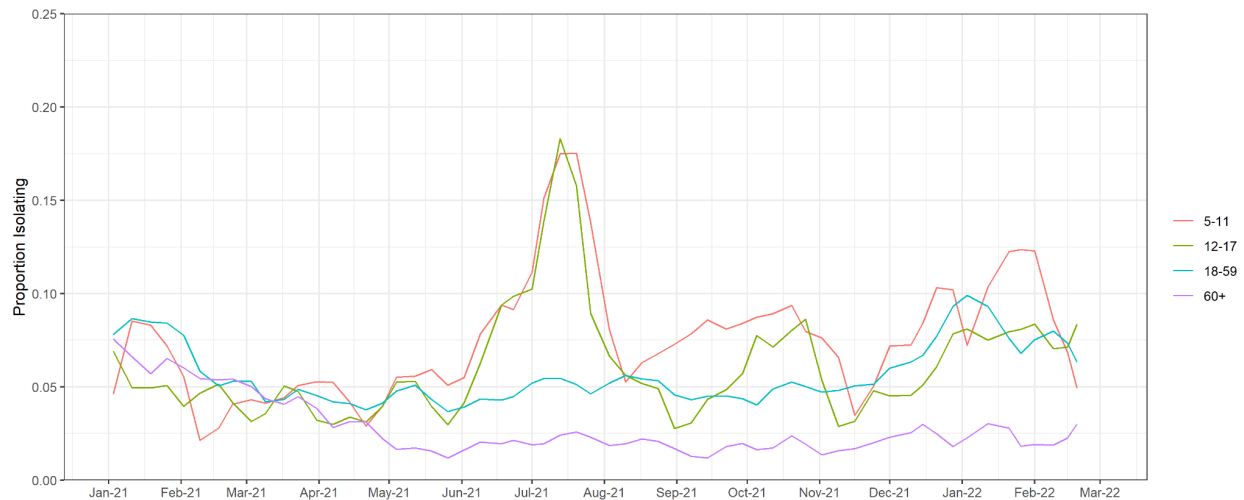
Figure 5: Proportion of adults or children in isolation or quarantine by age-group.
Observations are smoothed over two weeks to account for panel effects apart from the most
recent week of data. Date on x axis refers to the midpoint of the survey period and may be
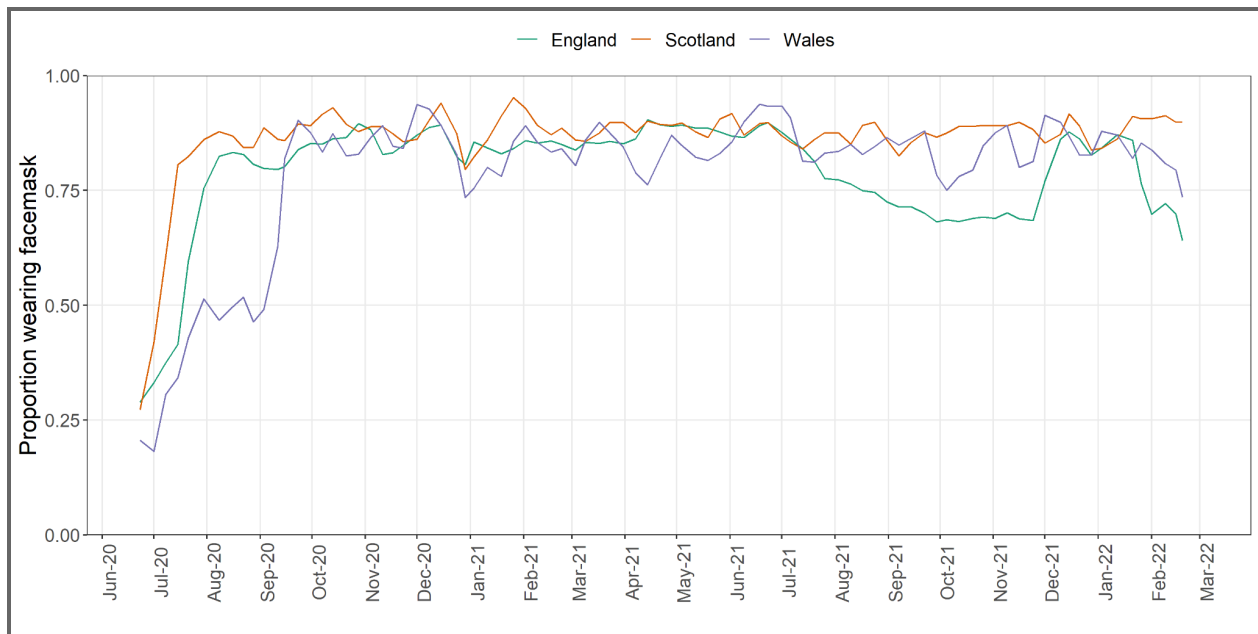affected by panel effects.

**Figure 6: 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
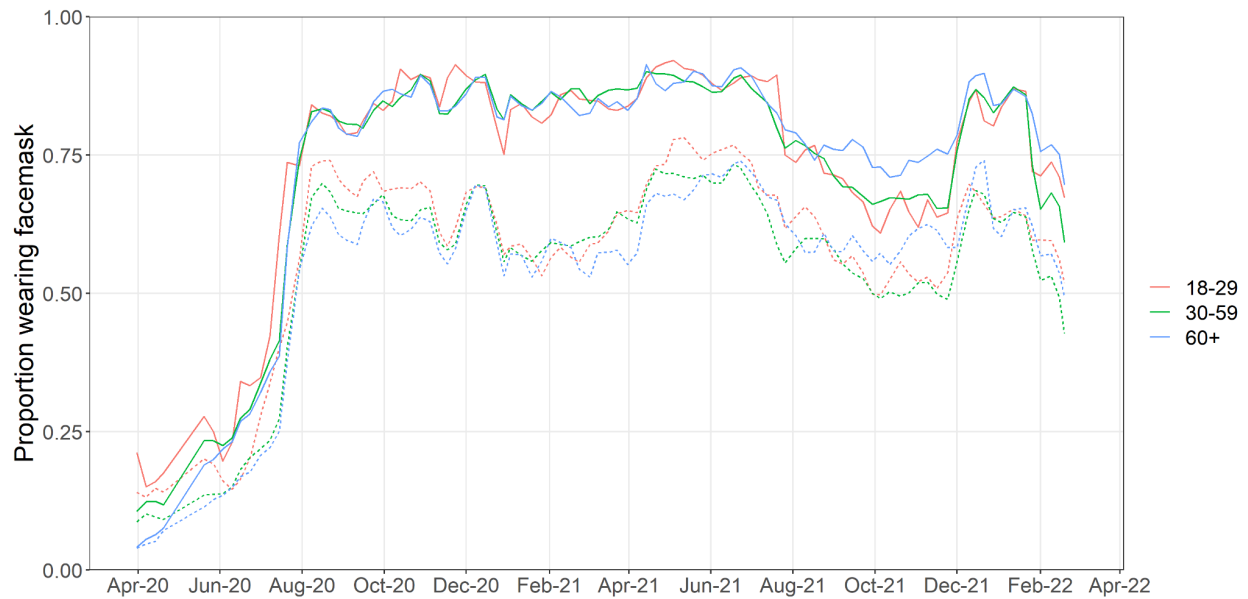survey period.

Figure 7: Proportion of adults wearing a face mask over time in England by age-group (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.
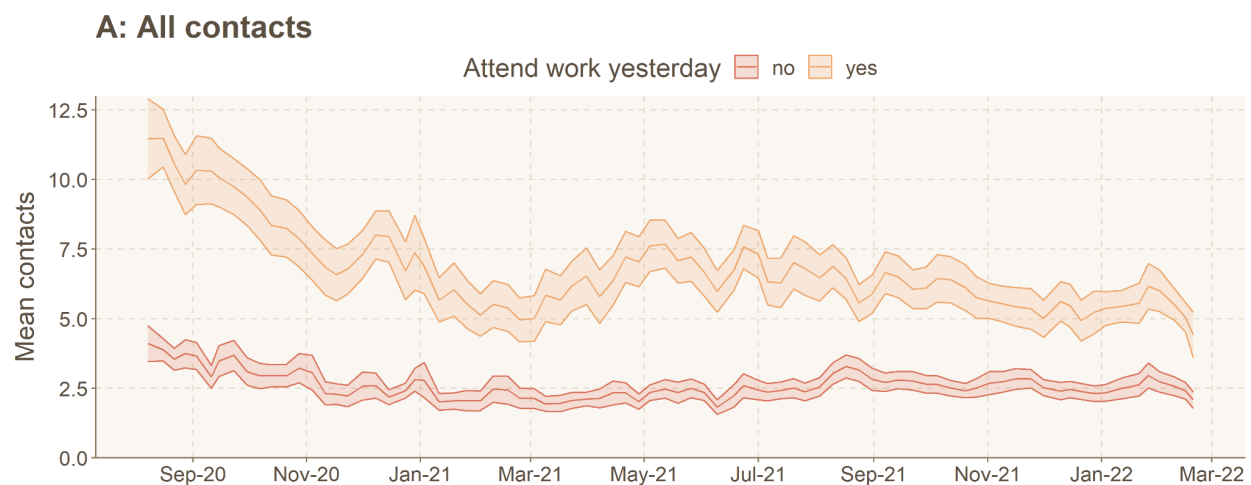

Figure 8: Mean contacts in the UK since August 2020 for individuals attending or not attending work on the day of the survey for people that are employed and their work is open. *95%* uncertainty interval calculated assuming a standard normal mean of two times the standard error of the mean. Contacts 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. The final observation includes data for the most recent survey wave only.

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.

3. Coronavirus (COVID-19) Latest Insights - Office for National Statistics. 2022. Office for National Statistics. https://www.ons.gov.uk
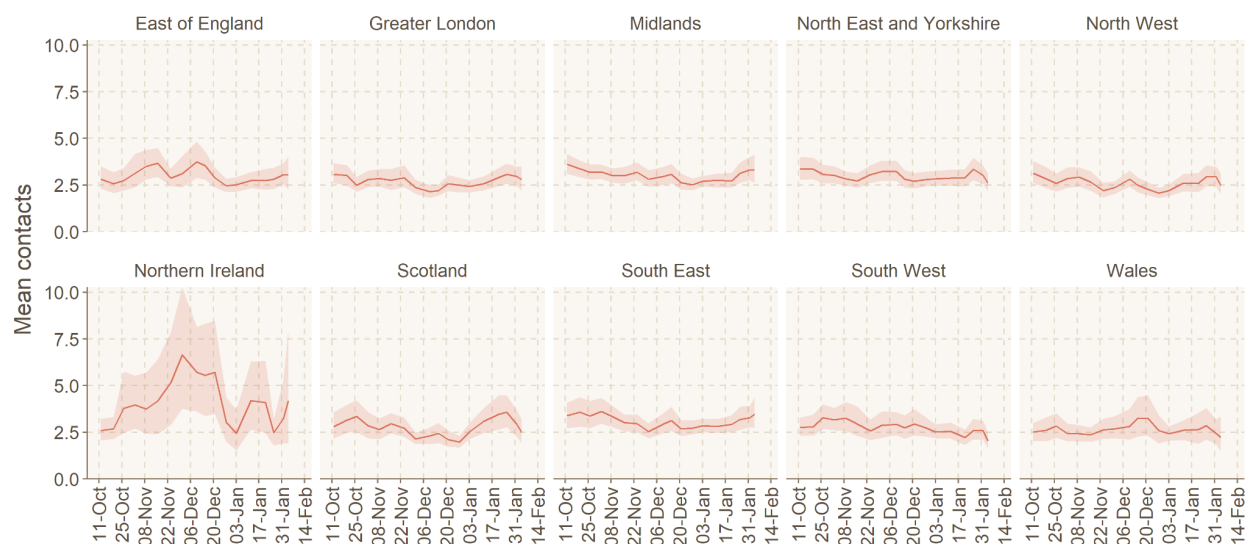
Additional graphs and tables

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.