Social contacts in the UK from the CoMix social contact survey
Report for survey week 67

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Report for SPI-M-O and SAGE, 13 July 2021
Data up to 6 July 2021

Summary

- There has been a gradual increase in mean contacts recorded for the 70+ age group over recent weeks.
- Contacts amongst younger adults (18-69 years) have remained at roughly similar levels over the last couple of months.
- The data issues with household contacts are still present for previous data and the assumption of household size is still used for household contacts at home, this has the greatest effect on the 18-29 year old category.
- Contacts in children are slightly lower than those seen prior to half term, mostly in the 12-17 year old category though these are proxy reports from parents.

Main

In the previous reports (Survey week 62, 63, and 64) a reduction in contacts amongst adults was reported. This reduction was in most part due to a data error with participants not being asked about contact with household members for those weeks. This did not affect contacts that were not household members. We are conducting an additional survey to recover information about the household members. However, in the interest of providing timely information we have produced this report under the assumption that participants that report no household contacts actually had contact with all household members. This is a plausible assumption, with over 80% of participants reporting contact with all their household members in previous rounds of the survey. This has the greatest effect on the 18-29 year old category.

Overall, mean contacts have remained roughly steady for adults since Mid May (Figure 1). The only adult age group that has reported a gradual increase in mean contacts over recent weeks is the 70+ age group (Figure 2). Levels of contact for school-aged children (5-17) appear to have fallen slightly over the last few weeks (Figure 3), which may partly reflect the national nature of this dataset, with Scottish children being on their summer holidays but perhaps also absenteeism and exclusion due to current high levels of prevalence. These changes in mean levels of contact are, however, small and overall reported contact rates for children are currently similar to previous periods when schools have been open (Figure 4).

Levels of contact for working aged adults are currently below the peak levels recorded last summer. However, the elderly are now reporting the highest levels of contact yet observed (Figure 5).

There are no obvious differences in patterns of contact reported by English regions or nation within the UK (Figure 6).

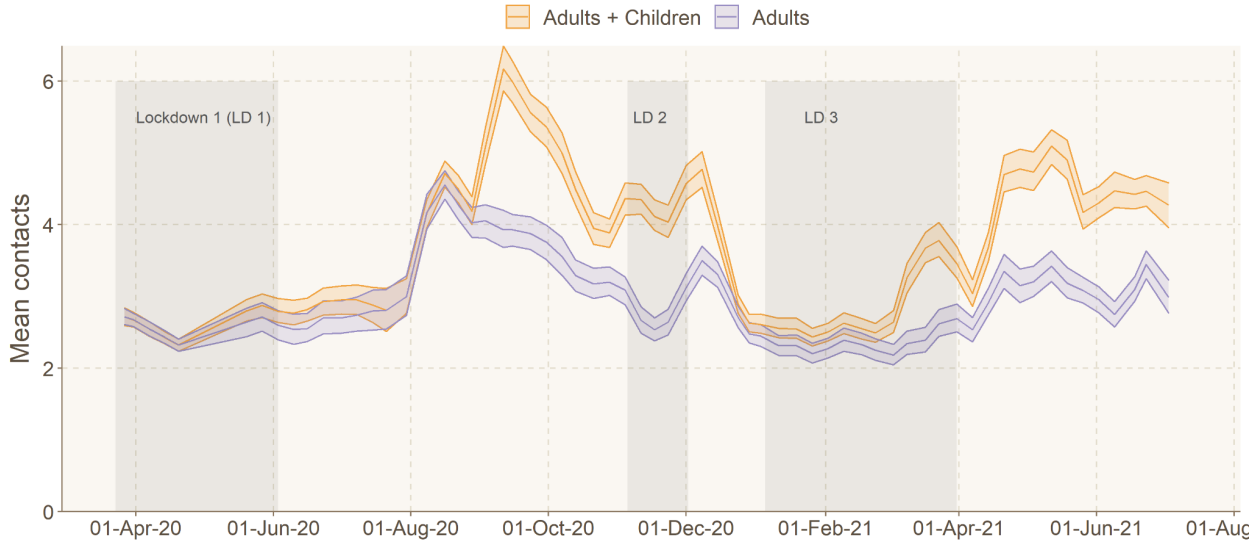

Figure 1: Mean contacts in the UK since the 23rd March 2020 for adults and children (all participants) and adults only (18 year +). Uncertainty calculated using bootstrapping. Contacts truncated to 50 contacts per participant. Observations are smoothed over two weeks to account for panel effects. Date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

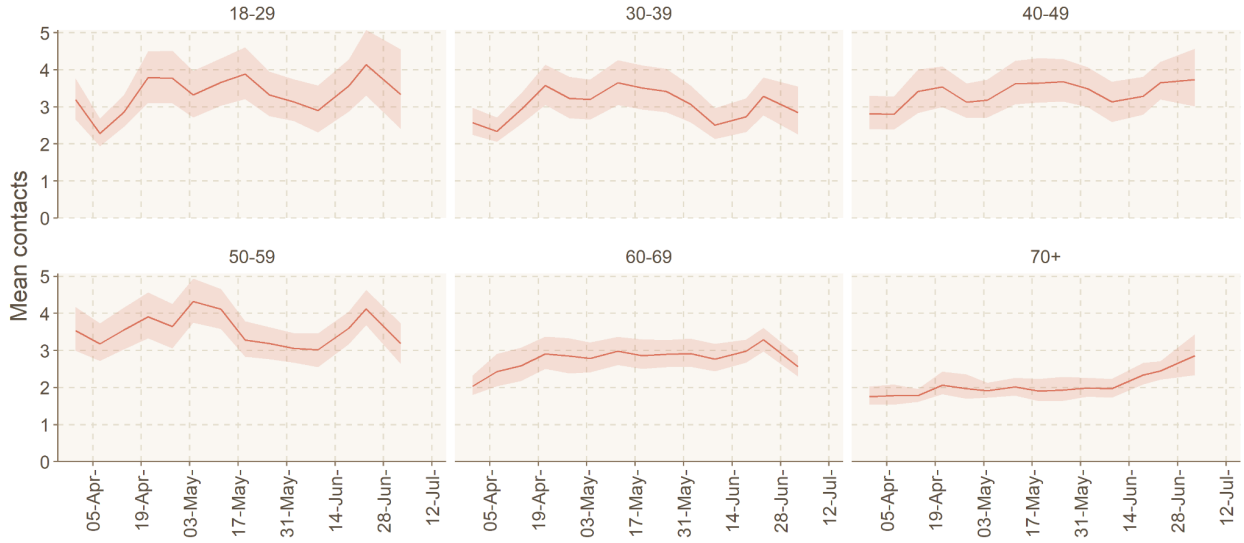

Figure 2: Mean contacts in all settings by age-group for adults over time. Uncertainty calculated using bootstrapping. Contacts truncated to 50 contacts per participant. Observations are smoothed over two weeks to account for panel effects. Date on x axis refers to the midpoint of the survey period.

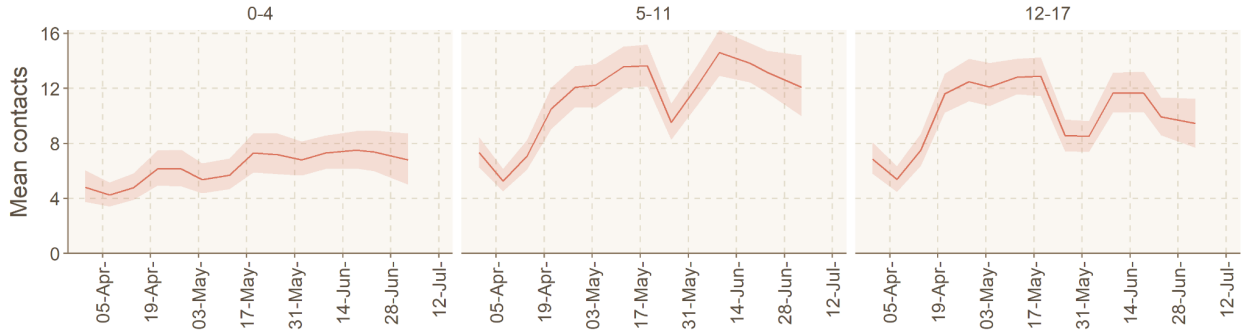

Figure 3: Mean contacts in all settings by age-group for children over time. Uncertainty calculated using bootstrapping. Contacts truncated to 50 contacts per participant. Observations are smoothed over two weeks to account for panel effects. Date on x axis refers to the midpoint of the survey period.

Table 1. Time periods based on different level of lockdowns and restrictions in England over the previous year

Period	Date	Period	Date
1. Lockdown 1 (LD 1)	*24 Mar 2020 - 03 Jun 2020*	*6. Lockdown 2 easing*	*03 Dec 2020 - 19 Dec 2020*
2. Lockdown 1 easing	*04 Jun 2020 - 29 Jul 2020*	*7. Lockdown 3*	*05 Jan 2021 - 07 Mar 2021*
3. Relaxed restrictions	*30 Jul 2020 - 03 Sep 2020*	*8. Lockdown 3 + schools*	*08 Mar 2021 - 31 Mar 2021*
4. School reopening	*04 Sep 2020 - 24 Oct 2020*	*9. Step 2 + schools*	*16 Apr 2021 - 16 May 2021*
5. Lockdown 2	*05 Nov 2020 - 02 Dec 2020*	*10. 30 June onwards*	*30 June 2021 - 6 July 2021*

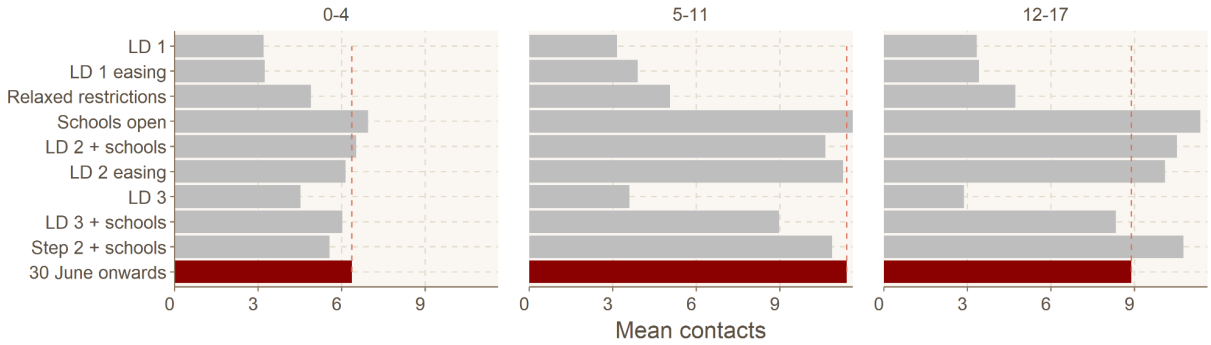

Figure 4: Comparison of mean weekday contacts from the 30 June to 6 July, (excludes half term) to nine previous time periods of different restrictions by age for children. Current period highlighted in red with dashed line for easier comparison to previous periods.

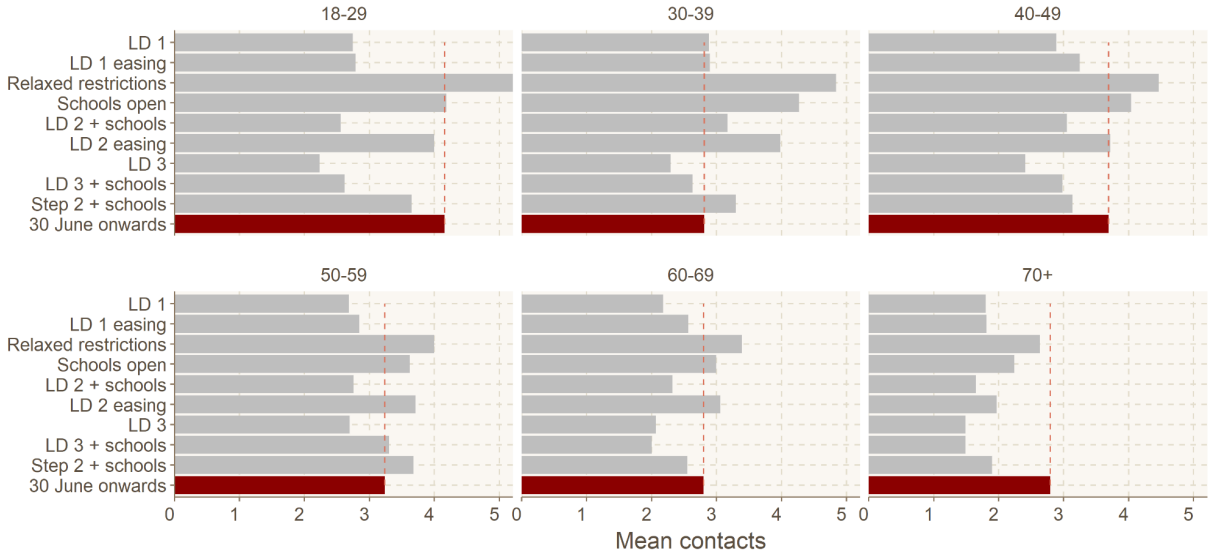

Figure 5: Comparison of mean weekday contacts from the 30 June to 6 July to nine previous time periods of different restrictions by age for adults. Current period highlighted in red with dashed line for easier comparison to previous periods.

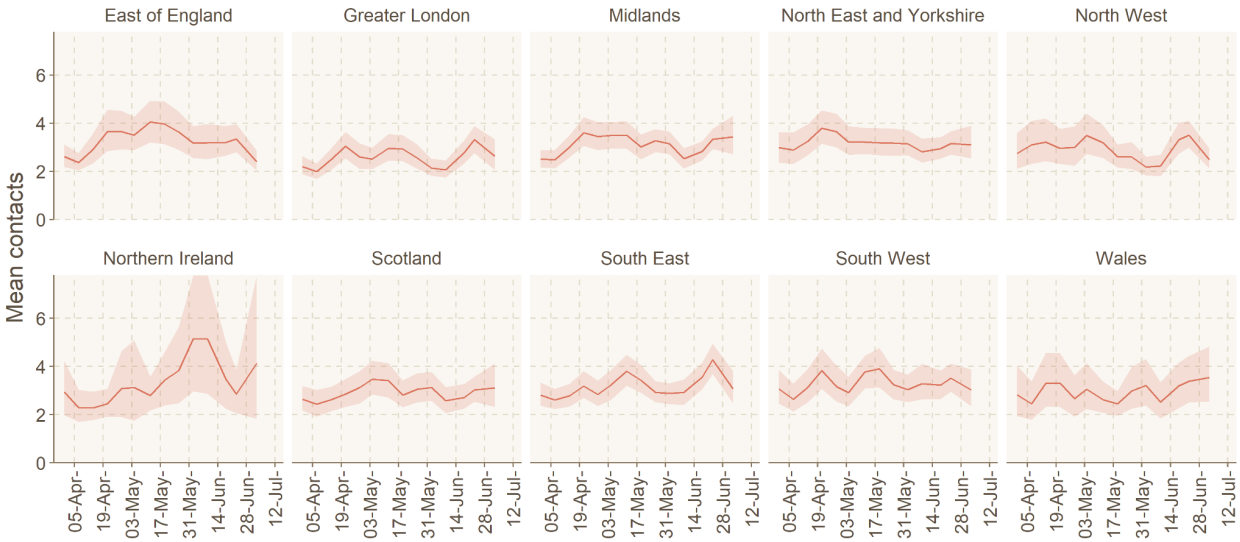

Figure 6: Mean contacts in all settings in adults for UK nations and English regions over time. Uncertainty calculated using bootstrapping. Contacts truncated to 50 contacts per participant. Observations are smoothed over two weeks to account for panel effects. Date on x axis refers to the midpoint of the survey period.

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 [2]. The contact survey is based on the POLYMOD contact survey [1].

Note that for the past three reports, the contacts for household members had been decreasing; this has turned out to be a data issue with participants not being asked about this in the survey. For this week's analysis, we replaced the number of household contacts with the reported household size minus one for individuals who reported zero household contacts.

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.

We compared the mean reported contacts for the most recent data of the survey to the mean contacts reported during nine time periods over the previous year which represent different levels of restrictions.

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References

1. 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.

2. 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.