Social contacts in the UK from the CoMix social contact survey
Report for survey week 63

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Report for SPI-M-O and SAGE, 15 June 2021
Data up to 10 June 2021

Summary

- Mean contact rates reported for school-aged (5-17 years) children have increased again, with the return to school after the half term break.
- Mean reported daily contacts for working aged adults (18-59) appear to have declined slightly over the last two weeks, though contacts for older adults (60+) appear to have held steady.

Main

Overall mean rates of recorded contacts (including adults and children) remain similar to those levels recorded in the summer and early autumn of 2020 (Figure 1). However, this overall figure masks differences by age groups. Mean rates of contact reported for school-aged children (5-17 years) have increased again, after the half-term holidays (Figure 2). However, mean adult contacts appear to have declined somewhat over recent weeks (Figure 3). In last week's report this was attributed to a possible half-term effect, though this does not seem to be the case as mean contacts seem to have fallen slightly again. This decline appears to have occurred in working-aged adults - with mean contact rates for older adults (60+) holding steady (Figure 3). This decline in mean reported contacts appears to be associated with a fall in work-related contacts (Figure S1), although there has also been a steady decline in reported contacts in the home setting. Despite slight differences in trends in contacts between working aged and older individuals, there remains an age-gradient in reported contacts with the 60-69 year olds and 70+ year olds reporting lower contacts overall than younger adults (Figure 3).

Figures 4 and 5 compare the mean rates of contact reported by children and adults during Step 3 of the Roadmap, excluding the week of half-term, with other periods during the pandemic (see table 1 for details). Reported rates of childhood contacts are equivalent or higher than any other period during the last year (Figure 4). However, rates of adult contact appear to be lower now than during the summer 2020 peak (Figure 5), and more comparable to rates observed in the autumn, either side of the second lockdown.

Discerning clear trends in regional contact patterns is difficult. Reported contacts for participants in Northern Ireland do appear to be increasing, though the sample size is small and so patterns are very uncertain (Figure 6).

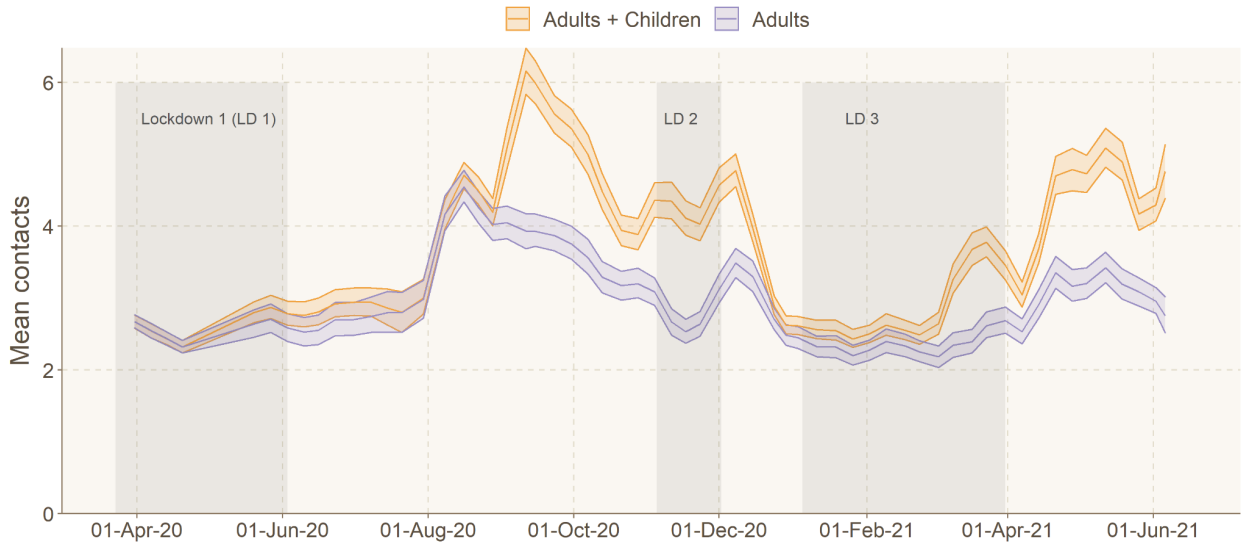

Figure 1: Mean contacts in the UK since the 23rd March 2020 for adults and children (all

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.

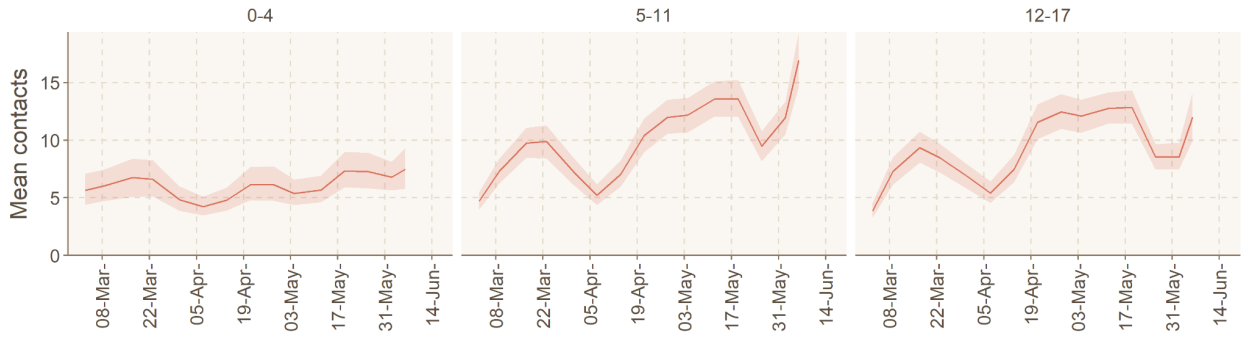

Figure 2: Mean contacts in all settings by age-group for children over time. Uncertainty calculated using bootstrapping. Contacts truncated to 50 contacts per participant. Observations are smoothed over two weeks to account for panel effects. Date on x axis refers to the midpoint of the survey period.

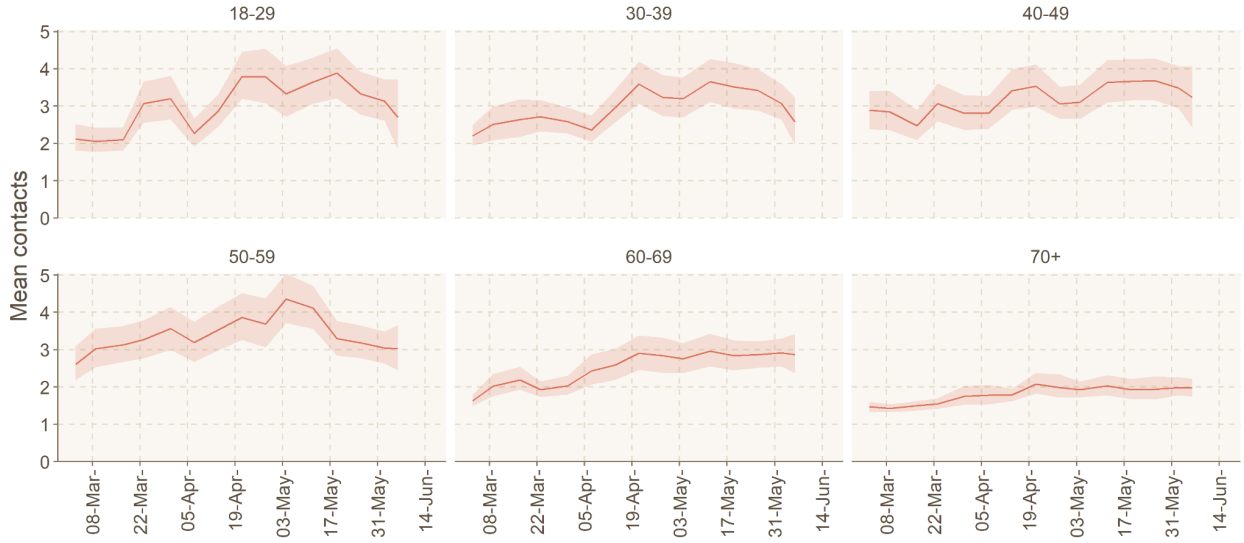

Figure 3: Mean contacts in all settings by age-group for adults over time. Uncertainty calculated using bootstrapping. Contacts truncated to 50 contacts per participant. Observations are smoothed over two weeks to account for panel effects. Date on x axis refers to the midpoint of the survey period.

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. Step 3 + schools*	*17 May 2021 - 10 June 2021 Excludes 31 May to 4 June for half term.*

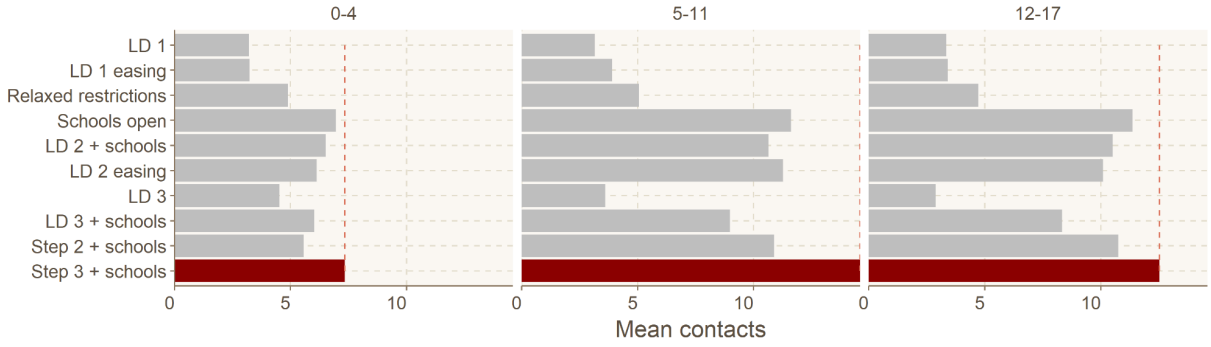

Figure 4: Comparison of mean weekday contacts from the 17 of May to 10 June, (excludes half term) to nine previous time periods of different restrictions by age for children. Current period highlighted in red with dashed line for easier comparison to previous periods.

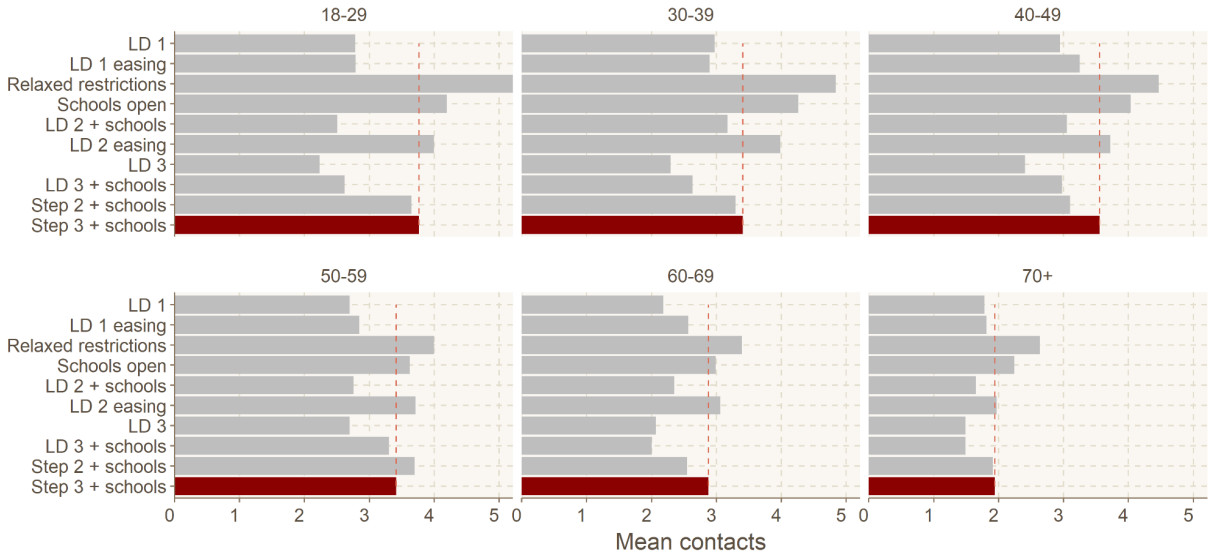

Figure 5: Comparison of mean weekday contacts from the 17 of May to 10 June, (excludes half term) to nine previous time periods of different restrictions by age for adults. Current period highlighted in red with dashed line for easier comparison to previous periods.

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].

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.

Funding
Medical Research Council (MC_PC_19065), the European Commission (EpiPose 101003688) and the NIHR (CV220-088 - COMIX) and HPRU in Modelling & Health Economics (NIHR200908).

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.

Appendix

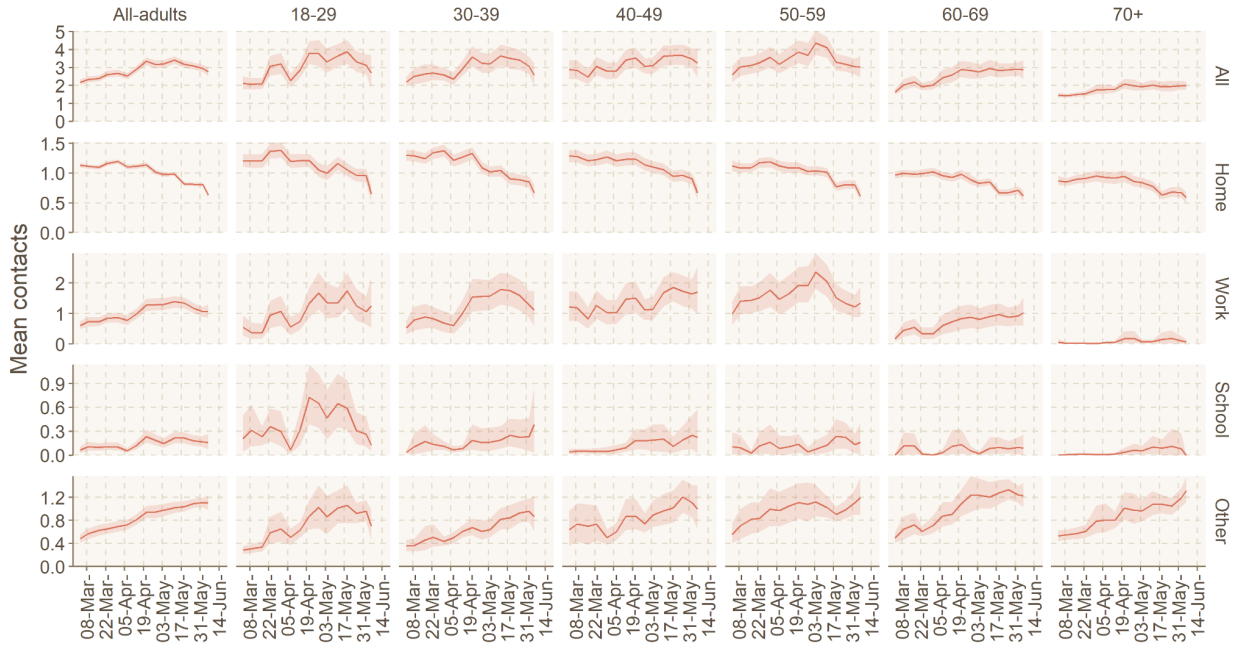

Figure S1: Setting-specific mean contacts by age-group for adults over time. Uncertainty calculated using bootstrapping. Contacts truncated to 50 contacts per participant. Observations are smoothed over two weeks to account for panel effects.. Date on x axis refers to the midpoint of the survey period.

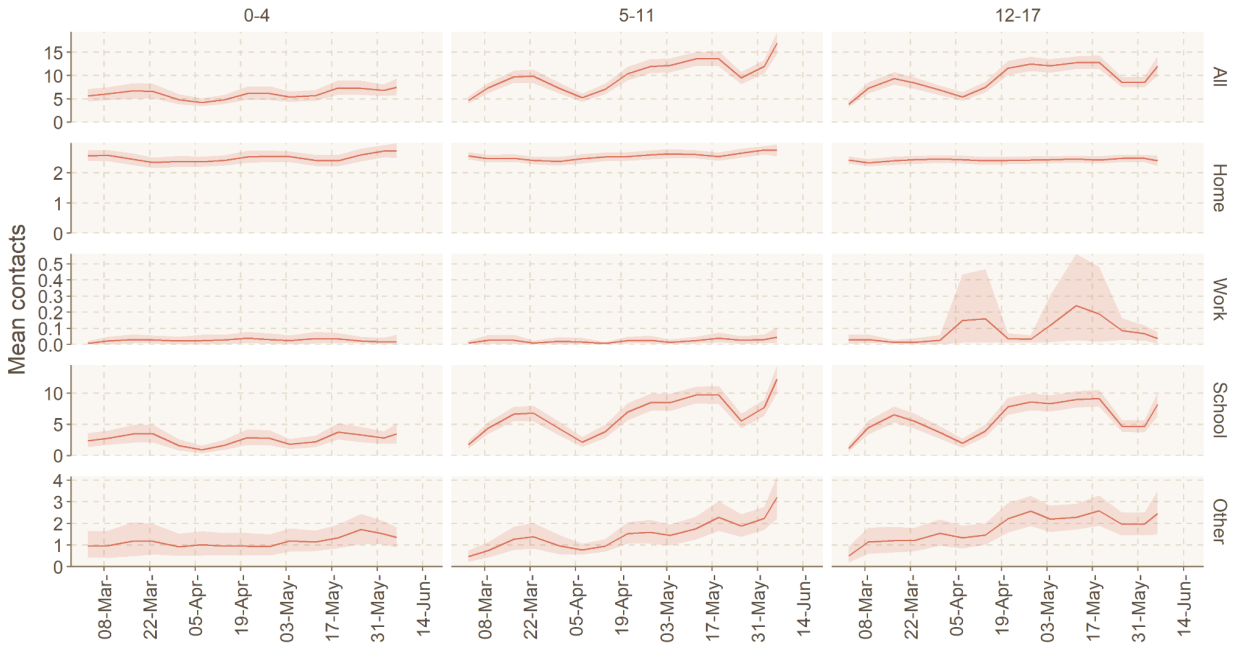

Figure S2: Setting-specific mean contacts by age-group for children over time.
Uncertainty calculated using bootstrapping. Contacts truncated to 50 contacts per participant. Observations are smoothed over two weeks to account for panel effects. Date on x axis refers to the midpoint of the survey period.