Social contacts in the UK from the CoMix social contact survey
Report for survey week 62

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Report for SPI-M-O and SAGE, 7th June 2021
Data up to 3rd June 2021

Summary

- There has been a sharp reduction in the mean daily reported contacts of school-aged (5-17 years) children, coincident with half term. Children's contact rates were similar to those reported during the Easter vacation period.
- Adult mean reported daily contact rates have stabilised or fallen slightly in some age groups. This appears to be due to a decline in work-related contacts and is probably also associated with the half-term break.
- Outside contacts have increased across all age groups (both children and adults).
- It is very difficult to discern differences by region due to small sample sizes.

Main

Data collection over the most recent week has largely coincided with the half-term holidays. This has resulted in a significant drop in overall mean daily contacts (Figure 1) largely due to a fall in recorded contacts by school-aged children (Figure 2). The reported mean contact rate for children for this week is remarkably similar to those reported during the Easter holidays.

Mean adult contacts have remained roughly constant (Figure 3) though there is some evidence of reductions in mean adult contact rates in certain age groups (Figure 3), which are mostly attributable to a reduction in work-related contacts (Figure S1). This is likely also associated with the half-term break.

Outdoor contacts appear to be increasing, both in children (Figure 4) and adults (Figure 5). The mean reported indoor contact rate has fallen for children, again coincident with the half-term break.

Discerning clear trends in regional contact patterns is difficult due to the smaller sample sizes.(Figure 6).

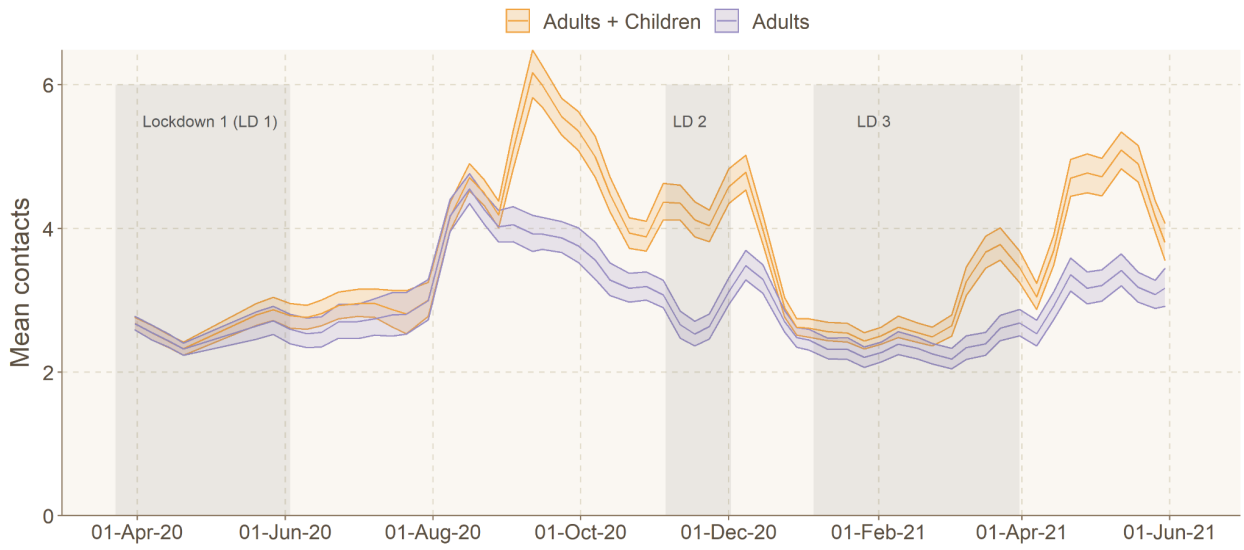

Figure 1: Mean contacts in the UK since the 23rd March 2020 for adults and children (all participants) and adults only (18 year +). Uncertainty calculated using bootstrapping. Contacts truncated to 50 contacts per participant. Observations are smoothed over two weeks to account for panel effects. Date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

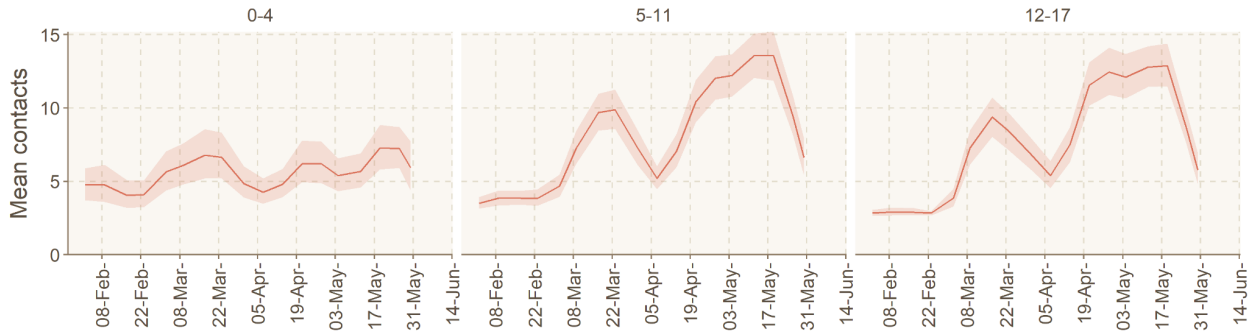

Figure 2: Mean contacts in all settings by age-group for children over time. Uncertainty calculated using bootstrapping. Contacts truncated to 50 contacts per participant. Observations are smoothed over two weeks to account for panel effects. Date on x axis refers to the midpoint of the survey period.

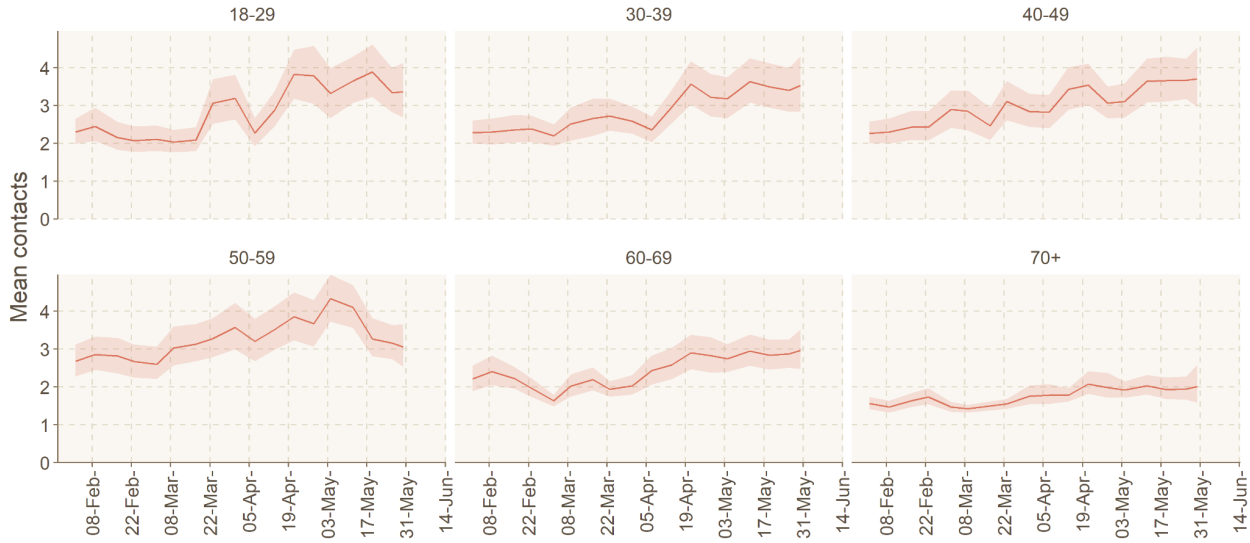

Figure 3: Mean contacts in all settings by age-group for adults over time. Uncertainty calculated using bootstrapping. Contacts truncated to 50 contacts per participant. Observations are smoothed over two weeks to account for panel effects. Date on x axis refers to the midpoint of the survey period.

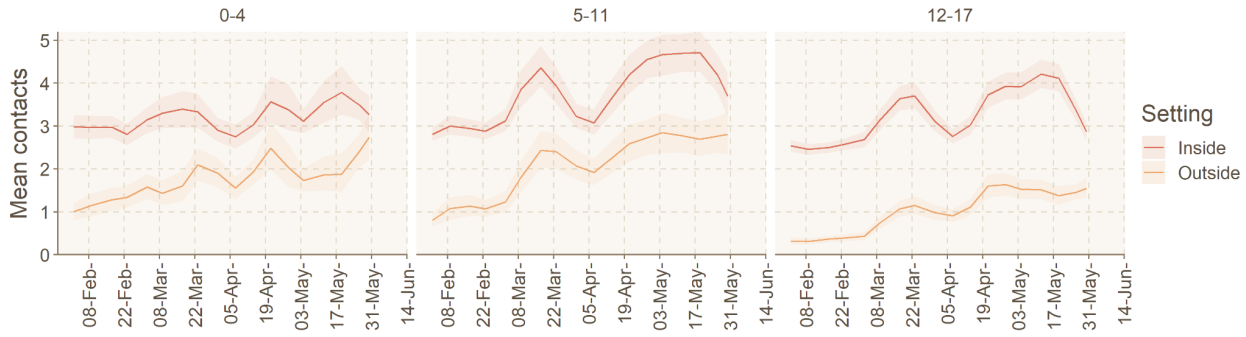

Figure 4: Mean contacts indoors versus outdoors in all settings by age-groups for children over time Uncertainty calculated using bootstrapped. Contacts truncated to 50 contacts per participant. Observations are smoothed over two weeks to account for panel effects. Date on x axis refers to the midpoint of the survey period. Note information on a contact being inside or outside is only available for individually reported contacts, i.e. is not present for all contacts, and a contact can be selected as inside and outside.

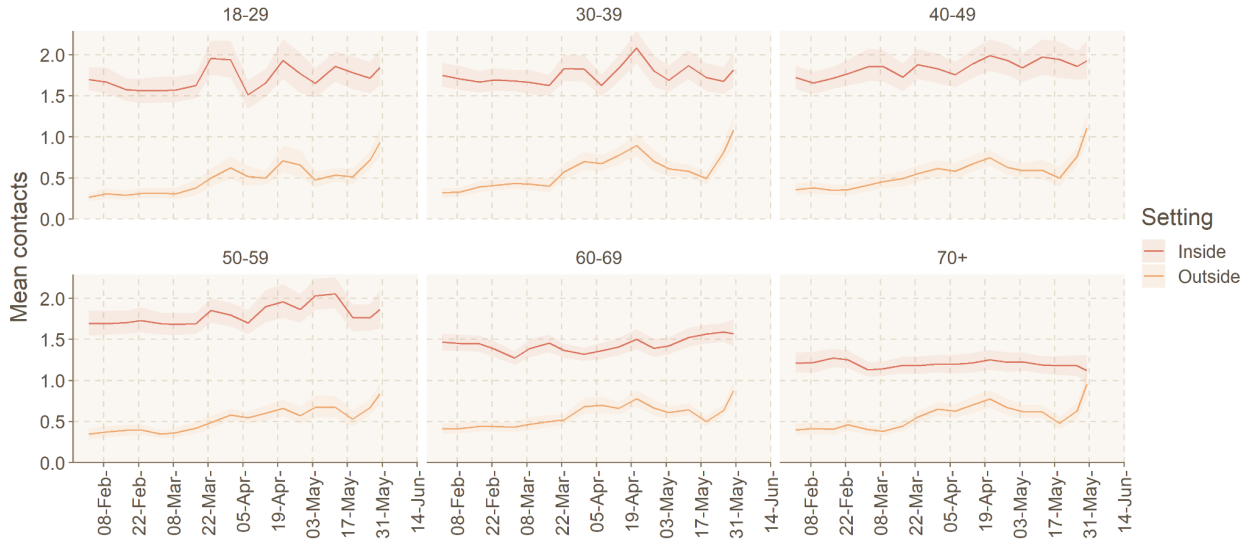

Figure 5: Mean contacts indoors versus outdoors in all settings by age-groups for adults over time Uncertainty calculated using bootstrapping. Contacts truncated to 50 contacts per participant. Observations are smoothed over two weeks to account for panel effects. Date on x axis refers to the midpoint of the survey period. Note information on a contact being inside or outside is only available for individually reported contacts, i.e. is not available for all contacts, and a contact can be selected as inside and outside.

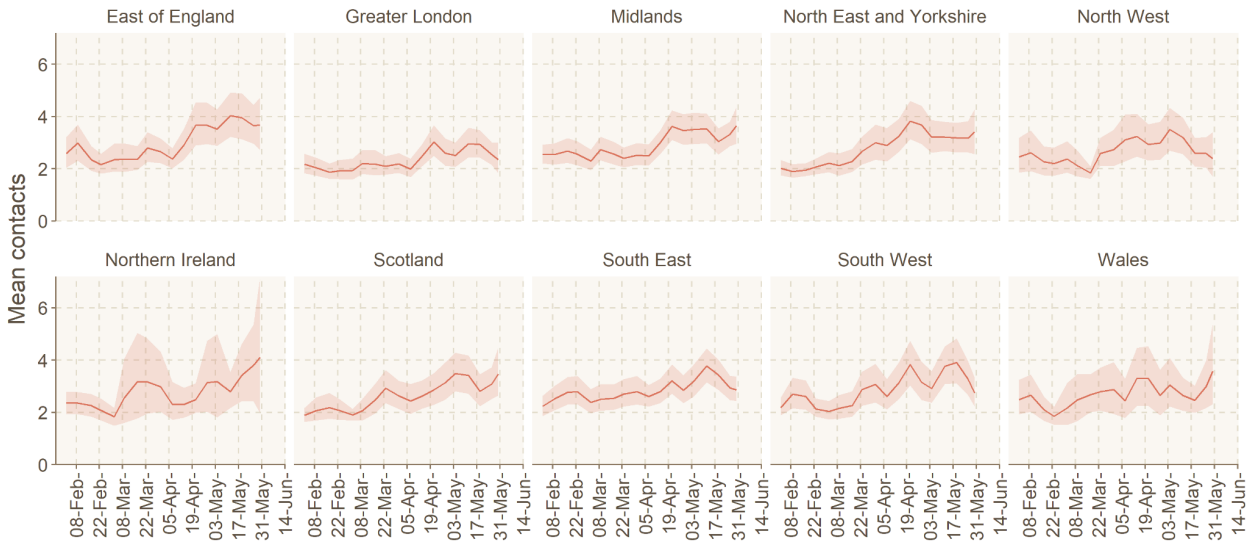

Figure 6: Mean contacts in all settings in adults for UK nations and English regions over time. Uncertainty calculated using bootstrapping. Contacts truncated to 50 contacts per participant. Observations are smoothed over two weeks to account for panel effects. Date on x axis refers to the midpoint of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

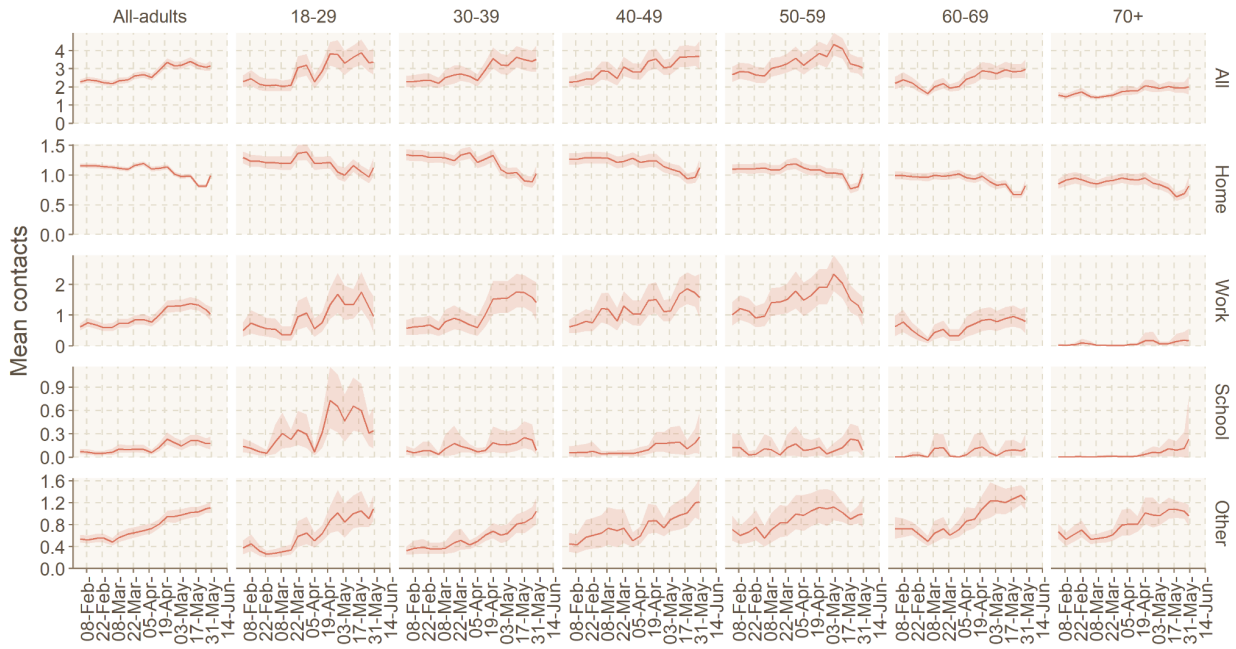

Figure S1: Setting-specific mean contacts by age-group for adults over time. Uncertainty calculated using bootstrapping. Contacts truncated to 50 contacts per participant. Observations are smoothed over two weeks to account for panel effects.. Date on x axis refers to the midpoint of the survey period.

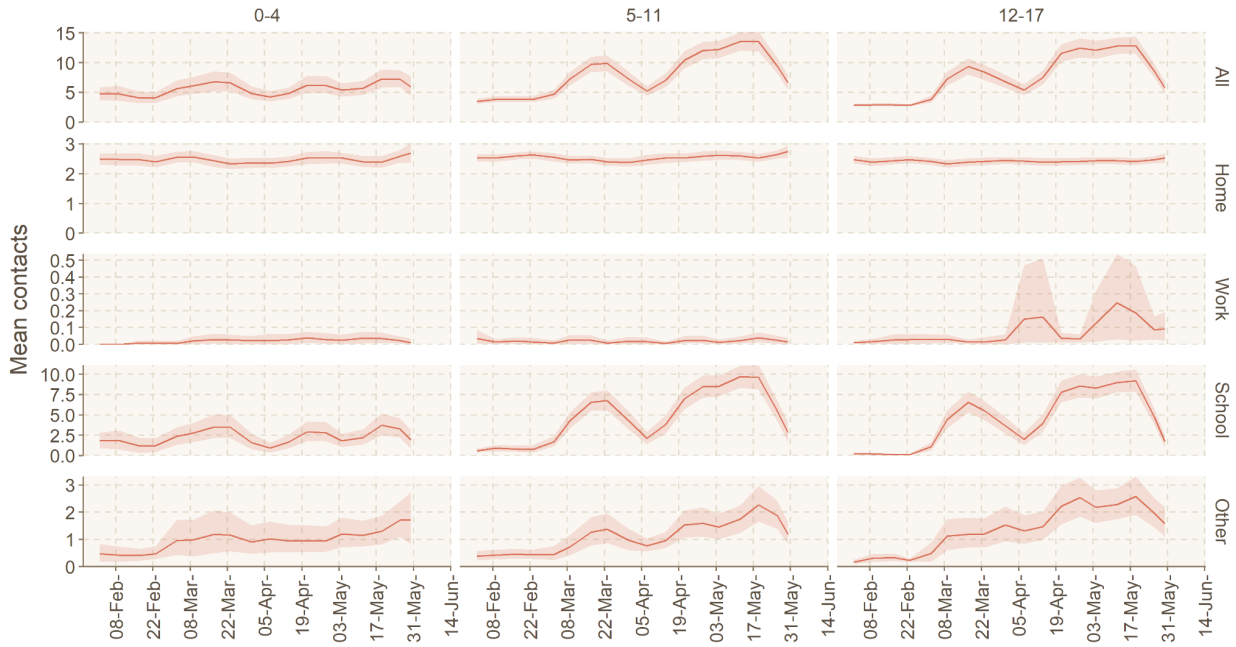

Figure S2: Setting-specific mean contacts by age-group for children over time.
Uncertainty calculated using bootstrapping. Contacts truncated to 50 contacts per participant. Observations are smoothed over two weeks to account for panel effects. Date on x axis refers to the midpoint of the survey period.