

Social contacts in the UK from the CoMix social contact survey

Report for survey week 57

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*Report for SPI-M-O and SAGE, 5th May 2021
Data up to 28th April 2021*

Summary

- Although contacts for adults remain low compared to pre-pandemic levels, mean reported adult contacts are now consistent with levels seen after the end of the second lockdown but still lower than levels recorded during the month of August 2020.
- The increase in contacts for adults has occurred across all age groups, including the elderly. However, the absolute level of contacts for 70+ is still the lowest amongst all age groups.
- Children's contact levels are consistent with those seen during previous periods when schools have been open. There appears to have been an increase in contacts outside of school settings for school-aged children over the previous two weeks.
- The increase in contacts appears to be occurring in the majority regions and nations of the UK, though discerning any differences by region is difficult due to small sample sizes.

Results

Adult contacts have increased over the last couple of months. The latest data (from 22nd to 28th April) shows that this increase has continued (Figure 1). Mean contacts reported over the prior two weeks (14th to 28th of April 2021) for all participants (adults + children) and adults is clearly above that seen during lockdown 3 (Figure 2) and is similar to the levels of contacts reported after the second lockdown (December 2020). Adult contacts appeared to have declined around Easter (most notable in young adults aged 18-30, but this trend is also apparent in other age groups). Contacts have since increased across all ages, including a steady increase in the level of contacts reported for those over the age of 60 (Figure 3 and 4). It should be noted that contacts in these age groups are still considerably lower than those seen in younger adults (aged 18-59). Mean levels of contacts for adults remain lower than those seen during August 2020 and it is worth stressing that the increases in contacts that have been recorded are still relatively small and the overall level of contacts is low compared with pre-pandemic levels [2].

Mean contacts for children remain consistent with levels recorded during previous periods of school opening. It is notable that there has been an increase in non-school contacts for school-aged children over the last few weeks (Figure 5, 6, and S2).

Discerning clear trends in regional contact patterns is difficult due to the smaller sample sizes. The English regions and the UK nations appear to have a continued upward trend over the past two months with varying degrees of increase seen across regions. Though Wales appears to have a sharp decrease this week the uncertainty around this estimate is large and the sample size for Wales very small (Figure 7).

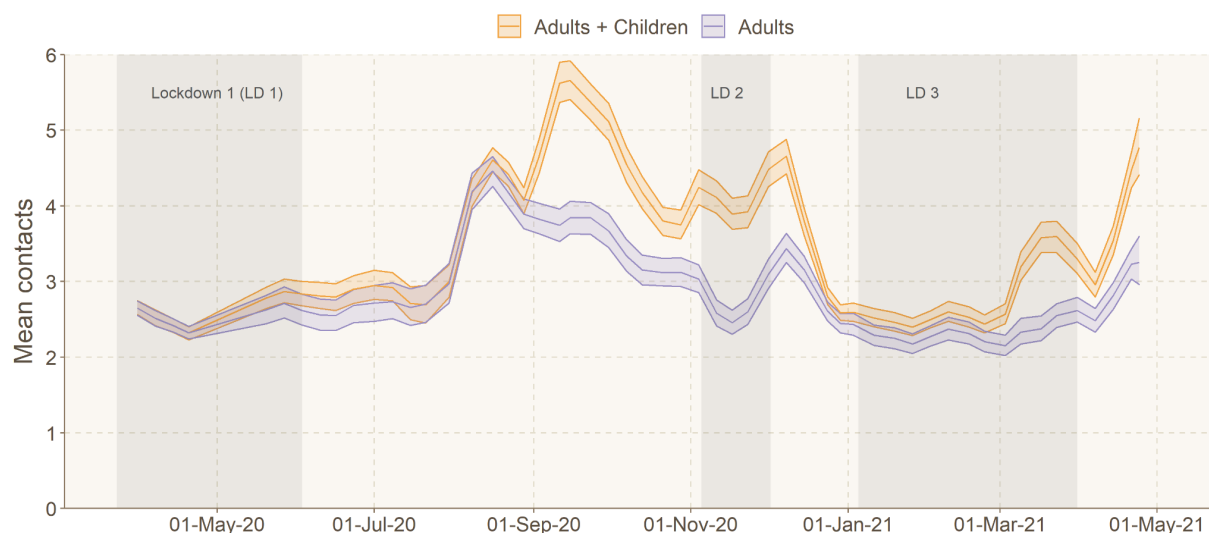


Figure 1: Mean contacts since the 23rd March 2020 for adults and children (all participants) and adults only (18 year +). Uncertainty calculated using bootstrapping.

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.

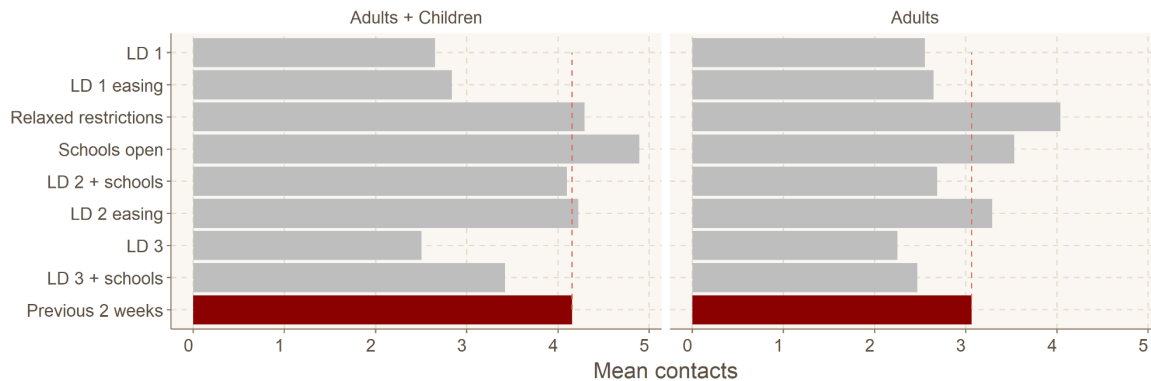


Figure 2: Comparison of mean contacts for most recent two week period to eight time periods of different restrictions for adults and children (all participants) and adults only (18 year +). Current period highlighted in red with dashed line for easier comparison to previous periods. Previous 2 weeks is 14 days prior to 28th April 2021

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	5. Lockdown 2	05 Nov 2020 - 02 Dec 2020
2. Lockdown 1 easing	04 Jun 2020 - 29 Jul 2020	6. Lockdown 2 easing	03 Dec 2020 - 19 Dec 2020
3. Relaxed restrictions	30 Jul 2020 - 03 Sep 2020	7. Lockdown 3	05 Jan 2021 - 07 Mar 2021
4. School reopening	04 Sep 2020 - 24 Oct 2020	8. Lockdown 3 + schools	08 Mar 2021 - 31 Mar 2021

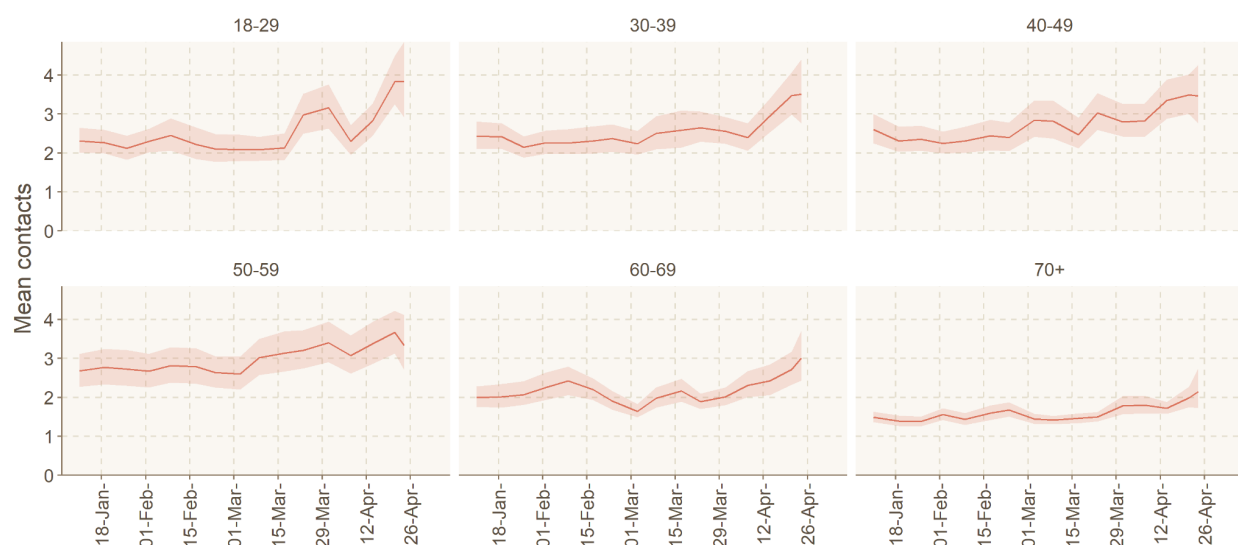


Figure 3: Mean contacts in all settings by age-group for adults over time. Uncertainty calculated using bootstrapping. Contacts truncated to 50 contacts per participant. Observations are smoothed over two weeks to account for panel effects. Date on x axis refers to the midpoint of the survey period.

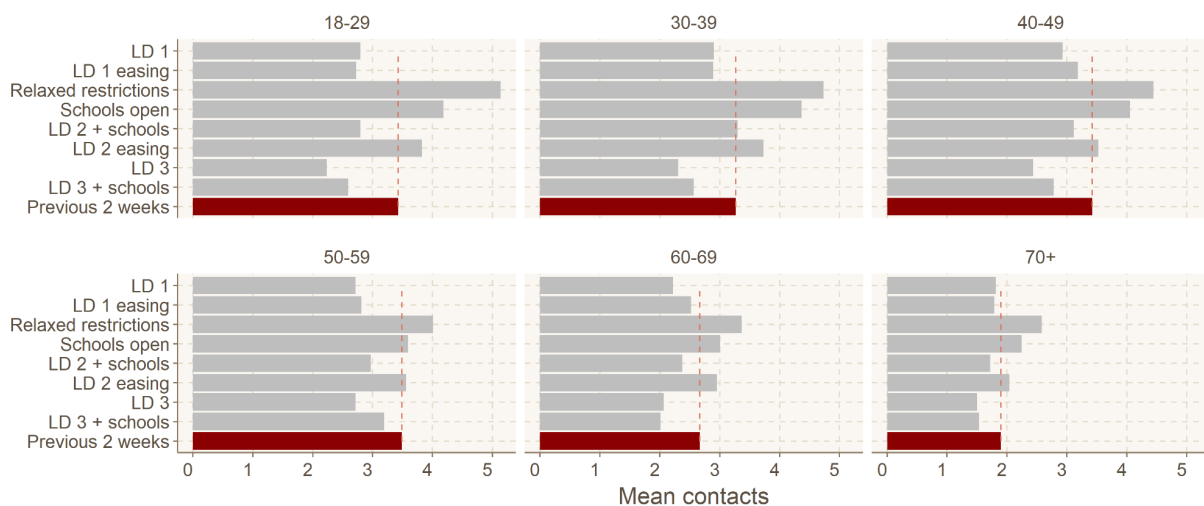


Figure 4: Comparison of mean contacts for most recent two week period to eight time periods of different restrictions by age. Current period highlighted in red with dashed line for easier comparison to previous periods. Previous 2 weeks is 14 days prior to 28th April 2021

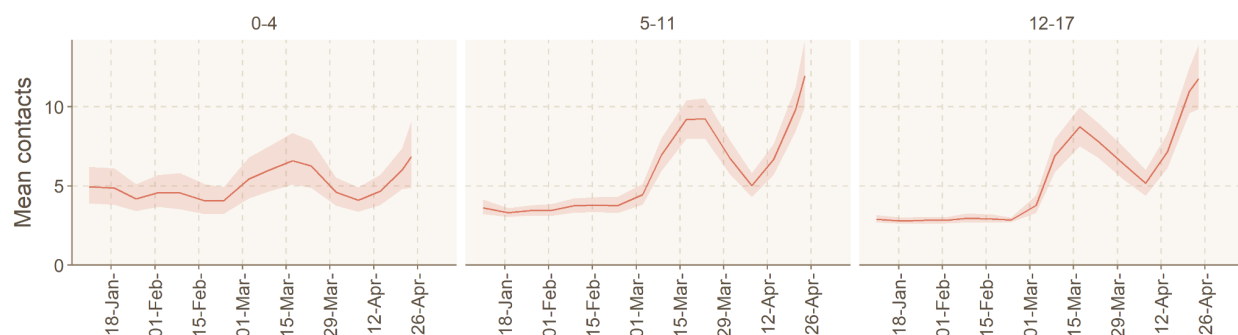


Figure 5: Mean contacts in all settings by age-group for children over time. Uncertainty calculated using bootstrapping. Contacts truncated to 50 contacts per participant. Observations are smoothed over two weeks to account for panel effects. Date on x axis refers to the midpoint of the survey period.

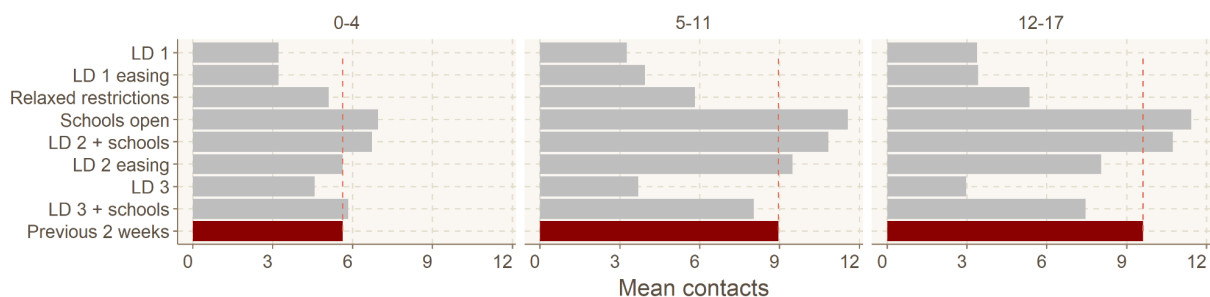


Figure 6: Comparison of mean contacts for most recent two week period to eight time periods of different restrictions by age. Current period highlighted in red with dashed line for easier comparison to previous periods. Previous 2 weeks is 14 days prior to 28th April 2021

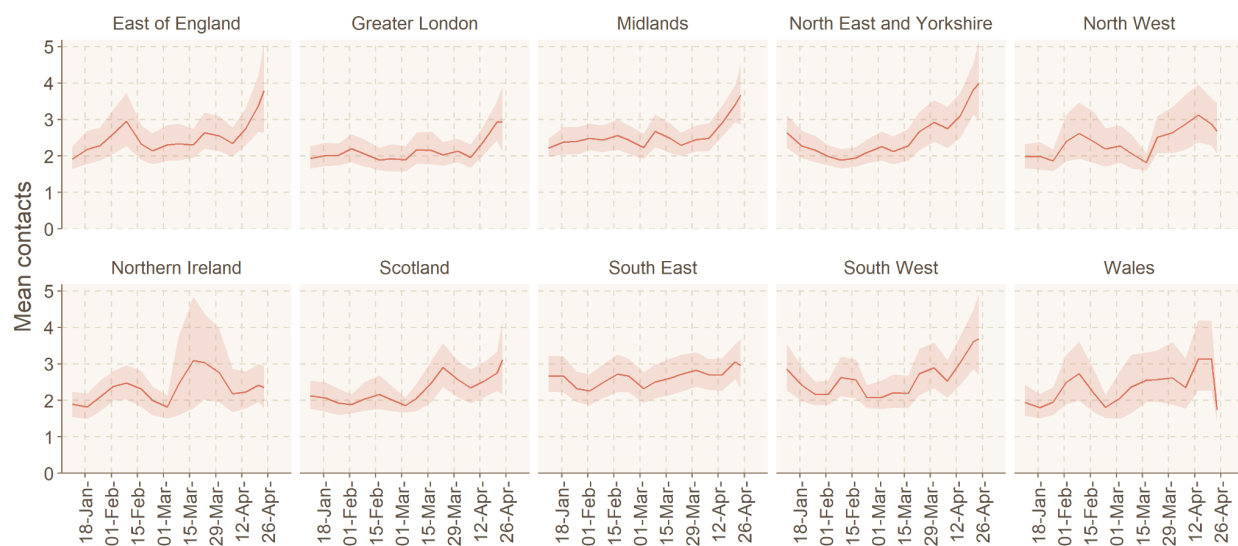


Figure 7: Mean contacts in all settings in adults for UK nations and English regions over time. Uncertainty calculated using bootstrapped. Contacts truncated to 50 contacts per participant. Observations are smoothed over two weeks to account for panel effects. Date on x axis refers to the midpoint of the survey period.

Methods

CoMix is a behavioural survey, launched on 24th of March 2020. The sample is broadly representative of the UK adult population. Participants 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 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 two weeks of the survey to the mean contacts reported during eight time periods over the previous year which represent different levels of restrictions.

Funding

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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.

Appendix

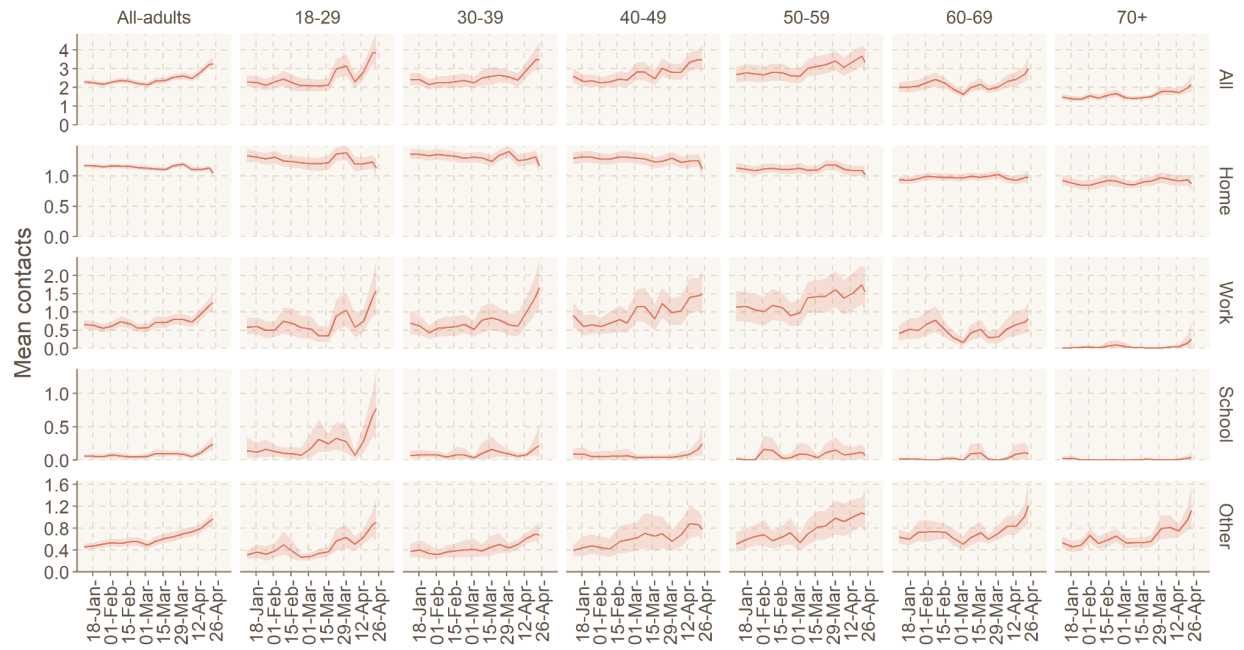


Figure S1: Setting-specific mean contacts by age-group for adults over time. Uncertainty calculated using bootstrapping. Contacts truncated to 50 contacts per participant. Observations are smoothed over two weeks to account for panel effects. Educ = educational setting. Date on x axis refers to the midpoint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

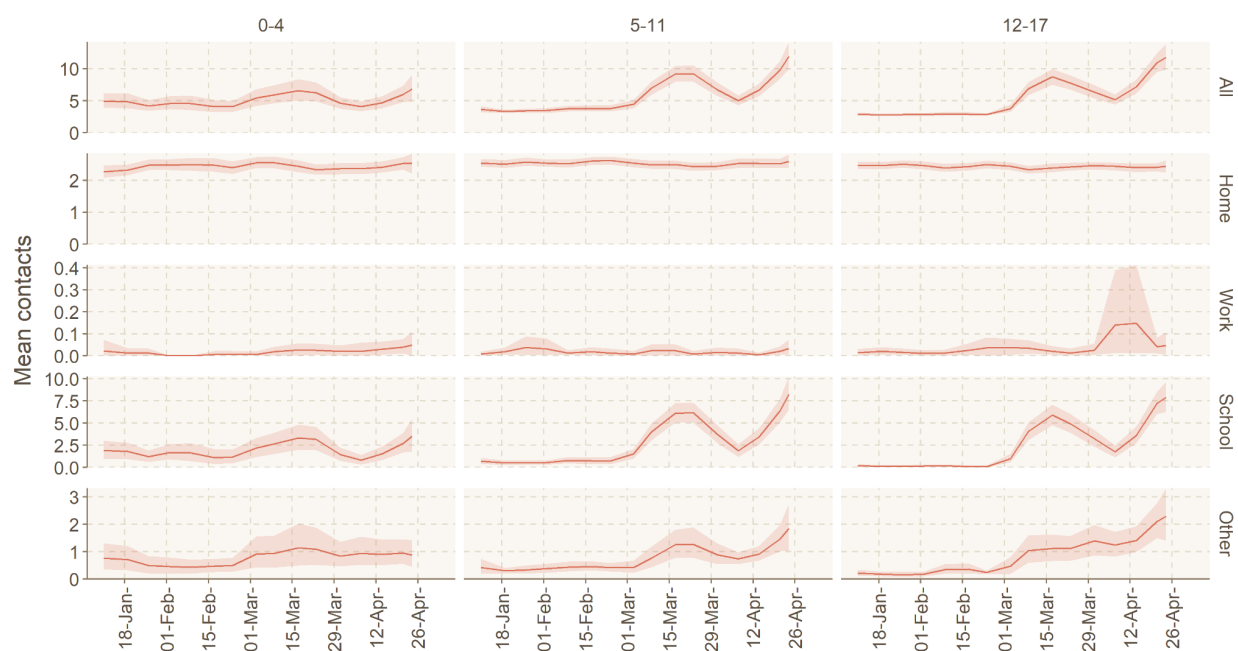


Figure S2: Setting-specific mean contacts by age-group for children over time.

Uncertainty calculated using bootstrapping. Contacts truncated to 50 contacts per participant. Observations are smoothed over two weeks to account for panel effects. Educ = educational setting. Date on x axis refers to the midpoint of the survey period.