Social contacts in workplace the UK from the CoMix social contact survey

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Results

- Individuals who attended work on the day of the survey tend to report more than twice the mean number of contacts as individuals who were in employment but did not attend work on the day of the survey (Figure 1).
- Current mean levels of reported contact are roughly 7 contacts per person per day for those attending work and 3 per person per day for those in employment but not attending work. This difference is large with overall mean rates of contact for all adults (including those not in employment) being less than 3.5 (3.2 to 3.8) contacts per person per day.
- This pattern has persisted over time, but during the lockdown period (from January to March 2021) the difference in contact rates between those who attended and did not attend work was somewhat smaller (Figure 1), suggesting that those who went to work made slightly fewer contacts during the lockdown.
- Part-time workers tend to report higher mean rates of contact than others in employment, and the difference in contact rates reported by part-time workers who attended work on the day of the survey versus those that did not is largest (Figure 2). Those who are self-employed report the lowest mean rates of contacts and the smallest difference in contacts when attending work or not (Figure 2).
- The CoMix survey also asks whether employees' workplace was open on the day of the survey. The mean reported contacts is, again, dependent on whether the workplace was open or not (Figure 3), though the difference is less marked in absolute terms (roughly 4.5 mean contacts per day for those reporting their workplace was open versus 2.5 contacts per day for those reporting that their workplace was closed). The difference between figures 1 and 3 is explained by those that did not attend work despite it being open. This implies that requiring workers to attend the workplace would be an important determinant of mean contact rates (over and above the opening of workplaces).
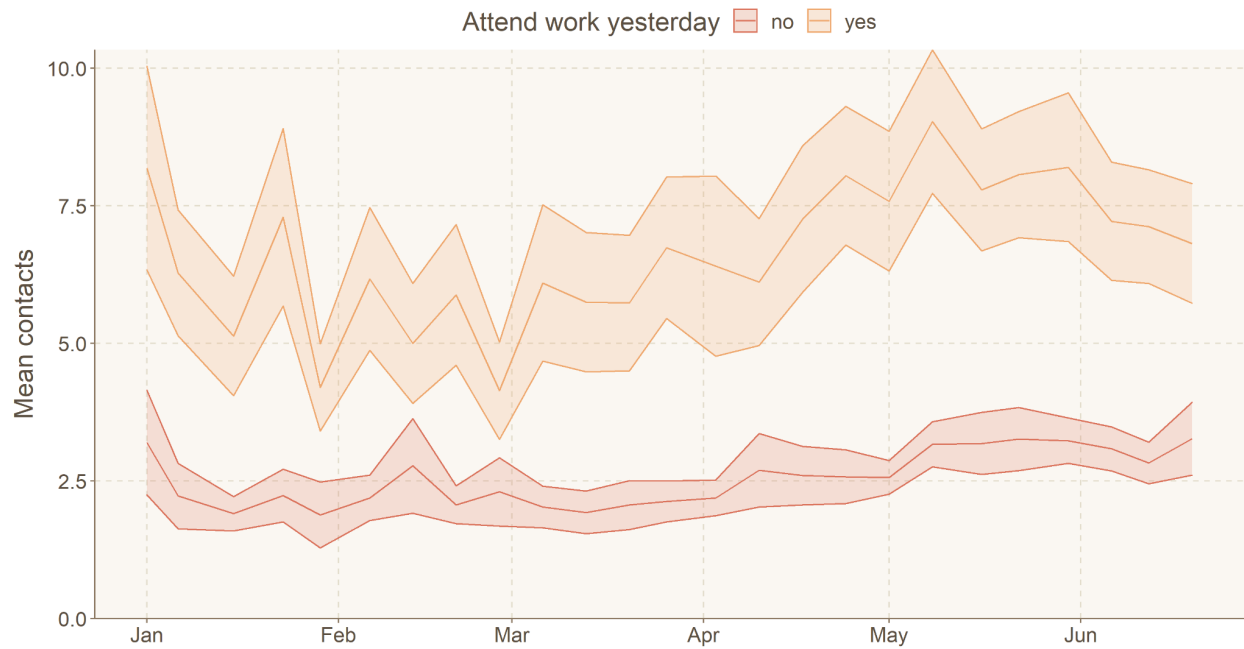
Figure 1: Mean contacts in the UK since Jan 2021 for individuals attending or not attending work on the day of the survey for people that are employed and their work is open. 95% Uncertainty interval calculated assuming a standard normal mean of two times the standard error of the meanusing bootstrapping. 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.
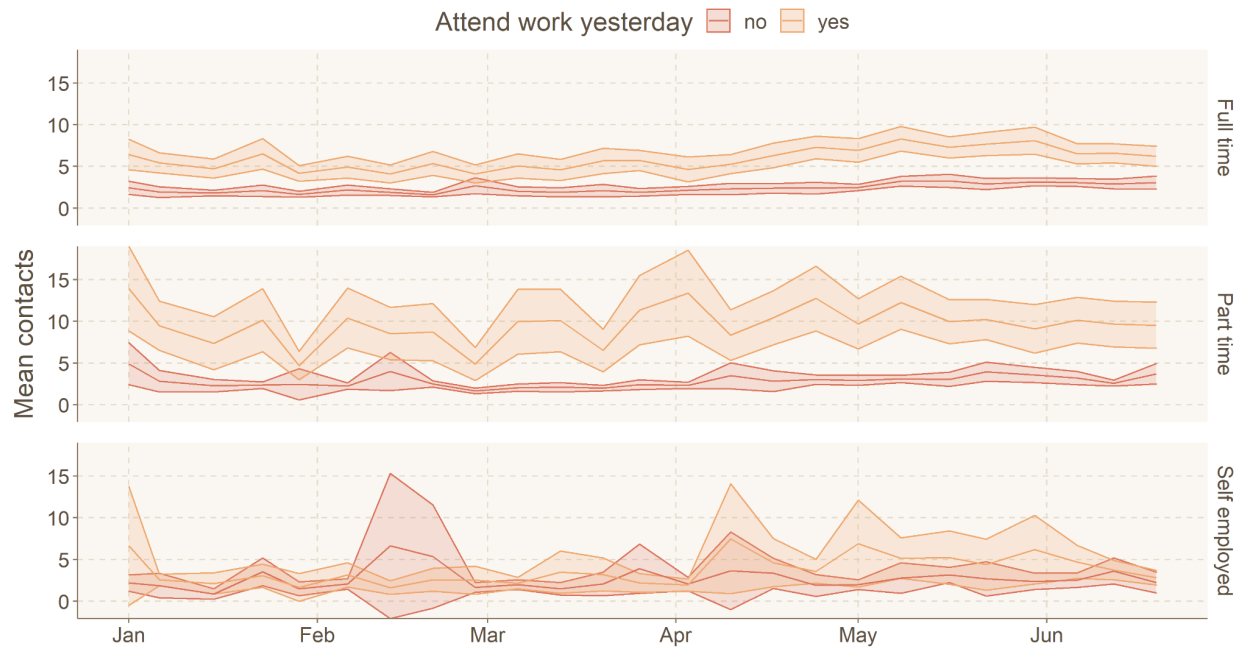
Figure 2: Mean contacts in the UK since Jan 2021 by employment type for individuals attending or not attending work on the day of the survey for people that are employed and their work is open. 95% Uncertainty interval calculated assuming a standard normal mean of two times the standard error of the meanusing 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.
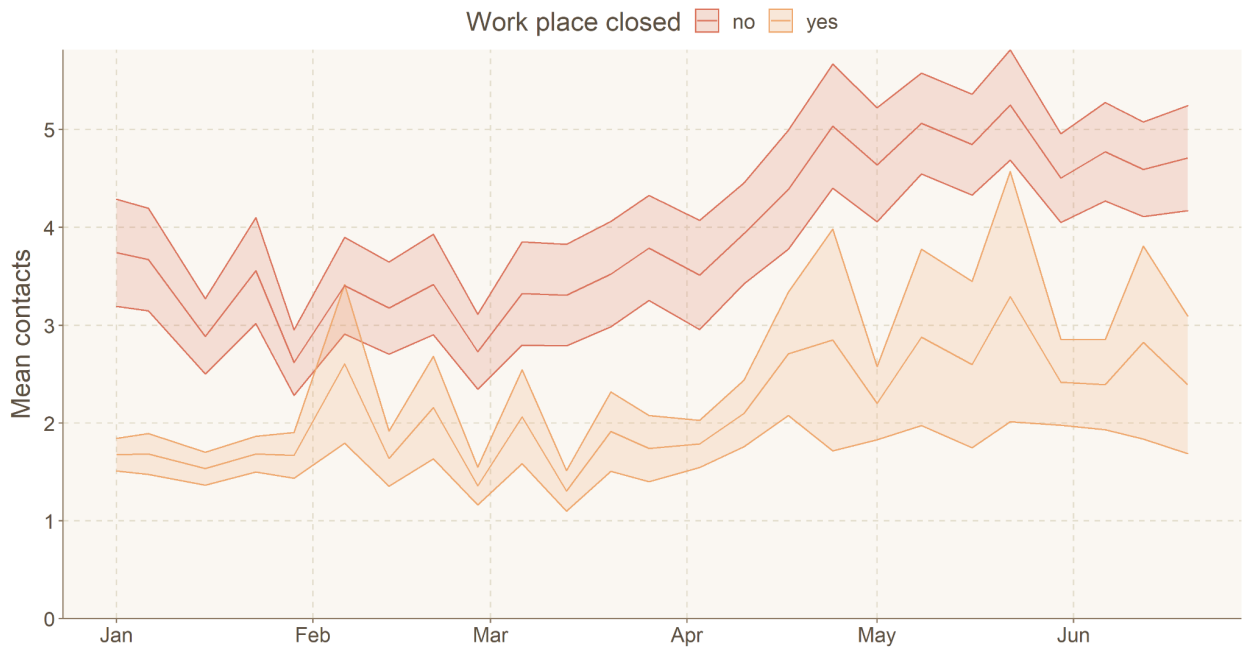
Figure 3: Mean contacts in the UK since Jan 2021 for individuals that are employed comparing when their place of work is open or closed. 95% Uncertainty interval calculated assuming a standard normal mean of two times the standard error of the meanusing bootstrapping. Contacts truncated to 50 contacts 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 and a 95% confidence interval assuming a standard error of a standard normal distribution. 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.

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.