

Editor-in-chief
Eurosurveillance

Reviewers' comments:

Reviewer #1: This is a timely and interesting study.

My comments are minor, could be clarified or discussed :

In the abstract, the conclusion "The substantial reduction in contacts has contributed greatly in halting the COVID-19 epidemic." may be true, but could have been "must have" [Ed: or appears to have?]

What is a conversation: I think it was 3 sentences in Polymod, what was the definition here?

P5L30 : were there any reduction or increase in contacts in the household ? does the data allow to tell? (maybe stratified on household size/age) In any case this could be reported/discussed.

P6L26: While I agree that this indicates that bias may be limited, the "accurately reported their contacts" seems overconfident.

P6L42 : what is a "relatively large number" ? are HCWs included in these 50-79 groups?

Fig3 : it seems that household contacts between the oldest and the very young (infants) increased during the distancing study, while the contact with the children-teenagers decreased; is it due to small sample or is this genuine?

Reviewer #2: In this paper authors document how the contact rate across age groups was affected as a result of the physical distancing measures that were put in place to control the COVID-19 pandemic in the Netherlands. The paper does a good job at documenting the reductions in contact rates when contact is defined as having a conversation in person or physical contact. A more useful definition could have included information about the setting where the contact takes place as well as the duration of the contact because we know that SARS-CoV-2 spreads more easily in indoor settings and the risk of transmission increases with the duration of the exposure, which contrasts with diseases such as Ebola that spread through close contact. This includes the possibility of superspreading events in supermarkets or workplaces even when participants may not have reported contacts during grocery shopping. Thus, a reduction in physical contact rate may not necessarily reflect a reduction in transmission for this disease that spreads through the air (Ong et al. 2020), a great fraction of the transmission occurs during the pre-symptomatic stage (He et al. 2020) and an increasing evidence for asymptomatic infections (as first evidenced from data of the Diamond Princess cruise ship (Mizumoto et al. 2020). Thus, we cannot just say that infected individuals naturally reduce their contacts rates (and hence their transmission rate) when infected. This would need to be highlighted in the discussion as a limitation.

References:

Ong, Sean Wei Xiang, et al. "Air, surface environmental, and personal protective equipment contamination by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) from a symptomatic patient." *Jama* 323.16 (2020): 1610-1612.

He, Xi, et al. "Temporal dynamics in viral shedding and transmissibility of COVID-19." *Nature medicine* 26.5 (2020): 672-675.

Mizumoto, Kenji, et al. "Estimating the asymptomatic proportion of coronavirus disease 2019 (COVID-19) cases on board the Diamond Princess cruise ship, Yokohama, Japan, 2020." *Eurosurveillance* 25.10 (2020): 2000180.

Editorial comments:

Thanks again for submitting to Eurosurveillance. We have thoroughly evaluated your manuscript describing results of an interesting and public health relevant study. Aside from the pertinent reviewer comments, I would like you to consider the following in your revision. Given the topical discussion in many countries about recommending/mandating use of face masks to prevent the spread of COVID-19, you may wish to stress in the discussion that the demonstrated impact here is without considering face masks and hand hygiene (optional).

Some statements in the discussion may have to be adapted slightly to the latest status of knowledge i.e. that on the role of children in transmission of SARS-CoV-2 and references should be updated accordingly.

We distinguish between sex and gender and in the context here, I propose to use the term sex as per the 'Sex and Gender Equity in Research SAGER' definition <https://researchintegrityjournal.biomedcentral.com/articles/10.1186/s41073-016-0007-6>. Please use commas as separators for 1,000s and ensure all abbreviations are introduced in the text when mentioned for the first time. If there is an online version of the questionnaire(s) please add this information under methods.

Title: Please add dates when surveys were conducted.

Abstract: The subheading for 'Aim' is missing and the information about measuring the eigenvalue for the matrix should be part of 'Methods'.

Background/Introduction: I did not check the individual references but it appears that [5] may feature in [6] and if so [5] can be omitted. In the sentence following the mention [5,6] please specify that the surveys you refer to here were conducted in the context of the COVID-19 pandemic.

Methods: For children under a certain age contact frequency may have been obtained by parents/legal guardians. Can you please specify in the text? Further, could you explain why you oversampled persons living in areas with low vaccination (which one, for all vaccines or for MMR as proxy?) coverage and why you excluded people reporting more than 100 (daily?) contacts, so the reader can follow this reasoning better?

You may consider replacing conversation in person by 'face-to-face conversation' if this meaning is correct. 'Physical contact' as used here appears to be a vague concept and it may constitute a limitation as pointed out by reviewer 2. Can you please elaborate and mention as limitation?

Age groups overlap – please check what was analysed and correct accordingly in text, tables and figures.

For the analysis part, please add how missing data were treated.

Results: Even though not all data displayed in tables or figures should be repeated in the text, I would suggest elaborating on the following in the text: in how far does household size in this study 'reasonably' reflect that in the Netherlands? In how far did the sample reflect the Dutch population? It appears some age/sex groups were overrepresented. Maybe good to mention the latter also in the discussion. The reduction of the mean number of contacts in the community is mentioned in the discussion as 71%. Please check the rounding; I get a reduction of 'only' 70% using the percentages in the results. The exact percentage values for the age groups with the greatest and lowest reduction from the table should be stated in the text as well.

Personal note: I found the considerable contact reduction of ca 75% in the age groups 60 to 70 and 70 to 80 interesting. The age group 70+ was targeted specifically with 'stay at home' messages here in Sweden (and to the best of my knowledge, also in other countries but not sure about the Netherlands). Generally, people followed this recommendation even though it was difficult for many of them as this age group also comprises a rather socially active 'grandparent generation'.

Table 1: Please elaborate what the 'n' stands for under contact days. In the text, you mention that there was no difference between contact days between the two surveys but looking at the numbers in the table it seems there was a difference for the days at the beginning of the week.

Table 2: For a number of occupational groups the totals are below 50 or even below 10. Although 95% CIs are given for these percentages, I would like you to consider if these data can reliably inform public health action and if they can be omitted or collapsed into larger categories.

Discussion: Please follow the order in results when you present findings in the first paragraph unless you deem some results more important than others. The statement about weekends should be revised as the findings were only for Saturdays. With respect to the limited reduction of reported contacts by elderly people, see my personal note above.

Please elaborate more on the meaning of some of the limitations such as on the larger average household size and why you consider that reporting more contacts on weekdays would lead to an underestimation of the reduction in the number of contacts.

In terms of stable contact patterns throughout a year, I would question the universal validity of such a statement for most of the countries in Europe. Even if frequency would remain the same, the quality (indoor/outdoor, vicinity) of contacts may not necessarily be equal during summer and winter months, also in the Netherlands. Please elaborate on what the one study cited here measured and if possible find more evidence to supporting your statement.

- Research, surveillance and review articles should have structured abstracts (max 250 words); other regular articles should have non-structured abstracts (max 200 words).

- Tables must be created in Word. The full table (title, table, notes) should be inserted in the manuscript directly after the first paragraph in which it is mentioned. As tables must be editable, images are not acceptable. To aid readability in both the online and .pdf versions of the article, portrait-oriented tables are preferred whenever possible (<https://www.eurosurveillance.org/for-authors>).

- If you present numbers with percentages in Tables, the percentages need to be in a Table column separate from the numbers. When the sample size is small (less than 60), we would not generally give percentages as they are subject to disproportional change with increasing or decreasing numerator and static denominator. The tables should not have any empty cells as design element or because information is not available (NA can be used for example).

- Figures must be provided in an editable format, i.e. we need to be able to edit text inside the figure (see our instructions for authors: <http://www.eurosurveillance.org/for-authors>).

- An ethical statement should be included (<https://www.eurosurveillance.org/for-authors#ethical%20statement>); if ethical approval was not needed, this should be stated in the manuscript.

- The supplement files should be headed with a short descriptive title and contain the requested disclaimer at the top (<https://www.eurosurveillance.org/for-authors>).

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