Unravelling transmission patterns of RSV and predicting the impact of maternal and pediatric vaccination

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This codebook describes the general practitioner data, specifically the files `ARIpositives20XX.csv` and `ARIcatchment20XX.csv`, where `XX=12,13,14,15,16`, as used in the analyses/scripts. Data requests should be directed to m.hooiveld@nivel.nl of Nivel (Netherlands Institute for Health Services Research). See also `https://nivel.nl/en`.

The data sets contain time series of weekly incidence of general practitioner (GP) consultations by patients with acute respiratory infection (`ARIpositives20XX.csv`) and corresponding size of the catchment populations (`ARIcatchment20XX.csv`) in the Netherlands. The data was retrieved from the Nivel Primary Care Database [1, 2]. The catchment population of the general practitioner network is approximately 7% of the Dutch population. Here we use five time series spanning the 2012/2013, 2013/2014, 2014/2015, 2015/2016, and 2016/2017 RSV epidemics. To cover the RSV epidemic in each epidemic, we take a broad range for RSV seasons, spanning 35 weeks, starting from ISO week 40 in a given year, and extending into week 22 or 21 of the next year [4].

The data in used in our study about the estimation of transmission patterns of RSV in the Netherlands. Scripts to analyze the data are available on GitHub [3].

Specifications

The ARI data is stratified into 7 age classes:

— 0 years

— 1-4 years

— 5-9 years

— 10-19 years

— 20-45 years

— 45-64 years

— 65+ years

Each data file (`ARIpositives20XX.csv` and `ARIcatchment20XX.csv`) contains the number of ARI cases and size of the catchment population in a given epidemic season (2012 for the 2012/2013 season, 2013 for the 2013/2014 season, etcetera) for all weeks included (35 rows) and for all age groups (7 columns). Hence, incidence in a given year, week, and age group ($i_{y,w,a}$) is given by the number of cases ($f_{y,w,a}$) divided by the size of the catchment population ($g_{y,w,a}$), i.e. $i_{y,w,a} = \frac{f_{y,w,a}}{g_{y,w,a}}$.

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References

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[4] L. M. Vos, A. C. Teirlinck, J. E. Lozano, T. Vega, G. A. Donker, A. I. Hoepelman, L. J. Bont, J. J. Oosterheert, and A. Meijer. Use of the moving epidemic method (MEM) to assess national surveillance data for respiratory syncytial virus (RSV) in the Netherlands, 2005 to 2017. *Euro Surveill.*, 24(20), May 2019.