

Project proposal National Public Health Institute The Netherlands (RIVM).

Monitoring behavioral change in real-time to assess compliance with social-distancing interventions and explore the correlation with disease end-points.

Project description:

The main question in the Netherlands at the moment is whether sanctions to curtail the spread of COVID can be eased, and secondary, how to monitor the probable second wave.

To better serve decision makers and to improve our surveillance, now-casting and infectious disease models we are looking at ways to monitor population behavior (which facilitate transmission) in a timely manner, and for a longer period of time. Apart from other initiatives such as household contact-surveys, using telecom data, and 5.1.2e data we would like to include population movement data developed by Google. Therefore by this writing we would like to request permission to collaborate more closely.

We do this request for two reasons:

The first reason is perhaps mundane, but this is to reduce the reporting delay. We hope that by participating the reporting delay will be reduced.

The second reason is to improve the end-point and to establish the correlation between this end-point and disease endpoints. Although the currently published timelines of several distinct geographical locations does indicate whether people changed their behavior, it does not reveal the change in number of close contacts or clustering. Therefore ideally we would come to an alternative timeline focused on those. Subsequently we have to confirm that interpretation of the data in the context of disease transmission is justified, and have to explore correlation between these timelines and our other disease surveillance (using state of the art-techniques).

What we can offer is world class surveillance data and a world class analytical team. In the Netherlands there is syndromic surveillance, GP surveillance, hospital surveillance, ICU surveillance and mortality surveillance, all with short delays and centrally collected. Furthermore the analytical team is exceptionally strong, with many publications in top tier journals. Therefore we are convinced this collaboration will be fruitful.

Best regards,

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