Dealing with Data: How to Build a Statistical Surveillance Dashboard for COVID-19

When a major national or global health crisis or pandemic such as the current COVID-19 breaks out, it is important that there is an effective monitoring system in place. The proposed statistical surveillance dashboard can provide authorities and other decision makers with insights and in-depth data analysis to help them make critical decisions.

In a recent article published in *Quality Engineering,* Barone and colleagues propose a set of novel tools and metrics for analysing COVID-19 data in an explorative and non-inferential way. Data downloaded daily from the website of the European Centre for Disease Prevention and Control were thoroughly analysed. The authors performed analyses to create a surveillance dashboard including graphs, figures and criticality tables useful for those who have to make political decisions on territories affected by the COVID-19 epidemic. (See attached Table 1).

You might also like: Ransomware attacks against healthcare organisations have jumped about 45% since early November, following an alarming 71% increase in October 2020, making healthcare the number one target of ransomware attacks that month. Fending off these attacks can be incredibly difficult, but it's not impossible. HealthManagement offers several best practices from IT experts. Learn more

Barone et al. suggest the criticality table can be complemented with geo-demographic indications such as latitude and longitude of the country, entity of the population. These data can provide further details to better understand if there are more or less favourable conditions for the development of the epidemic process. The researchers will deal with these aspects in a following study.

Why bother to implement this?

The analysis presented in this brief article can be easily deployed within countries at regional level, and within regions at province levels. The researchers say, for example, that one country can make a reasonable comparison between its different regions regarding the average velocity of the spread of the epidemic to identify the most critical areas requiring increased attention.

Using relatively simple explorative techniques to analyse data, says Barone, we can strive to provide authorities and other decision-makers with valuable insights into COVID-19 epidemic, which can ultimately lead to vital improvements in both the containment strategy and the policies enforced across the countries or regions hit by the epidemic. The methods used are rigorous but not mathematically advanced making them easy to read and understand. Furthermore, it is done in a way that anyone interested can set up similar dashboards.

Free and Easy?

Authors offer that all of the analyses presented in their article will be part of a user friendly and accessible online dashboard, where users will be able to select plots and tables of their own interest.

Source: Quality Engineering

Photo: KOBU Agency on Unsplash

Published on : Tue, 20 Jul 2021