

More vaccinated against seasonal flu VS fewer deaths. Just a coincidence?

Towards the end of January 2020 I began to monitor the progress of the Corona Virus on the now famous, albeit basic, John Hopkins University WebGIS built on the infrastructure of Esri (world giant of information systems).

I confided to some colleagues that having no news about the age of the infected, the gender and any previous pathologies, they could not say anything about the infection which was then called CoVid-19 (Corona Virus Disease discovered in 2019).

The following month beyond China other nations had added among which stood out South Korea which was having an exponential growth of positive cases, while in Italy there were the first signs concentrated in an area between Lombardy and Veneto (the bad luck has wanted the patient "1" to be intercepted in an area that proved to be peripheral to the epicenter of the infection and the same was a typically healthy subject as an amateur sportsman; this allowed the virus to travel unchallenged along the paths drawn by commuters on vehicles public in the areas of Bergamo, Brescia etc, [https://www.istat.it/pendolarismo/grafici_province_cartografia_2011.html]).

In the same days I started looking for data on the web about seasonal flu vaccination coverage in South Korea [https://www.researchgate.net/publication/6234377_Influenza_Vaccine_Coverage_Rates_and_Perceptions_on_Vaccination_in_South_Korea] and, especially in Italy [http://www.salute.gov.it/imgs/C_17_tavole_19_allegati_itemAllegati_0_fileAllegati_itemFile_3_file.pdf] as I noticed that here were about half of us compared to Korea and **my idea is that subjects, especially the elderly, who are vaccinated, manage to create a better barrier the advancement of the virus as less debilitated organisms.**

Furthermore, I always considered the same WebGIS developed for Italian Civil Protection too concentrated on the absolute values of the events that occurred.

Proceeding in fits and starts due to a cartography consultancy that still keeps me busy, I created a small QGIS database in which I populated a shapefile of the regions with the civil protection data (updated on 27-03-2020) and with the data ISTAT (Italian Statistical Institute) and ISS (Italian Higher Institute of Health) relating to the number of inhabitants and to the areas of each local authority.

The image that I attach shows, in pairs, the representation obtainable with absolute data and that with data referring to the usual group per 100,000 inhabitants;

For example, in the comparison of total positive cases and for 100K it is noted that, apart from Lombardy, there is a greater concentration in Valle d'Aosta, Trento, Bolzano while in the South the situation is much better.

By comparing the two methods for the swabs made, Veneto, Sicily, Lazio etc. are noted that in the face of a high number of tests they discover a relatively low percentage of positives.

Finally in the Po Valley there are many deceased, but comparing the cases on 100,000 inhabitants, the Valle d'Aosta and Trentino Alto Adige can still be seen with very serious situations;

Vice versa, the Piedmont Marche couple arouses curiosity where the former has more cases, while the concentration is about half of the latter.

Complete the image, the representation of population density for each region and in which the primacy of Campania is noted, which however has a concentration of total positives among the lowest.

Finally in the figure at the top right I represented the percentage of the population vaccinated against seasonal flu and which could suggest an inverse correlation between vaccinated subjects and concentration of positive cases; obvious examples would be Molise and the South in general and on the opposite side the northernmost regions of Italy. What do you think about?

