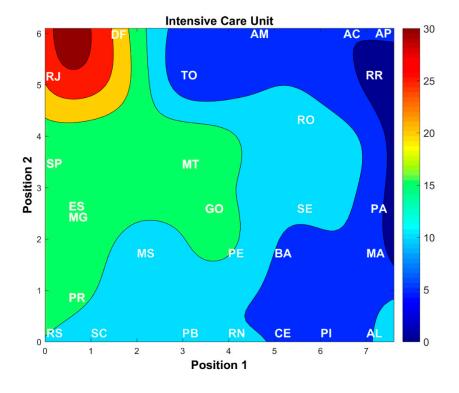
## Can Socioeconomic, Health, and Safety Data Explain the Spread of COVID-19 Outbreak on Brazilian Federative Units?

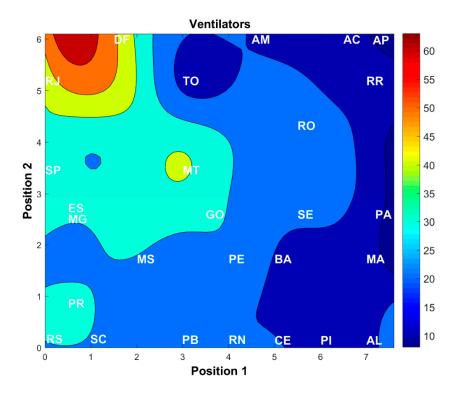
Diego Galvan <sup>1,2,3</sup>\*, Luciane Effting <sup>4</sup>, Hágata Cremasco <sup>4</sup>, Carlos Adam Conte-Junior <sub>1,2,3</sub>

- <sup>1</sup> COVID-19 Research Group, Center for Food Analysis (NAL), Technological Development Support Laboratory (LADETEC), Cidade Universitária, Rio de Janeiro, RJ, 21941-598, Brazil; conte@iq.ufrj.br
- <sup>2</sup> Laboratory of Advanced Analysis in Biochemistry and Molecular Biology (LAABBM), Department of Biochemistry, Federal University of Rio de Janeiro (UFRJ), Cidade Universitária, Rio de Janeiro, RJ, 21941-909, Brazil
- <sup>3</sup> Nanotechnology Network, Carlos Chagas Filho Research Support Foundation of the State of Rio de Janeiro (FAPERJ), Rio de Janeiro, RJ, 20020-000, Brazil
- <sup>4</sup> Chemistry Department, State University of Londrina (UEL), Londrina, PR, 86057-970, Brazil; luciane.effting@uel.br; hagata@uel.br
- \* Correspondence: diegogalvann@gmail.com; diegogalvann@iq.ufrj.br, orcid: https://orcid.org/0000-0001-8394-3431.

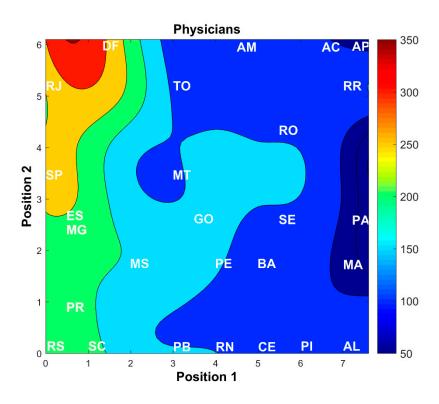


## **Supporting Information**

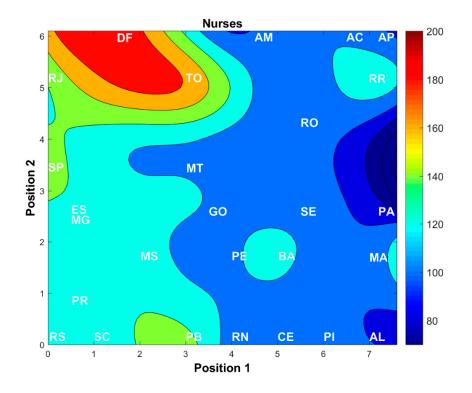
**Figure S1** – Weight maps overlaid by topological maps for variable **Intensive Care Unit (ICU)** by Brazilian federative unit.



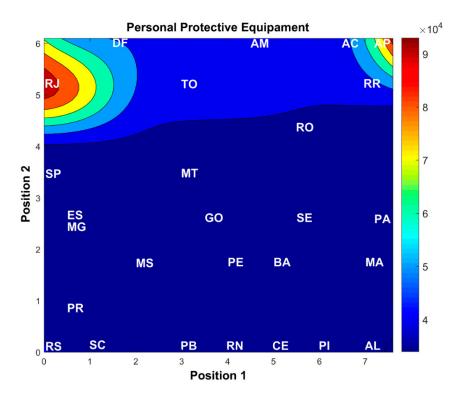
**Figure S2** – Weight maps overlaid by topological maps for variable **Ventilators** by Brazilian federative unit.



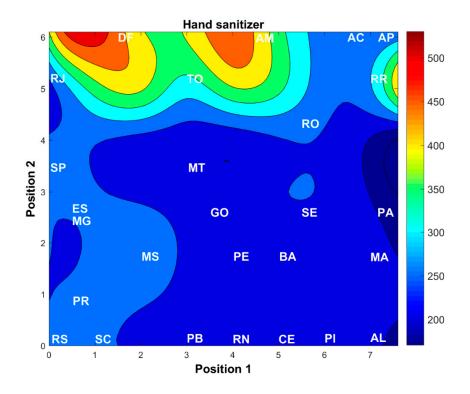
**Figure S3** – Weight maps overlaid by topological maps for variable **Physicians** by Brazilian federative unit.



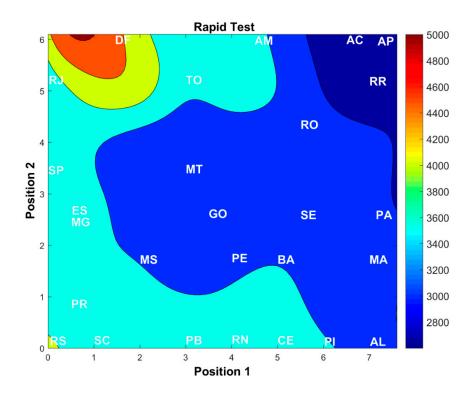
**Figure S4** – Weight maps overlaid by topological maps for variable **Nurses** by Brazilian federative unit.



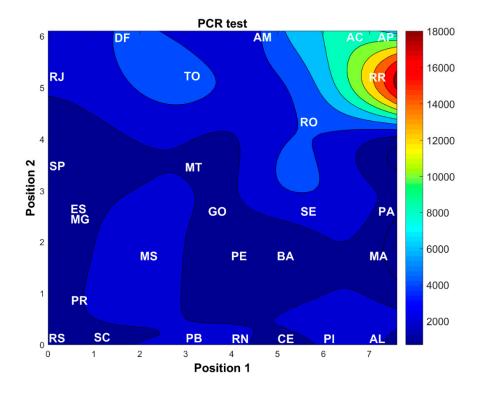
**Figure S5** – Weight maps overlaid by topological maps for variable **Personal Protective Equipment** by Brazilian federative unit.



**Figure S6** – Weight maps overlaid by topological maps for variable **Hand sanitizer** by Brazilian federative unit.



**Figure S7** – Weight maps overlaid by topological maps for variable **Rapid test** by Brazilian federative unit.



**Figure S8** – Weight maps overlaid by topological maps for variable **PCR test** by Brazilian federative unit.

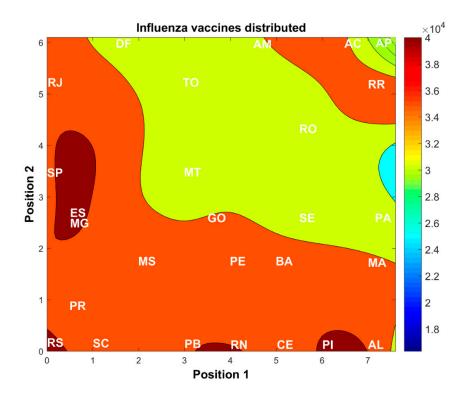
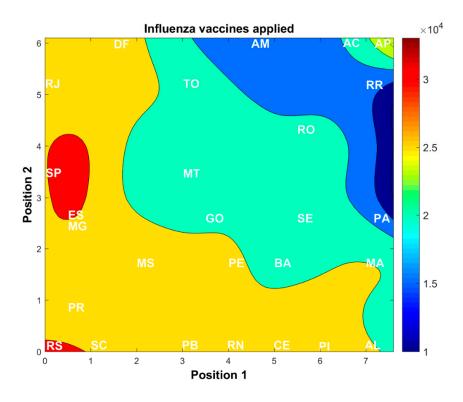
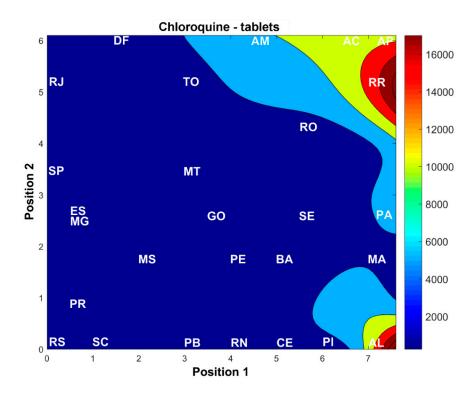


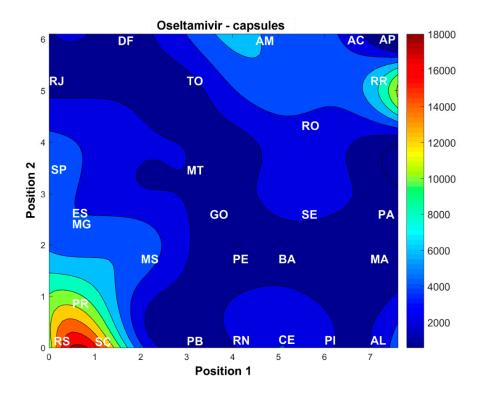
Figure S9 – Weight maps overlaid by topological maps for variable Influenza vaccines distributed by Brazilian federative unit.



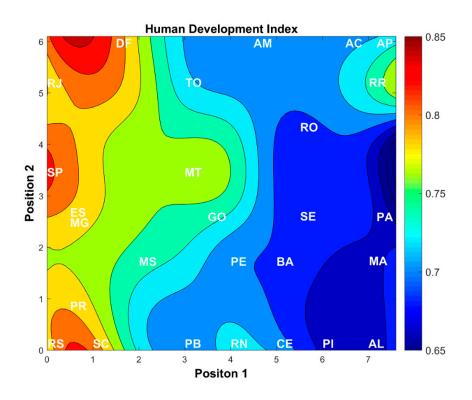
**Figure S10** – Weight maps overlaid by topological maps for variable **Influenza vaccines applied** by Brazilian federative unit.



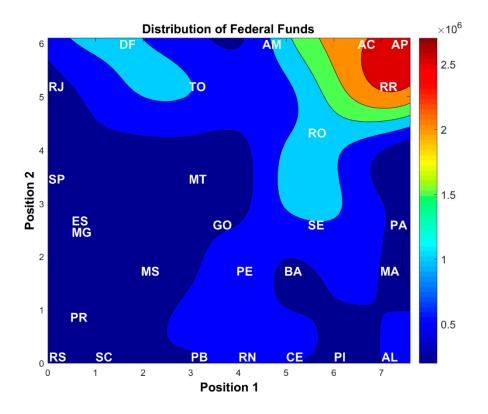
**Figure S11** – Weight maps overlaid by topological maps for variable **Chloroquine tablets** by Brazilian federative unit.



**Figure S12** – Weight maps overlaid by topological maps for variable **Oseltamivir capsules** by Brazilian federative unit.



**Figure S13** – Weight maps overlaid by topological maps for variable **Human Development Index (HDI)** by Brazilian federative unit.



**Figure S14** – Weight maps overlaid by topological maps for variable **Distribution of Federal funds** by Brazilian federative unit.

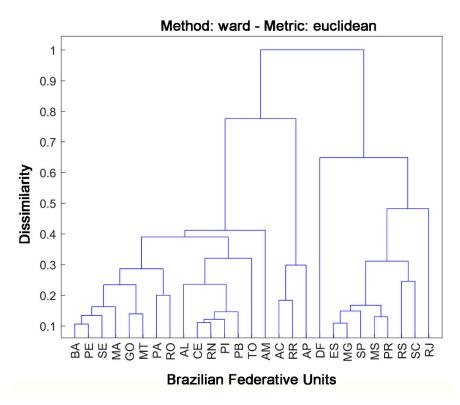


Figure S15 – Dendrogram of an HCA for Brazilian Federative Units.