## Supplemental Appendix online 2

How the districts were categorized-

The districts existing today in Rio de Janeiro, which are presented in the study, were created based on federal law in 1992 for the purpose of organizing the city for planning growth and urban development. The Rio de Janeiro Health Secretariat carries out the city's strategic health planning based on this division

Areas 2.1 and 2.2 are the two areas with the highest Social Development Index, so they were aggregated and classified as the reference. Areas 3.1 and 3.3 are historically areas of great agglomeration and very populated, with shantytowns and showing different homicides rates. As we are one of the Brazilian municipalities showing a high homicide rate in adolescents, we kept them separated. The AP 4.0, 5.1, 5.2, and 5.3, at the time of the study, were new areas in expansion, with fewer people and very few shantytowns, so we aggregated them in one, together with áreas 1.0 and 3.2.