



APPLICATION OF IBGE DATABASES FOR OPERATIONAL PLAN IN COMPLEX SAMPLE STUDY SEROPREVALENCE

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Hantaviruses is an acute viral anthroponozoonosis with a high mortality rate, ranging around 20-70%. Given its high lethality and the lack of studies using probabilistic methods, the serum prevalence studies using statistical resources enable better knowledge person, time and place disease distribution. For rural areas this kind of research is not available. Hantaviruses human population-based seroprevalence study for Brazilian Federal District (DF) was designed with cartographic and population of census tracts, which sample size was 495 people. Considering the blood dropping refusal, it was increased by 20%, and a number of 595 households was recommended. The aim is to present the use of random sampling techniques in hantaviruses Seroprevalence study, at DF, with public data. Sampling plan of 595 addresses randomly select, using complex sampling techniques, combining systematic and simple sampling were applied to prepare household list. Census tracts were selected if they had georeferenced points of probable transmission locations (PTL). DF census tract geographical mesh and public data, including the list address, were obtained from the Brazilian Institute of Geography and Statistics (IBGE) domain. There are no list of each dwellers neither family chief name. Random address were listed for each census tract. The source of the probable transmission locations (PTL) data was DF environmental health surveillance reports. Data sheet and its calculations, laptops, geographic positioning device, IBGE and Google Earth™ images were the tools used. Non-probabilistic sampling was obtained during the field visit. Distribution of 595 household for each one of 81 selected census tracts, using 'selection interval', regarding weighed systematic sampling distribution, produced decimal results for several census tracts. Then the rounding was always done to the upper integer number value, resulting in 631 addresses to visit. The household randomly ordered list had 319 (50.6%) addresses classified as rural and 312 (49.4%) as urban. Virtual maps and 81 lists with specific household addresses were prepared. There were 133 (21.1%) addresses with geographic coordinates, and 453 (71.8%) only with directions. Forty five (7.1%) addresses were not useful. When all addresses of one census tract list were useless others techniques were used to provide substitute addresses. For while, 478 (96.6%) blood samples of randomly sampling were dropped. Devices and data were prepared to support field logistic plan to achieve the study sampling. The free image software and public databases allowed a feasible field logistic plan.

Key words: probabilistic sampling; population-based; complex sampling; hantavirus