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DEVELOPMENT AND UTILITY OF THE ONLINE PRIORITY HEALTH INDEX

Because public health funds are limited we created the priority health Indices (PHIs) for diseases (PHI-DZ) and risk factors (PHI-RF) to prioritize health issues for a specific geographical area or population. Use of PHIs precludes the need to draw indicator comparisons between local and other geographical areas or populations. PHI-DZ for a local area requires calculation of 20 measures and 12 indicators across 51 diseases groups. PHI-RF for a local area requires calculation of 10 measures and 6 indicators across 12 risk factors. PHIs are a weighted measure which harmonizes information from multiple indicators across many diseases or risk factors in two steps. First, we standardize and re-scale indicators to generate dimensionless and positive scores. Second, we used scores to generate PHIs in three ways: the sum of the priority ranked values of original indicators; the product and the sum of squares. PHI-RF has been used to prioritize health issues in Brazil (2015) and Italy (2010). A simplified version of both PHIs has been used in Missouri since 2002. Conducting PHI offline has limited use of the local public health practice. We used PHP and MySQL database to further develop two PHIs web applications. In the applications, we integrated R software for statistical analysis required to generate PHIs. PHIs Applications allow users to upload surveillance data and prioritize health issues locally. It also allows for simultaneous computing PHIs for multiple local areas. We use data from 27 Brazilian capital cities in 2000-2012 to demonstrate PHIs utility as a web-based application.

Biography

Eduardo J. Simoes, is Chair, Stuart Wesbury and HMI Alumni Distinguished Professor of the Department of Health Management and Informatics-University of Missouri School of Medicine (2011-current). His medical degree is from Faculdade de Medicina, Universidade de Pernambuco-Brazil (1976-1981), diploma&master of sciences degree from University Of London School Of Hygiene Tropical Medicine (1986-1987) and master of public health degree from Emory University School of Public Health (1989-1991). He is a fellow of the American College of Epidemiology, reviewer and editor for 12 journals. He published over 100 peer-reviewed publications, eight book chapters and 18 reports. He presented at 150 conferences.

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