

Tool helps public health agencies prioritize health risks

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Public health agencies across the globe are challenged with preventing the spread of chronic diseases while dealing with limited funds and devastating budget cuts. Now, a researcher at the University of Missouri has applied the Public Health Index (PHI) model, a tool he designed that has been adopted by the Missouri Department of Health and Senior Services, to help the Brazilian government identify and prioritize health risks affecting its population. Researcher Eduardo Simoes says if more public health agencies adopted this tool to identify top health risks associated with chronic diseases among their specific populations, limited funding for prevention efforts could be proportionately allocated.

"The PHI model helps ensure that funding for prevention programs is proportionate to the health risks affecting the most people," said Simoes, chair of the Department of Health Management and Informatics at the MU School of Medicine and lead author of the study. "Because funds are limited, [public health](#) programs need to be prioritized. The PHI model uses readily available public health surveillance data to prioritize health issues."

Simoes says the Public Health Index model balances the impact of health risks across criteria of prioritization such as magnitude, severity and urgency of health issues with the effectiveness and cost of interventions, and the community's willingness to address various health risks.

Brazil requested Simoes apply the PHI model to the country's urban

population. Simoes and his colleagues identified the top six health risks for [chronic diseases](#) in Brazilian cities and compared the risks to Brazil's current prevention efforts.

"Using the Public Health Index model, we found hypertension, physical inactivity, insufficient blood pressure screening, high cholesterol, smoking and binge drinking to be the leading burdens that have the highest impact on public health in Brazil," Simoes said. "Our findings present a road map for developing and implementing prevention programs or for accelerating existing old ones."

Simoes says the PHI model harmonizes and simplifies data from hundreds of health indicators to help health officials identify their own health priorities and simplify the process of decision-making process.

"In planning and decision-making, health officials use many tools," Simoes said. "The PHI is a tool that should be used in addition to others because it can highlight the top health priorities for specific regions, which later can be used to justify distributing funds and other resources to address the risks identified."

Simoes' PHI model has been implemented by the state of Missouri since 2000 and has been used in Italy since 2009. Simoes hopes more states, countries and regions will adopt the model since it can easily be applied to local or national settings.

"The PHI model can be used to prioritize chronic disease prevention efforts at the local and national level in Brazil and countries with similar public health surveillance systems," Simoes said.

The study, "A Priority Health Index Identifies the Top Six Priority Risk and Related Factors for Non-communicable Diseases in Brazilian Cities," recently was published in *BMC Public Health*, the journal of

epidemiology and public health.

More information: Simoes, E. J., Bouras, A., Cortez-Escalante, J. J., Malta, D. C., Porto, D. L., Mokdad, A. H., ... Neto, O. L. M. (2015). A priority health index identifies the top six priority risk and related factors for non-communicable diseases in Brazilian cities. *BMC Public Health*, 15(1). [DOI: 10.1186/s12889-015-1787-1](https://doi.org/10.1186/s12889-015-1787-1)

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