Significant inverse association between public spending on health and pandemic influenza mortality

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Pandemic A (H1N1) 2009 mortality rates exhibited wide diversion between countries. Based on data from a total of 30 European countries, a study published in the journal *PLoS ONE* (May 11, 2011) found that the greater the state financial "generosity" to health sector the lower the pandemic influenza mortality.

The study was conducted by a Greek team of researchers; Georgios Nikolopoulos, DDS, MSc, PhD, epidemiologist at the Hellenic Centre for Disease Control and Prevention (HCDCP), Athens; Pantelis Bagos, BSc, MSc, PhD, Assistant Professor at the University of Central Greece, Lamia; Theodoros Lytras, MD, MPH, public health officer at the Department of Epidemiological Surveillance and Intervention, HCDCP, Athens; and Stefanos Bonovas, MD, MSc, PhD, Head of the Department of Epidemiological Surveillance and Intervention, HCDCP, Athens, Greece.

Using data from 30 European countries, the investigators applied advanced statistical methods to examine the relationship between pandemic mortality rates and a set of representative environmental, health care-associated, economic and demographic country-level parameters. The study indicated a significant inverse association between public spending on health and pandemic influenza mortality; i.e. a rise of 100 international dollars in the per capita government expenditure on health was associated with a reduction in the pandemic influenza

mortality rate by approximately 2.8 percent.

This finding adds to the existing evidence that reduced public expenditure allocations to the health sector have adverse consequences for the health of populations. Yet, at the present time of economic recession, governments are called to implement programs of macroeconomic stability balancing their limited budget and, consequently, decreasing public health spending. "The more you spend the more you get" people used to say, but, do government money matter in improving population health? "There are indeed health gains achieved through increased public expenditures on health. Based on the results of the current study and taking also into account the accumulated evidence that public health investments are valuable in saving human lives, policy makers, within the context of economic stabilization, need to safeguard budgetary allocations to the health sector," says Dr. Nikolopoulos.

However, further work needs to be done, to unravel the mechanisms by which reduced government spending on health may have affected the 2009 pandemic influenza mortality. These mechanisms may include, among others, limited access to medical care services, low quality of health system resources, inadequate numbers of health workers, underfunded influenza pandemic preparedness and ineffective public health interventions. As Dr. Bonovas points out "These have long been fundamental concerns for public health, and global health policies should place more emphasis on these issues".

More information: Nikolopoulos G, Bagos P, Lytras T, Bonovas S (2011) An Ecological Study of the Determinants of Differences in 2009 Pandemic Influenza Mortality Rates between Countries in Europe. PLoS ONE 6(5): e19432. doi:10.1371/journal.pone.0019432