

Public health factors may have affected 2016 US presidential election results

October 2 2017

A study led by a Massachusetts General Hospital (MGH) investigator - in collaboration with the [Massachusetts Institute of Technology Department of Political Science](#) - has identified community health as a possible contributor to the surprising results of the 2016 U.S. presidential election. In their analysis published in the open-access journal *PLOS ONE*, the researchers find an association between the public health of a county and the likelihood of a voting shift towards the 2016 Republican candidate, compared with the 2012 Republican candidate.

"Across the country, we found that voters in counties with poor [public health](#) shifted dramatically towards the Republican candidate in 2016, compared with 2012, an effect that was particularly strong in states where the results changed Electoral College votes," says Jason H. Wasfy, MD, MPhil, of the MGH Division of Cardiology, who led the study.

"Although we cannot determine causality from these results, the findings raise the possibility of a role for public [health](#) status in determining [voting behavior](#)."

The authors note that previous studies of relationships between health and voting patterns have found associations between poor health - both physical and mental - and low voter turnout, particularly in older voters. In light of 2016's unexpected shifts in voting patterns in several states - including the best performance for a Democratic presidential candidate in Texas in 20 years and the first victory of a Republican candidate in Wisconsin in 32 years - the researchers investigated potential

connections between [community health](#) and changes in voting patterns between the two elections.

To do this, they combined county-by-county election data for both elections with information from a public health database compiled by the Robert Wood Johnson Foundation, including data collected by the Centers for Disease Control and Prevention. The public health measures used in the analysis were reported days of poor health; the prevalence of food insecurity, obesity and diabetes; [teen birth rates](#), and the age-adjusted mortality rate. Complete data covering both elections was available for 3,009 counties, more than 95 percent of the 3,142 counties or equivalent regions in the U.S.

The primary outcome measured was the difference between the percentage of voters in a county voting for Donald Trump in 2016 and the percentage voting for Mitt Romney in 2012. Across all counties there was an average 5.4 percent shift from Romney to Trump - with 88 percent of counties shifting towards Trump while 12 percent shifted away from Trump. Counties that shifted towards Trump - not all of which were won by the Republican - had higher proportions of white populations, more rural populations and lower average household incomes than those that shifted away from Trump.

In terms of public health measures, counties shifting towards Trump also had higher teen birth rates and age-adjusted mortality, but lower rates of violent crime. Counties shifting towards Trump also appeared to have fewer health care resources, including around half the number primary care physicians, per capita, than did counties shifting away from Trump. This association between public health and voting patterns was strongest in the West and particularly in the Midwest, where major voting shifts contributed to the Republican victory.

"Even after adjusting for factors such as race, income and education,

public health seems to have an additional, independent association with this voting shift towards Trump," explains Wasfy, who is an assistant professor of Medicine at Harvard Medical School. "It's critical to interpret our results as reflecting county-wide ecological associations, rather than individual voting behavior. More than anything, I think these results demonstrate that health is a real issue that can affect people's lives and their decisions. We all need to focus on improving public health as a means of improving people's lives."

More information: Jason H. Wasfy et al, County community health associations of net voting shift in the 2016 U.S. presidential election, *PLOS ONE* (2017). [DOI: 10.1371/journal.pone.0185051](https://doi.org/10.1371/journal.pone.0185051)

Provided by Massachusetts General Hospital

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