



## DECREASES IN PUBLIC HEALTH SPENDING ASSOCIATED WITH MORE DEATHS FROM PREVENTABLE CAUSES

*Analysis of how proposed public health funding reductions in Sedgwick County could lead to more preventable deaths over time*

### Background

At a time when spending on all public programs is being scrutinized and resources are scarce, policymakers often want to know the potential impact of difficult funding decisions. There is usually little evidence available to measure the potential impact of proposed cuts.

Anticipating the impact of reductions in public health spending can be especially difficult, in part because the services provided are often preventive in nature and the benefits may be realized gradually over a long period of time. Many other factors in a community also influence how healthy we are, including the economy, housing options, transportation, crime and environmental conditions.

### Public Health Funding and Preventable Deaths

Given the recent attention on the proposed reduction in public health spending in Sedgwick County (KS), this topic has gained relevance and urgency. Fortunately, there is a study that was published in a highly respected, peer-reviewed journal in 2011 that explored this issue (Mays, G., 2011).

The study analyzed information from more than 2,000 communities in the United States

to determine the relationship between funding levels for public health services and deaths from some preventable causes. The basic goal was to understand whether more spending on public health could prevent deaths from the kinds of things that you would expect public health services to prevent.

In short, the research showed that increased spending by local public health agencies over the thirteen-year period studied was linked to statistically significant declines in deaths from some preventable causes such as infant mortality, heart disease, diabetes and cancer. Increased local public health spending was also associated with declines in influenza deaths and deaths from all causes, but these findings were not statistically significant. Increased spending was not associated with a change in deaths from Alzheimer's disease and other causes not likely to be affected by public health interventions.

### Applying the Model in Sedgwick County

This analysis explores the potential impact of proposed reductions in public health spending in Sedgwick County using the model in the Mays study. Budget figures were obtained from the Sedgwick County Health Department covering the period 2013-2015.

“ Public health encompasses a broad array of programs designed to prevent the occurrence of disease and injury within communities. But policymakers have little evidence to draw on when determining the value of investments in these program activities.

- Mays, G., et al. (2011)



To reduce the effect of year-to-year variations, the 2016 proposed budget was compared to the average of the budgets for the previous three years.

Mortality and population numbers were obtained from the state vital statistics system. The most recent mortality data are from 2011, 2012 and 2013. Population data is also available for 2014. To reduce the effect of year-to-year variations, a three-year mortality average was calculated for the period 2011-2013.

Applying the model from the Mays study, the proposed reductions in Sedgwick County public health spending were used to estimate the expected change in deaths from certain preventable causes.

Based on this model, over time, the reduced investment in public health would be expected to lead to:

**2** | Additional deaths per year from diabetes.

**5** | Additional deaths per year among infants.

**17** | Additional deaths per year from cancer.

**41** | Additional deaths per year from heart disease.

Source: Mays, G., and Smith, S., (2011). Evidence Links Increases In Public Health Spending To Declines In Preventable Deaths. *Health Affairs*, 30, no.8 (2011):1585-1593.

## Limitations of the Analysis

As with every study, there are limitations to this one. The timing of the health effects are difficult to pinpoint (e.g., when deaths could occur). The national study estimates the average annual mortality effects over a 13-year period, but those effects may not be uniform as to their occurrence during the period. Effects on some of the causes of death may be more immediate (e.g., infant mortality) and for other causes of death, the effects may accumulate over time. Also, the effect of sustained cuts could be different from the effect of short-term cuts.

In addition, the model assumes that the conditions and factors that researchers examined in the national study would have the same effect in Sedgwick County, but local variations could cause a difference in the exact effects of reductions in public health funding on mortality.

## Conclusion

Budget decisions have real consequences. We hope that this analysis provides useful information to anticipate the potential effects of reductions in public health spending in Sedgwick County. Furthermore, the information available from the national model is also relevant to the many other counties and states around the country facing similar situations. Having this kind of information can be useful to decision-makers facing difficult budget decisions.

### ABOUT THE FACT SHEET


This brief is based on work done by Gianfranco Pezzino, M.D., M.P.H., Cheng-Chung Huang, M.P.H., and Robert F. St. Peter, M.D. It is available online at [www.khi.org/policy/article/fact-sheet-decreases-in-public-health-spending-associated-with-more-deaths-](http://www.khi.org/policy/article/fact-sheet-decreases-in-public-health-spending-associated-with-more-deaths-).

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