

The role of public
health improvements
in health advances:
the 20th century
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Summary of the Article

Mortality rates in the United States declined substantially during the late 19th century and early 20th century compared to any period in the US history. However, there is scanty evidence to pin point the causal factors that resulted in these improvements in US mortality rates during that period. In the wake this view, Cutler and Miller (10) embarked on investigating the causal influence that clean water technologies, especially chlorination and filtration, had on improving the mortality rates in major cities in the United States during the early century. Cutler and Miller (2005) conducted their study on the assumption that the introduction of chlorination and water filtration systems resulted in substantial declined in mortality rates, which was adopted as a pre-explanation for the about 50 percent reduction in the mortality cases during the period 190-1936.

In order to have a better understanding of the relationship between mortality and clean water, Cutler and Miller (8) analyzed data regarding the sanitary interventions that were matched to deaths by cause, which was achieved using annual mortality statistics gathered in the selected areas by age, cause (these were available from the Census Bureau's Mortality Statistics from 1900 to 1936. The results of the study pointed out that that clean water played an integral role in reducing mortality between the years 1900 and 1936, reducing infant mortality by about 75 percent and reducing child mortality by 66 percent. It is apparent that the magnitude of these effects is striking. Basing on these findings, Cutler and Miller (15) asserts that clean water could have played an integral role in almost eradicating typhoid fever during the late 19th century and early 20th century. In addition, Cutler and <https://assignbuster.com/the-role-of-public-health-improvements-in-health-advances-the-20th-century-united-states/>

Miller (12) maintain that the impact of clean water on the total rates of mortality is far much reater than just reducing the typhoid effect alone. Decreases in typhoid fever resulting from clean water accounted for just 2 percent of the total reduction in mortality during the period under study. After this initial analyses, Cutler and Miller (2005) explore the behavioral responses associated with clean water and their findings supported the aspect of a multiplier effect linked to public interventions by: (a) increasing the returns to individual health behaviors; (b) and that public health interventions tend to impose an increase in these individual health behaviors. In addition, estimates pointed out that the social rate of return of clean water technologies was relatively larger than 23 to 1 with cost per life savings of almost \$ 500 (equivalent to the 2003 dollar value).

Overall, the results of the study Cutler and Miller (20) pointed out that clean water technologies played an integral role in reducing the mortality rates in the US. The study provided a framework for public health policy intervention in the contemporary America and worldwide.

Critique of the Article

A major strength of the study is that it controlled all the other factors that would have provided alternative explanations for the reduction in mortality rates during 1900-1936. The study commences by highlighting the limitations of other explanations to the phenomena and embarks on the selection of a model to explain the occurrence and takes into consideration the confounding factors. For instance, the study first evaluates the effect that clean water had on cause-specific and total mortality after which it

explores the behavioral responses of clean water; this systematic approach is helpful in addressing the confounding variables. Basing on this systematic approach that the authors adopted when conducting the research, I find the author's argument convincing; this is because this research had minimal limitations compared to other models adopted to explain the historical decline in US mortality during 1900-1936. The author acknowledges that other forces besides healthcare were at work and goes ahead to critically and empirically evaluate them prior to settling on the role of clean water technologies.

The only limitation of the study stems from the weaknesses in the methodology identified by the author. For instance, scanty information regarding municipals implementation of clean water technologies; different times for various cities implementing clean water technologies; different cities using different clean water technologies. Perhaps, the authors could have compiled their data independently for each city and basing the specific clean water technology. Instead, the author generalized clean water technologies and attempted to be specific with regard to mortality causes. The findings could have been more specific and helpful if the study could have paired, say, for a given city, a particular clean water technology (such as filtration) and how it correlates with specific mortality rates. Such an approach could have been beneficial in identifying which particular clean water technology was instrumental in the decline of the mortality rates in the United States during the period under study.

Besides investigating the role of specific clean water technologies in

reducing mortalities, a follow up study on the topic could include <https://assignbuster.com/the-role-of-public-health-improvements-in-health-advances-the-20th-century-united-states/>

investigating why, despite the substantial health returns associated with public health interventions, do they constantly fail? In addition, further studies could embark on exploring the effectiveness of public health interventions in terms of cost and health outcomes; this would be helpful in ascertaining the specific public health interventions needed to address specific public health issues. Follow up studies could also assess how government initiatives such as education and mass campaigns can be used to improve the effectiveness of these health-specific interventions.