ABSTRACT

Do Areas with More Primary Care Physicians have Lower Cardiovascular and Cancer Mortality?

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INTRODUCTION

There are an estimated 647 000 deaths in the United states from cardiovascular disease (CVD) each year and 606 000 from cancer in 2019 [2,3]. Primary, secondary and tertiary prevention are all independent factors in reducing overall mortality among various diseases such as cancer and CVD. Primary care physicians (PCP) are generally the first point of contact between the patient and health care system and are in an optimal position to practice prevention through managing risk factors, detection, and appropriate use of specialists. According to the Association of American Medical colleges (AAMC), the United States would currently need an additional 95,000 doctors, including PCPs, if health care use patterns equalized across race, insurance coverage and geographic location which are also known individual risk factors for CVD and cancer mortality [4]. Hence, we hypothesize that varying degree of access to primary care physicians at county level in the United States can have an effect on the patterns of CVD and cancer mortality.

METHODS

The number of PCPs at county level in the United States were obtained through County Health Rankings and Roadmaps Data. All the registered PCPs with either MD or DO degrees were included in the analysis. County level, age-standardized, mortality data for cardiovascular and oncological diseases were obtained using National Vitals Statistics System. Using this data, linear regression models were constructed to assess the association between PCPs/10,000 population, and cardiovascular and oncological mortality, adjusting for socio-demographic factors.

RESULTS

After adjusting for socio-demographic factors such as sex, race, median household income, percentage of uninsured adults and urban-rural distribution, it was noted that a higher number of PCPs/10,000 population was associated with lower cardiovascular mortality ($P < 0.001$, $\beta = -27.7$) and cancer mortality ($P < 0.001$, $\beta = -1.2$).

CONCLUSION

Higher number of PCPs translates to lower mortality outcomes for cardiovascular and oncological diseases. Policy makers may use this data to direct resources to counties with poor primary care facilities and higher mortality rates. Decreasing barriers to better primary care may be a pertinent step in improving cardiovascular and cancer mortality.

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