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Publication Date

2023-11-30

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Climate Change in Healthcare; Who Does it Really Affect?

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ABSTRACT

The issue of climate change is persistent, and its effects on the general population as a whole are imminent. Climate change affects everything, from our health, to economies, and even the way we live together as a society. The paper outlines the profound, yet intricate impacts that climate change has brought upon healthcare, highlighting the challenges faced by individuals living with these rapid environmental shifts. It goes into detail in regards to the mental and physical health implications, the disproportionate effects on the most vulnerable communities, and the overall increasing pressure building on these healthcare industries. Urgent and adaptive strategies are a necessity for healthcare to effectively combat climate change and its impact on the world as a whole.

INTRODUCTION

In our exploration of climate change's impact on healthcare, we uncover its subtle yet profound effects. This paper highlights the struggle of healthcare systems to keep pace with rapid environmental changes, exacerbating existing health issues and creating new challenges. We delve into the disproportionate effect on vulnerable communities, the increased strain on healthcare facilities, and the mental and physical toll on individuals across various demographics. By weaving together scientific findings, policy discussions, and real-world impacts, we aim to shed light on the urgent need for adaptive strategies in healthcare to address the multifaceted challenges posed by climate change.

DISCUSSION

In a 2022 literature review published in Science Direct [1], Guihenneuc et al. found that climate change has had a severe negative impact on healthcare facilities. Both mitigation and

adaptation steps are needed to minimize the impact of climate change on patient care/outcomes. As public perception and awareness of climate change has grown, so too has the database on scientific literature; the number of articles on climate change and health grew by over 10,000 in the period between 1999 and 2021. The main climate hazards recognized across literature: A) Warming and heatwaves, B) Droughts, C) Wildfires, D) Storms, hurricanes and cyclones, E) Floods and sea-level rise, and F) Other indirect effects. In this review, the authors had several key findings, notably that there are 3 main ways in which climate change impacts health: i) direct impacts such as injuries or illnesses caused by extreme weather events, ii) effects mediated through natural systems such as air pollution or vector-borne disease, and iii) effects mediated by human systems such as mental health and undernutrition. Every aspect of healthcare has been, and will continue to be, affected by climate change. This is especially important as the authors found that exposure has increased more rapidly than vulnerability has decreased, indicating the likelihood of more adverse health events if policymakers do not take urgent action.

In further discussion of the impact of climate change on healthcare, it is important to note how these impacts can trickle down to the general public as a whole. Climate change has left millions displaced and without proper healthcare. In the article “The Impact of Climate Change on Our Health and Health Systems” [2], the authors Shanoor Seervai, Lovisa Gustafsson, and Melinda Abrams detail the effects of climate change on both our mental and physical health. Physical health is affected by extreme climate, with respiratory and cardiovascular issues from air pollution on the rise, injuries and disease from flooding, and high temperatures leading to an increase in heat strokes. Beyond the physical toll, millions of people are displaced every year and forced to move due to these extreme weather events. Alterations to the physical environment are thought to cause emotional distress, as individuals are left with no place to call home. With climate change only increasing the prevalence of these health issues and more, the healthcare system must be well-equipped to handle the challenge. However, climate change seems to be damaging an already overwhelmed system. Healthcare costs are being pushed up as more people come with issues caused by extreme weather. Extreme weather can even cause hospitals to temporarily close, leaving those that are open extremely overworked and under-resourced. Healthcare systems have to be ready to take on these challenges; this means investing in resources to prepare for upcoming climate change hurdles and prioritizing individuals that will be most affected in the coming years.

In discussion of a similar perspective from the previous article, in a 2023 New York Times article written by Noah Weiland, “Workers Exposed to Extreme Heat Have Few Protections,” [5] Weiland discusses the effects of skyrocketing temperatures on workers and the government’s attempts to establish new safety regulations. He further examines the specific struggle of airport workers in the US in dealing with unprecedented extreme heat, detailing the physical and mental consequences of pushing their bodies in unsafe conditions. Rising temperatures and heat waves seem to more sharply affect those with preexisting health conditions like epilepsy and diabetes, both directly and indirectly, but also cause general discomfort and struggle for workers in general. Certain states, like California, have passed regulations to prevent health concerns, yet many still lack proper protections for workers. The Occupational Safety and Health Administration (OSHA) underwent a myriad of steps in order to apply new standards, meaning it might take a considerable amount of time before these changes are put into practice. The damage done by heat waves can take the form of economic losses, dips in productivity, and even potential deaths. These consequences are especially apparent for airport workers, who have to spend long hours outside and conduct strenuous activities. Many companies are apathetic to these issues, which has led to many unfortunate and preventable injuries for airport employees. To put an end to the pressing harms facing airport workers and employees in general, reformers could target the climate or workplace side of the issues.. Another possible avenue for worker efforts is in the root of the larger issue itself, the climate change space, where individuals could push for policy reform in order to create greener workplaces and slow the rate of climate change for all.

In consideration of more specific populations of individuals, people who suffer from asthma are also subject to the negative effects of climate change. Climate change is known to have a significant impact on a variety of health conditions, with asthma being one of the most affected. Asthma is a chronic disease, affecting its patients throughout their lives with both financial and lifestyle obstacles. A national scale, multi-sector Environmental Protection Agency study [3] looked at how extreme heat, air quality, flooding, and other factors are projected to affect children’s asthma at both 2°C and 4°C warming. It was found that climate change is expected to increase the incidence of asthma in children between 4% and 11% respectively, with 17-30% increases in emergency room visits per year. Having asthma has a lifetime cost estimate of \$36,000 USD [4], which is not cheap for anyone that is impacted by these changes. In

consideration of the rise of asthma related issues, the Asthma and Allergy Foundation of America is working with the EPA to strengthen the monitoring of ambient air quality and working to reduce greenhouse gas emissions by 50% from 2005 by 2030.

CONCLUDING REMARKS

In concluding our depiction of the intersection of climate change and healthcare, the imperative for immediate action becomes clear. The far-reaching implications, particularly the disproportional impact on vulnerable demographics and the strain imposed on healthcare infrastructure, necessitate urgent attention and intervention. The depth of this issue extends beyond the blatant environmental impacts; it underscores the exacerbation of existing health discrepancies and the emergence of novel health challenges. It is incumbent upon us to enact proactive policy reforms, implement adaptable workplace measures, and bring community-centric initiatives to light. This comprehensive analysis serves as a demand for action, emphasizing the collective need for cohesive efforts and robust policies to fortify public health resilience amidst an everlasting shifting climate.

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