



The Impact of Coronavirus Disease 2019 on the Treatment of Children With Leukemia: A Call for Action

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Dear Editor-in-Chief,

I am writing to draw your attention to the impact of coronavirus disease 2019 (COVID-19) on the treatment of children with leukemia from the onset of the pandemic to the present day, as well as its potential future effects on a global scale. According to evidence, leukemia is the most common type of childhood cancer, and COVID-19 has had a considerable effect on the treatment of children with leukemia. More precisely, the pandemic has disrupted healthcare systems worldwide, causing delays in diagnosis, treatment, and follow-up care for these children. Additionally, the fear of contracting COVID-19 has led to a decrease in hospital visits and reluctance to seek medical attention, probably resulting in delayed diagnosis and treatment of leukemia.¹ For instance, the number of new leukemia cases diagnosed during the first year of the pandemic decreased by approximately 30% compared to the pre-pandemic period.²

Moreover, COVID-19 has impacted the delivery of chemotherapy and other treatments for children with leukemia. Therefore, treatment protocols have been modified to minimize the risk of infection, resulting in changes in treatment schedules and regimens. These actions can lead to suboptimal treatment outcomes and potentially affect long-term survival rates.³ Before the pandemic, standard treatment regimens were followed without significant interruptions. However, there was an average delay of 15% in scheduled chemotherapy sessions during the pandemic.^{4,5}

Furthermore, the pandemic has reduced funding for childhood cancer research and clinical trials, as resources are redirected toward COVID-19 research and treatment efforts. Such a reduction can have long-term consequences for developing new and innovative treatments for childhood leukemia.⁶ For example, funding for leukemia research experienced a reduction of nearly 25% during the pandemic period compared to previous years.⁷

In general, the impact of COVID-19 on childhood leukemia treatment may be felt for years to come. It

should be noted that delayed diagnosis and treatment can lead to more advanced disease and poorer outcomes, while modifications to treatment protocols may result in suboptimal outcomes. In addition, reducing funding for childhood cancer research may slow progress toward developing new and more effective treatments. Projections indicate that if current trends continue, the post-pandemic period may witness a 20% increase in advanced leukemia cases due to delays in diagnosis and treatment during the pandemic.⁸

In conclusion, the COVID-19 pandemic has had a significant effect on the treatment of children with leukemia, from delays in diagnosis to changes in treatment protocols and reduced funding for research. Healthcare systems and governments must cooperate to address these challenges and ensure that this group of children continues to receive the best possible care.

Competing Interests

The author of this article is a member of the editorial board of the *Epidemiology and Health System Journal*. However, the review and publication process for this article has been conducted in the same manner as that for other articles in the journal, ensuring that there are no differences in the review process.

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