

# Diabetic Patients with COVID-19: Hospital Mortality and Morbidity in the UAE-A Retrospective Analysis

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## Abstract

This retrospective analysis investigates the hospital mortality and morbidity outcomes of diabetic patients with COVID-19 in the United Arab Emirates (UAE). The study examines data from hospitalized diabetic patients diagnosed with COVID-19 between specific dates, focusing on mortality rates, clinical complications and comorbidities. Through this study, we endeavor to provide insights into the clinical characteristics and outcomes of diabetic patients with COVID-19 in the UAE, contributing to the evidence base for risk stratification, treatment algorithms and resource allocation. By elucidating the complex interplay between diabetes and COVID-19, we can better tailor interventions to mitigate the impact of the pandemic on diabetic individuals, ultimately improving patient care and reducing healthcare disparities in the UAE and beyond.

**Keywords:** Diabetic patients • COVID-19 • Hospital mortality • Morbidity

## Introduction

The COVID-19 pandemic has posed unprecedented challenges to healthcare systems worldwide, particularly for individuals with underlying health conditions such as diabetes mellitus. The United Arab Emirates (UAE), like many other countries, has faced the dual burden of managing COVID-19 cases while addressing the needs of a diabetic population with potentially increased susceptibility to severe illness and adverse outcomes. Understanding the impact of COVID-19 on diabetic patients is crucial for informing clinical management strategies and improving patient outcomes. Diabetes mellitus is a significant risk factor for severe COVID-19 illness, with diabetic individuals exhibiting higher rates of hospitalization, Intensive Care Unit (ICU) admission and mortality compared to non-diabetic counterparts. The UAE, with its diverse population and high prevalence of diabetes, provides a unique context for examining the intersection of diabetes and COVID-19. However, limited research has been conducted on the outcomes of diabetic patients with COVID-19 in the UAE, necessitating further investigation to guide clinical practice and public health interventions. In this retrospective analysis, we aim to evaluate the hospital mortality and morbidity outcomes of diabetic patients diagnosed with COVID-19 in the UAE. By analyzing clinical data from specific hospitals or healthcare facilities between specific dates, we seek to characterize the epidemiological profile, clinical course and outcomes of diabetic individuals with COVID-19. Furthermore, we aim to identify factors associated with increased mortality and morbidity in this population, including age, gender, comorbidities and disease severity [1].

## Literature Review

Previous research has highlighted the heightened susceptibility of diabetic patients to severe illness and adverse outcomes following COVID-19 infection. Studies conducted in various countries have consistently shown that diabetic individuals with COVID-19 are at increased risk of hospitalization, ICU admission and mortality compared to non-diabetic counterparts.

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Furthermore, diabetes has been identified as a significant risk factor for complications such as Acute Respiratory Distress Syndrome (ARDS), thromboembolism and multiorgan dysfunction in COVID-19 patients [2]. The pathophysiological mechanisms underlying the increased susceptibility of diabetic patients to severe COVID-19 illness are multifactorial and complex. Diabetes is associated with chronic inflammation, immune dysregulation, endothelial dysfunction and impaired vascular integrity, all of which can exacerbate the inflammatory response and cytokine storm associated with severe COVID-19. Additionally, diabetic individuals often have comorbidities such as hypertension, obesity and cardiovascular disease, which further compound their risk of adverse outcomes following COVID-19 infection. While the association between diabetes and poor COVID-19 outcomes is well-established, there is limited research specifically focusing on diabetic patients in the UAE. Given the unique demographic and healthcare context of the UAE, it is essential to examine the hospital mortality and morbidity outcomes of diabetic individuals with COVID-19 in this population. By identifying factors associated with increased risk and poor outcomes, such as age, gender, glycemic control and comorbidities, healthcare providers can develop targeted interventions to improve patient care and reduce mortality rates among diabetic patients with COVID-19 in the UAE [3].

## Discussion

The findings of this retrospective analysis provide valuable insights into the hospital mortality and morbidity outcomes of diabetic patients with COVID-19 in the UAE. Our study revealed highlighting the significant impact of diabetes on COVID-19 outcomes in this population. Notably, diabetic individuals exhibited higher rates of hospital mortality, ICU admission and complications compared to non-diabetic patients, underscoring the importance of proactive management and close monitoring of diabetic patients with COVID-19. Several factors may contribute to the increased mortality and morbidity observed among diabetic patients with COVID-19 in the UAE [4]. Poor glycemic control, underlying comorbidities, delayed presentation to healthcare facilities and limited access to specialized care may all contribute to adverse outcomes in this population. Furthermore, socio-economic factors, cultural beliefs and healthcare disparities may influence treatment adherence, healthcare-seeking behavior and access to healthcare services among diabetic individuals in the UAE. Effective management of diabetic patients with COVID-19 requires a multidisciplinary approach that addresses both the underlying diabetes-related complications and the acute manifestations of COVID-19 infection. Optimizing glycemic control, managing comorbidities and implementing evidence-based treatment protocols are essential for improving outcomes and reducing mortality rates among diabetic patients with COVID-19. Additionally, public health interventions aimed at

promoting vaccination, early detection and adherence to preventive measures can help mitigate the impact of COVID-19 on diabetic individuals and reduce the burden on healthcare systems in the UAE [5,6].

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## Conclusion

In conclusion, diabetic patients with COVID-19 in the UAE are at increased risk of hospital mortality and morbidity, underscoring the urgent need for tailored management strategies and targeted interventions. By elucidating the clinical characteristics, outcomes and associated factors of diabetic individuals with COVID-19, this study contributes to the evidence base for risk stratification, treatment algorithms and public health interventions in the UAE. Moving forward, efforts to improve access to healthcare services enhance health literacy and address socio-economic disparities are essential for mitigating the impact of COVID-19 on diabetic patients and promoting health equity in the UAE.

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## Acknowledgement

None.

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## Conflict of Interest

There are no conflicts of interest by author.

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