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**Abstract**

# Pattern of Comorbidities and the Impact on Outcomes in Patients With COVID-19 in Babel Governorate, Iraq, in 2020

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**Abstract**

**Background:** Comorbidities pose a major clinical challenge to the care and treatment of patients with COVID-19.

**Objective:** This study aimed to evaluate the effects of common comorbidities on the severity, outcome, and length of stay in the hospital for patients with COVID-19 in Babel Governorate, Iraq, in 2020.

**Methods:** All laboratory-confirmed cases of COVID-19 in the 2 COVID-19 hospitals in Babel Governorate from March through September 2020 were included. We developed a form to document sociodemographic data, clinical presentation, severity, comorbidities, length of hospital stay, and outcomes.

**Results:** A total of 2574 patients were included; 1581 (61.4%) were men. The mean age was 48.7 (SD 16.4) years. There were 1212 (47.1%) severe cases and 489 (19%) critical cases. There were 1543 (59.9%) patients with no comorbidity, 536 (20.9%) patients with 1 comorbidity, and 495 (19.2%) patients with 2 or more comorbidities. The most common comorbidity was diabetes mellitus (643/1599, 25%), followed by hypertension (598/1599, 23.4%). The proportion of severe or critical cases among the patients with comorbidities was 84% (865/1031) compared to 54.1% (836/1543) among the patients with no comorbidity ( $P<.001$ ). About 12% (125/1031) of patients with comorbidities had a mean hospitalization time >2 weeks compared to the 8% (123/1543) of patients with no comorbidity ( $P<.001$ ). The case-fatality ratio was 26.4% (272/1031) in patients with comorbidities compared to 10.6% (163/1543) in patients with no comorbidity ( $P<.001$ ).

**Conclusions:** Comorbidity is a significant predictor of serious hospital course and fatal outcomes in patients with COVID-19. Patients with comorbidities must be vigilant with preventive measures and should be prioritized for COVID-19 vaccination.

(*iproc* 2022;8(1):e36511) doi: [10.2196/36511](https://doi.org/10.2196/36511)

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**KEYWORDS**

comorbidities; COVID-19; Iraq; hypertension; diabetes; 2020

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*Edited by Y Khader; this is a non-peer-reviewed article. Submitted 16.01.22; accepted 24.01.22; published 24.02.22.*

*Please cite as:*

Hussein A, Lami F

Pattern of Comorbidities and the Impact on Outcomes in Patients With COVID-19 in Babel Governorate, Iraq, in 2020

*iproc* 2022;8(1):e36511

URL: <https://www.iproc.org/2022/1/e36511>

doi: [10.2196/36511](https://doi.org/10.2196/36511)

PMID:

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