

Presenting Characteristics, Comorbidities, and Outcomes Among 5700 Patients Hospitalized With COVID-19 in the New York City Area

Richardson S, Hirsch JS, Narasimhan M, Crawford JM, McGinn T, et al. *JAMA*. 2020; 323(20):2052-9.

Introduction:

The recent emergence of COVID-19 in the United States (US) has challenged clinicians who are treating patients with this new virus. As of April 20, 2020, more than 30% of all US cases were in New York (NY). Data from these NY cases provide healthcare systems and clinicians with valuable insights into the management and outcomes for these seriously ill patients.

Study design:

Case series of patients with COVID-19 admitted to 12 hospitals in the Northwell Health System in New York City, Long Island, and Westchester, NY

Study population:

Patients with confirmed severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infection who required hospitalization (admitted between and including March 1 and April 4, 2020)

Results:

5700 patients were included in the study; the median age was 63 years (IQR range 52-75), 39.7% were female.

The most frequent comorbidities for hospitalized patients were hypertension (56.6%), obesity (41.7%), and diabetes (33.8%). Median score on the Charlson Comorbidity Index was 4 points, which corresponds to a 53% estimated 10-year survival.

Mortality was 0% (0/20) for male and female patients younger than 20 years. Mortality rates were higher for male compared with female patients at every 10-year age interval older than 20 years.

During hospital triage, 1734 patients (30.7%) had a fever, 986 (17.3%) had a respiratory rate greater than 24 breaths/minute and 1584 (27.8%) required oxygen therapy. Respiratory virus co-infection was 2.1%.

Of the 2634 patients who were discharged or died by the end of the study:

- 373 patients (14.2%) were treated in the intensive care unit (median age 68 years, 33.5% female)
- 320 patients (12.2%) received mechanical ventilation
- 81 patients (3.2%) received kidney replacement therapy
- 553 (21%) died

At study end (April 4, 2020), of patients that required mechanical ventilation 1151(20.2%), 831 (72.2%) remained in the hospital, 38 (3.3%) were discharged alive, and 282 (24.5%) died.

- Mortality rate for patients who had been on mechanical ventilation in the 18-65 age group was 76.4% versus 97.2% for those older than 65 years.
- At follow-up (median 4.4 days), 45 patients (2.2%) were readmitted (3-day median time to readmission).

Patients with diabetes who died were more likely to have required intensive care and/or mechanical ventilation vs. patients with hypertension who died.

Conclusions:

Data on COVID-19 disease characteristics, comorbidities, and outcomes provide clinicians with valuable information to help optimize the management of these seriously ill patients.

Summary prepared by Nestlé Health Science.

The complete study may be accessed online:

<https://jamanetwork.com/journals/jama/fullarticle/2765184>