

Effect of COVID-19 outbreak on emergency department attendances in an Italian academic hospital

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Background:

Coronavirus disease 2019 (COVID-19) is a viral infection caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). The disease was discovered during the 2019 outbreak in Mainland China and the first cases were reported in Italy on February 21, 2020. This study evaluates the emergency department (ED) attendances of an academic hospital in northern Italy before and after media reported the news of the first infected patients in Italy.

Methods:

Adult attendances in ED in February 2020 were analysed dividing the period into 4 weeks (days 1-7, 8-14, 15-21, 22-28) compared with the same periods in 2019. The visits were analysed separately according to the Italian colour code of triage: white (non-critical), green (low-critical), yellow (medium critical), red (life-threatening). The mean weekly number of attendances was compared with t-test.

Results:

February 2020 total ED attendances compared with February 2019 were 4865 vs 5029 (-3.3%), of which white codes were 834 vs 762 (+9.4%), green 2450 vs 2580 (-5.0%), yellow 1427 vs 1536 (-7.1%), red 154 vs 151 (+2.0%). February 2020 weekly mean ED attendances compared with February 2019 had statistically significant difference only in the fourth week (days 22-28) for green codes (75 vs 92, $p=0.007$) and yellow codes (41 vs 52, $p=0.047$), not for white (27 vs 26, $p=0.760$) and red codes (5 vs 5, $p=0.817$). The first three weeks of February 2020 compared with 2019 showed no statistically significant difference in weekly mean ED attendances.

Conclusions:

There was a significant reduction of green and yellow codes attendances at ED in the fourth week of February 2020, corresponding to the initial phase of Italian COVID-19 outbreak. The fear of contracting SARS-CoV-2 by attending the ED probably acted as a significant deterrent in visits, especially for low and medium critical patients. Additional data are required to better understand the phenomenon, including the behaviour of non-critical attendances.

Key messages:

- A reduction of green and yellow codes attendances was reported during initial phase of COVID-19 outbreak in an Italian academic hospital.
- Fear of contracting COVID-19 infection in a hospital setting could impact on emergency department attendances.