Upgrades to Intensive Care: The Effects of COVID-19 on Decision-Making in the Emergency Department

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Background

- The initial surge of critically ill patients in the COVID-19 pandemic severely disrupted processes at acute care hospitals.
- This study examines the frequency and causes for patients upgraded to intensive care unit (ICU) level care following admission from the emergency department (ED) to non-critical care units.

Methods

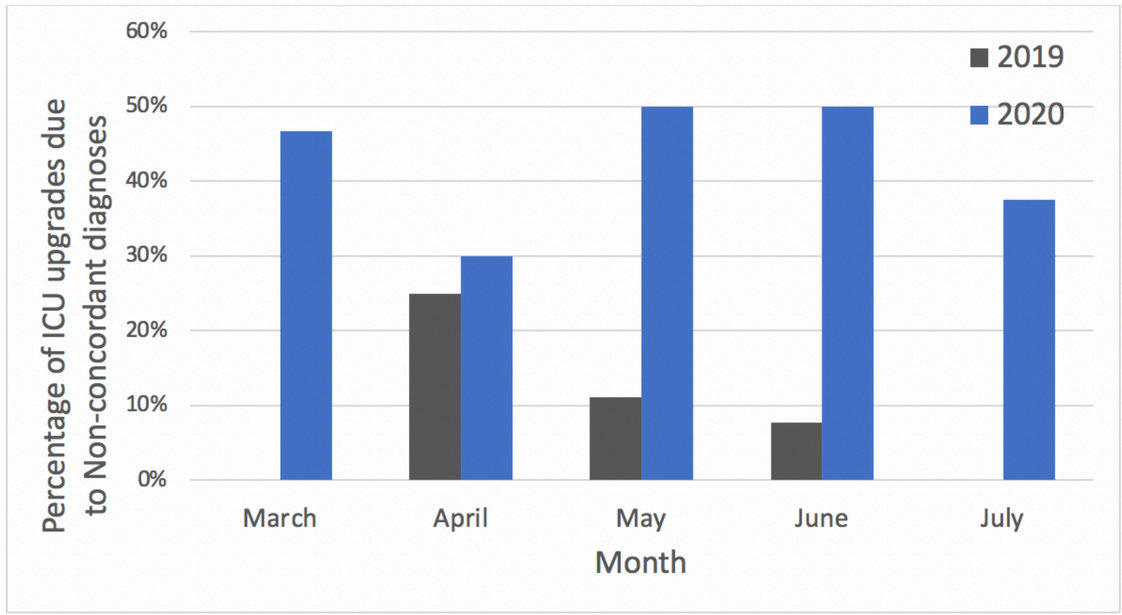
- We performed a retrospective chart review of patients upgraded to an ICU within 48 hours of ED admission during the initial 5 months of the COVID-19 pandemic.
- The number of ICU upgrades per month was determined, including the percentage of upgrades noted to have non-concordant diagnoses. Patterns of upgrades were categorized for cognitive biases by reviewers.

Cognitive Bias	Definition
Availability Heuristic	Overdiagnosis of COVID-19 in context of frequency and severity of this disease
Anchoring Bias	Diagnosis made based on a specific feature of history, physical examination or diagnostic finding
Premature Closure	Diagnosis made before all available data received that would have been available to physician
Confirmation Bias	Relevant information inconsistent with working diagnosis was discounted

Results

- There was **no statistically significant change in the overall number of ICU upgrades** in 2019 and 2020 (p=0.264).
  - 2020: 19 out of 46 ICU upgrades (41.3%) were associated with non-concordant diagnoses. 5 of these cases were associated with a COVID-19 diagnosis.
  - 2019: 6 out of 54 upgrades (11.1%) demonstrated non-concordant diagnoses. **This difference was statistically significant (p = 0.025).**

Percentage of intensive care unit (ICU) upgrades due to non-concordant diagnoses.



Cognitive Bias	2019		2020	
	Number of Cases	Percentage of Cases	Number of Cases	Percentage of Cases
Premature Closure	3	50.0%	13	72.2%
Anchoring	4	66.7%	11	61.1%
Confirmation Bias	2	33.3%	10	55.6%
Availability Heuristic	1	16.7%	3	16.7%

Conclusion

Though it is early to speak of perspective gained from the COVID-19 experience, this review suggests some degree of change in thought processes working under pandemic conditions.