

Decision Fatigue among Emergency Physicians: Reality or Myth

Prashant Nasa¹, Nimisha Abdul Majeed²

Keywords: Burnout, Clinical decision making, Communication, Emergency department, Emergency physician, Fatigue, Mental health.
Indian Journal of Critical Care Medicine (2023); 10.5005/jp-journals-10071-24526

INTRODUCTION

Shift work is routine in certain branches of healthcare that work at the front line. The Emergency Department (ED) is a critical gateway to healthcare services, with emergency physicians (EP) playing a pivotal role in patient management. EPs, the primary caregivers in the healthcare system, are involved in many clinical and non-clinical decision-making during each shift.

There are several crucial reasons why ED is different from other departments. Since patients with medical or surgical emergencies usually enter a healthcare facility through the ED, EPs are frequently the first physicians for such patients. Patients visiting ED differ considerably in their complexity, frequently require critical and timebound decision-making, integrating several clinical and diagnostic data, and involving the full cognitive abilities of the EPs. Besides, the ED is known for unpredictable schedules, and unlike the outpatient department, there is no control over the patient's acuity and volumes. Further work conditions are typical of frequent interruptions and change-in-task to manage high-priority or high-acuity emergencies. Emergency physicians are susceptible to negative outcomes like burnout, decision fatigue and a higher staff turnover.¹ The coronavirus disease 2019 (COVID-19) has further exposed the gap in ED with a surge of patients, shortage of healthcare providers, and higher risk of infection among frontline workers.² Decision fatigue among EPs is not uncommon and is associated with an increased risk of impaired clinical-decision making, inadequate treatment plans, medication errors, and inappropriate patient disposition.³

Factors Associated with Decision-fatigue

Working hours: Physicians' cognitive abilities may be affected by shift work, especially at the end of shifts, overnight shifts, and prolonged shifts. Shift workers are more prone to fatigue because of the non-circadian nature of their work schedules. Shifts in the ED and intensive care units (ICUs) are unique because of the wide workload fluctuation from shift to shift. Depending on the patient volumes, acuity, and arrival times, the ED workload may change rapidly.¹ The studies reported an altered cognitive ability, decline in short-time memory, and disturbed sleep among EPs because of the shifting nature of their work, making them more prone to errors in decision-making.^{4,5}

Workload: Workload is another critical factor contributing to decision fatigue. The workload issues such as high patient flow, limited staffing, lack of supervision, and inadequate support staff

^{1,2}Department of Critical Care Medicine, NMC Specialty Hospital, Dubai, United Arab Emirates

Corresponding Author: Prashant Nasa, Department of Critical Care Medicine, NMC Specialty Hospital, Dubai, United Arab Emirates, Phone: +971 501425022, e-mail: dr.prashantnasa@hotmail.com

How to cite this article: Nasa P, Majeed NA. Decision Fatigue among Emergency Physicians: Reality or Myth. *Indian J Crit Care Med* 2023;27(9):609–610.

Source of support: Nil

Conflict of interest: None

or infrastructure are common in ED.⁶ High workload is also linked to burnout, intention to leave, and greater prescribing errors among EPs.^{7,8}

Work Schedule: Lack of time off, frequent interruptions, and long shifts are also associated with physical and emotional wear out and mental fatigue among EPs. It further complicates decision-making and independent functioning.

Lack of resources: When healthcare cannot deliver the care they intend to, it causes burnout and decision fatigue. A lack of adequate infrastructure and equipment can make it challenging to complete tasks, compromising the quality of care delivered and wearing one out.⁹

Multitasking: Emergency physicians often treat multiple patients simultaneously due to the rising demand for emergency services. However, a growing body of research in experimental psychology and cognitive neurosciences has shown that multitasking impairs decision-making, increases prescribing errors, and increases work stress among EPs.^{7,10}

Burnout: Emergency physicians are at high risk of burnout, with an incidence of 25–78%. Lack of sleep, imbalance of personal and professional life, co-worker relationships, substance abuse, heavy workload, and personality traits (i.e., ability to cope with stress and mental disorders) are a few factors associated with burnout among EPs. The higher burnout rate is further linked to intent to leave, depersonalization, emotional exhaustion, and decision fatigue among EPs.¹ A positive work environment for doctors can be created by conducting occasional group activities and workplace therapies, flexibility in the work schedule, and time off.

Effects of Decision Fatigue

Decision fatigue is a psychological concept that refers to the depletion of cognitive resources due to repetitive decision-making. The phenomenon may manifest in multiple ways, and individuals may remain unaware of its presence. Decision fatigue has been linked to poor decision-making, decision procrastination, reduced reasoning capacity, and cognitive shortcuts. It increases the risk of basic cognitive errors, like confusing patients with similar presentations, impulsive decision-making, and taking unsafe or 'easy' decisions without considering long-term consequences. Decision fatigue among EPs predisposes their negative attitude towards patient safety and is linked to various errors like inappropriate antibiotic prescription, excess or under-use of diagnostic tools (e.g., CT scan), wrong patient disposition, and unnecessary cross-specialty referrals.^{9,11,12}

Decision fatigue not only affects professional work but may disrupt the personal life of EPs. Sleepiness and poor performance can make people susceptible to unintentional events like traffic or workplace accidents, high turnover, and intent to leave.⁹ Hence, it is critical for EPs to be aware of and understand the factors that influence their clinical decisions, and the impact of decision fatigue on patient outcomes.^{1,13}

In this issue of the journal, Al Arim et al. evaluated the impact of fatigue among EPs working in a tertiary care facility in Oman, on the decision-making for CT scans, consultant referrals, and patient disposition. The study found higher fatigue among EPs with more frequent cross-specialty referrals and in-patient admission. However, there was no impact of decision fatigue on CT scans. This may be explained by the structure of the ED team with the presence of round-the-clock specialists and the adoption of standardized protocols for making CT scan decisions. However, negative cross-specialty referrals increased noticeably in the later hours of the afternoon shift. This observation suggests that physicians experiencing decision fatigue are biased toward choosing options that are simpler and safer.⁹ This may put pressure on healthcare resources and increase inefficiency of healthcare delivery.³

Mitigating Decision Fatigue

Decision fatigue is not limited to the medical profession or ED. Many professions that are involved with multitasking, high complexity, and quick judgments with immediate and ongoing effects can experience the phenomenon. However, its early recognition is critical because of its dangerous consequences. Anticipation and screening of EPs by validated tools can help in timely diagnosis. The capacity to diagnose decision fatigue and apply the necessary skills and resources to ensure that it does not impede the professional and personal life is crucial.^{11,13} Behavioral education through simulation-based training can help build skills to simplify decision-making. The natural ability to identify sick patients from stable patients is an art ingrained among EPs. Similar skills can be used to develop a 'priority' system through experiential learning, allowing the decision-making to recognize decisions that can be pushed until a less critical time.⁹

CONCLUSION

Decision fatigue among EPs is a critical issue in ED with a direct impact on patient safety. Addressing decision fatigue among EPs is

crucial to ensure patient safety, and optimum resource utilization, and reduce the burden of higher burnout and turnover. Future studies should investigate methods to diagnose decision fatigue among healthcare providers and strategies to mitigate this problem timely.

ORCID

Prashant Nasa  <https://orcid.org/0000-0003-1948-4060>

Nimisha Abdul Majeed  <https://orcid.org/0000-0002-9468-6626>

REFERENCES

1. Klinefelter Z, Hirsh EL, Britt TW, George CL, Sulzbach M, Fowler LA. Shift Happens: Emergency Physician Perspectives on Fatigue and Shift Work. *Clocks Sleep* 2023;5(2):234–248. DOI: <https://doi.org/10.3390/clocksleep5020019>.
2. Nasa P, Modi P, Setubal G, Puspaha A, Upadhyay S, Talal SH. Demographic and risk characteristics of healthcare workers infected with SARS-CoV-2 from two tertiary care hospitals in the United Arab Emirates. *World J Virol* 2023;12(2):122–131. DOI: 10.5501/wjv.v12.i2.122.
3. Moorhouse A. Decision fatigue: Less is more when making choices with patients. *Br J Gen Pract* 2020;70(697):399. DOI: 10.3399/bjgp20X711989.
4. Machi MS, Staum M, Callaway CW, Moore C, Jeong K, Suyama J, et al. The relationship between shift work, sleep, and cognition in career emergency physicians. *Acad Emerg Med*. 2012;19(1):85–91. DOI: 10.1111/j.1553-2712.2011.01254.x.
5. Persico N, Maltese F, Ferrigno C, Bablon A, Marmillot C, Papazian L, et al. Influence of shift duration on cognitive performance of emergency physicians: A prospective cross-sectional study. *Ann Emerg Med* 2018;72(2):171–180. DOI: 10.1016/j.annemergmed.2017.10.005.
6. Lee M. Addressing decision fatigue in the emergency department. *Emerg Med Australas* 2020;32(6):1064–1066. DOI: 10.1111/1742-6723.13672.
7. Westbrook JI, Raban MZ, Walter SR, Douglas H. Task errors by emergency physicians are associated with interruptions, multitasking, fatigue and working memory capacity: A prospective, direct observation study. *BMJ Qual Saf* 2018;27(8):655–663. DOI: <http://dx.doi.org/10.1136/bmjqs-2017-007333>.
8. Harry E, Sinsky C, Dyrbye LN, Makowski MS, Trockel M, Tutty M, et al. Physician task load and the risk of burnout among us physicians in a national survey. *It Comm J Qual Patient Saf* 2021;47(2):76–85. DOI: 10.1016/j.jcjq.2020.09.011.
9. Dubash R, Bertenshaw C, Ho JH. Decision fatigue in the emergency department. *Emerg Med Australas* 2020;32(6):1059–1061. DOI: 10.1111/1742-6723.13670.
10. Augenstein T, Schneider A, Wehler M, Weigl M. Multitasking behaviors and provider outcomes in emergency department physicians: two consecutive, observational and multi-source studies. *Scand J Trauma Resusc Emerg Med* 2021;29(1):14. DOI: <https://doi.org/10.1186/s13049-020-00824-8>.
11. Zheng B, Kwok E, Taljaard M, Nemnom MJ, Stiell I. Decision fatigue in the Emergency Department: How does emergency physician decision making change over an eight-hour shift? *Am J Emerg Med* 2020;38(12):2506–2510. DOI: 10.1016/j.ajem.2019.12.020.
12. Al-Arim AH, Hazra D, Al-Alawi AKA. Impact of fatigue on emergency physicians' decision-making for CT scan requests and in-patient referrals: An observational study from a tertiary care medical centre of the sultanate of oman. *Indian J Crit Care Med* 2023;27(9):620–624.
13. Pignatiello GA, Martin RJ, Hickman RL Jr. Decision fatigue: A conceptual analysis. *J Health Psychol* 2020;25(1):123–135. DOI: 10.1177/1359105318763510.