

Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Elsevier hereby grants permission to make all its COVID-19-related research that is available on the COVID-19 resource centre - including this research content - immediately available in PubMed Central and other publicly funded repositories, such as the WHO COVID database with rights for unrestricted research re-use and analyses in any form or by any means with acknowledgement of the original source. These permissions are granted for free by Elsevier for as long as the COVID-19 resource centre remains active.

ELSEVIER

Contents lists available at ScienceDirect

International Journal of Surgery

journal homepage: www.elsevier.com/locate/ijsu



Commentary



A Commentary on "Crisis management for surgical teams and their leaders, lessons from the COVID-19 pandemic; A structured approach to developing resilience or natural organisational responses" (Int J Surg 2021; 91:105987)

Dear Editor,

We read with great interest the article by Pring et al. [1] titled "Crisis management for surgical teams and their leaders, lessons from the COVID-19 pandemic; A structured approach to developing resilience or natural organizational responses", where the authors propose a teamwork algorithm to generate an effective and safe organizational response for surgical teams and their leaders, including the participation of non-medical institutions [1]. We thank the authors for providing us with such valuable evidence. However, we would like to comment on the role of surgical interest groups, composed mainly of medical students, in the logistics of surgical team crisis management in both hospitals and universities.

Today's global surgery has demonstrated the need and impact of involving medical students in the duties and challenges presented by surgical teams, both at the academic and care levels [2,3]. Nguyen et al. [3] inquired about the attitudes of medical students that favor teaching process in surgery, finding that enthusiasm, humility, confidence, teamwork and adaptability are the values that stand out most among students, in facilitating teaching and problem solving in academic surgery [3]. Precisely because of this type of results, authors such as Hernandez et al. [2] propose a curricular modification with emphasis on mentoring programs and professional approach with the medical student, with the objective of bringing them closer to reality, and to develop them on problem-solving skills [2]. In addition, studies such as that of White et al. [4] have shown that involving students in a hyper-realistic surgical training environment promotes emotional resilience and mitigates the symptoms of burnout and anxiety [4]. Based on the results described above, the use of mixed-methods case studies in surgery as a model of clinical education in various medical schools, applying the component of close accompaniment with the surgical team, results in a successful outcome [5].

A strategy to initiate the transition from the traditional learning model to a learning model based on mentoring programs, surgical interest groups play a fundamental role, especially in the pandemic and post-pandemic periods [6–10]. These groups are collectives formed mainly by medical students, which perform academic and research activities in surgery and subspecialties, to deepen knowledge, develop skills not only surgical but professional, participate in events of social appropriation and circulate new knowledge, and have an approach on the lifestyle and problems of the surgeon [6–10]. Ortega-Sierra et al. [7] stated that through the responsibilities and the establishment of roles in the interest groups, these groups become factories of future mentors, and strengthen the commitment of teachers and residents with the mentoring programs [7]. Therefore, the pillars of these groups would allow the gradual transition to the responsibilities of the surgical team in reality,

and acquire responsibilities in surgical teams, organizational responses and management in times of crisis. In this way, it is possible to obtain a better distribution of responsibilities, care load and reduce the risk of developing neuropsychiatric disorders such as anxiety, depression, burnout, among others.

Provenance and peer review

Commentary, internally reviewed

Ethical approval

It is not necessary.

Sources of funding

None.

Author contribution

All authors equally contributed to the analysis and writing of the manuscript.

Research registration Unique Identifying number (UIN)

Name of the registry: Not applicable.

Unique Identifying number or registration ID: Not applicable.

Hyperlink to your specific registration (must be publicly accessible and will be checked): Not applicable.

Guarantor

Maria Paz Bolaño-Romero, Medical and Surgical Research Center, University of Cartagena, Cartagena, Colombia. Email: mbolanor1@unicartagena.edu.co

Declaration of competing interest

None.

References

 E.T. Pring, G. Malietzis, S.W.H. Kendall, J.T. Jenkins, T. Athanasiou, Crisis management for surgical teams and their leaders, lessons from the COVID-19 pandemic; A structured approach to developing resilience or natural organisational responses, Int. J. Surg. 91 (2021) 105987.

- [2] S. Hernandez, O.N. Nnamani Silva, P. Conroy, L. Weiser, A. Thompson, S. Mohamedaly, et al., Bursting the hidden curriculum bubble: a surgical near-Peer mentorship Pilot program for URM medical students, J. Surg. Educ. S1931–7204 (21) (2021) 185–189.
- [3] S. Nguyen, T. Johnston, H.C. McCrary, C. Chow, C. Babcock, B. Richards, et al., Medical student attitudes and actions that encourage teaching on surgery clerkships, Am. J. Surg. S0002–9610 (21) (2021), 00228-2.
- [4] A. White, I. Zapata, A. Lenz, R. Ryznar, N. Nevins, T.N. Hoang, et al., Medical students immersed in a hyper-realistic surgical training environment leads to improved measures of emotional resiliency by both hardiness and emotional intelligence evaluation, Front. Psychol. 11 (2020) 569035.
- [5] X. Song, S. Vance, Students' surgical experiences in a distributed model of clinical education: a mixed-methods sequential case study, J. Surg. Educ. 78 (3) (2021) 858–865.
- [6] J.A. Miranda-Pacheco, S.A. De Santis-Tamara, S.L. Parra-Pinzón, J.J. González-Monterroza, I.D. Lozada-Martínez, Medical interest groups and work policies as emerging determinants of a successful career: a student perspective - Correspondence, Int. J. Surg. (2021) 106020.
- [7] M.G. Ortega-Sierra, G.E. Beltran-Hoyos, A.M. Benjumea-Velásquez, I.M. Bossio-Martínez, I.D. Lozada-Martínez, Surgery interest groups in medical schools: mentoring factory, J. Surg. Res. 267 (2021) 209–210.
- [8] M.G. Ortega-Sierra, J.I. Charry-Caicedo, A.T. Orrego-Torres, L. Rueda-Ibarra, I. D. Lozada Martínez, Breaking down barriers to surgical learning in times of COVID-19: an initiative of future surgeons, Eur. Surg. (2021). Online ahead of print.
- [9] M.G. Ortega-Sierra, O.A. Cuello-Torres, L.A. Blandón-Vergara, Y.A. Pelufo-Zabala, I.D. Lozada-Martínez, S. Rahman, Interest groups in neurosurgery: the key to the progress of research and the advancement of professionalism, International Journal of Surgery Open (2021) 100372.
- [10] I. Lozada-Martínez, M. Bolaño-Romero, L. Moscote-Salazar, D. Torres-Llinas, Letter to the editor: 'medical education in times of COVID-19: what's new in neurosurgery? World Neurosurg 143 (2020) 603.

Mario Fernando Cartagena-Gutiérrez School of Medicine, Universidad el Bosque, Ak. 9 #131a-20, Bogotá, Colombia

Frank Jaider Pineda-Trujillo School of Medicine, Universidad del Magdalena, Calle 32 #22-08, Santa Marta, Colombia

Jhoan Sebastián Robledo-Arias

School of Medicine, Universidad del Quindío, Carrera 15 #12N, Armenia, Colombia

Ángela María Forero-Hollmann

School of Medicine, Fundación Universitaria Ciencias de la Salud, Cra. 54 No .67A-80, Bogotá, Colombia

Maria Paz Bolaño-Romero*

Medical and Surgical Research Center, School of Medicine, University of Cartagena, Cra. 50 #24-120, Cartagena, Colombia

* Corresponding author.

E-mail address: mbolanor1@unicartagena.edu.co (M.P. Bolaño-Romero).