

Improving Patient Safety and Communication – EMS to ED Handoffs

Presented by: The Florida Professional Liability Self-Insurance Programs

Disclosure Statement: Faculty Disclosure: The following speakers and planning committee members have no actual or potential conflict of interest in relation to this activity.

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Requirements for Successful Completion: This CME activity consists of an educational component (slides, audio/online lecture) which is must be viewed in its entirety. Certificates for CE credit are awarded upon successful completion (80% proficiency) of the post-test and completion of the evaluation.

Release Date: 05/01/2020

Expiration Date: 04/30/2022

Target Audience: Physicians, Specialty Physicians, Physician Assistants, Residents, Nurses, Paramedics.

Learning Objectives: As a result of the participation in this activity, participants should be able to:

1. Identify key patient safety components of the EMS-ED handoff.
2. Demonstrate essential components of a successful EMS-ED handoff.
3. Identify handoff tools and memory aids (i.e., MIST, IMIST-AMBO, SBAR, or SBAT).
4. Recognize the significance of communicating crucial components throughout the entire handoff process.
5. Explain leadership roles in ensuring a successful EMS-ED handoff.
6. Discuss ways the healthcare team can improve communication to ensure a successful EMS-ED handoff in special populations.

CME Advisory Committee Disclosure: Conflict of interest information for the CME Advisory Committee members can be found on the following website: <https://cme.ufl.edu/disclosure/>. All relevant financial relationships have been mitigated.

Accreditation: This activity has been planned and implemented in accordance with the accreditation requirements and policies of the Accreditation Council for Continuing Medical Education (ACCME) through the joint providership of the University of Florida College of Medicine and Medtrainer. The University of Florida College of Medicine is accredited by the ACCME to provide continuing medical education for physicians.

Credit: The University of Florida College of Medicine designates this enduring material for a maximum of 1 *AMA PRA Category 1 Credit™*. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

Contact: If you have any questions please feel free to contact SIPHELP at (352) 273-7006 or at SIPHELP@ad.ufl.edu.

Bibliographic Sources:

1. AMERICAN ACADEMY OF PEDIATRICS Committee on Pediatric Emergency Medicine, AMERICAN COLLEGE OF EMERGENCY PHYSICIANS Pediatric Emergency Medicine Committee, E. N. A. P. C. (2016). Handoffs: Transitions of Care for Children in the Emergency Department. *Pediatrics*, 138(5), e20162680. <https://doi.org/10.1542/peds.2016-2680>
2. Bagian, J., & Paull, D. (2018). Handovers During Anesthesia Care. *JAMA*, 319(2), 125–127.
3. Cheung, D. S., et al. (2010). "Improving handoffs in the emergency department." *Ann Emerg Med* 55(2): 171-180.

4. Friesen MA, White SV, Byers JF. Handoffs: Implications for Nurses. In: Hughes RG, editor. Patient Safety and Quality: An Evidence-Based Handbook for Nurses. Rockville (MD): Agency for Healthcare Research and Quality (US); 2008 Apr. Chapter 34. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK2649/>
5. Goldberg, S., Porat, A., Strother, C., Lim, N., Wijeratne, S., Sanchez, G., & Munjal, K. (2016). Quantitative Analysis of the Content of EMS Handoff of Critically Ill and Injured Patients to the Emergency Department. *Prehospital Emergency Care*, 21(1), 14–17. <https://doi.org/10.1080/10903127.2016.1194930>
6. Gordon, M., Hill, E., Stojan, J. N., & Daniel, M. (2018). Educational Interventions to Improve Handover in Health Care. *Academic Medicine*, 93(8), 1234–1244. <https://doi.org/10.1097/acm.0000000000002236>
7. Groos, T., Benjamin, L., & Stone, E. (2016). Handoffs: Transitions of Care for Children in the Emergency Department. *American Academy of Pediatrics*, 138(5), 1–12. <https://doi.org/10.1542/peds.2016-2680>
8. Hart, D., et al. (2019). "Integration of Entrustable Professional Activities with the Milestones for Emergency Medicine Residents." *West J Emerg Med* 20(1): 35-42.
9. Hilligoss, Brian, & Cohen, M. (2011). Hospital Handoffs as Multifunctional Situated Routines: Implications for Researchers and Administrators. *Biennial Review of Health Care Management (Advances in Health Care Management)*, 11, 91–132. [https://doi.org/10.1108/S1474-8231\(2011\)0000011008](https://doi.org/10.1108/S1474-8231(2011)0000011008)
10. Hilligoss, Brian, & Cohen, M. D. (2013). The unappreciated challenges of between-unit handoffs: Negotiating and coordinating across boundaries. *Annals of Emergency Medicine*, 20(10), 1–6. <https://doi.org/10.1016/j.annemergmed.2012.04.009>
11. Hilligoss, Brian, & Moffatt-Bruce, S. D. (2014). The limits of checklists: handoff and narrative thinking. *BMJ Qual Saf*, 23(7), 528–533. <https://doi.org/10.1136/bmjqs-2013-002705>
12. Iedema R, Ball C, Daly B, et al. Design and trial of a new ambulance-to-emergency department handover protocol: 'IMIST-AMBO'. *BMJ Quality & Safety* 2012;21:627-633.
13. James, M. K., Clarke, L. A., Simpson, R. M., Noto, A. J., Sclair, J. R., Doughlin, G. K., & Lee, S. W. (2018). Accuracy of pre-hospital trauma notification calls. *American Journal of Emergency Medicine*. <https://doi.org/10.1016/j.ajem.2018.06.058>
14. Jarvis P. R. (2016). Improving emergency department patient flow. *Clinical and experimental emergency medicine*, 3(2), 63–68. <https://doi.org/10.15441/ceem.16.127>
15. Jones, P. M., et al. (2018). "Association Between Handover of Anesthesia Care and Adverse Postoperative Outcomes Among Patients Undergoing Major Surgery." *JAMA* 319(2): 143-153.
16. Khairat, S., & Gong, Y. (2010). Understanding effective clinical communication in medical errors. *Studies in Health Technology and Informatics*, 160(Pt 1), 704–708. Retrieved from <http://www.ncbi.nlm.nih.gov/pubmed/20841777>
17. Meisel, Z. F., et al. (2015). "Optimizing the Patient Handoff Between Emergency Medical Services and the Emergency Department." *Annals of Emergency Medicine* 65(3): 310-317.e311.
18. Milano, A., Stanekwicz, H., Stoltzfus, J., & Salen, P. (2019). The Impact of a Standardized Checklist on Transition of Care During Emergency Department Resident Physician Change of Shift. *Western Journal of Emergency Medicine*, 20(1), 29–34. <https://doi.org/10.5811/westjem.2018.10.39020>
19. Mullan, P. C., Macias, C. G., Hsu, D., Alam, S., & Patel, B. (2015). A Novel Briefing Checklist at Shift Handoff in an Emergency Department Improves Situational Awareness and Safety Event Identification Conclusions: The Physician Active Shift Signout in the Emergency De. *Pediatric Emergency Care*, 31(4), 231–238.
20. Müller, M., Jürgens, J., Redaelli, M., Klingberg, K., Hautz, W. E., & Stock, S. (2018). Impact of the communication and patient hand-off tool SBAR on patient safety: a systematic review. *BMJ open*, 8(8), e022202. <http://dx.doi.org/10.1136/bmjopen-2018-022202>
21. Reimer, A. P., Alfes, C. M., Rowe, A. S., & Rodriguez-Fox, B. M. (2018). Emergency Patient Handoffs: Identifying Essential Elements and Developing an Evidence-Based Training Tool. *The Journal of Continuing Education in Nursing*, 49(1), 34–41. <https://doi.org/10.3928/00220124-20180102-08>
22. Riesenberger, L. A., Leitzsch, J., & Little, B. (2009). Systematic Review of Handoff Mnemonics Literature. *American Journal of Medical Quality*, 24(3), 196–204. <https://doi.org/10.1177/1062860609332512>
23. Riggs, J. R. and C. Hicks (2018). "P123: Mental practice for technical skills training in emergency medicine: a scoping review." *CJEM* 20(S1): S100-S100.
24. Roscoe, L. A., Eisenberg, E. M., & Forde, C. (2016). The Role of Patients' Stories in Emergency Medicine Triage. *Health Communication*, 31(9), 115–1164. <https://doi.org/10.1080/10410236.2015.1046020>
25. Sanjuan-Quiles, A., et al. (2018). "Handover of Patients From Prehospital Emergency Services to Emergency Departments: A Qualitative Analysis Based on Experiences of Nurses." *Journal of Nursing Care Quality* 34: 1.

26. Sochet, A. A., Ryan, K. S., Bartlett, J. L., Nakagawa, T. A., & Bingham, L. (2018). Standardization of Pediatric Interfacility Transport Handover: Measuring the Development of a Shared Mental Model. *Pediatric Critical Care Medicine*, 19(2), e72–e79. <https://doi.org/10.1097/PCC.0000000000001396>
27. Sujan, M. A., Spurgeon, P., & Cooke, M. W. (2017). Translating tensions into safe practices through dynamic trade-offs: The secret second handover. In *Resilient Health Care, Volume 2: The Resilience of Everyday Clinical Work* (pp. 11–22). <https://doi.org/10.1201/9781315605739>
28. Sujan, M., Spurgeon, P., & Cooke, M. (2015). The role of dynamic trade-offs in creating safety - A qualitative study of handover across care boundaries in emergency care. *Reliability Engineering and System Safety*, 141, 54–62. <https://doi.org/10.1016/j.ress.2015.03.006>
29. Sumner, B. D., Grimsley, E. A., Cochrane, N. H., Keane, R. R., Sandler, A. B., Mullan, P. C., & O'Connell, K. J. (2019). Videographic Assessment of the Quality of EMS to ED Handoff Communication During Pediatric Resuscitations. *Prehospital Emergency Care*, 23(1), 15–21. <https://doi.org/10.1080/10903127.2018.1481475>
30. Transfer of patient care between EMS providers and receiving facilities. (2014). *Prehospital Emergency Care : Official Journal of the National Association of EMS Physicians and the National Association of State EMS Directors*. <https://doi.org/10.3109/10903127.2014.883001>
31. Wiler, J. L., Gentle, C., Halfpenny, J. M., Heins, A., Mehrotra, A., Mikhail, M. G., & Fite, D. (2010). Optimizing Emergency Department Front-End Operations. *Annals of Emergency Medicine*. <https://doi.org/10.1016/j.annemergmed.2009.05.021>
32. Wood, K., & Pope, C. (2015). Clinical handovers between prehospital and hospital staff: literature review. *Emergency Medicine Journal*, 32(7), 577–581. <https://doi.org/10.1136/emered-2013-203165>
33. Yoshida, H., Rutman, L. E., Chen, J., Shaffer, M. L., Migita, R. T., Enriquez, B. K., ... Mazor, S. S. (2019). Waterfalls and Handoffs: A Novel Physician Staffing Model to Decrease Handoffs in a Pediatric Emergency Department. *Annals of Emergency Medicine*, 73(3), 248–254. <https://doi.org/10.1016/j.annemergmed.2018.08.424>

Website Resources

1. Auckland HEMS prehospital to ED handover - YouTube. (n.d.). Retrieved January 23, 2020, from <https://www.youtube.com/watch?v=ZbvWQAAFJK0>
2. emDOCs.net – Emergency Medicine Education ED Handoffs – The problem and what we can do to improve - emDOCs.net - Emergency Medicine Education. (n.d.). Retrieved January 23, 2020, from <http://www.emdocs.net/ed-handoffs-the-problem-and-what-we-can-do-to-improve/>
3. HEFT EMCAST Podcast - EMS handover; make a difference to all alerted patients | Free Listening on Podbean App. (n.d.). Retrieved January 23, 2020, from https://www.podbean.com/media/share/dir-8nz6h-11cd6e2?utm_campaign=w_share_ep&utm_medium=dlink&utm_source=w_share
4. Hostetter, M., & Klein, S. (2013). Quality Matters reported on emerging models and trends in health care delivery reform and interviews. Retrieved January 23, 2020, from <http://www.commonwealthfund.org/publications/newsletters/quality-matters/2013/october-november/in-focus-improving-patient-flow>
5. Institute for Healthcare Improvement: SBAR Tool: Situation-Background-Assessment-Recommendation. (n.d.). Retrieved January 23, 2020, from <http://www.ihl.org/resources/Pages/Tools/SBARToolkit.aspx>
6. The Science of Safe Handoffs - Emergency Physicians Monthly. (n.d.). Retrieved January 23, 2020, from <https://epmonthly.com/article/the-science-of-safe-handoffs/>
7. Toolkit to Reduce Ambulance Patient Offload Delays in the Emergency Department: Building Strategies for California Hospitals and Local Emergency Services Agencies Toolkit to Reduce Ambulance Patient Offload Delays in the Emergency Department. (2014). Retrieved January 23, 2020, from https://www.calhospital.org/sites/main/files/file-attachments/2_up_bartleson_prasad_ed_toolkit_12_2_14_v2_dpeditis_compatibility_mode.pdf
8. Video: Patient Handoff. (n.d.). Retrieved January 23, 2020, from <https://www.ems1.com/ems-products/patient-handling/videos/patient-handoff-7OvpsMG4oUboRCMS/>