

Improving Patient Safety and Communication – EMS to ED Handoffs

Presented by: The Florida Professional Liability Self-Insurance Programs:

Phyllis Hendry, MD, FAAP, FACEP

Beth W. Munz, Esq., CPHRM

Stephanie Gann, BS

Disclosure Statement: Phyllis Hendry, MD, Beth W. Munz, Esq., and Stephanie Gann, BS have disclosed that they have no relevant financial relationships. No one else in a position to control content has any financial relationships to disclose.

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 CME credit are awarded upon successful completion (80% proficiency) of the post-test and completion of the evaluation.

Release Date: 05/01/2022

Expiration Date: 04/30/2024

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: The University of Florida College of Medicine is accredited by the Accreditation Council for Continuing Medical Education (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., Stankewicz, 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/>