WebM&M

Morbidity and Mortality Rounds on the Web



Source and Credits

- This presentation is based on the April 2020 AHRQ WebM&M Spotlight Case
 - See the full article at https://psnet.ahrq.gov/webmm
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 - Editors in Chief, AHRQ WebM&M: Patrick Romano, MD, MPH and Debra Bakerjian PhD, APRN, RN
 - Spotlight Editors: Jacqueline Stocking, PhD; Ulfat Shaikh, MD
 - o Managing Editor: Meghan Weyrich, MPH

Objectives

At the conclusion of this educational activity, participants should be able to:

- Define implicit bias, imposter syndrome, stereotype threat, and "second victim" effect.
- Recognize how individual and institutional level implicit bias impacts care teams and patient outcomes.
- Discuss the value of effective interprofessional team communication for patient outcomes and provider well-being.
- Identify strategies to mitigate implicit bias and promote effective team communication.



IMPLICIT BIASES, INTERPROFESSIONAL COMMUNICATION, AND POWER DYNAMICS

A disagreement in a decision to escalate level of care for a patient in respiratory distress reveals issues of power dynamics, hierarchies, and implicit bias as young female physicians interact with experienced male members in an interdisciplinary team.



Case Details

An interdisciplinary care team was caring for a patient:

Team members	Time at institution	Gender
ICU medical resident	In training < 3 years	female
Wards medical resident	In training <3 years	female
Supervising hospital medicine attending	≤ 1-year post residency training	female
Respiratory therapist	5-10 years	male
Bedside RN	5-10 years	male
ICU Charge RN	Unknown	unknown

- The patient on a step-down unit develops progressive mixed respiratory failure and is decompensating despite several interventions.
- Physicians determine the patient warranted ICU-level care and communicate this assessment at the bedside with the interdisciplinary team.
- The Respiratory Therapist and Nurses on the team determine that the patient does not require ICU level of care.
- The differing assessments among the care team were not reconciled and patient remained on the step-down unit.

Case Details

- Patient's respiratory failure progressed on BiPAP therapy.
- He was eventually transferred to the ICU and required emergent intubation.
- Post intubation course was complicated by a pulseless electrical activity cardiac arrest due to breath-stacking and auto-PEEP (positive end expiratory pressure).
- Return of spontaneous circulation was achieved after several rounds of resuscitation.
- Patient was discharged one week after presentation with improved respiratory status and baseline neurologic function.



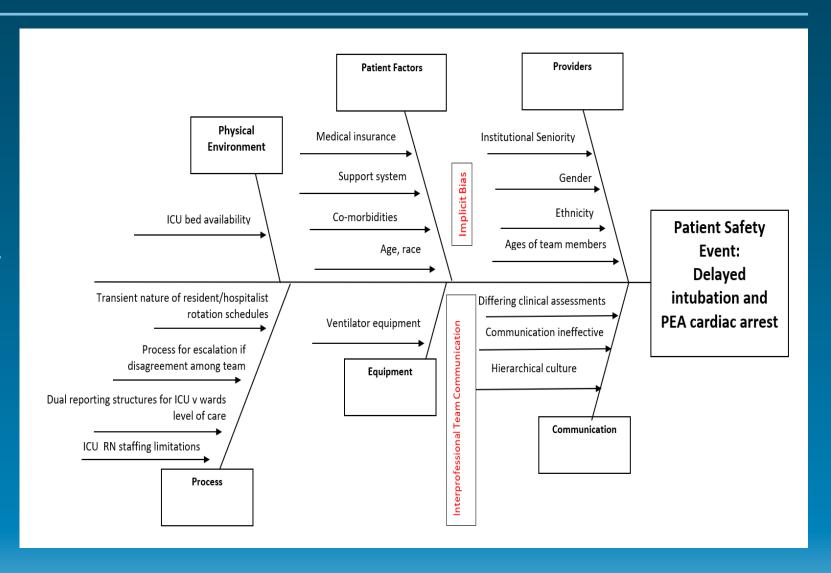
IMPLICIT BIASES, INTERPROFESSIONAL COMMUNICATION, AND POWER DYNAMICS

The Commentary

By Erin Stephany Sanchez, MD, Melody Tran-Reina, MD, Kupiri Ackerman-Barger, PhD, RN, Kristine Phung, MD, Mithu Molla, MD, MBA, and Hendry Ton, MD, MS

Root Cause Analysis

- Several factors contributed to delayed intubation and subsequent pulseless electrical activity (PEA) cardiac arrest.
- A root cause analysis
 framework was used to explore
 contributors to this patient safety
 event.
- Two overarching causes are explored in more depth in this presentation:
 - 1. Implicit bias
 - 2. Dysfunctional interprofessional team communication



ROOT CAUSE 1

Implicit Bias



Root Cause 1: Implicit Bias (1)

- What is Implicit Bias?
 - Beliefs and prejudices that reside outside of our conscious awareness.
 - Stereotypes are often a way for the brain to process large amounts of information more efficiently by categorizing people into groups based on gender, age, race/ethnicity.
 - This can result in inaccurate information about the people being categorized.
- Implicit bias has been identified as a factor contributing to health disparities in the United States, such as the under-recognition and undertreatment of conditions like pain, cardiovascular disease, asthma, and mental health in women and racial and ethnic minorities.

Root Cause 1: Implicit Bias (2)

- These studies demonstrate that implicit bias affecting women in medicine exists:
 - Males received higher performance ratings and achieved milestones (a standardized framework for longitudinal resident assessment) sooner than females over the course of residency by the equivalent of 3-4 months of training, despite entering with similar achievements in the first year.
 - Implicit Association Tests (IATs) for both gender-career and gender-specialty were administered to health care professionals and surgeons and found that respondents had strong biases that associated men with career and surgery, and women with family and family medicine.
 - A retrospective observational study of introductions in internal medicine grand rounds found that when women introduced a male speaker, they used his professional title 95% of the time. However, when men introduced a female speaker, her professional title was used only 49% of the time.

ROOT CAUSE 2

Interprofessional Team Communication



Root Cause 2: Interprofessional Communication (1)

- Hierarchy can be a source of conflict in interprofessional healthcare teams, resulting in unresolved tension.
 - This can lead to the medical team and nursing team arriving at significantly different assessments which results in conflict, as occurred in this case.
- There is an absence of discourse about hierarchies in interprofessional education, suggesting educator hesitancy to address the realities of hierarchies in healthcare.
 - A review of the literature between 1954-2013, Paradis and Whitehead found only six out of over two thousand journal articles on interprofessional education focused primarily on power and conflict.



Root Cause 2: Interprofessional Communication (2)

- Implicit gender bias can impact interprofessional communication in crisis situations
 - Given the same scripted simulated scenario of anesthetists making clearly incorrect medical decisions, respiratory therapists were more likely to challenge a decision of a female anesthetist than one made by a male anesthetist.
 - In debriefing, the respiratory therapists reported that they immediately realized that patient safety could be compromised by the inappropriate medical management of the anesthetists; and yet their responses were different based on the gender of the anesthetist involved.
- This suggests that gender influences communication in part due to perceived power imbalances.

IMPACTS & EFFECTS

Implicit Bias



Impacts & Effects: Implicit Bias (1)

- Implicit biases can result in long-lasting effects on physician well-being through several secondary effects.
 - 1. "Second victim" effect
 - 2. Imposter Syndrome
 - 3. Stereotype Threat



Impacts & Effects: Implicit Bias (2)

- 1. "Second victim" effect: An unanticipated emotional impact a medical error can have on healthcare professionals involved.
 - "Second victims" can feel personally responsible for the error and can develop dysfunctional coping mechanisms that can contribute to burnout.

Impacts & Effects: Implicit Bias (3)

- **2. Imposter Syndrome**: When successful people have a persistent belief in their lack of intelligence or competence despite many worthy accomplishments.
 - Affects both men and women
 - Women are more likely to be affected
 - Symptoms have been closely linked to burnout
 - Chronic doubt is common

Impacts & Effects: Implicit Bias (4)

- **3. Stereotype threat**: The risk of conforming to a negative stereotype about an individual's race, ethnic, gender, or cultural group
 - Prescriptive gender stereotypes in academic medicine that adversely affect women include:
 - Occupying subordinate roles
 - Lacking confidence in leadership abilities
 - Not exhibiting ambition, assertiveness, or competitiveness
 - Women who violate these stereotypes may incur negative reactions, such as derogation and dislike, from their colleagues.
 - Women who suffer from stereotype threat may perform below their actual abilities when group membership is emphasized.

Impacts & Effects: Implicit Bias (5)

The impacts of "second victim" effect, imposter syndrome, and stereotype threat can be profound and have lasting consequences on academic identity, performance, and rates of burnout in medicine.



IMPACTS & EFFECTS

Interprofessional Communication

Impacts & Effects: Interprofessional Communication (1)

- Failures in interprofessional teamwork and communication can lead directly to:
 - Compromised patient care
 - Staff distress
 - Tension
 - Inefficiency
 - Adverse Events
 - This can result in substantial and unnecessary suffering of patients and high financial costs secondary to extended hospital stays and litigation costs.
 - Failures in interprofessional teamwork were found to be a contributory factor in 61% of sentinel events.

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Impacts & Effects: Interprofessional Communication (2)

For the sake of patient safety, it is critical to address the importance of optimizing interprofessional team communication by limiting influences of embedded hierarchies and power imbalances.



INTERVENTIONS & STRATEGIES

Mitigating Implicit Bias and Imposter Syndrome



Interventions & Strategies: Implicit Bias

- Successful interventions have been described to reduce implicit racial bias in medical students in the CHANGES study including:
 - Use of Implicit Association Tests (IATs) in medical education and faculty development
 - Cultural competency training addressing racial disparities
 - Positive learning climate with faculty and resident role-modeling
- These interventions could be adopted to address other implicit biases in healthcare training, such as gender bias.



Interventions & Strategies: Imposter Syndrome

- Strategies to address imposter syndrome include:
 - Consider cognitive based approaches to reduce symptoms
 - Promote inclusive learning environments in medical education curricula
 - Develop structured mentorship programs with female role models
 - Normalize Imposter Syndrome by defining it, openly discussing it, and integrating it into wellness initiatives throughout training

INTERVENTIONS & STRATEGIES

Promote Effective Team Communication



Interventions & Strategies: Communication (1)

- Use interdisciplinary healthcare delivery models
 - These can improve interprofessional communication and patient outcomes and examples include:
 - Interdisciplinary team rounds
 - Accountable Care Units (ACUs): A hospital care model designed to organize physicians, nurses, and allied health professionals into high-functioning unitbased teams



Intervention & Strategies: Communication (2)

- Incorporate early interprofessional training and include discourse around hierarchies
 - This can reduce perceived power imbalance and may improve patient safety
 - Trainings such as the Crew Resource Management (developed by the aviation industry to reduce flight errors) have been explored in the healthcare setting as a potential model to improve hierarchies, teamwork, and overall patient safety

Intervention & Strategies: Communication (3)

- Use standardized communication models
 - This can encourage a more collaborative approach among healthcare teams and improve interprofessional communication.
- One example to facilitate shared decision making includes the SBAR method:

S = Situation	a concise statement of the problem
B = Background	pertinent and brief information related to the situation
A = Assessment	analysis and considerations of options — what you found/think
R = Recommendation	action requested/recommended — what you want

Intervention & Strategies: Communication (4)

- Use conflict negotiation strategies
 - Start by defining a mutual goal
 - Identify and expand on small agreements
 - Avoid negative personal comments and interjections

- Escalate concerns through proper channels
 - Escalation to the attending physician to facilitate an attending-toattending discussion, followed by the appropriate authority at the Institution's medical staff structure may help resolve clinical decisions quickly.

TAKE-HOME POINTS

Take-Home Points

- Implicit bias can impact patient safety outcomes and clinician well-being.
- Evidence based strategies to reduce implicit bias include utilizing IAT's in medical training and formal curricula to address gender and racial disparities and cultural competencies.
- Effective communication among team members is critical for optimal performance and positive patient safety outcomes.
- Strategies to help improve interprofessional collaboration and communication include developing curricula that includes early interprofessional training and discourse around hierarchies; utilizing models of healthcare delivery to create interprofessional teams of healthcare providers, and using standardized communication tools like the SBAR method.

References

- 1. Institute of Medicine (US) Committee on Understanding and Eliminating Racial and Ethnic Disparities in Health Care. Unequal Treatment: Confronting Racial and Ethnic Disparities in Health Care. https://www.ncbi.nlm.nih.gov/pubmed/25. Published 2003. Accessed February 9, 2020.
- 2. Institute of Medicine (US) Committee on Advancing Pain Research, Care, and Education. Relieving Pain in America: A Blueprint for Transforming Prevention, Care, Education, and Research. https://www.ncbi.nlm.nih.gov/pubmed/22553896. Published 2011. Accessed February 9, 2020.
- 3. Singhal A, Tien YY, Hsia RY. Racial-Ethnic Disparities in Opioid Prescriptions at Emergency Department Visits for Conditions Commonly Associated with Prescription Drug Abuse. *PLoS One*. 2016;11(8):e0159224. Published 2016 Aug 8. doi:10.1371/journal.pone.0159224
- 4. Tait RC, Chibnall JT. (2014). Racial/ethnic disparities in the assessment and treatment of pain: Psychosocial perspectives. *Am Psychol.* 2014;69(2):131-141. doi:10.1037/a0035204
- 5. van Ryn M, Burgess D, Malat J, Griffin J. Physicians' perceptions of patients' social and behavioral characteristics and race disparities in treatment recommendations for men with coronary artery disease. *Am J Public Health*. 2006;96(2):351–357. doi:10.2105/AJPH.2004.041806
- 6. White AA, Stubblefield-Tave B. Some Advice for Physicians and Other Clinicians Treating Minorities, Women, and Other Patients at Risk of Receiving Health Care Disparities. J Racial Ethn Health Disparities. 2017 06; 4(3):472-479. doi.org/10.1007/s40615-016-0248-6
- 7. Dayal A, O'Connor DM, Qadri U, Arora VM. Comparison of Male vs Female Resident Milestone Evaluations by Faculty During Emergency Medicine Residency Training. *JAMA Intern Med.* 2017;177(5):651–657. doi:10.1001/jamainternmed.2016.9616
- 8. Salles A, Awad M, Goldin L, et al. Estimating Implicit and Explicit Gender Bias Among Health Care Professionals and Surgeons. *JAMA Netw Open.* 2019;2(7):e196545. doi:10.1001/jamanetworkopen.2019.6545
- 9. Files JA, Mayer AP, Ko MG, et al. Speaker introductions at internal medicine grand rounds: Forms of address reveal gender bias. J Womens Health. 2017;26:413-419. doi: 10.1089/jwh.2016.6044
- 10. Baker L, Egan-Lee E, Martimianakis MA, Reeves S. Relationships of power: implications for interprofessional education. J Interprof Care. 2011 Mar;25(2):98-104. doi: 10.3109/13561820.2010.505350
- 11. Paradis E, Whitehead CR. Louder than words: power and conflict in interprofessional education articles, 1954-2013. Med Educ. 2015 Apr;49(4):399-407. doi: 10.1111/medu.12668
- 12. Pattni N, Bould M, Hayter M, et al. Gender, power and leadership: the effect of a superior's gender on respiratory therapists' ability to challenge leadership during a life-threatening emergency. Brit J Anaesth. 2017;119(4):697-702. doi:10.1093/bja/aex246
- 13. Wu AW. Medical error: the second victim. The doctor who makes the mistake needs help too. BMJ. 2000;320(7237):726–727. doi:10.1136/bmj.320.7237.726
- 14. Scott SD, Hirschinger LE, Cox KR, McCoig M, Brandt J, Hall L. The natural history of recovery for the health care provider "second victim" after adverse patient events. Qual Saf Health Care. 2009;18:325-330. doi:10.1136/qshc.2009.032870
- 15. Young V. The Secret Thoughts of Successful Women: Why Capable People Suffer from the Impostor Syndrome and How to Thrive in Spite of It. New York: Crown Business; 2011.

References (2)

- 16. Villwock JA, Sobin LB, Koester LA, Harris TM. Impostor syndrome and burnout among American medical students: a pilot study. Int J Med Educ 2016;7:364–9. doi:10.5116/ijme.5801.eac4
- 17. Holliday AM, Gheihman G, Cooper C, Sullivan A, Ohyama H, Leaf DE, Leaf RK. High Prevalence of Imposterism Among Female Harvard Medical and Dental Students. J Gen Intern Med. 2019 Oct 25. doi:10.1007/s11606-019-05441-5
- 18. Burgess DJ, Joseph A, van Ryn M, Carnes M. Does stereotype threat affect women in academic medicine?. Acad Med. 2012;87(4):506–512. doi:10.1097/ACM.0b013e318248f718
- 19. Lingard L, Espin S, Whyte S, et al. Communication failures in the operating room: an observational classification of recurrent types and effects. Qual Saf Health Care. 2004;13(5):330–334. doi:10.1136/qhc.13.5.330
- 20. Reader TW, Flin R, Cuthbertons BH. Communication skills and error in the intensive care unit. Curr Opin Crit Care. 13: 732-736. doi:10.1097/MCC.0b013e3282f1bb0e
- 21. Vincent C. Patient Safety. London; Elselvier; 2006.
- 22. JCAHO. Sentinel Event Data 2012. https://www.jointcommission.org/Published 2012.
- 23. Weller J, Boyd M, Cumin D. Teams, tribes and patient safety: overcoming barriers to effective teamwork in healthcare. Postgrad Med J. 2014 Mar;90(1061):149-54. doi: 10.1136/postgradmedj-2012-131168
- 24. van Ryn M, Hardeman R, Phelan SM, et al. Medical School Experiences Associated with Change in Implicit Racial Bias Among 3547 Students: A Medical Student CHANGES Study Report. J Gen Intern Med. 2015;30(12):1748–1756. doi:10.1007/s11606-015-3447-7
- 25. Bravata DM, Watts SA, Keefer AL, et al. Prevalence, Predictors, and Treatment of Impostor Syndrome: a Systematic Review. *Journal of General Internal Medicine*. 2019. doi:10.1007/s11606-019-05364-1
- 26. Zwarenstein M, Goldman J, Reeves S. Interprofessional collaboration: effects of practice-based interventions on professional practice and healthcare outcomes. Cochrane Database Syst Rev. 2009 Jul 8;(3):CD000072. doi:10.1002/14651858.CD000072.pub2
- 27. Stein J, Payne C, Methvin A, Bonsall JM, Chadwick L, Clark D, Castle BW, Tong D, Dressler DD. Reorganizing a hospital ward as an accountable care unit. J Hosp Med. 2015 Jan;10(1):36-40. doi:10.1002/jhm.2284
- 28. Zeltser MV, Nash DB. Republished: Approaching the Evidence Basis for Aviation-Derived Teamwork Training in Medicine. Am J Med Qual. 2019;34(5):455-464. doi:10.1177/1062860619873215
- 29. Foronda C, Macwilliams B, Mcarthur E. Interprofessional communication in healthcare: An integrative review. Nurse Educ Pract. 2016;19:36-40. doi:10.1016/j.nepr.2016.04.005
 - 30. Saltman DC, O'Dea NA, Kidd MR. Conflict management: a primer for doctors in training. Postgrad Med J. 2006;82(963):9–12. doi:10.1136/pgmj.2005.034306

THANK YOU!