Austin Journal of Clinical Pathology

Open Access

Austin Publishing Group

Review Article

Medical Error and Patient Safety: Fostering a Patient Safety Culture

Kalra J[1]* and Adams SJ[2]

[1]Department of Pathology and Laboratory Medicine, University of Saskatchewan, Canada

[2]College of Medicine, University of Saskatchewan, Canada

***Corresponding author:** Kalra J, Department of Pathology and Laboratory Medicine, University of Saskatchewan, Royal University Hospital, 103 Hospital Drive, Saskatoon, Saskatchewan, Canada

Received: July 27, 2016; **Accepted:** August 23, 2016; **Published:** August 29, 2016

Abstract

Variation in healthcare processes creates opportunities for medical error and, in this context; consistency is viewed as an ideal to reduce medical error. In this article we point out that a culture of patient safety and a culture of innovation have unique, though synergistic, characteristics which must be fostered if quality performance in healthcare is to be achieved. We discuss how creativity and ingenuity, foundational concepts underlying innovation, must drive continuous quality improvement strategies. A culture of patient safety incorporating evidence based interventions will be effective in promoting quality in healthcare. However, special precautions must be in place when implementing change in order to mitigate risks to patient safety, all the while balanced with efforts to support rather than stifle a culture of innovation.

Keywords: Medical error; Patient safety; Culture; Health care; Adverse events

Introduction

Premium non noncore (first, do no harm) is a core principle of medicine; however, when patients enter the healthcare system, it is recognized that medical errors do occur and patients may be harmed [1,2]. The United States Institute of Medicine's landmark report To Err is Human: Building a Safer Health System brought increased awareness to the prevalence of errors in healthcare and provided a necessary catalyst to promote patient safety by articulating an ambitious goal of reducing the number of errors by 50% over the next five years [3]. Achieving that ideal has proven to be difficult. In the United States, national efforts at supporting recommendations to create a safer health system were enhanced by funding of over $530 million from 2001 through 2011 through the Agency for Healthcare Research and Quality for research on patient safety. However, the results of this program have been somewhat disappointing. In a review of Medicare Patient Safety Monitoring System data from 2005-2011, adverse-event rates were found to decline substantially among patients hospitalized for acute myocardial infarction or congestive heart failure but not among those hospitalized for pneumonia or conditions requiring surgery, despite targeted national efforts focused improving quality of care for these common conditions [4].

Compromised quality care, including medical error, results in increased morbidity and mortality and use of unnecessary resources [5]. These issues require urgent attention and action, and must include collaboration between all players within the healthcare system, including healthcare providers, healthcare managers and administration, regulatory and professional bodies, and accreditation bodies. A culture of patient safety must become the new normal for healthcare, and must incorporate evidence-based interventions to minimize medical error and promote quality care across institutional boundaries.

What is a patient safety culture?

A patient safety culture includes the shared beliefs, attitudes, values, norms and behavioral characteristics of healthcare providers and employees in relation to an organization's ongoing patient safety performance [6–8]. A patient safety culture demonstrates a commitment to patient-centered care and prioritizes safety over competing interests such as efficiency or volume [9]. It represents a commitment by all participants in the healthcare system to minimize medical error and provide quality care.

Patient safety culture may be represented using a three-layer model incorporating organizational dimensions, psychological dimensions and social processes [7]. Organizational dimensions include the actions of management to promote safety, communication and information flow, practices of organization learning, and management of change. Psychological dimensions include sense of personal responsibility and control over one's own work and its results, knowledge of hazards and hazard mechanisms, and knowledge of safety and the necessary means to achieve it, while social processes affect how concepts are interpreted and how practices are shaped through interactions with colleagues [7].

Developing a patient safety culture

Despite the myriad benefits of a patient safety culture—such as increased trust between patients, health providers, and insurers; reduced malpractice claims; reduced length of stay in hospital; and, most importantly, improved patient outcomes—various barriers exist in developing a culture of patient safety [5]. These barriers include resistance to change among healthcare providers; inadequate communication between healthcare team members, management, and professional and accreditation bodies; lack of cohesive team work among members of the healthcare team; lack of awareness of sources of error and models of patient safety; and limited resources for the implementation of interventions to improve patient safety [5].

Interventions should be aimed at enabling, enacting, and elaborating a patient safety culture through policies and practices that motivate the pursuit of safety, frontline actions that improve patient

Citation: Kalra J and Adams SJ. Medical Error and Patient Safety: Fostering a Patient Safety Culture. Austin J Clin Pathol. 2016; 3(1): 1041.

safety, and learning practices that reinforce safe behaviours [9]. A systematic review of the literature on the effectiveness of interventions to improve patient safety culture found evidence to support that leadership walk rounds and multi-faceted unit-based programs (which applied a structured framework to assess, identify, report and improve patient safety defects) may have a positive impact on patient safety climate [6]. Technological innovations, such as computer-assisted diagnostic aids, decision support algorithms, feedback loops, or additional confirmation stages in diagnostic pathways, may decrease diagnostic error [10]. However, special precautions must be in place during implementation of new technologies or processes in order to mitigate unintended risks to patient safety, all the while balanced with efforts to support rather than stifle a culture of innovation.

Education on patient safety should permeate all levels, including undergraduate, postgraduate, and continuing medical education, in a collaborative approach with other healthcare professionals. A formal education program may begin with developing awareness of the potential for medical errors, moving towards identification of areas where errors may occur and finally developing skills to create effective solutions [1].

While patient safety culture permeates all levels of the health system, management's commitment to safety has been considered the most central component to developing a patient safety culture [7]. A commitment-based management philosophy, as an opposed to a control-based model, fosters self-discipline and motivation among healthcare providers, and allows for greater stakeholder involvement in decision making [11]. A "no-fault" model may allow for increased reporting of medical errors, thus creating opportunities for analyses of errors and personal and institutional learning [1,11]. Quality care grand rounds, for example, can be used as a forum for discussion of medical errors in a safe, non-punitive environment [1,12].

Spread and scale

Many effective patient safety interventions fail to be scaled-up to the level where they have the greatest impact across institutions and health regions. This can be attributed to the decentralized nature of healthcare systems, variation in local contexts, and lack of leadership championing specific innovations across sites [13]. A culture of collaboration among institutions, organizations, and health regions—sharing successes and failures—is required. Regional and national patient safety councils or institutions may play a lead role to ensure that the most successful interventions which improve patient safety are adopted across institutions. In Canada, for example, the Canadian Patient Safety Institute was established by the federal government in 2013 to provide capital to generate, introduce and promote new tools related to patient safety; commission and publish research on patient safety; and provide tools, resources, and services for healthcare providers, leaders, and boards [14]. It is a moral imperative to spread and scale strategies found to be effective in specific units or institutions to create a culture of patient safety within and across departments, healthcare institutions, and beyond.

Establishing the evidence-base

Theoretical underpinnings may no longer be sufficient to justify spread and scale of interventions aimed at improving patient safety without supporting evidence. The effectiveness of interventions at improving patient safety climate can and should be measured. Safety culture is commonly measured using "safety climate"—the measurable surface features of safety culture—as a surrogate. Safety climate assesses perceptions of the priority given to safety relative to other organizational goals [8]. There is an emerging body of literature which assesses the effectiveness of interventions to improve safety culture and safety climate [15]; however, it is recognized the level of evidence remains limited [6]. As a guideline for future research, studies should (a) describe the theory or logic model underlying the intervention; (b) describe the intervention in sufficient detail so it can be replicated; and (c) describe the implementation process, how the intervention changed over time, and the effects on staff roles, with clearly defined outcomes [15]. Future studies should also investigate the financial implications of specific interventions, as it is anticipated that many interventions are associated with upfront and ongoing costs, as well as potential downstream savings [16].

Conclusion

If we are to live by the principle premium non noncore, we must foster a culture of patient safety; the social contract between healthcare providers and the public demands that safe, quality care is the standard to be attained. Fostering a patient safety culture begins with awareness of the potential for medical and healthcare errors to occur. Healthcare providers must then use the tools which are before them, as well as develop new strategies and interventions, to create a patient safety culture through continuous improvement. Such a culture must become embedded in all healthcare processes and become the new normal within and across laboratories, departments, institutions, regions, regional or national regulatory and accreditation bodies, and professions. Research efforts should be directed at assessing the effectiveness of interventions to improve patient safety culture, reduce medical error, and ultimately improve patient outcomes.

References

1. Kalra J, Kalra N, Baniak N. Medical error, disclosure and patient safety: A global view of quality care. Clin Biochem. 2013; 46: 1161–1169.
2. Kalra J, Massey KL, Mulla A. Disclosure of medical error: policies and practice. JR Soc Med. 2005; 98: 307–309.
3. Washington DC. To Err Is Human. National Academies Press. 2000.
4. Wang Y, Eldridge N, Metersky ML, Verzier NR, Meehan TP, Pandolfi MM, et al. National trends in patient safety for four common conditions. N Engl J Med. 2014; 370: 341–351.
5. Kalra J. Medical Errors and Patient Safety: Strategies to reduce and disclose medical errors and improve patient safety. De Gruyter. 2011.
6. Morello RT, Lowthian JA, Barker AL, McGinnes R, Dunt D, Brand C. Strategies for improving patient safety culture in hospitals: a systematic review. BMJ Qual Saf. 2013; 22: 11–8.
7. Reiman T, Pietikäinen E, Oedewald P. Multilayered approach to patient safety culture. Qual Saf Health Care. 2010; 19: 20.
8. Flin R, Burns C, Mearns K, Yule S, Robertson EM. Measuring safety climate in health care. Qual Saf Health Care. 2006; 15: 109–115.
9. Singer SJ, Vogus TJ. Reducing hospital errors: interventions that build safety culture. Annu Rev Public Health. 2013; 34: 373–396.
10. McDonald KM, Matesic B, Contopoulos-Ioannidis DG, Lonhart J, Schmidt E, Pineda N, et al. Patient safety strategies targeted at diagnostic errors: a systematic review. Ann Intern Med 2013; 158: 381–389.

11. Khatri N, Brown GD, Hicks LL. From a blame culture to a just culture in health care. Health Care Manage Rev. 2009; 34: 312–322.

12. Wachter RM, Shojania KG, Markowitz AJ, Smith M, Saint S. Quality grand rounds: the case for patient safety. Ann Intern Med. 2006; 145: 629.

13. Lanham HJ, Leykum LK, Taylor BS, McCannon CJ, Lindberg C, Lester RT. How complexity science can inform scale-up and spread in health care: understanding the role of self-organization in variation across local contexts. Soc Sci Med. 2013; 93: 194–202.

14. Canadian Patient Safety Institute. About CPSI. 2016.

15. Wachter RM, Pronovost P, Shekelle P. Strategies to improve patient safety: the evidence base matures. Ann Intern Med. 2013; 158: 350.

16. McFadden KL, Stock GN, Gowen CR. Implementation of patient safety initiatives in US hospitals. Int J Oper Prod Manag. 2006; 26: 326–347.

Austin J Clin Pathol - Volume 3 Issue 1 - 2016
ISSN : 2381-9170 | www.austinpublishinggroup.com

Citation: Kalra J and Adams SJ. Medical Error and Patient Safety: Fostering a Patient Safety Culture. Austin J Clin Pathol. 2016; 3(1): 1041.