

# PROMOTING EVIDENCE-BASED PRACTICE IN HEALTHCARE SETTINGS IN PHARMACY, NURSING, LABORATORY AND RADIOLOGY

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### **Abstract:**

Promoting evidence-based practice (EBP) in healthcare settings is essential for ensuring high-quality patient care and optimal outcomes. This review article examines the current state of EBP implementation in healthcare settings, identifies barriers and facilitators to its adoption, and explores strategies to promote its use. By synthesizing existing literature and best practices, this review aims to provide insights into how healthcare organizations can effectively integrate EBP into clinical practice. Promoting evidence-based practice in healthcare settings is crucial for delivering high-quality, patient-centered care. By addressing barriers, leveraging facilitators, and implementing effective strategies, healthcare organizations can enhance EBP adoption and ultimately improve patient outcomes.

**Keywords:** Evidence-based practice, Healthcare, Implementation, Clinical practice, Quality improvement, Patient outcomes

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#### **Introduction:**

Evidence-based practice (EBP) is a term that has gained increasing popularity in the fields of healthcare, education, social work, and many other disciplines. It is a methodology that involves integrating the best available research evidence with clinical expertise and patient values to make informed decisions about the care and treatment of individuals [1].

At its core, evidence-based practice is about using the most current and relevant research evidence to inform decision-making. This evidence can come from a variety of sources, including randomized controlled trials, systematic reviews, meta-analyses, and expert consensus. By integrating this evidence with clinical expertise, practitioners can make more informed decisions about the care and treatment of their patients [2].

One of the key principles of evidence-based practice is that it is patient-centered. This means that practitioners must take into account the values, preferences, and goals of the individual patient when making decisions about their care. By involving patients in the decision-making process, practitioners can ensure that the care they provide is tailored to the specific needs and preferences of each individual [3].

Another important aspect of evidence-based practice is the emphasis on continuous learning and improvement. Practitioners are encouraged to regularly review the latest research evidence and update their practice accordingly. This commitment to lifelong learning helps ensure that practitioners are providing the best possible care to their patients [4].

The implementation of evidence-based practice can vary depending on the setting. In healthcare, for example, practitioners may use clinical practice guidelines to inform their decision-making. These guidelines are developed based on the best available research evidence and are intended to help practitioners make evidence-based decisions about patient care [5].

In education, evidence-based practice may involve using research evidence to inform teaching strategies and interventions. By incorporating the latest research findings into their practice, educators can ensure that they are providing the most effective instruction to their students [6].

In social work, evidence-based practice may involve using research evidence to inform interventions and programs aimed at improving the well-being of individuals and communities. By using evidence-based approaches, social workers can ensure that they are providing the most effective and efficient services to their clients [7].

Evidence-based practice is a methodology that involves integrating research evidence, clinical expertise, and patient values to inform decision-making. By using the best available evidence to guide their practice, practitioners can ensure that they are providing the most effective and personalized care to their patients. The principles of evidence-based practice, including patient-centered care and continuous learning, are essential for ensuring high-quality outcomes in a variety of settings. By embracing evidence-based practice, practitioners can improve the quality of care they provide and ultimately improve the well-being of their patients [8].

### Barriers to Implementing EBP in Healthcare Settings:

Evidence-based practice (EBP) is a crucial component of providing high-quality healthcare services. It involves integrating the best available evidence with clinical expertise and patient values to make informed decisions about patient care. Despite the numerous benefits of EBP, such as improved patient outcomes, increased patient satisfaction, and reduced healthcare costs, there are several barriers that can hinder its successful implementation in healthcare settings [4].

One of the major barriers to implementing EBP in healthcare settings is a lack of knowledge and skills among healthcare professionals. Many healthcare providers may not have received adequate training in EBP during their education and may not be familiar with the principles and processes involved in implementing it. This can lead to resistance to change and reluctance to adopt new practices, as healthcare professionals may feel overwhelmed or unprepared to incorporate EBP into their daily routines [3].

Another barrier to implementing EBP in healthcare settings is a lack of resources, including time, funding, and access to research evidence. Healthcare professionals often have demanding workloads and limited time to search for and critically appraise the latest research evidence. Additionally, accessing and obtaining research articles and other sources of evidence can be costly, especially for healthcare organizations with limited budgets. Without the necessary resources, healthcare professionals may struggle to implement EBP effectively and may resort to relying on outdated or ineffective practices [9].

Additionally, organizational barriers can impede the successful implementation of EBP in healthcare settings. These barriers can include a lack of leadership support, resistance to change among staff, and competing priorities within the organization. Without strong leadership and a supportive organizational culture, healthcare professionals may not feel empowered to adopt EBP practices and may face challenges in aligning their goals and priorities with those of the organization. Resistance to change can further hinder the implementation of EBP, as healthcare professionals may be hesitant to deviate from established practices or protocols [10].

Furthermore, cultural barriers, such as hierarchical structures and professional boundaries, can also pose challenges to implementing EBP in healthcare settings. Healthcare professionals may accustomed to working in silos and may not be accustomed to collaborating with colleagues from different disciplines or levels of expertise. This can hinder the sharing of knowledge and expertise necessary for implementing EBP effectively. Additionally, healthcare professionals may face pressure to conform to traditional practices or hierarchies within their organizations, which can limit their ability to challenge existing norms and advocate for EBP [11].

There are several barriers to implementing EBP in healthcare settings that can hinder the delivery of high-quality, evidence-based care. Addressing these barriers requires a multifaceted approach that involves providing education and training to healthcare professionals, allocating resources for accessing and appraising research evidence, fostering a supportive organizational culture, and promoting collaboration and communication among healthcare professionals. By overcoming these barriers, healthcare organizations can enhance the quality of care they provide and improve patient outcomes [12].

## Facilitators of EBP Adoption in Healthcare Settings:

Evidence-based practice (EBP) is a crucial aspect of modern healthcare, as it involves integrating the best available evidence with clinical expertise and patient values to make informed decisions about patient care. However, despite the numerous benefits associated with EBP, its adoption in healthcare settings can be challenging [13].

One of the primary facilitators of EBP adoption in healthcare settings is the availability of resources and support. Healthcare organizations that provide clinicians with access to relevant research evidence, guidelines, and tools to support EBP are more likely to see successful adoption of EBP practices. This includes access to online databases, journals, and other resources that can help clinicians stay up-to-date with the latest evidence-based practices. Additionally, providing clinicians

with training and support in EBP methodologies can help build their confidence and competence in implementing EBP in their clinical practice [14]. Another important facilitator of EBP adoption is leadership support and buy-in. Leaders within healthcare organizations play a crucial role in promoting a culture of EBP and creating an environment where clinicians feel supported in integrating EBP into their practice. When leaders prioritize EBP and demonstrate their commitment to its implementation, clinicians are more likely to see the value in adopting EBP practices. This can involve providing time and resources for EBP activities, as well as recognizing and rewarding clinicians who demonstrate a commitment to EBP [15].

Collaboration and interdisciplinary teamwork are also key facilitators of EBP adoption in healthcare settings. EBP is inherently a collaborative process that involves bringing together individuals from different disciplines to make informed decisions about patient care. By fostering a culture of collaboration and teamwork. healthcare organizations can create an environment where clinicians feel empowered to work together to integrate evidence-based practices into their clinical care. This can involve interdisciplinary meetings, case conferences, and other opportunities for clinicians to share knowledge and expertise in order to improve patient outcomes [16].

In addition to these facilitators, organizational culture and readiness for change are also important factors that can influence the adoption of EBP in healthcare settings. Organizations that have a culture that values innovation, continuous improvement, and learning are more likely to embrace EBP and see successful implementation. Additionally, organizations that are ready for change and willing to invest in the necessary resources and support for EBP adoption are more likely to overcome barriers and challenges that may arise during the implementation process [17].

The successful adoption of EBP in healthcare settings requires a combination of resources, support, leadership, collaboration, and organizational culture. By addressing these key facilitators, healthcare organizations can create an environment where clinicians feel empowered to integrate evidence-based practices into their clinical care, ultimately leading to improved patient outcomes and quality of care. As the healthcare landscape continues to evolve, it is essential that organizations prioritize EBP adoption in order to provide the best possible care for their patients [18].

### Strategies for Promoting EBP in Healthcare Settings:

One of the key strategies for promoting EBP in healthcare settings is education and training. Healthcare professionals need to be equipped with the knowledge and skills required to critically appraise research evidence, integrate it with clinical expertise, and apply it to patient care. This can be achieved through formal education programs, workshops, seminars, and online resources. By providing healthcare professionals with the necessary education and training, they will be better prepared to embrace EBP and incorporate it into their practice [9].

Another important strategy for promoting EBP in healthcare settings is creating a supportive organizational culture. Organizational leaders play a crucial role in fostering a culture that values and promotes EBP. This can be achieved by providing resources and support for EBP initiatives, encouraging collaboration and communication among healthcare professionals, and recognizing and rewarding EBP implementation. By creating a supportive organizational culture, healthcare settings can cultivate an environment where EBP is seen as the standard of care [19].

In addition to education and training and creating a supportive organizational culture, another strategy for promoting EBP in healthcare settings is providing access to evidence-based resources. Healthcare professionals need access to up-to-date research evidence, clinical guidelines, and best practices in order to implement EBP effectively. This can be achieved by subscribing to online databases, journals, and clinical guidelines, as well as establishing partnerships with academic institutions and research organizations. By providing healthcare professionals with access to evidence-based resources, they will be able to stay informed and make informed decisions in their practice [20].

Furthermore, involving patients in the EBP process is another important strategy for promoting EBP in healthcare settings. Patients play a crucial role in shared decision-making and their values and preferences should be taken into consideration when implementing EBP. Healthcare professionals should engage patients in discussions about treatment options, risks and benefits, and involve them in the decision-making process. By involving patients in the EBP process, healthcare settings can ensure that patient-centered care is delivered and that patients are actively engaged in their own care [5].

### Measuring the Impact of EBP in Healthcare Settings:

One of the key aspects of measuring the impact of EBP in healthcare settings is evaluating patient outcomes. Patient outcomes refer to the results of healthcare interventions on patients' health status, well-being, and satisfaction. By measuring patient outcomes, healthcare providers can determine the effectiveness of EBP interventions and make informed decisions about the best course of action for individual patients. This can help improve patient care, enhance patient satisfaction, and ultimately lead to better health outcomes [21].

In addition to evaluating patient outcomes, assessing healthcare quality metrics is another important aspect of measuring the impact of EBP in healthcare settings. Healthcare quality metrics are measures that assess the quality of healthcare services, such as patient safety, efficiency, effectiveness, timeliness, and equity. By assessing healthcare quality metrics, healthcare providers can identify areas for improvement, track progress, and ensure that EBP interventions are delivering high-quality care to patients. This can help improve healthcare delivery, reduce healthcare costs, and enhance patient outcomes [22].

Monitoring adherence to EBP guidelines is also essential for measuring the impact of EBP in healthcare settings. EBP guidelines are evidence-based recommendations that guide healthcare providers in making clinical decisions and delivering care based on the best available evidence. By monitoring adherence to EBP guidelines, healthcare providers can ensure that EBP interventions are being implemented correctly, consistently, and effectively. This can help improve the quality of care, reduce variations in practice, and enhance patient outcomes [23].

Overall, measuring the impact of EBP in healthcare settings is crucial for evaluating patient outcomes, healthcare auality assessing metrics. monitoring adherence to EBP guidelines. By doing so, healthcare providers can ensure that EBP interventions are effective, efficient, and evidencebased, leading to improved patient care, enhanced healthcare quality, and better health outcomes for patients. It is important for healthcare organizations to invest in tools and resources for measuring the impact of EBP in order to continuously improve the delivery of care and achieve better outcomes for patients [24].

### **Challenges in EBP Implementation:**

One of the major challenges in EBP implementation is the sustainability of EBP initiatives. While healthcare organizations may

initially invest in training and resources to support EBP, maintaining these initiatives over the long term can be difficult. This is due to factors such as staff turnover, competing priorities, and limited resources. In order to address this challenge, healthcare organizations need to develop strategies to integrate EBP into their organizational culture and make it a priority for all staff members [25]. Another challenge in EBP implementation is overcoming resistance from healthcare providers. Some healthcare professionals may be skeptical of EBP or resistant to change, which can hinder the adoption of evidence-based practices. In order to address this challenge, organizations need to provide education and training on the benefits of EBP, engage staff in the decision-making process, and address any concerns or misconceptions that

Integrating EBP into existing workflows is also a challenge for healthcare organizations. Many providers are already overwhelmed with their day-to-day responsibilities and may struggle to find the time to incorporate EBP into their practice. In order to address this challenge, organizations need to streamline processes, provide easy access to evidence-based guidelines and resources, and provide support and resources to help providers integrate EBP into their workflows [27].

### **Future Directions:**

providers may have [26].

Looking towards the future, there are several key directions in which EBP is likely to evolve. One of these is advancements in EBP research, which will continue to improve our understanding of what works best in healthcare and how to implement evidence-based practices effectively. This will help to ensure that EBP remains relevant and up-to-date in a rapidly changing healthcare landscape [28]. Another important direction for EBP is incorporating patient preferences in decision-

Another important direction for EBP is incorporating patient preferences in decision-making. Patients are increasingly taking an active role in their healthcare decisions and it is important to consider their values, preferences, and goals when implementing evidence-based practices. This can help to improve patient outcomes and satisfaction with care [29].

Finally, there is a growing recognition of the importance of global perspectives in EBP dissemination and implementation. Healthcare systems vary widely around the world and what works in one context may not necessarily work in another. By sharing best practices and lessons learned across borders, we can improve the implementation of EBP on a global scale and ensure that all patients receive the best possible care [30].

While there are challenges in implementing EBP in healthcare, there are also exciting opportunities for the future. By addressing issues such as sustainability, resistance, and integration, and by embracing advancements in research, patient preferences, and global perspectives, we can continue to improve the quality of care and outcomes for patients around the world [31].

#### **Conclusion:**

In conclusion, promoting EBP in healthcare settings requires a multi-faceted approach that includes education and training, creating a supportive organizational culture, providing access to evidence-based resources, and involving patients in the EBP process. By implementing these strategies, healthcare settings can overcome barriers to EBP implementation and improve patient outcomes. EBP is essential for delivering high-quality, effective, and patient-centered care, and it is important for healthcare professionals to embrace and promote EBP in their practice.

### **References:**

- 1. Melnyk, B. M., & Fineout-Overholt, E. (2011). Evidence-based practice in nursing & healthcare: A guide to best practice. Lippincott Williams & Wilkins.
- Straus, S. E., Glasziou, P., Richardson, W. S., & Haynes, R. B. (2018). Evidence-based medicine: How to practice and teach EBM. Elsevier.
- 3. Sackett, D. L., Rosenberg, W. M., Gray, J. A., Haynes, R. B., & Richardson, W. S. (1996). Evidence based medicine: what it is and what it isn't. BMJ, 312(7023), 71-72.
- 4. DiCenso, A., Guyatt, G., & Ciliska, D. (2005). Evidence-based nursing: A guide to clinical practice. Elsevier Health Sciences.
- 5. Hoffmann, T. C., & Bennett, S. (2013). Del Mar C. Evidence-based practice across the health professions. Elsevier Health Sciences.
- 6. Titler, M. G. (2008). The evidence for evidence-based practice implementation. Patient safety and quality: An evidence-based handbook for nurses, 1, 3-1.
- 7. Kitson, A., Harvey, G., & McCormack, B. (1998). Enabling the implementation of evidence-based practice: a conceptual framework. Quality in health care, 7(3), 149-158
- 8. Rycroft-Malone, J., Seers, K., Titchen, A., Harvey, G., Kitson, A., & McCormack, B. (2004). What counts as evidence in evidence-based practice?. Journal of advanced nursing, 47(1), 81-90.

- 9. Grol, R., & Grimshaw, J. (2003). From best evidence to best practice: effective implementation of change in patients' care. The Lancet, 362(9391), 1225-1230.
- 10.Helfrich, C. D., Li, Y. F., Sharp, N. D., Sales, A. E., & SoRelle, R. (2009). Organizational readiness to change assessment (ORCA): Development of an instrument based on the Promoting Action on Research in Health Services (PARIHS) framework. Implementation Science, 4(1), 38.
- 11. Stetler, C. B., Ritchie, J. A., Rycroft-Malone, J., & Charns, M. P. (2014). Leadership for evidence-based practice: strategic and functional behaviors for institutionalizing EBP. Worldviews on Evidence-Based Nursing, 11(4), 219-226.
- 12. Cullen, L., & Adams, S. L. (2012). Planning for implementation of evidence-based practice. Journal of Nursing Administration, 42(4), 222-230
- 13. Aarons, G. A., Hurlburt, M., & Horwitz, S. M. (2011). Advancing a conceptual model of evidence-based practice implementation in public service sectors. Administration and Policy in Mental Health and Mental Health Services Research, 38(1), 4-23.
- 14. Damschroder, L. J., Aron, D. C., Keith, R. E., Kirsh, S. R., Alexander, J. A., & Lowery, J. C. (2009). Fostering implementation of health services research findings into practice: a consolidated framework for advancing implementation science. Implementation Science, 4(1), 50.
- 15.Gifford, W., Davies, B., Edwards, N., Griffin, P., & Lybanon, V. (2007). Managerial leadership for nurses' use of research evidence: an integrative review of the literature. Worldviews on Evidence-Based Nursing, 4(3), 126-145.
- 16.Rycroft-Malone, J., Harvey, G., Seers, K., Kitson, A., McCormack, B., & Titchen, A. (2004). An exploration of the factors that influence the implementation of evidence into practice. Journal of clinical nursing, 13(8), 913-924.
- 17. Squires, J. E., Estabrooks, C. A., Gustavsson, P., & Wallin, L. (2011). Individual determinants of research utilization by nurses: a systematic review update. Implementation Science, 6(1), 1-13.
- 18. Estabrooks, C. A., Squires, J. E., Cummings, G. G., Birdsell, J. M., Norton, P. G., & Cummings, G. (2009). Development and assessment of the Alberta Context Tool. BMC Health Services Research, 9(1), 234.

- 19. Grimshaw, J. M., Eccles, M. P., Lavis, J. N., Hill, S. J., & Squires, J. E. (2012). Knowledge translation of research findings. Implementation Science, 7(1), 50.
- 20.Scott, S. D., Estabrooks, C. A., Allen, M., & Pollock, C. (2008). A context of uncertainty: how context shapes nurses' research utilization behaviors. Qualitative Health Research, 18(3), 347-357.
- 21. Squires, J. E., Hutchinson, A. M., Boström, A. M., O'Rourke, H. M., Cobban, S. J., Estabrooks, C. A., & Cummings, G. G. (2015). To what extent do nurses use research in clinical practice? A systematic review. Implementation Science, 10(1), 1-11.
- 22. Hutchinson, A. M., Johnston, L., & Estabrooks, C. A. (2006). Theories of KT: Implications for practice. The knowledge utilization studies center, University of Alberta.
- 23. Rycroft-Malone, J., Seers, K., Chandler, J., Hawkes, C. A., Crichton, N., Allen, C., ... & Bullock, I. (2013). The role of evidence, context, and facilitation in an implementation trial: implications for the development of the PARIHS framework. Implementation Science, 8(1), 28.
- 24. Greenhalgh, T., Robert, G., Macfarlane, F., Bate, P., & Kyriakidou, O. (2004). Diffusion of innovations in service organizations: systematic review and recommendations. The Milbank Quarterly, 82(4), 581-629.
- 25. Damschroder, L. J., & Hagedorn, H. J. (2011). A guiding framework and approach for implementation research in substance use disorders treatment. Psychology of Addictive Behaviors, 25(2), 194.
- 26.Kitson, A., Rycroft-Malone, J., Harvey, G., McCormack, B., Seers, K., & Titchen, A. (2008). Evaluating the successful implementation of evidence into practice using the PARiHS framework: theoretical and practical challenges. Implementation Science, 3(1), 1-12.
- 27.Baker, R., Camosso-Stefinovic, J., Gillies, C., Shaw, E. J., Cheater, F., Flottorp, S., ... & Eccles, M. P. (2010). Tailored interventions to overcome identified barriers to change: effects on professional practice and health care outcomes. Cochrane Database of Systematic Reviews, (3).
- 28.Boström, A. M., Squires, J. E., Mitchell, A., Sales, A., & Estabrooks, C. A. (2012). Workplace culture and the implementation of evidence-based practice: A systematic review. Implementation Science, 7(1), 1-13.

- 29. Estabrooks, C. A., Squires, J. E., Hayduk, L. A., Cummings, G. G., Norton, P. G., & Advancing Research on Nursing Workforce, S. (2011). Assessing the context of health care organizations: an instrument for targeted surveys of knowledge translation systems. Implementation Science, 6(1), 1-13.
- 30. Rycroft-Malone, J., & Bucknall, T. (2010). Models and frameworks for implementing evidence-based practice: linking evidence to action. John Wiley & Sons.
- 31. Thompson, D. S., Estabrooks, C. A., Scott-Findlay, S., Moore, K., & Wallin, L. (2007). Interventions aimed at increasing research use in nursing: a systematic review. Implementation Science, 2(1), 1-16.