Healthcare is undergoing a paradigm shift wherein care delivery is transitioning from traditional disease/episodic models focused on “sick” care to more sustainable wellness models, while reimbursement is evolving from fee-for-service to value-based models. Taking place in tandem with this ongoing evolution is a demographic shift that places the aging and elderly in the highest percentile of patient populations. This new reality is to create an unstable industry financial dynamic due to the complex care requirements required to treat a higher prevalence of chronic disease. At the same time, advances in personalized medicine and science are paving the way to better health, as is a rapid advancement in evidence that introduces promising new therapies and best practices at an unprecedented pace—requiring constant monitoring of the policies and processes driving care delivery to ensure accepted practice is keeping up with the times.

Heightened regulatory scrutiny is also at the forefront of industry movements, as watchdogs seek to root out practices that negatively impact patient safety and care quality and/or add to the financial burden already borne by patients and the healthcare system as a whole. As scrutiny increases, the need for clinicians to access and leverage data and evidence-based best practices also grows to justify the care provided and its associated costs.

Underpinning—and potentially undercutting—the industry’s transformation to one based on quality and value is clinicians’ traditional approach of practicing in isolation, which commonly leads to poor interprofessional collaboration and lacks care standardization. It is a care environment that does not facilitate delivery of patient-centered, team-based care, which can in turn jeopardize outcomes and patient safety and create a negative patient experience.
The importance of collaboration that is rooted in evidence-based practice, defined by Dr. Bernadette Melnyk is: “A paradigm and lifelong problem-solving approach to clinical decision-making that involves the conscientious use of the best available evidence (including a systematic search for and critical appraisal of the most relevant evidence to answer a clinical question) with one’s own clinical expertise and patient values and preferences to improve outcomes for individuals, groups, communities, and systems.”

This definition is important, as it highlights key components of an evidence methodology, which is required if the healthcare industry is to successfully transform into a patient-centric system focused on wellness, quality and value. It also creates the foundation for a model that can guide the last mile of this transition where adoption of evidence-based practice is the end goal: The Applied Evidence-Based Practice Model.

Designed to leverage the highest-quality evidence to support clinical decision-making and practice, the Applied Evidence-Based model guides integration of evidence into clinical workflows in a way that reduces care variability while still enabling individualized care based on the patient’s specific needs. It also supports the interprofessional care team in providing the best care possible. This is uniquely apropos for physicians, nurses, and other clinicians who make up the interdisciplinary teams that are on the frontlines of nearly every clinical setting.

The rigorous structure of evidence methodology

Under the Applied Evidence-Based Model, stakeholders engage a multi-step, replicable and systematic strategy of using high quality evidence to apply a rigorous protocol of synthesizing a body of evidence. When the body of evidence is lacking or inconclusive, an evidence methodology applies consensus-based, core curriculum and expert opinion.

The core components of an evidence methodology go well beyond indexing and encompass:

- A comprehensive overview of an identified topic conducted through hand-searching techniques, which informs the development of a clinical question or questions.
- Developing the clinical question(s) based on the topic overview.
- Use of key search terms from the clinical questions to formulate search strings.
- Performing a comprehensive search using a minimum of four databases.
- Publication screening for those terms relevant to the topic and questions based on defined inclusion/exclusion criteria, as well as handsearching when necessary, to locate international clinical practice guidelines and professional/specialty organizations.
- Reviewing the body of evidence.
- Identifying and integrating regulatory, quality and safety standards.

Use of the methodology outlined above allows for application of the highest quality of evidence available within the context of the content being authored.

This evidence methodology minimizes the risk of bias by focusing on literature that also uses a rigorous methodology to review the body of evidence. It also relies on types of literature reviews that use a systematic approach to a body of evidence (e.g. Cochrane Reviews, Joanna Briggs Institute, etc.).

“It may seem a strange principle to enunciate as the very first requirement in a hospital that it should do the sick no harm.”

– Florence Nightingale
Somewhere in the middle are clinical practice guidelines developed using a rigorous transparent methodology, such as GRADE, while lower quality evidence is used to fill in the gaps when there is no scientific data available. Expert opinion based on clinical experience and knowledge rounds out the approach to minimizing bias.

When it comes to indicating the level or quality of supporting evidence, using this evidence methodology is superior to a hierarchical system. It eliminates the potential for misinterpretation created by the lack of standardization within hierarchical systems – there are literally hundreds of potentially conflicting, inconsistent evidence hierarchies, some using letters and other using numbers.

Hierarchical systems also associate study design with recommendation strength when in reality high quality evidence may not imply a strong recommendation, nor does low quality evidence necessarily imply a weak recommendation. They overlook the body of evidence and quality of studies, which may lead to studies showing favorable outcomes being referenced over those that show poor outcomes or potential harm. Finally, under hierarchical systems, qualitative evidence may be disregarded and underappreciated, and is in fact omitted from the hierarchical pyramid.

Evidence-informed care
Not everything is supported by high-quality evidence. In some areas of care delivery, it is simply unethical to conduct research, for example withholding oxygen therapy from a patient with hypoxia or not administering antivenin or administering a non-proven antivenin in the case of a deadly snake or spider bite. Additionally, patients may choose quality of life over the actions dictated by the evidence. These instances are now defined by the term “evidence-informed care”—a personalized model of care informed by, but not based on, the evidence.

Essentially, evidence-informed care requires clinicians to know the most current evidence that supports practice, while balancing science with their patients’ unique needs, values and preferences.

To understand when the right approach is to base action on the evidence or approach care through the lens of evidence as information, it is necessary to synthesize the research to provide clinicians with something that is actionable and accessible within the context of care so that it can be appropriately applied.

“Were there none who were discontented with what they have, the world would never reach anything better.”
— Florence Nightingale

Enabling evidence through informatics
The next stop on the journey to integrating evidence into practice is understanding the role of informatics. An important aspect of integrating evidence-based care into clinical workflows, the goal of informatics is to improve patient health by optimizing information management and communications. This includes leveraging information structures, processes and technology to support interprofessional teams and patients in their decision-making to help achieve the desired outcomes.

Central to informatics is the Data, Information, Knowledge and Wisdom Model, the goal of which is to define the work of clinicians and make that work visible. It is something frontline clinicians apply every day, often without realizing it. For example, “data” includes items such as numbers, words and sentences that are not interpreted. While a great deal of data is collected in the EHR, it’s meaningless until it is organized and interpreted, at which time “information” is created. This could be organizing a group of numbers as vital signs.
Next, a nurse or other member of the interprofessional team will synthesize the information and look for relationships and patterns between the types of information. When these data sets are integrated and viewed in context of the bigger picture, clinicians gain knowledge about the patient. For example, if a patient presents with an altered level of consciousness, fever, increased heart rate, hypotension and elevated respiratory rate, a nurse will synthesize this information and identify that the patient is exhibiting symptoms of sepsis.

The appropriate use of that knowledge to solve a problem is wisdom—knowing when and how to apply knowledge. In the sepsis example, the nurse understands the why and the evidence behind the need for quick action to treat sepsis.

By applying the principles of the Data, Information, Knowledge and Wisdom Model to workflow design, systems can be developed that support patient-centered, longitudinal care, as well as interprofessional team care that supports the scope of practice of each discipline—all while minimizing duplication and repetition.

Systems should include evidence-based content, which must be actionable and embedded into the workflow to support clinical decision support. The design should optimize the workflow to support the professional process of care while promoting documentation efficiency and patient safety.

There are three tiers that must be traversed to bring these design principles together into an EHR and to integrate evidence-based content into a clinical workflow:

1. **Logic tier:** Where the work of creating the evidence-based content occurs along with the transformation of that content to create the data tier and presentation tier.

2. **Data tier:** A relational database where content is standardized, structured and mapped to standardized terminologies such as SNOMED-CT and LOINC.

3. **Presentation tier:** Where clinicians at the point-of-care interact with the evidence-based content within the EHR, and where the care team applies evidence.
The Elements of Patient-Centered Care:

- Patients and families own their health and are at the center of safe, effective, coordinated holistic care.
- Interprofessional team shifts from “doing to” to “partnering with” the patient and family.
- Focus is on health and healing across the life span and across all settings where healing occurs.
- A healthy, respectful, caring, safe environment which supports those who give and receive care is assured.
- Health is a balance of the physical, psychological, social, cultural and spiritual dimensions.
- Healing is a process of reaching an optimal health state for the individual and family.
- Healthcare providers value and know the patient’s story, and the story is a key component of the care.

Actionable and accessible evidence

Now that there is quality evidence accessible at the point-of-care, the challenge is how best to advance interprofessional practice using and integrating that evidence into clinical practice.

Too often, healthcare organizations attempt to address this challenge through a project-driven approach, which only solves one piece of the overall adoption puzzle. Because it fails to address the larger issue of making static evidence actionable at the point-of-care, the resolution will not be lasting.

Sustaining meaningful change over time requires attention to both culture and professional practice. A framework-driven approach clearly indicates that the culture must be safe, respectful and caring. Meanwhile, professional practice involves using knowledge in a professional field. In healthcare, it demands collaboration, communication and the use of evidence-based practice to obtain desired clinical outcomes.

Both are addressed through partnership culture. This encompasses the infrastructure and the place where interprofessional team members come together to implement and sustain culture/practice change and the culture of the organization. It also includes the partnership between those interprofessional teams and the patient to enable the delivery of patient-centered care in which the focus is on health and healing and care is both personalized and individualized.
When the organization and formal leaders embrace the partnership culture model across all areas, they are actively engaged in supporting that culture through the formation of a Partnership Council whose work is aligned with the strategic work of the organization. Each role within an interprofessional team must be represented within the Council infrastructure to ensure the unique perspective of every function is represented in the decision-making process. A Partnership Council (staff engagement) infrastructure is also utilized to initiate scope of practice conversations, learn from each other and dialogue about practice at the point-of-care.

Ultimately, by integrating the professional processes of care that emphasize individual and integrated practices at the point-of-care, and by forming partnerships between all members of the healthcare team to coordinate, integrate and deliver healthcare across the continuum, multidisciplinary practice will evolve into interprofessional practice. This superior approach entails a deep level of collaboration and partnership, where care planning and evaluation are done jointly by all members of the team.

The interprofessional team commits to the integration of processes of care to support evidence-based and individualized patient care. Each discipline is clear on its own professional scope of practice, while each discipline understands the unique and overlapping scopes of practice of all members of the healthcare team.

The interprofessional team is tasked with reviewing appropriate clinical practice guidelines, looking for overlaps in scopes of practice, inconsistencies in practice, and duplication in delivery of services. When these duplications and variations are eliminated from clinical workflows and actionable evidence is easily accessible, clinicians across the continuum are more likely to embrace the integration of evidence to advance clinical practice at the point-of-care.

The most successful Partnership Councils share a set of common characteristics. These are:

- **Membership:** The Council is formed of people who represent the entire business unit/area/department.
- **Leadership:** Leadership is comprised of staff people who are resourceful and willing to link to other councils.
- **Participation:** Regular sustained participation by all members.
- **New member orientation:** An established process should exist to be sure new members understand their role and the purpose of the Council.
- **One-to-one assignments:** People are connected to the Council through trusting and respectful relationships and are fully informed regarding the outcomes of Council work.
- **Logistics and content:** Agendas are intentionally designed to make the best use of limited time. Topics are balanced in relation to operations and culture, and minutes communicate Council work to others.
- **Skill building:** Members regularly assess their skill set, as well as learn and use dialogue, partnership and Polarity Thinking.
- **Goal setting:** Regular, thoughtful, intentional consideration of internal and external needs and alignment with organization strategies—goals guide Council work.
- **Managing workflow:** Effective and efficient use of work teams to enable investigation of multiple issues, engage others and gather feedback.
- **Appreciative inquiry:** Highlight outstanding achievements and learn from them to guide future work.
- **Measure performance:** Engage in group self-assessment activities and review and interpret data.
- **External communication:** Share work and achievements with others outside of Council.
- **Share expertise:** Present learning, work in progress and insights gained inside and outside the work environment.
References


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