

How Allina Health Deployed Evidence-Based Decision Making and Reduced Variation

Allina Health 



HEALTHCARE ORGANIZATION

Integrated Delivery Healthcare System & Pioneer ACO

PRODUCTS

- Late-Binding™ Data Warehouse
- Health Catalyst® Analytics Platform

SERVICES

- Professional Services
- Clinical Improvement Services

EXECUTIVE SUMMARY

To tackle the variation and waste that can arise from different treatment decisions, Allina Health developed a solid framework to establish and deploy standard, evidence-based practices across the enterprise. The transition to a standard evidence-based decision-making process required collaboration and buy-in from multiple stakeholders and physicians. Allina's established quality governance structure reviewed and approved system-wide clinical practice guidelines for Stage 1 lung cancer treatment and IV heparin treatment.

To sustain and improve on this new model of care, a comprehensive checklist was developed to ensure that all future guidelines are based on patient subgroups and preferences, available evidence, stakeholder review, and other important criteria including IOM standards. Adherence to guidelines is monitored with metrics based on data extracted from Allina's enterprise data warehouse and from the electronic health record.

Results to date already indicate notable improvements in variation and cost, including the following:

- Established a system-wide EBDM model and policy
- 19 system-wide approved evidence-based guidelines developed months faster
- 5 percent decrease in Stage 1 lung cancer treatment variation
- 20 percent decrease in the number of heparin protocols

WHY EVIDENCE-BASED PRACTICES ARE IMPORTANT

Evidence has always played a key role in healthcare, and there is no shortage of clinical studies and published research to consult. The very proliferation of this information, however, makes it almost impossible to keep up with the most current findings.¹ To that end, clinicians continue to have to make difficult decisions on a regular basis, often with a good deal of uncertainty.² To reduce the significant variance and waste that arise when different clinicians within the



We faced wide variation in heparin treatment and monitoring practices and conflicting literature. The new CPG process helped us efficiently and quickly move to best practice.

David Beddow, MD
Hospitalist
Allina Health

same health system make markedly different decisions about medical treatment,³ health systems like Allina Health are taking the lead on implementing evidence-based decision-making models and clinical practice guidelines (CPGs).

In essence, this is the framework for improving outcomes based on the best possible evidence. It also supports shared decision making between patients and their providers (see Figure 1).

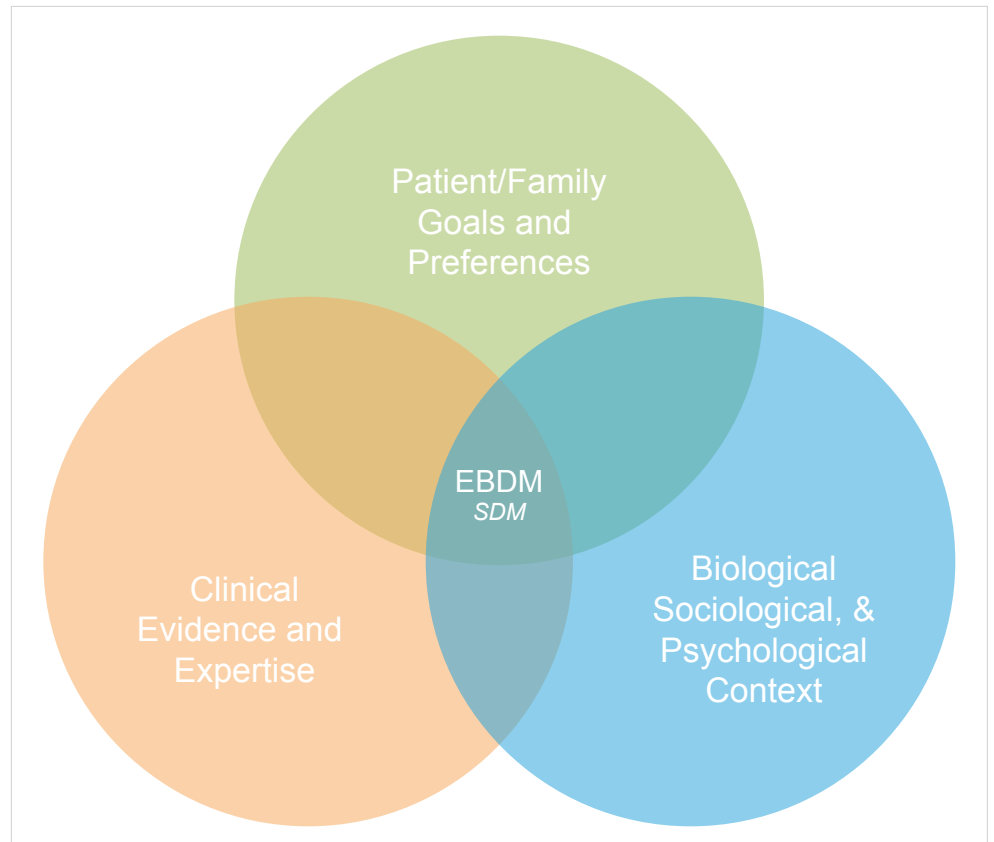


Figure 1. EBDM and SDM Model

The following story describes how Allina accomplished significant improvements across a vast enterprise of 13 hospitals, over 90 clinics, 16 pharmacies and numerous specialty medical practices—and further cemented its brand promise that all patients will receive optimal care regardless of treatment location.

LACK OF FRAMEWORK FOR CLINICAL PRACTICE GUIDELINES

As a not-for-profit health care system dedicated to helping people live healthier lives in communities throughout Minnesota and western Wisconsin, Allina has a wide regional reach. While this assures quality care for more patients, deploying evidence-based practices across such a large system comes with unique challenges. The processes for developing clinical practice guidelines



The process of developing clinical practice guidelines has become both efficient and collegial using the evidence-based decision-making model. It is a highlight of my career.

Lee Kamman, MD
Pulmonologist
Allina Health

at Allina, for example, were historically isolated within different units or locations. Additionally, there was no system-wide policy or infrastructure in place to devise and establish these guidelines. This made it difficult to deploy and update the guidelines that did exist across the entire enterprise.

All of this was compounded by another common challenge—Allina’s busy physicians did not have the resources and assistance needed to regularly review the latest research literature.

The sum challenge was two-fold. First, Allina clinicians needed the right clinical practice guidelines in hand to reduce variation and make sure that all patients, regardless of location, received the best possible care. Just as importantly, these guidelines would need to be part of a larger, evidence-based decision-making model in which administrators and other stakeholders could measure compliance with evidence-based practices, and have access to data that would help identify opportunities for improvement.

BUILDING EVIDENCE-BASED PRACTICES FROM THE GROUND UP

The work of crafting sound clinical practice guidelines began with the development and testing of a system-wide, measurable EBDM model (see Figure 2). This model provided a standard, step-by-step blueprint for guideline development. Allina has dedicated

There are many valuable offshoots of this program. If we know clinical outcomes, we are positioned to analyze costs.

Matthew Graczyk, MD
Surgeon
Allina Health

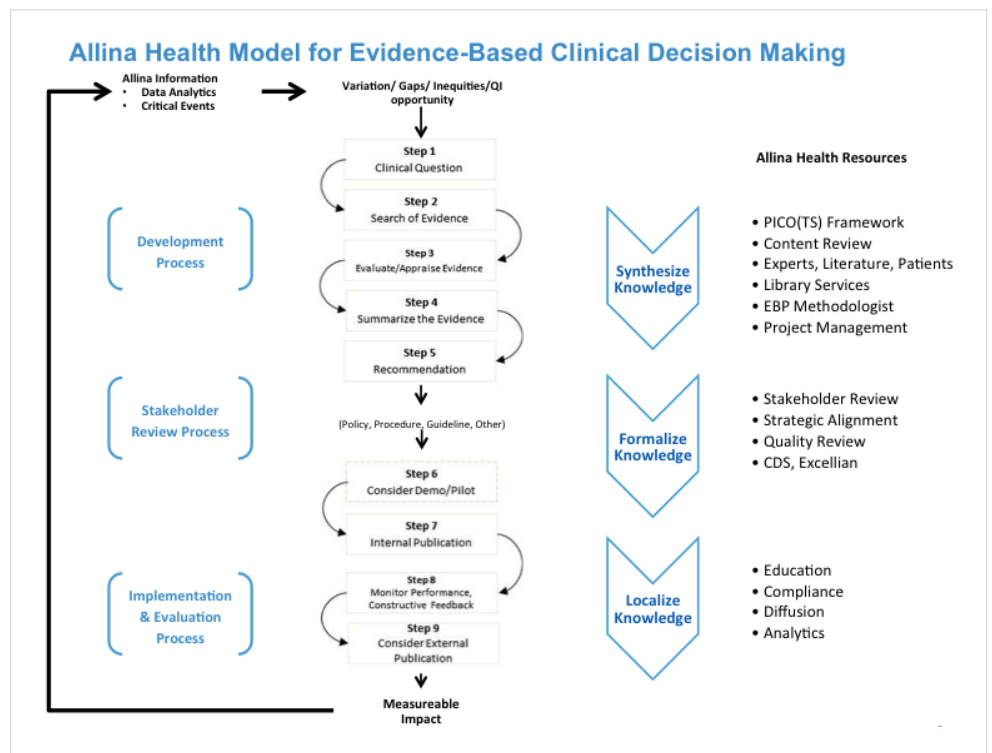


Figure 2. Allina Health Model for EBDM



We need the ability to constantly ask questions and have someone else help us research the answers. This supports the improvement process.

Matthew Graczyk, MD
Surgeon
Allina Health

resources to collect and assess available evidence for selected clinical conditions, making it easy for participating physicians to review the evidence rather than spending their valuable time searching the literature.

Peer-reviewed and approved clinical practice guidelines

Allina recognized that a system-wide policy on guidelines would support and uphold the EBDM model. Accordingly, this policy was comprised of several key elements. First, it includes a process for peer review and approval of proposed guidelines and a central repository to access approved guidelines. In addition, Allina established a multidisciplinary physician-led Clinical Practice Council to prioritize, develop, and make peer-reviewed, evidence-based recommendations for specific system-wide issues such as opioids for acute pain, medical cannabis, and appropriate age for mammography screening. Allina's senior leadership made their support visible throughout the entire process.

Prioritizing improvements

Initial focus was on clinical areas that represented significant variation in practice and/or where there was a lack of consensus. High motivation and readiness among providers to adopt evidence-based clinical practice guidelines prioritized initial phases testing the EBDM model. Two areas in particular were identified for initial improvement:

- Lung Cancer Stage 1. Allina's objectives in this area were simple but ambitious: reduce variation in Stage 1 lung cancer treatment (surgery vs. radiation) and improve outcomes. To accomplish this, Allina set its sights on developing and implementing standard evidence-based practices by 2016 across three major hospital-centered programs.
- IV heparin. IV heparin is widely used for patients with multiple protocols for various disease conditions, and is often unique to different hospital settings. Here Allina aimed to improve safety of intravenous heparin treatment by reducing the number of protocols used across the system, standardize the intravenous heparin treatment protocols across the system, and reduce cost via standardized aPTT monitoring.

Checklist for clinical practice guidelines

A thorough checklist was created for guideline development, implementation, and adherence. First, guidelines are to be developed by knowledgeable, multidisciplinary panels of experts and



Standard, evidence-based clinical practice guidelines were critical to our ability to deliver on the IHI's Triple Aim.

Connie Fiebiger, RN
Director of Clinical Programs for Cancer
Allina Health

representatives from key affected groups. From there, they must adhere to certain important criteria.

- Guidelines should always consider important patient subgroups and patient preferences.
- Guidelines must be based on a systematic review of the existing evidence using a systematic framework, such as the PICO framework. (Since implementation, Allina has developed 28 PICO statements.)
- Guideline development must also be based on an explicit and transparent process that minimizes distortions, biases, and conflicts of interest, and is consistent with hospital policies related to the code of ethics.
- Guidelines must provide a clear explanation of the logical relationships between evidence and practice, and when available, provide ratings of both the quality of evidence and the strength of the recommendations.
- Guidelines must include a plan for review modification within a maximum period not to exceed three years.
- Guidelines must include a plan for monitoring adherence.

Engaging and collaborating with clinicians

Working together, healthcare providers, knowledge acquisition experts, program managers, and others helped move the project efficiently from development to full implementation—and then to even further scaling out. Allina was able to overcome clinical skepticism through a combination of engaged physician leadership, education, collaborative guideline development, policies, and effective communication. Hiring a dedicated resource who could own this work was also vital to clinician engagement as well as the overall success of this initiative.

With the EBDM model in place, Allina will leverage its deep partnership with Health Catalyst® to extract near real-time data in the analysis of compliance and the impact these guidelines are having on outcomes.

RESULTS

Allina has created and adopted an effective, system-wide EBDM model that facilitates collaborative guideline creation. The success here rests on the collaborative approach Allina took to developing the model, backed it up with a policy, and implemented across the health system over a 9-month period. Indeed, the EBDM initiative



In order to be successful, you need strong physician leadership, a rigorous development model, and a process to build consensus.

Salvatore Bognanni
Director, Quality, Safety and Accreditation, Allina Health

reinforced system-wide collaboration and partnerships across Allina. Preliminary results from testing of the model indicate high stakeholder buy-in, utility, and feasibility within the current system.

Allina has also observed an overall increase in understanding of, and appreciation for, systematic approaches to EBDM. As for the costs of implementing the EBDM model, beyond one incremental full-time employee and portions of people's time, these costs have been minimal.

- ▶ **19 system-wide approved evidence-based guidelines developed months faster.** Prior to the EBDM initiative, the time to develop and establish system-wide evidence-based guidelines varied (depending on complexity, number of multidisciplinary team members, etc.), but typically took many months, if not years. By May 2015, with a well-resourced EBDM process in place, this time to develop and implement was reduced by many months to a typical range of 3-6 months. Since implementation of the policy, 18 approved system-wide evidence-based guidelines are in place with more in development.
- ▶ **5 percent reduction in Stage 1 lung cancer treatment variation.** Collaboration worked here, as well. Three separate hospital-centered oncology programs worked together to identify how to determine optimal treatment, with the initial focus on reducing variation in treatment. Pre-implementation, the largest spread in variation between surgery and radiation therapy was 27 percent. Six months post-implementation, this was reduced to 22 percent.
- ▶ **20 percent decrease in the number of heparin protocols.** At the start of the project, there were numerous site-based heparin protocols across Allina Health. By October 2015, the number was reduced to four standardized system-wide protocols to be fully implemented in the spring of 2016.
- ▶ **Implementation of a system-wide, evidence-based guideline for acute pain management with opioids.** Early evidence suggests that it is changing physician practice patterns in ways that are benefiting patients.

WHAT'S NEXT?

Allina is continuing to spread the guideline development policy and EBDM model to additional clinical areas and conditions. Allina also continues to develop and implement metrics and acquire

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Building a blueprint for
all of us to use was a
cornerstone to our success.

Salvatore Bognanni
Director, Quality, Safety and
Accreditation, Allina Health
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data to measure compliance, drive accountability, and document improvement in clinical outcomes and costs. ⚡

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