



Mercy Optimizes and Automates Patient Care Pathways with Ayasdi for Clinical Variation Management

A unique data-driven approach to surfacing the best practices that deliver the best patient outcomes.

Mercy is the 5th largest Catholic health care system in the U.S and is routinely ranked among the most technologically savvy hospital systems in the country. Mercy includes 44 acute care and specialty (heart, children's, orthopedic and rehab) hospitals, more than 700 physician practices and outpatient facilities, 40,000 co-workers and more than 2,000 Mercy Clinic physicians in Arkansas, Kansas, Missouri and Oklahoma.

Challenges

As a value-based care pioneer, Mercy was an early champion of developing and measuring adherence to clinical pathways across its hospitals. To develop a clinical pathways teams of selected physicians, nurses, and ancillary team members met together to review evidenced-based medicine studies and discuss individual best practices – with the goal of developing that pathway through consensus. These consensus-based pathways are derived from third party studies but are beset by the varying opinions of clinicians on what should and should not be incorporated. In addition, these consensus pathways did not address the individual clinical needs of Mercy's patients, as the pathways originate from studies derived from external patient populations. Both the varying opinions and lack of internal hospital data conspired to undermine their adoption.

In the face of these challenges, Mercy sought a data driven clinical pathway solution, derived from Mercy's existing patient information and customizable for Mercy's patient sub-populations. Mercy wanted to automate and accelerate the design of these pathways to both optimize patient care while controlling hospital costs.

CHALLENGES

- Desire to increase care quality
- Unwanted variation of care delivery
- Lower than expected adoption of clinical pathways

SOLUTION

Ayasdi for Clinical Variation Management

PROJECTED BENEFITS

- Improve care quality through focus on length of stay and care outcomes
- Increase physician adoption
- Reduce variations in care outcomes
- Save incremental \$45M over three years



Mercy used Ayasdi's Clinical Variation Management (CVM) application, developed with clinician-input, to rapidly and automatically discover optimal pathways from their own internal patient data. Ayasdi's CVM application correlates and analyzes Mercy's electronic medical record information and financial data, including information related to treatments prescribed, procedures performed, drugs administered, length of stay, and costs per patient.

Using Ayasdi's Clinical Variation Management (CVM) application, Mercy has developed dozens of new clinical pathways including a breakthrough total knee replacement clinical pathway. Using the CVM application, Mercy surfaced positive variation (innovation) that was being practiced by group of doctors in a hospital whose patients consistently had a lower length of hospital stay and shorter time to ambulation than other total knee surgery replacements in the Mercy system. More importantly, the CVM application identified exactly why. It turns out that these doctors were using a drug primarily prescribed for the treatment of central neuropathic pain before surgery. This approach would have never made it into the care pathway as the team at Mercy never would have hypothesized the use of this drug for this procedure.

Because Ayasdi's data-driven approach that eliminates subjectivity, Mercy estimates 20% more clinicians will accept the new evidenced-based clinical pathway co-developed with Ayasdi's CVM application. As a result, Mercy will be able to standardize care and reduce clinical variation. Clinicians can also customize the pathway for various patient sub-groups. Using Ayasdi's CVM application, physicians can model different outputs based on procedures added or subtracted to each pathway needed for their patients.

By lowering patient costs, minimizing care variability, and improving operational effectiveness, Mercy estimates developing hundreds of pathways and generating savings of more than \$45 million over a 3-year window.

"We see Ayasdi as a strategic application in helping Mercy maintain and optimize care pathways to continually improve clinical outcomes in the most effective way possible."

*—Dr. Beth Barbanell, MD,
VP of Clinical Pathway
Acceleration*

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