EvidenceCare

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IMPROVING HOSPITAL MARGINS BY REDUCING CARE VARIATION

A research report on how real-time data in the physicians' EHR workflow can reduce care variation, length-of-stay, and cost.

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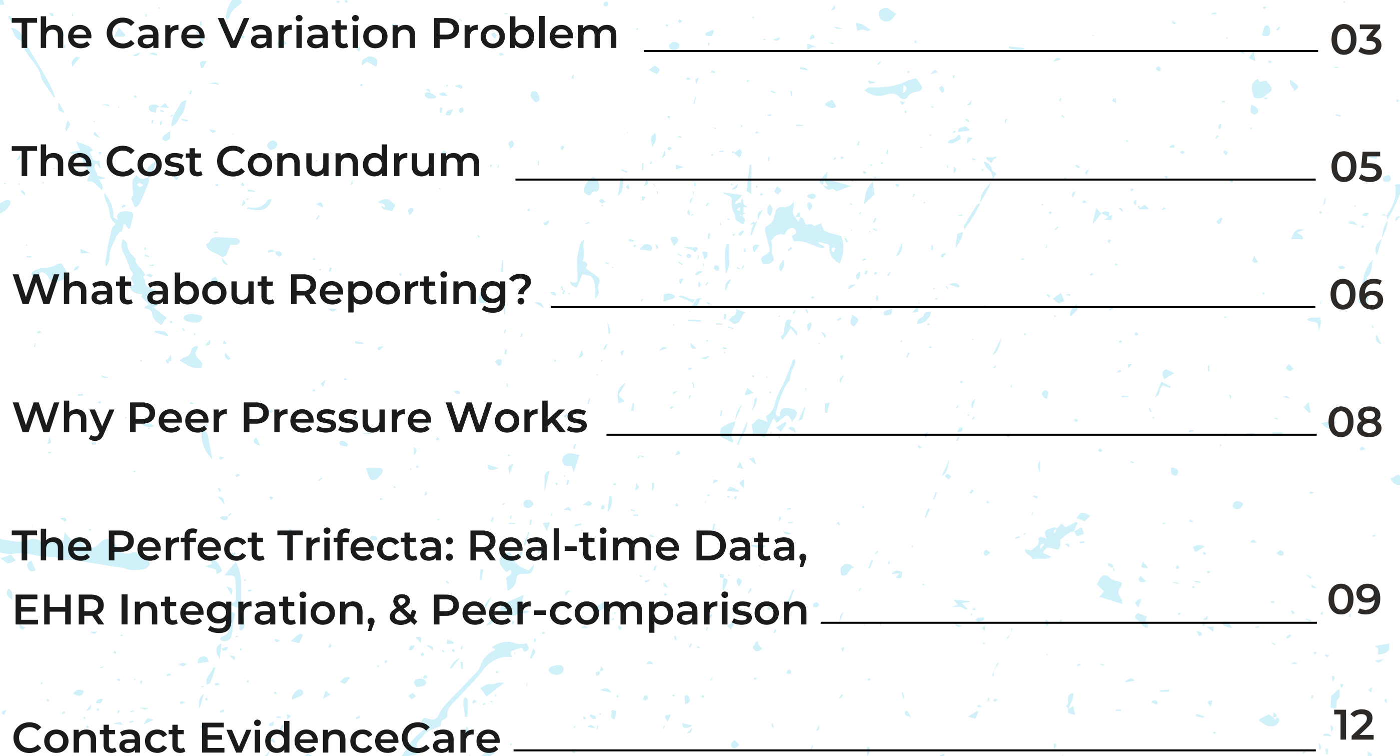

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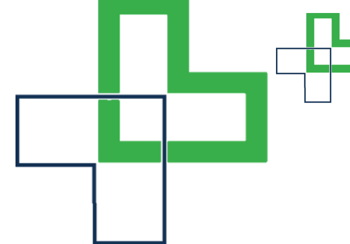


THE CARE VARIATION PROBLEM

If the practice of excellent patient care wasn't enough pressure on its own, the current U.S. healthcare system has compounded the pressure with administrative burdens.

When doctors are stretched thin, burned out, and trying to be efficient with their limited time, it's common to rely on old habits and medical training – even if they're outdated.

This is just one of many causes of **clinical care variation**, and it's an ongoing issue hospitals and health systems face.

The simplest definition of clinical care variation is ***"the over-, under-, or unnecessary utilization of healthcare services and resources,"*** as defined in the HFMA article, Reducing Clinical Variation to Drive Success in Value-Based Care. (Source - HFMA)

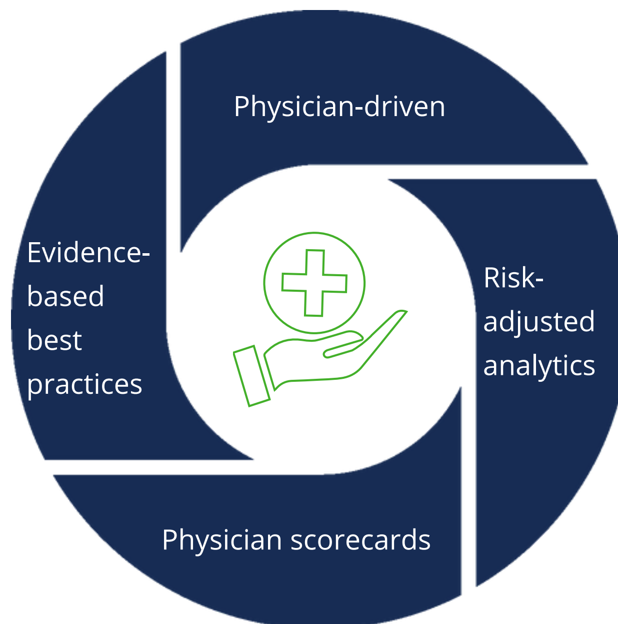
Based on this definition, it's not just over-utilization – which gets a lot of attention – but also not giving the right treatment where it's needed (under-utilization) or any care that isn't best practice for the patient's health and cost (unnecessary).

> *Unnecessary variation flows from physicians and the teams and processes available to support us in our practice. This includes differences in when, how, and where we were trained (such as diuretic use in neonatology), our practice environment (for example, a large academic trauma center versus a small critical access hospital), our propensity to fall victim to heuristics such as the availability bias or anchoring bias, and even single-patient, single-episode encounters that change a physician's treatment decisions for an entire career. In contrast, necessary variation flows from characteristics unique to an individual patient.* (Source - Health Affairs)

We'll look in more detail at the impact of variation on care quality in the next section, but it's also impacting the cost of care for patients and hospitals. According to research by The Advisory Board, **care variation could be costing the average hospital between $50-$150 million annually.** (Source - The Advisory Board)

Since this is a well-documented issue, it's worth asking, *what are health system leaders currently doing to address care variation?*

The healthcare consultant group, Lumina Health Partners, shared 4 key components of clinical variation reduction (Source - HFMA):



Lumina shares many helpful insights for each of these components, but in our experience speaking with health system leaders, **these components are often disparate initiatives with only moderate success.**

> Focusing *only* on physician decisions and behaviors minimizes evidence-based best practices.
> Focusing *only* on technology minimizes the physician experience.
> Focusing *only* on analytics or scorecards relies on data that is weeks or even months old.

The rest of this report will focus on some of the common approaches to reducing care variation, and how to combine them into an effective strategy for your health system.

THE COST CONUNDRUM

Opponents of trying to “overly reduce” the cost of care might argue that patient care will suffer because of cost reduction. But many studies show the opposite is true. Lower costs may actually lead to higher quality. In fact, the United States spends **the largest percentage of its GDP on health care** and has among **the lowest LEABs (life expectancy at birth)**, indicating a high cost, low quality issue.

Dr. William (Bill) Rice, SVP of Clinical Innovation at St. David’s HealthCare in Texas, has studied the issue of variance for many years. In a research article for the American College of Physician Executives, he discusses the role of “surrogate endpoints” on creating variation. (Source - ACPE)

> A surrogate endpoint can be a laboratory measurement, radiographic image, physical sign, or other measures that is not itself a measure of clinical benefit but is reasonably likely to predict clinical benefit. (Source - Definitive Healthcare)

Surrogate endpoints contribute to what Dr. Rice refers to as a “quality valley” which represents an opportunity to decrease costs and improve quality at the same time. In a study he conducted at two hospitals, it was found that **the physician groups with higher average charges had a higher average severity-adjusted mortality than the lower average charge group.**

The issue is not the existence of clinical endpoints, but that many physician actions are based on extra endpoints with no ultimate clinical benefit to the patient.

Efforts to reduce care variation have proven to close quality gaps and provide cost savings.

The Advisory Board found that **the highest quality hospitals deliver the lowest cost of care 82% of the time.** (Source - The Advisory Board)

The goal of reducing care variation and lowering costs is not to deliver *less care*; the goal is to deliver the *right care.*

WHAT ABOUT REPORTING?

Even if you're convinced of reducing care variation, *how do you actually start to change the status quo?*

There's growing literature on patient dashboards, reporting, EHR interventions, and peer comparison being effective means of changing behavior.

The power of data analytics and reporting currently available is exceptional. Hospitals and their EHR systems are data warehouses, and many software companies have created ways to access this data to create helpful reporting.

But reporting is only as good as its ability to empower people to act on the data.

Utilization reports are often provided months after care has been delivered, and therefore, aren't able to influence provider decisions. (Source - Milliman)

Dr. George Fidone, a founding partner of The Children's Clinic of Lufkin, TX, was tired of being in hospital leadership meetings where doctors were being asked to change behavior by providing reports that were months old.

Being retrospectively told you're an outlier in the care provided doesn't help. What would help is to provide real-time insight into the cost and care consequences of our decision-making. -Dr. George Fidone (Source - EvidenceCare)

The greatest impact on clinical decision-making will be made in real-time at the time of care decision.

THE STATIN STUDY

In a study using automated patient dashboards to provide instant feedback to physicians, researchers found that physicians increased appropriate statin prescriptions when an automated "nudge" was given if a patient met evidence-based standards to prescribe a statin – an example of the under-utilization of a prescription treatment that increased with physician intervention. (Source - National Library of Medicine)

THE ANTIBIOTIC STUDY

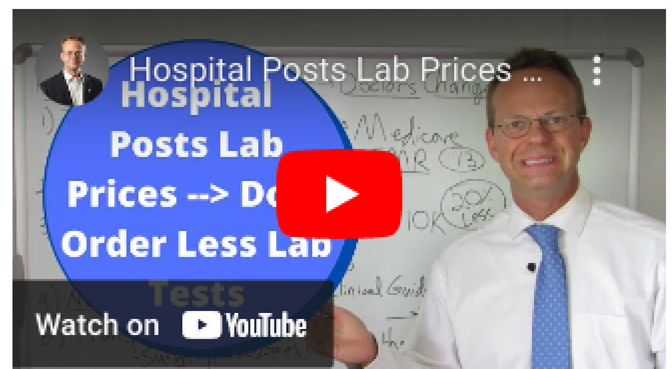
On the other end, a similar study found that two interventions, 1) a notification requiring physicians to enter a "reason why" they were prescribing an antibiotic or 2) a regular email cadence comparing peer performance, both decreased inappropriate antibiotic prescriptions – an example of the over-utilization of a prescription treatment. (Source - JAMA Network)

THE COST DATA STUDY

Related to the awareness of cost data, a Johns Hopkins study found that simply displaying the fee of diagnostic imaging at the time of order decreased physician test ordering. A common complaint of using real-time technology for physician intervention is that it's obtrusive and tries to force decision-making. This study showed that **even simple displays of data in real-time can have positive outcomes.** (Source - JAMA Network)

Dr. Eric Bricker of AHealthcareZ summarizes the significance of this last cost data study well:

"There are a million ways where hospitals could decrease the number of things they do, if they just show the doctors, 'hey, this is what it actually costs,' and the doctors weren't financially incentivized to do more or less."



Essentially, **empower the physicians with real-time data and let them make the best patient care decisions based on all the data possible.**

WHY PEER PRESSURE WORKS

In the statin study referenced earlier, it was also found that in addition to the automated dashboard, the physician group with the highest amount of appropriate care also received a 1-time email including peer comparison feedback on performance.

There are mixed results across multiple studies that used automated alerts or "suggested alternatives," but all the studies we reviewed that included **a socially motivated intervention yielded improved results in appropriate decision-making.** (Source - tctmd)

One study found that simply sharing benchmarks with physicians as compared to their peers significantly enhanced the effectiveness and quality of physician performance in delivering appropriate care. (Source - JAMA Network)

Doctors are humans, and humans are influenced by social norms. And many doctors will candidly tell you they're competitive. Using this natural form of peer pressure can incentivize doctors to ensure they're delivering the best care, every time.

As seen in numerous other studies, peer comparison interventions and data sharing interventions (through many forms like clinical decision support, alerts, and reporting) all have modest impact on physician behavior.

"Nudges" to physicians offer an effective, low-cost, and scalable approach to increase use of automated patient dashboards to improve guideline concordant behaviors, but these approaches may need to be designed to better fit within clinician workflow or be combined with other approaches to further increase their impact.

Dr. Mitesh Patel of "The Statin Study" added, *"This dashboard was not embedded in the EHR, which could explain why the impact of the intervention was 'modest.'"*

But very few studies, if any, were able to pull it all together to put peer comparison and real-time feedback in the EHR workflow for physicians.

Trying to come up with a platform that tells a doctor what to do clinically is not wise. They can do that. The key is giving them tools that help them get information that is highly relevant. Not tangentially relevant, but directly relevant is the key. We also heard from talking to physicians and our partners — no more clicks, no popups, don't disrupt the workflow. That's key to keeping the noise out of that care journey. People with good intentions have come up with lots of solutions, but there's always a sentence at the end that says, 'They just need to go to this app or just need to go to this website.' That's the hardest part of those models. Physicians aren't looking for another app. -William Febbo, CEO, OptimizeRx (Source - HIS Talk)

THE PERFECT TRIFECTA:

REAL-TIME DATA, EHR INTEGRATION, & PEER-COMPARISON

At EvidenceCare, we believe if you want to reduce care variance, lower costs, and improve outcomes using CDS technology, **you need to make the physician's workflow easier.**

We have 4 foundational beliefs to support this:

1. The physician should be the **decision-maker** on care.
2. The physician is the **driver** of hospital revenue and costs.
3. Total **transparency** benefits everyone.
4. The key to improvement is **real-time,** actionable insight.

When we designed our patented product, CareGauge, we first considered the physician experience to create a tool that would use real-time, peer-compared data, integrated directly into the physician's EHR workflow.

Led by physicians such as Dr. Fidone and Dr. Brian Fengler (Co-Founder and Chief Medical Officer at EvidenceCare), this design uses what we know about influencing physician behavior in a way that doesn't disrupt physicians. Instead, it empowers them with data they can act on (or not) and ensures they always have access to the best information.

The physician now has something he/she hadn't had for a while – true ownership of the entire [patient] relationship. Not just caring for you, but I'm mindful of the costs of my medical decisions.

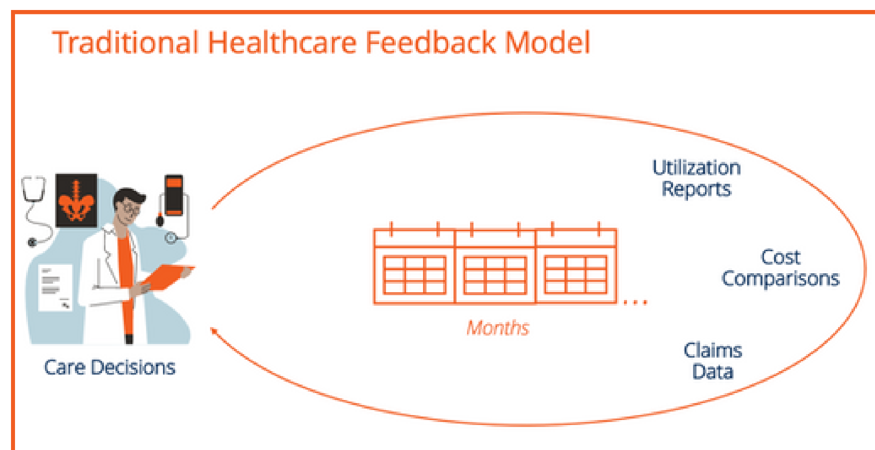
-Dr. George Fidone

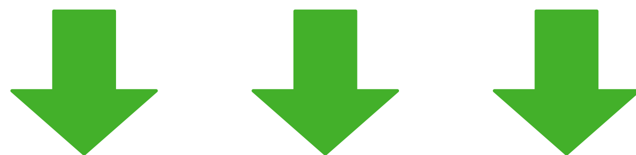
CareGauge presents zero-click, real-time care utilization and cost information with a simple indicator in the EHR (like a gas gauge in a car), based on benchmarked treatment data compared to historical patients at your health system with the same condition.

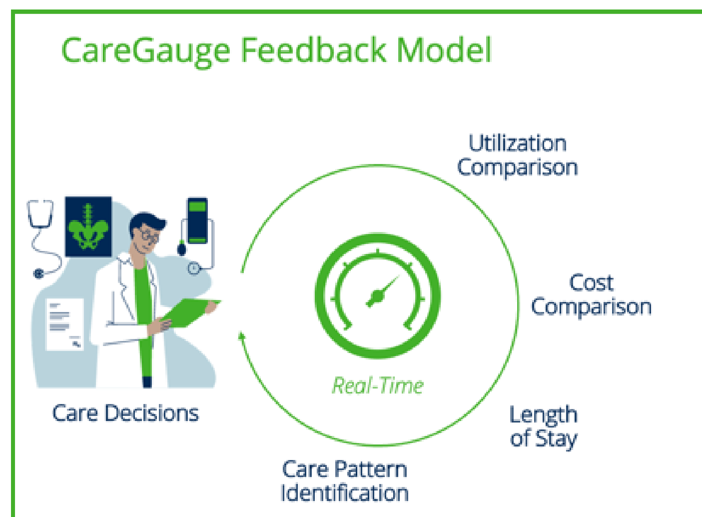
If physicians want more detailed information, they can click on the indicator to reveal which types of orders are contributing to variation.

Doctors are trained to be high performers and want to provide the best care. By simply showing them if they are an outlier, doctors naturally want to dig-in further to ensure they're making the best choice possible.

Giving real-time feedback with CareGauge helps with behavioral change and closes the gap of time needed to impact physician care decisions.



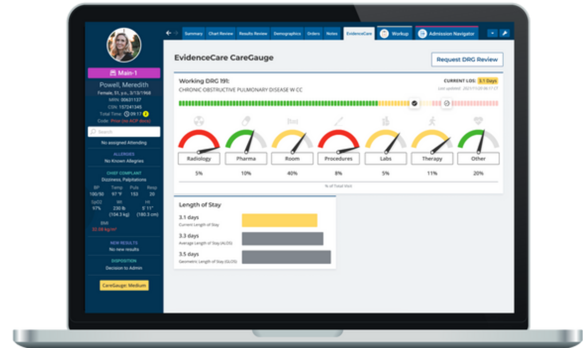




Hospitalists have generally come to be regarded as the 'quarterbacks' of hospitals and are now responsible for being a gate keeper of value... As we see a much sicker population in a value-driven health care environment and struggle to manage costs, hospitalists will be increasingly called upon to lead and integrate all aspects of patient care with a laser eye.

-Dr. Amit Vashist, Chief Clinical Officer at Ballad Health (Source - KevinMD)

When a health system can provide software with real-time feedback to physicians to approach care variation in this way, the positive outcomes are staggering.



One health system with a deployment of CareGauge at 5 of their hospitals saw the following results over 6 months:

- **Over $9M in operational cost savings**
- **5+ hours reduction in length-of-stay (LOS) per patient**
- **4% reduction in radiology utilization**
- **6% reduction in medication utilization**
- **10% reduction in lab utilization**

The best part is that physicians *actually enjoy* using CareGauge and are finding it an essential source of information prior to making care decisions.

Here are a few quotes from physicians currently using CareGauge:

"The initial response from our physicians was great, despite the fact that introducing anything new is hard... It didn't require any training. They just started using it."

"It's a quality-of-care tool, and we are using it to minimize unnecessary tests... It's great to get that constant reminder."

"[Displaying cost information] is huge. It's so useful because I was surprised by how much some things cost."

We hope you found this research report helpful.

If you're currently looking for ways to reduce care variation and have an impact on hospital margins, we'd love to hear from you and see how we can help.