Continuing to climb the mountain

Intermountain Healthcare, a Salt Lake City-based integrated health system with 22 hospitals and 1,400 employed physicians in 185 clinics mostly in Utah, has been both an IT leader and medical informatics pioneer for the past half century.

“A few health systems are trying to move the entire enterprise to population health as much as possible while bypassing interim steps such as bundled payments,” says Greg Poulsen, Chief Strategy Officer, Intermountain Healthcare. “We’ve been in the insurance business for nearly 34 years and we think the mechanism to impact care is twofold: one, to define how to provide a service and, two, to determine whether to provide a service in the first place.

Intermountain is incorporating the identification of key population segments (chronic care) in its care-delivery model using various mechanisms, often beginning with diagnosis and total care cost in a previous period. By looking at this “with trained eyes,” Intermountain identifies candidates for more intensive prevention and intervention. “Some formulas are used but their maturity continues to improve,” he says.

Identifying those with mental health issues is part of defining populations. In March Intermountain was awarded the annual Hearst Health Prize of $100,000 by Hearst Health and the Jefferson College of Population Health of Thomas Jefferson University for a program that embeds mental health screening and treatment within primary care and select specialty practices. [https://intermountainhealthcare.org/news/2017/03/intermountain-healthcare-awarded-the-2017-100k-hearst-health-prize/](https://intermountainhealthcare.org/news/2017/03/intermountain-healthcare-awarded-the-2017-100k-hearst-health-prize/)
However, unless you standardize care, population health becomes an intellectual exercise.

“We see enormous variation in care, whether it’s in the execution or in the type of care,” says Poulsen. “The approach varies among all specialties, whether medical, surgical or otherwise. Data enables us to eliminate this variability. EHR data are critical but insufficient alone. Insurance-claims data are critical but insufficient. However, the combination of claims data and EHR data is powerful, it provides information on how I as a patient present as well as the specific services and treatments provided and paid for. We still need the data-analytics piece to measure outcomes.”

Still, this is not an easy task. Even when physicians are shown the evidence they don’t often change their practice of medicine. Poulsen cites a recent Atlantic magazine article “When Evidence Says No but Doctors Say Yes,” which identifies treatment like arterial stents as having no value—zero impact on outcomes—for non-emergency stable cardiac patients, and yet is still widely ordered. [https://www.theatlantic.com/health/archive/2017/02/when-evidence-says-no-but-doctors-say-yes/517368/](https://www.theatlantic.com/health/archive/2017/02/when-evidence-says-no-but-doctors-say-yes/517368/)

Longer tail

“We don’t really understand the efficacy of various treatments,” he says. “If we did, we’d provide better care, avoid unnecessary care and enhance cost and quality. To us that’s the Holy Grail, bringing together the spectrum of services and activities. The snapshot of a care setting tells us if we’ve done a good job in replacing a knee but not if we knew the surgery was necessary in the first place—that requires information with a much longer tail to it.”

Poulsen cites an oft-told story at Intermountain called “the 39-week delivery story.” In 1989, the OB/GYN department found induction of births was not justifiable due to risk of injury prior to 39 weeks. However, that advice was routinely ignored and, like the rest of the country, Intermountain continued to induce a third of births prior to 39 weeks.

“So, why aren’t we following our own guidelines?” he asks. “Here’s where the data makes a difference. In the 1990s we delivered 30,000 babies a year. Babies electively induced 39 or 40 weeks had a .21 percent chance of injury. If we initiated it in the 38th week the risk doubled to .41 percent and it climbed to 1.2 percent in the 37th
week. It turns out that physicians performing induction wouldn’t even see the difference, but with real data the differences are glaring. We saw 500 fewer babies in the next year which resulted in a $4 million saving to someone.”

Longitude and latitude
The key is longitudinal data: you need broad and longitudinal data to be successful at health management. Poulsen uses a three-part equation as guidance:

1. **Once you initiate treatment you must ask:** Am I doing the right treatment to better the patient’s health while avoiding complications and unnecessary pain?

2. **Increasingly ask:** What type of treatment are we anticipating? Does the procedure we’re planning have value? Does the data support it as the most clinically effective and cost effective treatment? Are we, for example, prescribing a stent or bypass surgery that the data says is not effective for this patient? Referencing again the *Atlantic* article, one in 50 people getting a stent have major complications—not to mention the $120,000 cost—when it has been proven to be ineffective for stable cardiac patients. Do we have good evidence-based protocols for keeping people as healthy as possible? If somebody with diabetes has complications we’ll have to intervene, but a happier prospect is if we identify actions to keep organ systems and vascular systems optimally healthy so we don’t have to decide on more catastrophic measures.

3. **If I can’t do that,** I’ve got a number of things such as clot-busting drugs, inserting a stent or bypass surgery.

“While our data systems are effective for the third area—straightforward treatments as a last resort—the systems are less mature for determining how to treat partly because they need broader information such as well-defined best-practice modes that have been scientifically validated. An integrated care and business model should support providing as much appropriate care as the population for which we have responsibility requires,” he says.

**Begin beautiful relationships**
As a patient, I’m happier if my health is good and the model should reward them for good behavior that prevents heart disease from developing. Of course, some people will develop heart disease and some will require bypass surgery. The ideal is to avoid the latter if possible, and to do that we want more and more people to have relationships with us to avoid acute episodes,” Poulsen notes.

**What about new business-model design?**
“We embrace Medicare Advantage and an ACO as the right idea. From an IT perspective, the data has to be a broad vision of the person, including what’s going on outside the exam room. Am I getting my prescriptions refilled? If I have
hyperlipidemia am I getting a statin? People can slip off the wagon. There’s a whole series of factors that converge, including the insurer, type of drugs the person is taking, whether she has seen a doctor or been in the hospital, the episodes of care. The best we can do today is to integrate information from the EHR with that from claims processing,” he says.

“At Intermountain we get pretty good data on a subset of the population--the Venn diagram overlap of people who are both on our insurance plan and who receive care at our at our facilities,” says Poulsen. “That’s where we can do some really exciting things related to the efficiency of different treatments or prevention programs. And, oh by the way, those people had significantly lower ER use two years down the road.”

However, if a person Intermountain covers is treated by a non-Intermountain provider the information is incomplete, he says. “The same data gap occurs if we treat somebody who’s not on our plan. For example, if we treat a patient at an Intermountain site but she’s not on the Intermountain plan, we get a good picture of that episode of care but not the context of her care over time--let alone the context of her life.”

“Building a truly integrated model of care is partly technical, partly philosophical and partly incentives and alignment.”

Finding, embedding best practices in the EHR

“The first step is to identify the best practice. Do we have information that there’s a best practice? The fact that using stents is ineffective for stable cardiac patients is a case in point of good information from an outside source. The 39-weeks birth-induction study is good information from an inside source. Whether the source is outside or inside is irrelevant as long as the data is solid. Still, most data on best practices comes from the outside,” notes Poulsen.

The second step is clinical decision support, or CDS. Once validated, Intermountain can insert the best practice—evidence-based medicine—into the EHR. For example, Intermountain’s EHR will not allow a physician to order Pitocin to induce labor in a woman who is less than 39 weeks pregnant. The screen displays an alert, “This drug is contraindicated. Please talk to the medical director.” It’s not absolutely rigid, however, allowing a provider to override the alert with exceptions, say, if the patient is in the ER.

With CDS everyone gets into the act. For example, an alert may prompt a physician’s office staff that an asthmatic patient failed to fill her prescription. You might then call that patient to say, “We noticed you didn’t pick up your meds. Did you forget? Can you afford them?” Again, the initiation of action resides in the EHR.

“We’re not there yet. We do bits and pieces,” he acknowledges. “We’re good at asthmatics and diabetics as well as most cardiac patients, for example, but for many other conditions it’s still a work in progress. However, we get glimmers of how powerful an integrated system can be.”

A huge next step is to work more closely with outside insurers to align incentives while still complying with regulatory requirements. “On the other hand, we also need to work more closely with providers and not just share information with them. Interoperability is improving but remains a hurdle. Building a truly integrated model of care is partly technical, partly philosophical and partly incentives and alignment.”

Conclusion

MEMBER ORGANIZATIONS

Adventist Health, Roseville, CA
Adventist Health System, Altamonte Springs, FL
Advocate Health Care, Oak Brook, IL
AMITA Health, Arlington Heights, IL
Ascension, St. Louis, MO
AtlanticCare, Egg Harbor Township, NJ
Avera, Sioux Falls, SD
Banner Health, Phoenix, AZ
Baptist Health, Louisville, KY
BayCare Health System, Clearwater, FL
Baystate Health, Springfield, MA
Beaumont Health, Southfield, MI
Billings Clinic, Billings, MT
Catholic Health Initiatives, Englewood, CO
Cedars-Sinai Health System, Los Angeles, CA
Centura Health, Englewood, CO
Children’s Hospitals and Clinics of Minnesota, Minneapolis, MN
CHRISTUS Health, Irving, TX
Cincinnati Children’s Hospital Medical Center, Cincinnati, OH
Eastern Maine Healthcare Systems, Brewer, ME
Emory Healthcare, Atlanta, GA
Henry Ford Health System, Detroit, MI
HonorHealth, Scottsdale, AZ
Houston Methodist, Houston, TX
Indiana University Health, Indianapolis, IN
INTEGRIS Health, Oklahoma City, OK
Intermountain Healthcare, Salt Lake City, UT
Memorial Health System, Springfield, IL
Memorial Hermann Health System, Houston, TX
Memorial Sloan Kettering Cancer Center, New York, NY
Mercy Health, Cincinnati, OH
Methodist Le Bonheur Healthcare, Memphis, TN
Mosaic Life Care, St. Joseph, MO
Munson Healthcare, Traverse City, MI
NewYork-Presbyterian, New York, NY
Northwestern Medicine, Chicago, IL
OSF HealthCare System, Peoria, IL
Partners HealthCare System, Inc., Boston, MA
Sharp HealthCare, San Diego, CA
Spectrum Health, Grand Rapids, MI
Sutter Health, Sacramento, CA
Tampa General Hospital, Tampa, FL
Texas Health Resources, Arlington, TX
Trinity Health, Livonia, MI
UCLA Health, Los Angeles, CA
UK HealthCare, Lexington, KY
University Hospitals, Cleveland, OH
University of Chicago Medicine, Chicago, IL
University of Virginia Health System, Charlottesville, VA
Virginia Commonwealth University Health, Richmond, VA
Virginia Mason Health System, Seattle, WA

CORPORATE SPONSORS

IBM Watson Health
Cerner
HEARST Health
Nuance
Omnicell
Impact Advisors
Health Catalyst
Korn Ferry
Deloitte
Emmi
Optum
C-Suite Resources

Strategic Partners

STANLEY R. NELSON
Founder & Chairman Emeritus
(1993–2012)

Executive Committee
Don Wegmiller, Chairman
Shelli Williamson, Vice Chairman
Janet Guptill, FACHE, Executive Director
David Classen, MD, Associate Professor of Medicine, University of Utah, CMIO, Pascal Metrics
Tom Sadvary, CEO, HonorHealth

Board Members
David Campbell, David Campbell and Associates
Stephen C. Hanson, FACHE, CEO, Baptist Health
Steve Heck, Chairman, MedSys Group
Laura Kaiser, President & CEO, SSM Health
M. Michael Shabot, MD, EVP, Chief Clinical Officer, Memorial Hermann Health System
Bruce Smith, SVP & CIO, Advocate Health Care
Joseph R. Swedish, FACHE, President & CEO, Anthem
Anthony Tersigni, CEO, Ascension Alliance
Scott Weingarten, MD, SVP & Chief Clinical Transformation Officer, Cedars-Sinai Health System
Nicholas Wolter, MD, former CEO, Billings Clinic

May, 2017