Inspired innovation:
Field notes from the frontlines of healthcare's progress

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For the 25 years that NRC Health has hosted its annual Symposium, technological breakthroughs have dominated headlines in healthcare. And justifiably so. A breakneck pace of innovation has immeasurably improved health systems' operations and elevated patient welfare beyond what anyone might have expected.

However, as healthcare proceeds into the consumerist era, technology's promise is beginning to meet its limits. The most urgent questions facing today's healthcare organizations are, after all, very human ones. They're questions that digital tools, on their own, are ill equipped to address.

How do we develop deeper relationships with patients? How do we cultivate empathy? How do we move past transactional care, and win patients for life? Questions like these elude analysis by even the most sophisticated machines.

The good news is this: It's an even-handed embrace of both technological and human innovation that marks the surest pursuit of better care experiences.

This report details the areas in which this dual approach is at work today—which organizations are developing it, where they're focusing their efforts, and what questions health-system leaders must answer if they're to meet the challenges of 21st-century care.

Organizations must find a way to move beyond transactional care to win patients for life.

Innovating intelligence

It's not surprising that the Artificial Intelligence (AI) revolution has already arrived for healthcare. Indeed, health-system executives predict that their organizations will spend an average of $32.4 million[1] on AI technologies over the next five years.

What's perhaps more surprising is where these executives expect to see a return from this investment. The largest share of them—36%[2]—believe it will come from improvements to the patient experience.

Three specific AI implementations underpin this expectation.

$32.4M

estimated average to be spent on AI technologies over the next five years in healthcare

The first, in use today, is **Natural Language Processing (NLP)**. This is an AI process that algorithmically "reads" patient comments and classifies them according to what they express. This can be invaluable for both small– and large-scale interventions.

For instance, by automatically identifying comments that raise specific service concerns, NLP enables organizations to practice immediate service recovery. In the aggregate, NLP offers leaders a broader perspective on what their entire patient population is saying about their organization, which enables them to direct their efforts toward resolving any recurring concerns.
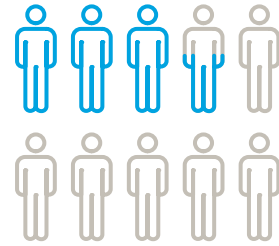
This is exactly how **Harris Health System**[3] deployed an NLP system. By algorithmically processing patient feedback, leaders at Harris learned that a disproportionate number of patient complaints were directed toward wait-times at their ophthalmology clinic. With such a specific area of focus, the Harris team found ways to streamline their admissions process, and complaints subsequently **dropped by over 60%, with an accompanying 11% increase in overall patient satisfaction.**

Another AI process on the fringes of development is **predictive analytics**. This technology uses historical data (like patient health information, demographics, and patient behaviors) to make predictions about the future. With a well-configured predictive-analytics algorithm, hospitals will be able to anticipate patients' needs before they arise, meeting them more quickly and completely.

Applications for predictive analytics sound like science fiction, but they're already emerging today. Such an algorithm could, for example, use demographic and behavioral data to spot community members at risk for developing prediabetes, thereby giving health systems the opportunity to intervene with targeted nutrition-education programs.

A final technology goes one step further. **Personalized engagement algorithms** don't just predict patient behaviors—they help direct them. These algorithms work like the recommendation engines on Netflix, which absorb datapoints about viewers and then produce suggestions for what they might like to watch next. While personalized engagement engines have not yet matured enough to shepherd patient experiences, it's only a matter of time before they become ubiquitous in tomorrow's health systems.

The best use-case for personalized engagement engines may be in the earliest phases of consumer engagement. In the coming years, it may be possible for such engines to configure customer-provider matches with perfect precision. This would maximize the chances for a productive relationship, which in turn would help ensure patient compliance and enduring loyalty.

36% of healthcare executives believe AI will produce a better patient experience within the next five years.

11%↑

increase in overall patient satisfaction at Harris Health System, derived by NLP technology

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REFLECTIONS

→ When it comes to AI investment, is your organization a leader or a laggard?

→ Would it be appropriate for you to invest more?

→ Do you have a plan in place for implementing AI processes within your organization?

Innovating access

Access to care may be the central question confronting healthcare leaders today. The healthcare organization's mandate is to improve the well-being of everyone in the community. But several factors prevent many people from receiving the care they need.

The most imposing of these factors is the soaring cost of care. 23% of American consumers defer care[4] because they can't afford it. However, most healthcare leaders have little influence over the problem. Thin operating margins preclude the possibility for price discounts at most organizations. Other barriers to access, though, are within health systems' power to change.

Geography, for instance. Many consumers struggle to get care because they live too far from their providers, or don't have reliable transportation. Innovative organizations have found simple ways to solve this problem.

One solution is the use of telehealth and digital appointments. These hyper-convenient modalities shrink the commuting distance for care to zero. Small wonder that their use is sharply increasing: at some health systems[5], in fact, digital appointments make up more than half of all patient visits.
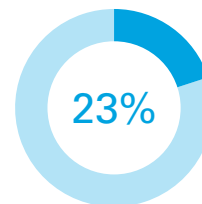
Other organizations take a different approach. Instead of waiting for patients to arrive at the hospital, they bring the hospital to the consumers.

Akron Children's Hospital[6], for instance, sends APRNs and social workers into low-income neighborhoods that fall outside the city's bus routes. This helps ensure that the area's children—more than 500,000 of them—get the kind of proactive, preventive care that is usually only available to consumers who regularly set foot inside a clinic or hospital building.

Another barrier that healthcare organizations can resolve is **appointment availability**. Many consumers, especially those new to a hospital system, have to wait too long to receive care. Whether due to constricted provider availability, or a complex backlog of consumers with varying care needs, the end result is the same: it's often months after a care need arises before the patient is able to see a provider.

Aspirus Health Care, based in central Wisconsin, observed this problem and took an extraordinary measure to solve it. They staffed their Welcome Center (a consumer intake call-center) exclusively with RNs, enabling the organization to more effectively triage incoming customers and direct their care efficiently. It was a simple change that radically simplified patient on-boarding, minimized wait-times, and maximized the reach of Aspirus's providers.

The importance of access

23% of patients have put off necessary medical treatment because they couldn't afford it.

"Akron Children's is highly focused on access—on providing various routes of access to meet consumer expectations and clinical needs at the same time. We think outside of access via brick-and-mortar, and also include virtual health capabilities and access to consumer information through physical and digital materials."

—**Dr. Steven Spalding,** Vice President of Population Health, Director of the Division of Rheumatology, and Pediatric Rheumatologist, Akron Children's Hospital

500k↑

patients screened for social-determinant risk factors as Akron Children's expands into the community

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REFLECTIONS

→ What are the major access concerns of your broader community?

→ Which of them are within your organization's power to address?

→ What's a major access bottleneck within your organization?

Innovating the healthcare workforce

Another mounting challenge for today's institutions is the extreme stresses of the work environment. Healthcare has always demanded more from its workforce than perhaps any other field. The work is unrelenting, it requires the utmost emotional sensitivity, and often, the stakes are literally life-and-death.

If that weren't enough, the trappings of modern healthcare work—time-consuming EHR systems, dizzyingly complex care protocols, and so on—if left unchecked, can make clinical staff feel utterly divorced from the human impact of their roles, and leave them feeling like cogs in a care machine.

This explains why 51% of doctors[7] report feeling burnt-out; why 41% of nurses[8] say they're unengaged; why 27% of nurse aides[9] leave their jobs every year; and why vanishingly few doctors—now fewer than 30%[10]—want to see their children follow in their footsteps into a medical career.

Innovative institutions know that the quality of their care depends on engaging their employees. Recognizing this, they do everything possible to preserve the vital spark of empathy in their staff.

Mary Greeley Medical Center[11] in Ames, Iowa, does this by helping employees support each other. They built an internal social network, specifically designed for inter-colleague praise. Earning compliments from colleagues knit the staff together, motivated peak performance, and improved 'Great Place to Work' ratings by 5%.

CareMount Medical in New Jersey likewise dedicated extensive resources to building and sustaining employee morale.

THROUGH A REAL-TIME FEEDBACK INITIATIVE, A CONSTANT PULSE OF POSITIVE REVIEWS FROM CONSUMERS CIRCULATED AMONG CAREMOUNT'S STAFF.

This encouragement, direct from patients, was more meaningful than any bonus incentive or staffing arrangement. It showed CareMount's providers that they were having a direct impact on their patients' lives—which resulted in an 8.5% improvement in 'Would Recommend' scores for CareMount.

5%

improvement in "Great place to work" ratings at Mary Greeley Medical

8.5%

improvement in "Would recommend" scores at CareMount Medical

Workforce burnout by the numbers

→ 51% of doctors report feeling burnt-out

→ 41% of nurses say they're unengaged

→ 27% of nurse aides leave their jobs every year

→ Fewer than 30% of doctors want to see their children follow them into a medical career

REFLECTIONS

→ How do you protect your staff from the dangers of burnout?

→ Do you have any specific employee-retention strategies in place?

→ Do you empower staff to effectively resolve service problems, without unnecessary escalation?

→ How do you offer encouragement to your workforce?

Innovating transparency

To the average consumer, both the business and the practice of healthcare can seem impossibly convoluted. Medical jargon, for the uninitiated, is cold and alienating. For people from outside the industry, the byzantine processes of registration and reimbursement are too tangled to trace.

On their own, these confusions would be off-putting. But they're also thrown into sharp relief by innovations elsewhere in the economy. In the age of one-click ordering, a months-long billing procedure—wherein no one knows what the total cost will be until an envelope reaches the consumer's door—seems ludicrously archaic.

Against this backdrop, consumers are now demanding more transparency from their healthcare providers. And who could blame them? Fortunately, healthcare leaders—and even the federal government—have recognized the problem and are moving toward a resolution.

FINANCIAL TRANSPARENCY HAS EMERGED AS AN IMPORTANT PRIORITY FOR THE CURRENT PRESIDENTIAL ADMINISTRATION.

The Center for Medicaid and Medicare Service (CMS) deserves applause for implementing a requirement of open pricing on hospital websites[12].

That is not, however, where the transparency should stop. Consumers deserve insight into quality of care and experience, too. On this front, health systems should take the lead. One such leader is **Vetter Senior Living**[13], a senior-living organization based in Nebraska, which has begun to publish verified reviews from its residents onto its community websites.

The effort has shown that, besides being a respectful gesture toward consumers, transparency is also aligned with organizations' strategic goals. In the months after Vetter Senior Living published its first reviews, the organization's website traffic surged by more than 30%, reflecting how hungry online audiences are for an open, transparent look at their healthcare providers.

"We're excited about the results our team members achieve, but we also know there's always room for us to improve the quality of our services. In that spirit, transparency inspires us to do what we say we will do, and be the best organization we can be."

—Glenn Van Ekeren, President, Vetter Senior Living

Over 30%

surge in web traffic for Vetter Senior Living after deploying Transparency

REFLECTIONS

→ If you were a new consumer, how much could you learn about your organization's quality from its website?

→ Would you trust what you saw?

→ How well could a patient navigate your care processes, if they have only limited health literacy and modest technological capabilities?

Innovating the experience

The most important change is also one that's famously resistant to managerial influence: the cultivation of genuine, empathic connections between providers and consumers.

Every leader in healthcare wants to see genuine and empathic relationships emerge within their organization. But the tactics they might be using to support other initiatives can fall flat in the pursuit of empathy. Emotional connections defy quantitative measurement, and therefore resist benchmarking. Scripting can drain any interaction of its warmth, if authentic feeling isn't there to back it up. Relationships are so much more than mandated phrasing.

The real innovation, then, comes when leaders empower their staff to build meaningful connections with customers. When they set aside rigid requirements, they allow an environment of empathy to flourish. It takes courage to commit to this—but it's almost always worthwhile.

Vidant Health in North Carolina[14], for example, chose to suspend rounding logs for its nursing staff, instead giving nurses a simple directive: Take care of your patients.

TRUST GOT THE JOB DONE AT VIDANT HEALTH: 100% HOURLY ROUNDING RATES, WITH NO ROUNDING LOG REQUIREMENTS.

Many managers might have feared a decline in rounding activity. But according to Vidant's patients, rounding actually increased. Patients at almost all of Vidant's units reported hourly rounding rates of more than 86%; many even reported 100% hourly rounding rates.

Vidant's management attributes this achievement to the respect they'd shown their nurses. By giving them autonomy, leaders boosted nurse performance— and engendered a sustainable practice of relationship cultivation that will serve Vidant for years to come.

"A focus on team members translates to a better patient experience. We saw consistent levels of nurse-leader rounding, and our grievances dropped—our nurses were helping address patient issues in real time."

—Julie Kennedy Oehlert, DNP,
Chief Experience Officer, Vidant Health

100%

hourly rounding rates, with no rounding log requirements, at Vidant Health

REFLECTIONS	→	Do your organization's policies or practices value relationships?
	→	How do you encourage empathic connections between team members and patients?
	→	What are your measures for the quality of patient relationships, if any?

It's not just the technology

These stories show how progress should not be defined by technology alone. As stunning as the last quarter-century's technological strides have been, they're not the only innovations making a difference in healthcare.

The defining shifts in healthcare's future won't be restricted to apps, drugs, or devices. They're just as likely to be thoughtful refinements in human judgment, creative assemblies of human teams, or meaningful advances in human understanding.

The challenges of 21st-century healthcare will demand that our human ingenuity keep pace with our technical capacities. That's the truest test of *innovation*.

IS YOUR ORGANIZATION READY TO EMBRACE IT?

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