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The Numbers Behind Humanizing Healthcare:
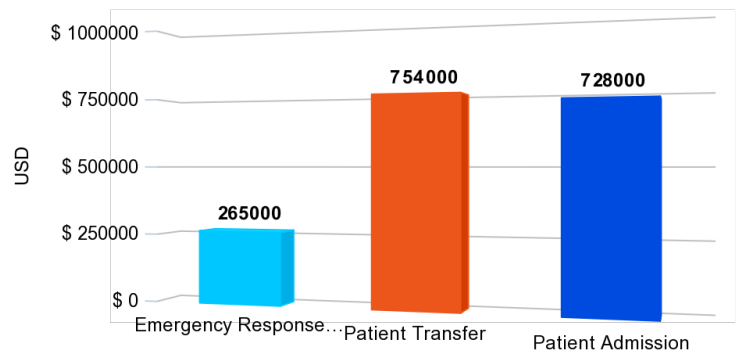
A review of the current state of interoperability and what we're still not doing about it.

The Numbers

Every year $8.3 billion US dollars are wasted on outdated health information technology (HIT) that puts countless patients' lives at risk, impedes millions of dollars' worth of medical R&D, and slows providers' workflow by an average of 45 minutes every day. Specifically, the average US hospital loses about $1.75 million to sluggish health information exchange (HIE) systems across 3 main clinical workflows: [1]

US Hospitals Losses from Slow Health Information Exchange

- **Patient Admissions** – It takes an average of 33 minutes to admit a single patient, which translates to an economic loss of $728,000. Even more notable, the average patient discharge takes about 101 minutes.
- **Emergency Response Coordination** – It takes an average of 40 minutes to coordinate a whole emergency response team, translating to an estimated loss of $265,000.
- **Patient Transfer** – Each transfer to another facility or hospice takes an average of 35 minutes, which means a loss of $754,000.

Era of Digital Silos

In today's digital age, when the average American can access their bank account anytime, anywhere, and sync fitness trackers and e-Prescriptions with a cloud, most patients are still sent on their way with a printout of their discharge summary and a CD-ROM that may not even include the images from their $2,600 MRI. Everyday patients are reassured that the limited access to their own data is "for their own safety", when the limit stems from profit-oriented practices and policies from split industry groups.

1 in 4 patients reported having to reiterate their medical history to multiple providers, while 63% of physicians reported dissatisfaction with the timeliness and content of referral information. These result in: 1 poor continuity of care, 2 delayed diagnoses, 3 polypharmacy, 4 increased litigation risk, and 5 costly, redundant testing.[2]

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The problem starts with providers and policy-makers still leaning heavily on legacy or basic EHR systems for information exchange. When EHR's were originally designed for billing purposes and simply digitizing record silos and file cabinets. Now that the goal is to humanize the industry and empower patients to be more accountable for their own health, it's imperative for providers to invest in HIT that provides patients with 3 engagement functionalities: to view, download and transmit (VDT) their own data.

It's taken the federal government 7 years and about $38 billion to get 4,520 acute care hospitals compliant under the Medicare EHR Incentive Program. Of that number, 96% were operating on 2014 certified technologies from 186 HIT developers. Only 69% of hospitals surveyed by the Office of the National Coordinator (ONC) in 2015 offered all 3 patient engagement functionalities. [3,4]

Among office-based physicians with EHRs, the same survey reveals 78% had adopted a certified EHR, with 54% reporting still using a "Basic EHR" with limited to no patient engagement functionalities. Specifically, only 63% were able to offer the viewing functionality, 41% the ability to download, and a mere 19% could transmit the data to a third party. Collectively, only 16% of physicians offer VDT functionalities.[5]

To help close these gaps between available CEHRT and provider compliance the final rule on "Promoting Interoperability" (PI rule) was released in 2015, mandating eligible providers (EPs) to demonstrate all 3 patient engagement functionalities as the rule's third stage is carried out 2017, and onwards. Now that there's a surplus of patient data and the technology to put it to meaningful use, why are doctors and patients alike still struggling to gain comprehensive and timely access?

Syncing Policies with Infrastructure

Unlike other industries that have thrived from adopting new technology, healthcare seems to be bogged down from a pervasive lack of interoperability between a staggering number of options. Instead of administrators and private practitioners basing their next HIT purchase or upgrade on patient engagement, they go for whichever presents the best business case that gets them compliant and incentivized the fastest.

Determined to steer the country towards more sustainable healthcare through better HIE, US lawmakers passed the 21st Century Cures Act of 2016 (Cures Act). Under this law the Trusted Exchange Framework and Common Agreement (TEFCA) was released by the ONC, which aims to improve trust and data sharing across disparate HIT networks. Another subbranch of the HHS, the Centers for Medicare and Medicaid Services (CMS) spearheads the Trump administration's MyHealthEData initiative, which addresses patients' access to their EHR.[6]

The Cures Act also encourages the development of open APIs that are standardized, transparent, and pro-competitive, to lay the groundwork for future population-level data transfer. This legislation also directly addresses Information Blocking and permits the imposition of disincentives and grave penalties for any anti-competitive practices. [6]

Silos Driving Patient Leakage

The landscape of healthcare is shifting drastically as the reimbursement model moves toward payment for value, and more patients are realizing they too have just as many options when it comes to purchasing healthcare. Hospitals and primary care physicians' feel the financial brunt of this shift from the following factors:

Growth of urgent care centers [7, 8]

In 2015, there were 6,946 registered urgent care clinics (UCCs) – a number that grew to 7,639 in 2017, and experts predict will rise to 15,000 by 2019. An estimated 89.2 million patient visits happen in urgent care clinics every year, comprising 18.2% of all primary care visits and 9.7% of all outpatient visits.

UCCs have steadily gained popularity among healthcare consumers as a prime example of convenient quality care, owing to their extended hours of operation, lower costs, less exclusive coverage options, drastically short wait times, and walk-in availability.

Emergence of telemedicine [7]

Telehealth's ease and savings are also moving patients away from their PCP visits. A fifth of US employers now offer these virtual services to their employees, with experts estimating the continued rise to take over 15% of physician clinic visits. Additionally, telehealth opens access to patient bases in rural communities, which hold 20% of the US population.

A recent Towers Watson survey reveals 76% of patients value accessibility more than waiting for an in-person consultation, and 70% of them are satisfied with communicating with their PCP through text, e-mail or video.

Excessive specialization [9, 10]

Medicine started with only 11 specialties for doctors. By 2014, physicians could choose from over 145 specialties – all with their own constant stream of updates and new R&D. Primary care physicians serve as a generalist in managing an individual's health and will not always know the latest evidence-based practice, treatments, and procedures, resulting in subpar interventions, unnecessary testing, and patient mistrust. Referral rates are rising, with estimates showing 1 out of 10 PCP visits, and 1 out of 3 patients under 65 are turned to a specialist. Many patients also skip consulting with a PCP entirely, and self-refer based on perceived quality for cost, and an increasing awareness that their data isn't guaranteed to go with them upon referral anyway.

Poor patient satisfaction [11]

Institution ads that tout "excellent service" and "cutting edge technology" are not connecting with today's much more discerning healthcare consumers. Armed with the internet, patients who

know more demand more, and providers who hold data hostage to keep their clientele close are only contributing to today's hindered interoperability. Aside from access to their data, one analysis revealed patients have 3 main concerns when availing of healthcare that greatly affect their perception of the quality they're receiving:

Respect – Patients expect to be treated like an individual, and their time to be valued.

Communication within care team – Patients lose trust and the feeling of security whenever they observe lapses in communication and coordination between their caregivers.

Approachable staff – Patients are inclined to feel like requests for additional information are a burden to their busy caregivers. Patient leakage rates are only expected to rise, and its negative effects on care coordination and practice revenue are compounded by outdated, siloed EHRs. At the center of any solution to these factors is patient satisfaction – gained only by improving engagement functionalities and communication.

"If care isn't coordinated in a way that improves outcomes, patient satisfaction, decreases costs and even provides provider satisfaction, everybody suffers."
- Reid Blackwelder, MD,
President of the American Academy of Family Physicians (AAFP)

Turning Silos into Data Streams

Unfortunately, studies show there aren't enough hours in the day for clinicians to provide complete care and counseling to their usual patient flow. In fact, the CDC estimates a single physician would need 21.7 hours to meet all the current demands of the job – not including administrative tasks. This chronic lack of time coupled with increasingly stringent and costly regulations leads to physician burnout, a phenomenon reported by 51% of 14,000 physicians surveyed in 2017.[12]

Now that the technology is available, it's time for providers to shed some of the burden to humanize healthcare again. Here are several HIT-based solutions to enhancing patient satisfaction, and ultimately, patient outcomes and industry-wide interoperability:

Boost engagement
A functional patient portal should feel like a two-way street, where both providers and patients have instant access to comprehensive patient data and secure messaging at any point-of-care. All 3 VDT functionalities must be available for both parties to enjoy faster test results, streamlined prescriptions, and easier appointment scheduling.

Manage care transitions
The time patients spend actively availing healthcare (i.e. PCP or ER visits, hospital

admissions) has only grown shorter, underscoring the importance of engagement and monitoring across the entire care continuum. Invest in enriched, unhurried patient education methods and a reliable follow-up system to reduce readmissions. Ensure EHRs are equipped with quality clinical decision support software to make all patient encounters meaningful.

Enhance patient safety

Patients who have a positive experience availing healthcare are more inclined to trust their care provider, stay on top of self-monitoring and follow medical advice. When patients can instantly see the data their providers do and know where to find their doctors' instructions, an enhanced sense of independence and control is fostered, and adherence to both treatments and follow-up visits are enhanced.

Improve HCAHPS score

The Hospital Consumer Assessment of Healthcare Providers and Systems is a patient satisfaction survey mandated by the CMS for all hospitals and enlists responses from adult patients between 48 hours and 6 weeks after discharge. Results reflect patient perceptions, which are then publicly reported and appropriately reimbursed by the government.

Enhance clinician workflows and job satisfaction

Frequently answered questions are essential but much of these can be resolved through a patient portal, patient education handouts or other interactive multimedia, freeing time for more personal provider-patient conversations. Ensure stations and staff mobile devices have EHRs and CDSs so all members of the care team are prepared to collect and dispense information on the go.

Empower patients

Patients who are uninformed of available options are likely to feel forced into a regimen and present a risk for nonadherence and complications. When clinicians and support staff take time to ensure patients are making informed decisions and the positive involvement of significant others is elicited, patients feel in control, valued, respected, and eager to learn from and maintain the patient-provider relationship.

Report positive findings

Positive audit findings help motivate members of the care team and keeps compliance burnout at bay. Public reports let staff know what they've been doing correctly, and how their efforts make a difference in patient outcomes and in their own workflow.

Patients as Partners

Seeing the state of HIT interoperability in numbers puts everything into perspective. While healthcare consumers may be coping with the short-term effects, siloed patient data hinders long term sustainability goals for all parties. The technology, legislation and policies are in place, but the right attitude for industry-wide adoption and communication is still far behind – and patients are not willing to wait.

"You make a great investment in the consumer Internet, maybe you make a lot of money and create something useful, interesting, or fun. But in life sciences, you have a chance to be part of something that lets people live longer and healthier and not lose the people they care about. That is really profound." -Bill Maris, Google Ventures Founder and Creator of Google's genetic R&D biotech company, Calico

It is interesting to learn that for any industry to achieve true technological advancement careful attention must be paid to social engineering. In the business of saving lives, providers must remember to tap into the most underutilized partner in sustainable healthcare – the patient.

PEPID Preparedness

Partnering with patients and their support groups means empowering them with all the information they need to make informed decisions and maintain adherence. Any point-of-care – from emergency rooms to pharmacies – can meet patient-centered goals sooner with EHRs equipped with VDT functionalities, and a reliable CDS.

Since 1994, PEPID's Knowledgebase (PKB) solutions have helped enhance point-of-care preparedness and patient satisfaction in over 1,000 institutions, across 159 countries. PEPID's unbeatable content offers the largest, unbiased drug database on the market along with rich, action-oriented clinical content, tools, and calculators.

PEPID supports the vision of interoperable healthcare. Our robust APIs offer seamless integration of the PKB into any health information system. The database and modules meet the highest standards of interoperability, including HL7's Infobutton and FHIR - backed by a team that ensures a smooth and efficient integration process.

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