



The Future of Healthcare Technology Roundtable

PART 1 | Innovators

The Future of Healthcare Technology Roundtable Series assembles insights from five important cohorts; Innovators, Physicians, Providers, Payors and Policy Makers, to discuss emerging trends and opportunities in today's healthcare environment. We hope to enlighten, inform, and provide thought leadership through this five-part written forum.

The Future of Healthcare Technology Roundtable Series is produced by Hyr Medical (www.hyrmed.com) and Axuall (www.axuall.com), both located in Cleveland, Ohio.



Q: What problem does your company solve for the healthcare industry?



Manoj Jhaveri
Hyr Medical

By 2025, the United States will have a shortage of over 100k Physicians and 1M Nurses. Freelance Practitioners are used to relieve these shortages (\$15B industry; projected to double in 5 years), but the current staffing supply chain is labor intensive, document-driven and painfully slow. As a result, Medical Practices face revenue “leakage” and higher costs. In addition, practitioner burnout and associated medical errors increase when Hospitals and Clinics are understaffed.

Hyr Medical solves this important problem; we’ve built a web-based marketplace that eliminates the agency middle man and reduces overhead costs. We enable direct connections between Practitioners and Medical Practices, automate portions of the credentialing process, and provide upfront transparency into rates and practice locations. The result: a significantly faster credentialing process, lower costs for Medical Practices, significantly higher rates for Physicians, and a system that finally attracts and rewards quality, Freelance Practitioners.



Charlie Lougheed
Axuall

Axuall addresses the unnecessary waste of time, money, and professional talent. Inefficiencies in deploying human capital are greatly impacting health systems’ ability to meet patient needs and grow their revenue.

Organizations that operate in highly regulated environments cannot simply take assertions at face value; they must verify those assertions with authorized third parties known as “primary sources”. A great example of this is the arduous verification process of professional credentials. Within healthcare, it can take 120 days or more to verify all the credentials of a physician.

This translates to billions of dollars in wasted effort and missed opportunities for the U.S. health system. When the average physician can generate about \$7,500 a day in revenue for a health system, the impacts to organizations’ topline and bottom line become painfully apparent.

A perfect storm is developing in healthcare where aging populations, combined with growing demand for digital delivery

channels and increasing practitioner shortages, is changing the economics of the market. This is bringing about advancements in delivery channels well beyond brick and mortar, such as telemedicine and freelance medicine; Hyr Medical’s network being a good example.

Axuall is addressing this crisis by providing a digital network that binds credential issuers, credential holders and credential subscribers enabling self-sovereign, portable, and real-time issuing, management, sharing, and monitoring of digital credentials.



Carm Huntress
RX Revu

Providers are making complex medication ordering decisions, on their patients’ behalf, multiple times per day. Further, consumers are demanding more personalized care and an accurate understanding of their out-of-pocket costs. RxRevu has developed a unified platform to streamline the medication ordering process within the EHR, giving providers the data they need to make more informed prescribing decisions. With real-time, personalized drug pricing information at the point of care, organizations are able to drive benefit compliance and operational efficiencies, all while decreasing out-of-pocket costs for patients.



Mike McSherry
Xealth

Digital health is driving exciting advancements that can improve patient experiences and outcomes; however, the digital health ecosystem is extremely fragmented, including within the same hospital. This makes implementing digital health initiatives in a meaningful, consistent way extremely difficult.

Xealth believes clinicians and their patients should be able to use familiar technologies to share information back and forth with each other as part of their daily routines. That’s why the company makes it easy for clinicians to find and order the right digital tools and programs, send these digital health orders right to the patient’s portal account, and then provide a feedback loop to the clinicians to monitor and optimize the digital health programs. This helps hospitals incorporate digital health programs in ways that are most meaningful.

Q: In your opinion, what are the top 3 opportunities for technology to affect healthcare efficiency over the next five years?



Manoj Jhaveri
Hyr Medical

Online Staffing and Patient Consult Platforms: Online staffing platforms will continue to shrink both time and space; enabling a more elastic and on-demand workforce, and thus improving healthcare access and efficiency. In addition, telehealth platforms will continue to increase their market presence and share.

Physician Credentialing: Physician credentialing is stuck in the 1980's. Healthcare practitioners don't own and have the ability to share a "digital wallet" that contains their verified credentials. A blockchain-based commerce network for verified credentials, once adopted at scale, will effectively and efficiently solve this problem.

Patient Scans + EMR: Artificial Intelligence, Machine Learning, Deep Learning will continue to assist physicians in novel ways with tasks such as reading x-rays and analyzing scans for the presence of cancer cells. In addition, natural language processing, will enable "computer scribes" to collect information during patient-physician visits for EMR input/analysis.



Charlie Lougheed
Axuall

Certainly, we believe credentialing is one. However, the verification of proof is something that can extend well beyond HR. Instant access to digitally verified information will have a profound impact on supply chain integrity, particularly in pharmaceutical and device tracking. We believe digital proof will also be a catalyst for revenue cycle optimization and improvements in prior authorization. These are areas that require a great deal of redundant or unnecessary human intervention today, that if designed and deployed thoughtfully, can have a big impact on efficiency and business operations.



Carm Huntress
RX Revu

1. Bend the Cost Curve: Provide much less expensive care at much lower costs by moving costly care to less expensive options that produce the same or better outcomes with technology

2. Automation: Automating many time-consuming tasks of healthcare like prior authorizations and patient paperwork through automation and interoperability

3. Predictive Care: Seeing a patient's problem before it happens and intervening appropriately.



Mike McSherry
Xealth

1. Reduce the disparity in healthcare: We have an opportunity to engage patients using tools that are already part of their daily life, including cell phones. Through these mediums, we can send educational materials, arrange transportation for those that need it, send meals to pregnant mothers who are at-risk, as just a few examples.

2. Strengthen the physician-patient relationship: People trust their doctors and technology should support that bond, not circumvent it. We recently worked with our partner Welldoc and multiple health systems to measure the impact of leveraging the physician-patient relationship with digital tools. Results found that activation rates for Welldoc's digital health product for managing diabetes can be four times higher when sent direct to the patient from their care team.

3. Bring a consumer experience to healthcare delivery:

Families are now paying upwards of \$20,000 per year for commercial insurance policies, while household names like Walmart, Best Buy and Amazon are investing heavily in healthcare. Technology that aids organizations in offering a convenient, digital experience to patients will have a larger role in health systems' strategies.

Q: How can technology innovation impact long term sustainable change in healthcare?



Manoj Jhaveri
Hyr Medical

Sustainable change occurs when we enable multiple “legs of the stool”. For example, when we consider the key technology areas I mentioned earlier – blockchain verification networks and telehealth platforms – and their impact on virtual visits and credentialing; these are actually related.

Imagine when physicians can not only get credentialed with various telehealth groups in days, but then also visit patients virtually from their home as “freelance physicians”. And as IMLC (Interstate Medical License Compact) expands across the United States, they can see more patients in more states instantly. This leads to sustainable and transformational change.



Charlie Lougheed
Axuall

First, it needs to start with adoption. Healthcare advancements take time and significant cultural shifts. This requires leadership support at every level within a health system; from those in the c-suite to those on the front line of care. But a second component, one that not everyone wants to admit, is that long term change is often driven by economics. With one-third of every dollar in U.S. healthcare being wasted, and spending continuing to rise disproportionately to income, we believe consumers and payers will begin to expect “Amazon-like” value and convenience from their providers. If true, the answer to long term sustainable change lies in a balance between macro and micro economic demands that are met by innovators that can produce meaningful results – not just fads.



Carm Huntress
RX Revu

Technology innovation will allow for the flattening of health-care value chains and improved consumer experience. Through advances in data flow, automation, and increased efficiencies across the care continuum, organizations will be able to reduce the cost and improve the quality of care for patients.



Mike McSherry
Xealth

Long-term, sustainable change can only be achieved if it enhances the overall experience. Technology by itself does not motivate new behavior. It is the way it is applied to make processes reliably easier, faster or more convenient that will show sustainability.



Q: What is the biggest roadblock in bringing new health tech innovation to the market?



Manoj Jhaveri
Hyr Medical

In most cases it is a lack of incentives to improve or change the status quo. For example, take the use of artificial intelligence in radiology. Assuming its use is well understood, how is the department chief for radiology in a healthcare system incentivized to use and measure the effectiveness of AI for scans? Do the radiologists in the department feel threatened? Or in the case of blockchain credentialing; is the med staff and recruiting office incentivized to improve productivity and efficiency? Creating and pushing the right incentivizes is of course the critical role of executives in the organization. They must show compassion, gain understanding and chart the path.



Charlie Lougheed
Axuall

There are several big roadblocks that technology innovators must navigate. First, there is the factor of noise. There are a lot of companies pitching “revolutionary” approaches to healthcare automation – so many that it makes it very difficult to focus on the ones that will have the greatest impact. Healthcare systems don’t have endless resources to evaluate all these, so noise is something that innovators need to cut through quickly.

Probably even more important, there is the factor of available budget. Most health systems operate at razor-thin margins, if at any margin at all. Vendors need to be mindful of the high return-on-investment bar that will need to be met to gain traction, especially early in a product’s life cycle. This underscores the need for venture capital to support startups that have strong economic potential so that they have the runway necessary to prove their worth.

Lastly, we believe another formidable roadblock to overcome is misaligned incentives, particularly between providers and payers. Innovators that clearly understand and can quantify the economic impacts to either will have a much better story to tell. We believe, if positioned properly, improvements to efficiency can appeal to both providers and payers.



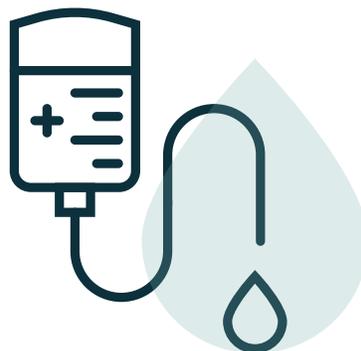
Carm Huntress
RX Revu

The current healthcare system is broken. First, we need to align the incentives of key stakeholders to aggressively move toward value. Second, robust legacy systems often prevent innovation and limit interoperability between new and old technologies. Finally, resistance to behavior-change is an ever-present challenge that often prevents forward momentum and implementation of new decision-support technologies.



Mike McSherry
Xealth

The largest barrier for health tech innovation is determining how it is best incorporated into the broader environment to drive meaningful change. That takes an understanding of the technology, the clinical perspective and all the stakeholders involved.



Q: Do you believe the trend towards provider consolidation will continue in the US? What other trends do you see shaping healthcare from a business model perspective: providers, payers, practitioners and patients?



Manoj Jhaveri
Hyr Medical

Provider consolidation will continue, as providers continue to grapple with areas such as HIPAA, regulatory compliance and EMR systems. It is very difficult for a private practice to absorb these large fixed costs, whereas a large healthcare system can spread these costs across a much larger base.

However, which that said, I do see a trend in which practitioners yearn for the days of “hanging their shingle” and want to claim more freedom and independence. This is in part captured by the freelance physician and traveling nurse movement, as well as telehealth. In addition, I believe we will continue to see more payers vertically integrate, and I think patients will demand easier and faster access to care.



Charlie Lougheed
Axuall

Yes, we believe the trend towards provider consolidation will continue -- the economic data all but guarantees it. We are seeing it not only in hospitals, but also organizations that provide ancillary services like ambulance, imaging, pharmaceutical companies, and drug retail.

The concern for patients and consumers is that while this has the potential to drive costs out of the system, it does not guarantee better care or outcomes. Our perspective is that innovators that provide organizations the ability to do (and prove) both will prevail over the next couple of decades.



Carm Huntress
RX Revu

Yes, I believe independent practices will continue to consolidate with larger systems as we move toward value-based care. Team-based, highly coordinated care models will be necessary to lower costs across the system. In addition, I believe there will be an increased focus on the consumer experience as patients continue to shop for care, and health systems search for ways to differentiate their offerings.



Mike McSherry
Xealth

Especially as value-based care establishes a greater foothold, the gap between payers, providers, practitioners and patients needs to narrow. Care coordination cannot happen with independent silos and each group has a stake in the same outcomes, just through a different lens. The extent to which we can close this gap may impact the trend towards provider consolidation.



Biographies



Manoj Jhaveri
www.hyrmmed.com



Manoj is the Co-Founder and CEO of Hyr Medical, Inc. (www.hyrmmed.com), a healthcare tech startup based in Cleveland, OH. Hyr Medical's vision is to fundamentally transform and modernize the \$15B healthcare staffing industry and enable an elastic, on-demand workforce.

Prior to Hyr Med, Manoj was a mechanical & industrial engineer at several Fortune 500 companies. He then spent 10 years as an innovation strategy & product development focused management consultant. Manoj was also a faculty member at Case Western Reserve University where he taught innovation management and marketing strategy.

Manoj has two young kids. He loves playing, coaching and watching basketball, golf, listening to podcasts while driving around town, running in the rain w/ music blasting, volunteering his time to important causes and meeting hard-working and curious people over coffee.



Charlie Lougheed
www.axuall.com



Charlie Lougheed serves in a number of leadership roles in both commercial and non-profit organizations where technology enables positive disruption and good in the world including Axuall, Unify Project, Friends of Breakthrough Schools, Galen Foundation, and The Lougheed Initiative.

Charlie co-founded and co-funded Explorys, now IBM Watson, in 2009 as a spin-off from the Cleveland Clinic. In six years, the company became the leader in healthcare big data and value-based-care analytics, spanning 26 healthcare networks, 60 hospitals, and 60 million patients across the US.

Prior to Explorys, Charlie cofounded Everstream in 1999 which later became the market leader in broadband and content analytics before being acquired by Concurrent (NASDAQ: CCUR) in 2005. There he served as CTO and later President as the company enabling its clients to leverage their data to exponentially scale their networks and broker better deals with their content providers.

Charlie has also been at the forefront of innovation within the financial services sector having led online banking and consumer analytics at KeyBank, National City Bank, and PNC. Prior to entering the financial services sector, Charlie served as Lead Consultant with the Deloitte & Touche Consulting Group.

Charlie is also an active leader in his community serving as founder and Chairman of The Lougheed Initiative Foundation, Vice Chairman of Friends of Breakthrough Schools, and Chairman of the Galen Foundation and PeopleBeatingCancer.org. He is a partner in 23Bell, the investment group that led the initial round of financing for Explorys, as well as a member of the North Coast Angel Fund.

Biographies



Carm Huntress

www.rxrevu.com



Carm is the founder and CEO of RxRevu and has over 20 years' experience in early stage start-up companies. His background spans a broad range of technologies including voice, web, mobile, RFID, web to print, and data analytics. His foundational skills are in engineering and product development which he applies heavily to his approach in building great teams and companies. He has raised over \$25 million in venture and continues to advise and support the Colorado and national digital healthcare ecosystem.



Mike McSherry

www.xealth.com



Mike McSherry is currently CEO of Xealth, a platform for digital health, which helps health systems organize, integrate and deploy digital health initiatives to drive engagement and utilization. Prior to Xealth, McSherry was CEO of Swype, an innovative touchscreen keyboard which made communication easier, faster and more inclusive. Swype was installed on over one billion smartphones and tablets and sold to Nuance. At Nuance, McSherry led the team that managed Apple's Siri, Amazon's Alexa, and other early mobile voice recognition platforms using the company's Dragon technology. McSherry brings with him more than 20 years of experience in the technology industry, co-founding several other consumer electronics businesses including Boost Mobile, which is now Sprint's pre-paid service. Drawing from his background in consumer engagement with electronic devices, McSherry's mission is to make digital health tools an integrated part of health care delivery.

To participate in future roundtable discussions or to share your thoughts about these conversations, please contact:
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