



ADDRESSING THE HEALTHCARE INNOVATION GAP

Providing Guidance and Tools to Help Hospitals Create an Environment that is Conducive to Practical, Sustainable Innovation

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A NEED WE CAN'T AFFORD TO IGNORE

I. Introduction

The United States healthcare industry is broken. While the country spends almost twice as much as the next westernized nation, U.S. healthcare ranks in last place among all industrialized nations. The last time the World Health Organization rated the quality of healthcare by country, the US came in 37th place. Somehow, the most powerful, affluent nation on earth is overpaying for an inferior product. The pressure being exerted on hospitals by the government and the insurance industry has created a nearly unsolvable challenge. Providers are now expected to simultaneously increase the quality of care while significantly lowering the cost of delivering it. For years, everyone has recognized that the model is broken and would need to be addressed, but the can keeps getting kicked down the road. With the acceleration of the lowering of reimbursements and increasingly large penalties tied to multiple quality measures, maintaining the status quo is suddenly no longer an option. Things have to change; hospitals and health systems need to innovate and find ways to do more with less.

Interestingly, entrepreneurs and investors also recognized the need for innovation in healthcare and, to address the demand, have been operating accordingly - the number of healthcare-related startups and the amount of investment capital have never been higher. Unfortunately, in spite of the fact that there is both significant demand and supply, there remains a disconnect between the hospitals most in need of innovation, the entrepreneurs working to create it, and the investors who support innovative companies.

This white paper will provide background on the complexities of fostering and supporting innovation within healthcare, explore where and why the barriers exist, and provide practical, tactical advice to support innovation within hospitals and health systems.

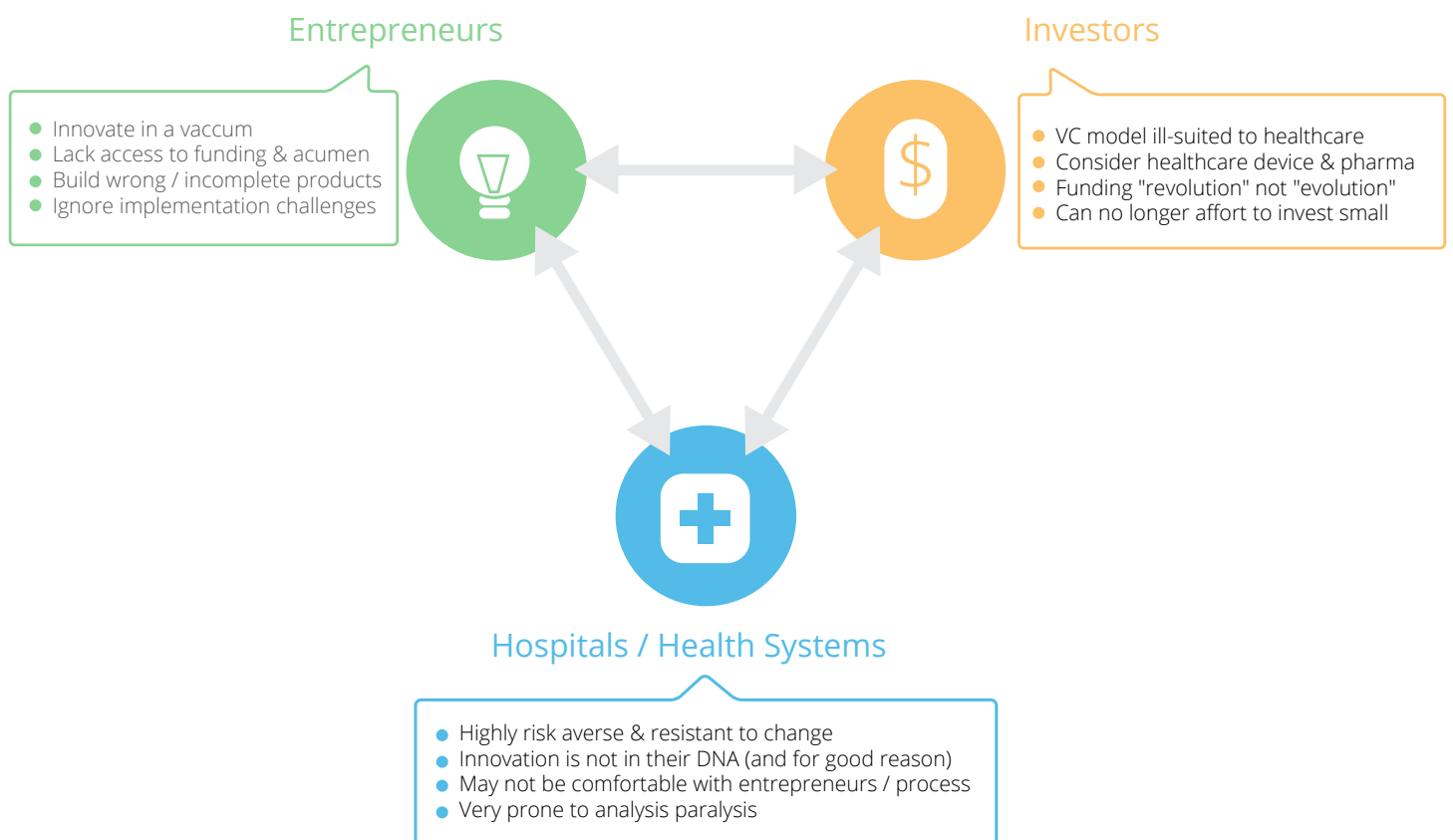
II. The State of Healthcare Innovation

The healthcare industry is currently undergoing the most significant transformation it has ever experienced. While the political climate leaves the future structure of American healthcare in question, hospitals and health systems continue to fall short of a solution to the one problem no healthcare legislation has effectively solved - revenues misaligning with cost growth. As reimbursements continue to decrease and economic incentives continue to tie to quality of care rather than quantity of services, hospitals and health systems are experiencing unbearable pressure to abandon the status quo. The need for innovative solutions in healthcare has never been greater.

Recognizing the shared, pressing, and unmet needs of a multitrillion-dollar industry, entrepreneurs and investors have led the proliferation of incubators, accelerators, and venture funds all aimed at providing an effective solution with broad applicability that can have a dramatic financial impact for hospitals and health systems. However, at the core of the relationship between entrepreneurs, investors, and hospitals is a significant disconnect that continues to impede progress and cause a considerable, negative impact on the economics and quality of healthcare.

III. The Innovation Gap

A healthy innovation ecosystem requires the cooperation and active participation of three separate entities: entrepreneurs who create new solutions, customers who provide the demand, and investors who supply the capital. However, the healthcare industry lacks a three-way, symbiotic relationship between entrepreneurs, investors, and health systems. This unhealthy, disconnected ecosystem severely curbs the success rate of healthcare innovation. This dynamic has caused and continues to exacerbate what we call the "Innovation Gap."



a. How Do Entrepreneurs Add to The Innovation Gap?

One unfortunate trait shared by many entrepreneurs is their propensity to innovate in a vacuum. They can be so driven by their idea or so paranoid that someone will steal it that they often go all the way through development and prototyping before ever showing their brainchild to a potential customer. Due to these factors, or simply a lack of industry knowledge, new solutions are rarely “ready for prime time” at the time of launch. It’s not uncommon to see new products that are lacking critical features, not compliant with standard requirements, or solving a problem that doesn’t have an interested customer.

Another unfortunate scenario, which often stems from the age disparity between healthcare entrepreneurs and healthcare consumers, is “innovating over the horizon.” This happens when entrepreneurs, who have a good understanding of the challenges facing the market, develop solutions from their personal perspective rather than that of the individuals who would actually be using the product. Entrepreneurs will incorporate the most current, innovative technologies without realizing the glacial pace of adoption in the industry. What they end up with are solutions that are 10 to 15 years ahead of being relevant to those who consume the majority of healthcare dollars.

Lastly, entrepreneurs generally follow the culture, norms, and methodologies of the startup world, which are quite different from those of the healthcare industry. While startups believe in the importance of going to market with a minimum viable product (MVP), failing fast, and constantly iterating their product, healthcare systems are unable to accept minimally viable, failing, and constantly changing products.

The mindset and methodologies of most entrepreneurs are incompatible with the culture, practices, and workflow in the healthcare industry.

b. How Do Investors Add to The Innovation Gap?

The overall growth of the venture capital industry – and specifically healthcare venture capital has actually made it harder for many healthcare startups to receive adequate and supportive funding. The massive opportunities in healthcare have attracted very large sums of investment capital, which means the average fund size and its typical investment are now much larger than in prior years. Therefore, young startups looking to raise seed funding of \$500 thousand to \$1 million are well outside the investment parameters of most VCs who look to write \$3 million to \$5 million checks. As a result, many startup founders are left trying to piece together a funding round through multiple checks from unsophisticated angel investors, wasting incredible amounts of money and time in the process – money and time that would be better spent building a better product.

Additionally, many startups simply are unable to navigate the complicated and time-consuming process of raising multiple angel rounds. Many companies with great solutions die before ever making it to market because of the difficulty in fundraising, not because of a lack of potential ROI of the product. Companies that are successful in scraping together an initial round and get some traction end up in very high demand and can command a much higher valuation – both because of the later stage and the increased dollars at that investment level. While this may be an optimal outcome for a small number of startups, this dynamic reduces the number of solutions entering the market and significantly diminishes the returns for the funds investing at the Series A and B levels.

In addition to the difficulties described above, when it comes to the largest investments being made in healthcare, there is a massive disconnect between the greatest areas of need in the market and where the investment dollars have been going. The Triple Aim from the Institute of Healthcare Improvement does a pretty good job of articulating, at a macro level, the issues that the healthcare industry needs to tackle. Unfortunately, when you look at where the largest investments are being made, it's a completely different story.

The Healthcare Venture Capital Investment Disparity

The Triple Aim (greatest areas of need)	Largest Investments
<ul style="list-style-type: none">● Improving the experience of care● Improving the health of populations● Reducing per capita cost of care	<ul style="list-style-type: none">● Biopharma● Medical device● Drug delivery

c. How Do Hospitals and Health Systems Add to The Innovation Gap?

The way in which hospitals and health systems have historically operated makes them ill-suited to work with early stage companies. Hospitals often have a culture that is not accepting of innovation due to the fact that they are hard-wired to avoid risk and, therefore, they are traditionally adverse to change.

In general, hospitals and health systems tend to be more accustomed to evolution rather than revolution. Historically, healthcare has not been viewed as a “business” nor have hospitals and health systems been run as traditional businesses would be. As a result, investing in things other than personnel, equipment, or things needed to operate is not something hospitals are inherently inclined to do.

The concept of investing in innovation, which is common in the business world, is a somewhat foreign concept to many healthcare organizations. However, as explained by Dr. Thomas Moran, Chief Medical Information Officer at Northwestern Medicine, “If we didn’t apply the principles that most organizations follow for innovation, medicine itself would have no cardiac stents, no off pump bypass surgery, or no transplants. Medicine has to push the envelope to think outside of our comfort zones and drive organizations of change. Nobody likes failure, but to innovate one must embrace the risk to fail.”

Additionally, hospital and health system leadership open to innovation also add to the innovation gap by forming committees that incorporate everyone’s perspective. This leads to broader support of the status quo because, while it may be easy for people to agree that the organization needs to change, they are reluctant to change the way they or their departments operate.

“Why is innovation hard?
Because health systems over analyze and
plan for the perfect instead of the good.”

Dr. Thomas Moran
Chief Medical Information Officer
Northwestern Medicine

IV. Fixing the Disconnect

While the Innovation Gap is extremely problematic, it was not created intentionally. Entrepreneurs, investors and health systems alike have a vested interest in fixing the disconnect. Unfortunately, there are a number of organizations whose intentions may not be as admirable. Instead, they seek to capitalize on the issue because it's more profitable to maintain the dysfunctional dynamic than to solve the actual problems. Because of this, hospitals and health systems should think twice before hiring outside experts and consultants.

Instead, they should seek practical and tactical guidance – clearly defined ways to challenge the status quo and create an environment where innovation can actually occur and succeed. Dr. Marcelo Malakooti, Director of Innovation at IGNITE Innovation and Director of NUvention Medical at the Northwestern University Feinberg School of Medicine, explains, "Adopting a culture of innovation can seem insurmountable, but success can be found in small, incremental ways. Innovation shouldn't be thought of as just important, or as an accessory or checkbox for Medicine, but a bare necessity. It is possible and should be encouraged."

"I am motivated to cultivate innovation and promote acceptance of risk and failure in order to continuously seek a better way, each and every time"

Dr. Marcelo Malakooti
Director of Innovation, IGNITE
Director of NUvention Medical
Northwestern University Feinberg
School of Medicine



A PRACTICAL, TACTICAL GUIDE TO HEALTHCARE INNOVATION

I. Introduction

The process described below to foster healthcare innovation is modeled on an evidence-based approach and curriculum, which has demonstrated success in the market. For over 20 years, this curriculum has been used to help entrepreneurs create successful businesses, while also helping large businesses innovate in the healthcare industry. The fundamental, underlying premise is to increase a company's odds of success by eliminating the most common causes of failure for startups.

Startups have an extraordinarily high failure rate – over 90% - and unfortunately this failure rate is independent of the quality of the potential solution in the market. Many companies with incredible potential fail due to completely avoidable reasons, such as creating a product that can't be operationalized easily in a hospital, not considering the sales cycle of a hospital, or not considering legal or regulatory requirements.

No one can teach entrepreneurs how to succeed, but the right curriculum that blends healthcare and entrepreneurial expertise can teach entrepreneurs how not to fail. By avoiding the most common pitfalls, entrepreneurs can greatly increase their success rate and the opportunity for their product to make it to the market. Our curriculum provides hospitals and health systems with practical guidance on how to create an environment where innovation can occur and also provide some tactical tools to help start the process.

II. Set the Stage

Once an organization has decided to embark on the path to innovation, in advance of starting the process or allocating any resources, it's best to arrive at a shared definition of what the word actually means. There is no shortage of ways to interpret the word "innovation" and, technically speaking, doing something different but not necessarily better could still qualify as innovation. As such, it is worthwhile to define the term in a manner suited to the underlying objectives. Furthur recommends embracing a definition similar to the following: innovation as a new, or improved, process or product resulting from study and experimentation that addresses a strategic need of the organization.

Key Takeaways:

Don't fall into the analysis paralysis trap before you even get started. Define innovation in a way that reflects your motivation and the role you expect it to play in your organization. Get started by:

- Recognizing it can take on many forms, processes, products, standardization*
- Understanding it may be as simple as finding better ways to utilize existing resources*
- Accepting that it's a "need to have" not a "nice to have"
- Defining what innovation means, as it applies to your organization*

III. Recognize it's a Culture Thing

Cultural issues at hospitals can provide significant challenges to innovation. Hospitals and health systems are hardwired to avoid all of the behaviors necessary for innovation. From a clinical perspective, this is a good thing - healthcare professionals have to avoid risk and follow clearly defined protocols without varying from standards of care in order to provide the best healthcare to their patients. Whereas hospitals avoid risks and change, entrepreneurs focus intently on change, risk, and trial and error in order to test, improve upon, and finalize their products. The entrepreneurial process and mindset is incompatible with the culture of hospitals because some degree of failure is to be expected and accepted.

Another common challenge in healthcare is its silo structure, which hampers collaboration. For a new innovation to be successful in a hospital, it must be approved by multiple different organizations, so cross-departmental collaboration is imperative.

Lastly, many hospitals have gatekeepers who stifle innovation by attempting to control the nature, process, or outcome of innovation to meet personal or departmental goals.

As the organization begins to think through and address the cultural barriers, it's best to position it as something the organization should embrace on an ongoing basis, rather than as a one-off project. Consider it more akin to learning to eat healthy as opposed to going on a crash diet. And remember there are an awful lot of very smart people in the field of healthcare so while the process of developing a new skill might feel different and perhaps even a bit uncomfortable, it's hardly an insurmountable challenge.

Key Takeaways:

Hospitals and health systems must not only recognize that innovation is not their core competency, but also that the culture of healthcare is not fertile ground for planting the seeds of innovation. Like the Hippocratic Oath, hospitals must first strive to do no harm to the innovative process. This is the first and unquestionably most important step, and innovation cannot happen without it. Get started by:

- Openly discuss the likely challenges and how you will overcome them
- Accepting that failure is part of the process - expect it and learn from it
- “Walking the talk” and communicating the organization’s commitment to innovation*
- Avoiding all jargon and buzz words, they annoy, intimidate and serve no useful purpose
- Being willing to provide autonomy, support and patience

We need to be more intentional in how we structure innovation. This includes the culture, process for submitting quality ideas, as well as the ability to quickly evaluate, implement and scale.

Dr. Dean Lin
President
Meridian Health

IV. Create Alignment and Structure for Success

When it comes to innovation, hospitals and health systems have to start by defining why. Why innovate? What is the goal? Who would benefit from the innovation? It could be to improve efficiencies, increase revenues, reduce costs, extend their brand, etc. The questions themselves may sound basic, but they are not always asked and can be difficult for hospitals and health systems to articulately answer.

“Innovation” is a popular industry buzzword and, unfortunately, many hospitals begin to undertake it as a means to its own end. A hospital would never decide to launch a marketing campaign without clearly laying out goals, milestones, strategy, and tactics. As such, why pursue innovation without laying out the reasons why, the methodology, and the ways to evaluate performance? The process of attempting to support innovation requires the same level of rigor and evaluation as any other marketing, financial, or strategic project. Hospitals and health systems simply cannot afford to continue to conduct business as usual. As stated by Jeff Oberlin, Director of the Center of Innovation at AMITA Health, “It is strategically important for health systems to stay relevant. If we do not innovate someone else will and our industry will be disrupted.” Therefore, hospitals and health systems need to accept that innovation has to become a core competence.

“Innovation benefits our patients and community. If there are new approaches and solutions to close gaps in care, support care transitions, and lower cost of care, we owe it to society to be

Jeff Oberlin
Director
Center of Innovation
AMITA Health

After coming to alignment regarding the “why” of innovation, hospitals and health systems need to define the “how.” In other words, hospitals and health systems must define what innovation process will be followed. It is essential to create a data driven and objective standard operating procedure. Without a set of guidelines, there is no way to prioritize where to focus and what problems to solve. In addition, without having some documented parameters, it’s extremely difficult to ensure all decisions are objective.

While each hospital may create its own set of guidelines, which are uniquely tailored to the specific needs of the organization, the fundamental elements should be more or less the same. As processes are defined, be mindful of the core philosophy which underlies the entire approach - reduce the most common causes of failure. There are always going to be challenges, but teams and processes should be designed to anticipate, address and ultimately overcome them.

A final, critical component of ensuring that the objectives and actions associated with innovation remain closely aligned is to incent the behaviors you want to drive. Systems operate exactly as they are designed, so build yours in a manner that rewards the behaviors or outcomes you hope to achieve. If it’s in an employee’s bonus plan, it’s going to get done.

Key Takeaways:

Everyone must buy into the motivation and the process and clearly define/accept the goal(s). Without alignment on scope, direction, and an effective incentive structure, the likelihood of success plummets. Get started by creating a list of questions to answer.* For example:

- Does this align with or support our vision and mission?
- Does this solve an existing organizational problem or meet an unmet need?
- Does it make financial sense? (How big is the problem & what’s the ROI?)
- How are we defining success? Clinical? Financial? Operational?
- Can we actually implement it? Logistically? Technologically?
- Who will be impacted (both positively and negatively)?
- What is the anticipated timeline & key milestones for the project?
- Who will object to this initiative/product/change and why?

V. Engage Internally and Externally

In addition to having alignment among leadership and the innovation team, hospitals and health systems must have buy-in from all key stakeholders. It is imperative that clinicians feel that innovation is happening “with them” rather than “to them.” The goal is to establish a small but highly qualified team to drive the initiative with broad input.

That said, the innovation team needs to set expectations around input. It should collect input from across the organization, as innovation can and should come from anywhere. This requires balance and clearly defined roles and responsibilities. The small team gathers broad input, but they are the ultimate decision makers. After all, hospitals and health systems are peculiar in that rarely does a single person have the ability to say yes, but almost everyone seems to have the ability to say no.

Along with setting expectations related to who participates in the process and how, the innovation team should have a set of reasonable and realistic expectations. In order to avoid any disappointment, they should understand that it’s likely to be an iterative process that creates or shapes an effective solution - not a singular “ah ha” moment.

Key Takeaways:

Gather buy-in from internal and external sources, but avoid allowing individual people to act as singular barriers to the process. Get started by:

- Learning from others - leverage their knowledge/success and avoid their mistakes
- Forming a patient and family advisory council (the customer is always right)
- Soliciting feedback from staff. When people are engaged in the innovation process, they become emotionally invested and more apt to adopt the solution*
- Letting ideas come from anywhere. Your employees may not be able to design a solution from scratch, but they are the ones dealing with the problems *
- Hosting your own monthly “Shark-Tank” where any employee can pitch an idea to leadership*

VI. Know Implementation Isn't Everything, but it's at least 50%

As previously discussed, the shared challenges of a multitrillion dollar industry have resulted in the creation of countless new technologies and approaches, armed with talking points about how they can easily support your organization to start driving immediate, substantial change. However, hospitals and health systems have to do their due diligence to consider how the solution will impact current operations. If a solution can't be seamlessly integrated into existing systems and workflow, or if it isn't embraced by your frontline staff, it is guaranteed to fail. An inability to implement is just as fatal as the product not working at all.

Key Takeaways:

The best solutions have a zero percent chance of success if they don't include a thoughtfully considered and well-defined process to operationalize their offering. Get started by:

- Carefully thinking through the entire deployment process. Who is going to be impacted?
- Soliciting input from the end users - it's so intuitive and so rarely done. Innovation should be a great help to them, so get them involved.
 - Does the solution address the actual problem? (Do they want it?)
 - Is it missing any critical features or functions?
 - Could you add something to make this an absolute "must have?"

One of the very best ways to get started is to gather people who are the members of your innovation team and ask them a simple question,

"Do you think there is there a better way to ____?"

If the answer is yes, then you are already on your way.

VII. Getting Started

By utilizing the curriculum above and understanding the role of innovation in healthcare, hospitals and health systems can expect to identify and solve the problems currently stalling their organizational innovation. They should use a goal-driven approach that clearly defines what is to be accomplished and success should be gauged against that goal. Lastly, since there is no better way to learn than by taking action, hospitals and health systems should begin by utilizing some of the suggestions described throughout this work and applying them to challenges facing organizations.

Remember that innovation can come from outside the organization (entrepreneurs) or inside the organization (intrapreneurs). Strive to be open to the former and supportive of the latter. Empower your intrapreneurs with the tools and terminology to effectively communicate their ideas. After all, they are ones most likely to create solutions that solve the problems they face every day. A few final things to consider while getting started:

Avoid:

- The urge to boil the ocean - start small
- Trying to solve the most challenging issues first
- Deflating the team by having them tackle unsolvable problems
- Behaviors and people that will hinder success

Embrace:

- Engaging the entire organization in the process - get their insights and input
- Having managers meet with their team and submit a list of challenges or problems to solve.
- Sharing progress and celebrate success*
- Making it exciting and fun for the organization. After all, aren't you doing this to make things better for patients and all those who care for them?

VIII. Conclusion

In the U.S. healthcare industry, hospitals and health systems are under enormous pressure to improve the quality and reduce the cost of providing care. This pressure has resulted in the recognition that operating as usual is no longer a viable business model. Healthcare innovation is more important than ever. However, there is a disconnect between those in need of innovation and those who can provide it. To effectively innovate to achieve the Triple Aim, hospitals and health systems have to first clearly define what innovation means to the organization.

Secondly, they have to make adjustments to the internal culture to avoid behaviors that impede innovation. Additionally, it has to be understood why innovation is necessary and a standard operating procedure should be created that includes gathering input from inside and outside the organization. Lastly, hospitals and health systems must consider ease of innovation in the process. A truly innovative solution considers the end user as well as current processes and workflows. With these steps in mind, hospitals and health systems can begin closing the innovation gap that is hindering innovation in healthcare.

About Furthur

The Furthur Fund was created to address the massive market potential of the healthcare industry by empowering health systems and entrepreneurs to collaborate on the next generation of healthcare innovation. The fundamental purpose of Furthur is to build a sustainable, repeatable, and scalable process to support health-tech startups who aspire to improve healthcare. Therefore, Furthur only works with startups that are developing solutions to improve the efficiency, quality, or economics of healthcare.

Furthur is the manifestation of a belief that effective and sustainable innovation requires a truly transformative process - one where everyone's interests are truly aligned. Furthur addresses the needs of health systems by working directly with them to ensure that entrepreneurs are focused on addressing their greatest needs and pain points. Furthur then provides the startups with the necessary financial and strategic guidance and support, so that their solutions are effective and their companies are viable. Since Furthur's investors are hospitals and health systems, they enjoy the economic returns associated with both the investments and the solutions.

Furthur provides health systems the opportunity to pursue innovation, implement change, and have access to new solutions - without being limited by the challenges inherent within their organizations. We'd love to hear from you.

***Additional resources available from Furthur**

¹ "MIRROR, MIRROR ON THE WALL How the Performance of the U.S. Health Care System Compares Internationally." The Commonwealth Fund. June 2014.

² "World Health Organization's Ranking of the World's Health Systems." The Patient Factor. 2017

³ "90% Of Startups Fail: Here's What You Need To Know About The 10%." Forbes. January 2015.