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Clinical entrepreneurship
as a driving force for
transformation

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Articles, podcasts, and research studies abound about the many challenges facing the health care industry. Issues like affordability, cost of care, and quality, continue to be tackled across entrenched industry players, startups, and out-of-industry actors such as retail, private equity, and venture capital. Years of traditional cost cutting have not delivered the savings and improvements in quality required at a time when health care affordability and improvements in life expectancy are not materializing. What is needed now is greater innovation, accelerated adoption, and a deep focus on transforming health care.

Clinicians are increasingly dissatisfied with the realization that their clinical role is to efficiently and repeatedly carry out certain tasks.¹ Challenges encountered in clinical practice can stymie efforts to best deliver care and can become a significant source of frustration and concern. Some health care organizations have begun to support clinical entrepreneurship programs that assist physicians and other providers in developing novel solutions that address persistent and meaningful problems that clinicians uniquely understand by virtue of their front-line experiences, sometimes resulting in commercialization opportunities that can deliver significant financial returns. While the skills associated with being an entrepreneur are not associated with traditional medical education, commitment to applying knowledge and expertise in delivering quality clinical care is central to professional identity.

In a study of early-career physicians in the UK National Health Service (NHS) participating in the NHS Clinical Entrepreneur Programme, participants recounted that their entrepreneurial project had originated in an attempt to contribute innovations to the organization and develop solutions to problems they perceived at work.² Participants shared that clinical entrepreneurs were able to identify problems and design solutions by virtue of their direct experience with patients and the health system. Organizational support for clinical innovation and entrepreneurship provides clinicians with agency to fix the very problems that affect them daily. An interesting finding in the NHS study was the positive relationship between the intent to innovate and commitment to improving the organization. As such, supporting clinicians in exploring, designing, and commercializing innovations should not be viewed as a distraction, but rather an important opportunity for organization improvement and economic growth.



Academic health care organizations have long embraced technology transfer—the process by which technologies, discoveries, and methodologies are protected through patents and other means (intellectual property, or “IP”) and moved from one organization or individual to another to ensure further development and wider application. Methods of compensation include, but are not limited to licensing, royalties, and equity in startups that are built on the innovation. When discoveries occur as part of the clinician's employment, ownership of IP generally belongs to the health care system, which may, at its discretion, share economic benefits with the inventor as innovations are commercialized.

Clinical entrepreneurship takes traditional technology transfer to the next level, encouraging clinicians to stand up new businesses built on their innovations and expanding the source of innovation from primarily research to insights garnered through direct patient care experiences. The financial benefits to the clinician can also differ in meaningful ways depending upon the equity sharing approach, as well as ongoing participation in the new venture in the form of advisory or leadership roles. When health systems focus on digital health, differentiating it from the traditional focuses of basic science and pharmaceutical technology transfer efforts, innovations can be applied within the health system and brought to market more quickly, thereby hastening transformation efforts.

Clinical entrepreneurship differs in important ways from entrepreneurship activities that originate from other sources. Sheba Medical Center in Tel Aviv, Israel, renowned as one of the top 10 hospitals in the world, established the Accelerate, Redesign, Collaborate (ARC) Innovation Center to drive the future of health care with a focus on cultivating and harnessing the power of clinical entrepreneurship. The Sheba Entrepreneurship Program @ARC (SPARC), co-developed with Reichman University's Zell Entrepreneurship Program, has trained approximately 5% of Sheba Medical Center's clinical workforce and encourages global participation in its program. Their particular focus on digital health has accelerated the health system's digital transformation efforts, a benefit, they believe, could not be achieved purely through conventional technology transfer methods. As the Sheba ARC case study referenced in this paper illustrates, affiliation with a health system uniquely provides the inspiration, a clear context for the problem being solved, and a testing and proving ground for the

new solutions. This approach has led to skyrocketing growth within Sheba ARC with 110 global startups since its founding in 2019 and is credited with contributing to the transformation of Sheba Medical Center into a world-class health care institution and driving significant economic benefits.

The confluence of business and human needs creates an opportunity to engage the clinical workforce in new ways to drive innovation and bolster purpose and passion among the clinical workforce. Encouraging and supporting clinicians in pursuing entrepreneurial ventures allows health systems to deploy their most skilled assets to work on the most complex problems. The clinician's voice of experience and expertise during this time of rapid change and considerable headwinds in the industry must be amplified. Placing clinicians at the center of innovative discovery has the potential to ignite the innovation required to transform our health care system.

“Clinician entrepreneurs represent a new breed of talent essential for driving the necessary changes in health systems. At Sheba Medical Center, we observed significant impact and cultural shift across our organization after training approximately 5% of our clinician workforce at SPARC, leading to measurable success in both transformation and financial growth.”

—Eyal Zimlichman, MD,

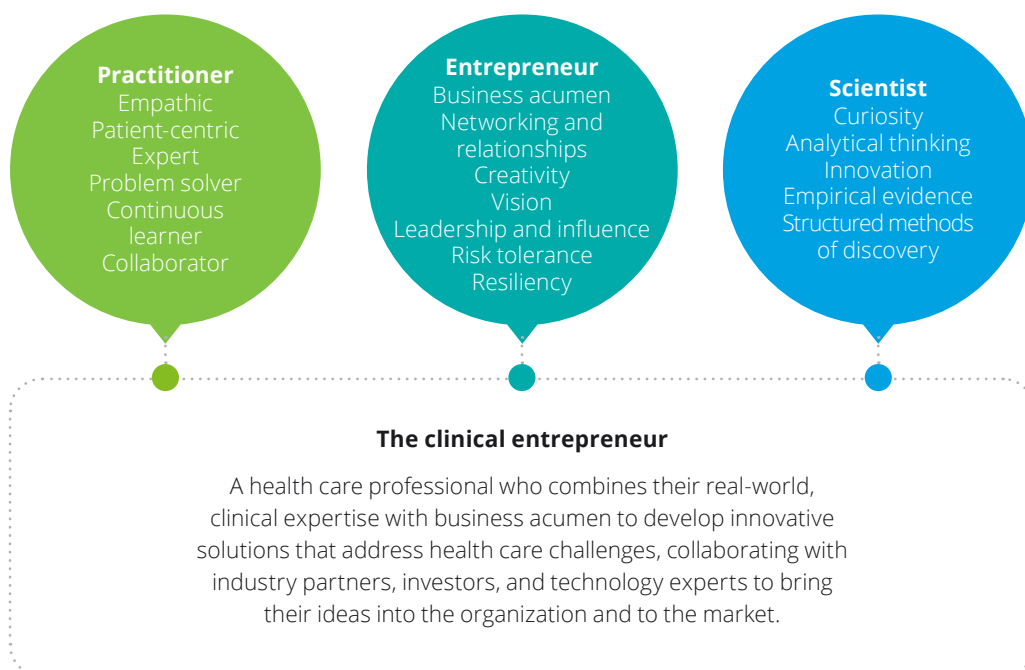
Director of ARC and Chief Innovation and Transformation Officer at Sheba Medical Center

What characterizes the clinical entrepreneur?

The clinical entrepreneur brings together the unique skills sets of the practitioner, scientist, and entrepreneur; can be cultivated and nurtured through education, mentorship, and funding; and is differentiated by the real-world experience and passion afforded by their distinctive hands-on experience with patients. In addition to leveraging the unique vantage point afforded to clinicians by virtue of their direct patient care experience and passion for the profession, accelerating clinical entrepreneurship requires programs and incentives that encourage participation in entrepreneurship activities, investing in upskilling, funding new ventures, and offering more generous equity and revenue-sharing.

The clinical entrepreneur can represent a natural evolution where front-line insight, a curious mindset, and a vision for the transformation of health care culminate in a prolific articulation of problems and potential solutions that represent fodder for innovation. What nurtures and sustains the clinical entrepreneur is a culture that supports and rewards innovation activities, as well as both financial and nonfinancial assistance for building and implementing novel solutions with transformative potential.

Once a problem is articulated and the process of designing a solution commences, clinicians should play a meaningful role throughout the innovation process. In the early days, the clinician's role is that of visionary and subject matter expert, lending their experience to the solution development process. As proofs of concept (PoCs) and Minimum Viable Products (MVPs) are developed and tested in operations, the role of the clinical entrepreneur is to champion its adoption, helping others understand the issue being addressed and the transformative potential of the solution, as well as guiding the development of new workflows and change management efforts. As the product is refined, a continued advisory role for the clinician is essential. And, in the event an innovation reaches the point of commercialization, the clinician should participate meaningfully in economic benefits and be granted important advisory and governance roles.



Moving beyond today's models

Health care organizations should embrace a more expansive view and approach to clinical entrepreneurship.

Existing model	Future model
Innovations and discoveries created by academic medical centers with deep research benches	Innovations created across a diverse landscape of health care organizations
Largely driven by researchers	Driven by a broad and diverse community of clinicians who are trained in the skills required to be an entrepreneur
Organization retains significant ownership of IP and commercial returns	Clinical entrepreneur may be granted a more generous ownership interest to encourage participation
Innovations and discoveries are used primarily by third parties (e.g., industry partnerships, licensing)	Innovations are tested and deployed within the health system for transformative potential as well as commercialized
Primarily funded through public and private grants	Health system and potentially VC/PE/third-party partners contribute early-stage funding, targeting innovations that align with strategic priorities





Clinical entrepreneurship takes traditional technology transfer to the next level, encouraging clinicians to stand up new businesses built on their innovations and expanding the source of innovation from primarily research to insights garnered through direct patient care experiences.

Shaping a generation of clinical entrepreneurs

There are four fundamental requirements to create sustainable clinical entrepreneurship across health care organizations:

1. Culture of innovation and entrepreneurship
2. Programming, mentoring, and community building
3. Meaningful incentives for the clinical entrepreneur
4. Infrastructure and support for venture building and business guidance

Growing and sustaining a clinical entrepreneurship model requires a self-reinforcing system of culture, training, and mentorship, venture-building support, and meaningful incentives that reward clinicians for the value they drive.

Clinical entrepreneurship sustainability model			
 Culture of innovation and entrepreneurship	 Programming, mentorship, and community building	 Incentives	 Infrastructure, funding, and support
Visible support for innovation and clinical entrepreneurship as a core value and focus of the organization	Purpose-built clinical entrepreneurship education, supportive membership programs, and building an ecosystem of innovators	Incentives that encourage idea generation and venture building and create a sustainable cycle of innovation	Support for building, testing, and scaling new ventures, as well as protecting, commercializing, and monetizing innovations
<ul style="list-style-type: none"> • Leadership messaging • Strategic plan integration • Commitment to multi-year funding and resource allocation • Demonstrations of risk tolerance 	<ul style="list-style-type: none"> • Entrepreneurship training programs • Community building across innovators and entrepreneurs • Collaboration events and forums • Continuing education for skill development 	<ul style="list-style-type: none"> • Equity sharing models • Dedicated time for venture building activities, as appropriate • Meaningful roles through venture progression, e.g., startup advisor, board member 	<ul style="list-style-type: none"> • Pre-seed funding • Founder support for venture building • Access to commercialization infrastructure, e.g., founding CEOs, growth funding • MVP/PoC development • IP protections • Pilot testing and scaling activities

Culture

Culture, while the hardest to articulate and even harder to foster, is foundational to driving a sustainable clinical entrepreneurship model. Culture building is both a layered and continuous process that requires constant nurturing and reinforcement. In this case, it begins with a clear articulation of the value of clinical entrepreneurship, communicated at the highest levels of the organization. Without executive sponsorship, an endeavor like this can be marginalized and deprioritized, thereby discouraging participation. Messaging comes in many forms, including encouraging participation, celebrating successes, and demonstrating an acceptance of the inherent risks involved in these ventures.

Tangible articulations of support come in many forms. Robust equity-sharing with clinical entrepreneurs should innovations turn into new business ventures is one of the most meaningful demonstrations of commitment that health system leadership should adopt. Challenging orthodoxies about who owns IP and granting generous ownership rights to entrepreneurs benefits not only the innovator, but also the health system by generating interest and engagement in innovation activities. This is a prime example of “all boats rising,” in which both the health system and the clinician benefit from the financial upside of the innovations, the potential for organization transformation, and clinical engagement and well-being. Multi-year funding, with clear messaging that innovation activities do not compete with funding ongoing operations, sustains the effort and contributes to culture building.

Programming, mentorship, and community building

As front-line physicians engage in innovation and entrepreneurship, thoughtful programming and mentorship are essential to teach the art and science of entrepreneurship. Training programs should be tailored to venture-building skills, rather than broad MBA-like programs. This includes such skills as articulating problems, identifying root cause issues, understanding emerging technologies and their potential impacts, and business-building skills such as evaluating a product’s commercial potential, building MVPs, securing seed and growth funding, and developing pitch decks. Such programming will be positively received by those interested and seen as an investment in clinicians, which helps build engagement and commitment.

The potential to partner with existing entrepreneurship programs, including academia, and incorporating field experts, such as VC firms and other entrepreneurs, into education and community-building should be explored. Programs can include only internal clinicians working within the health system, or open to those outside the system, infusing the group with diverse perspectives. Hands-on opportunities, such as mock pitches, provide practical experience and enrich the educational process.



Outside of more formal education, networking and mentorship programs should be cultivated, building the community of entrepreneurs and innovators who can provide critical informal guidance and support. Growing the ecosystem of partners, collaborators, mentors, and funders is key to the success of the venture-building process. The connections fostered both within and beyond the organization, and access to expertise and experience, will be invaluable resources as the clinical entrepreneur builds, deploys, and scales innovative solutions and explores the potential to commercialize new products.

Incentives

Incentives may come in many forms, both financial and nonfinancial, but providing incentives is important to generate interest, demonstrate the value placed on innovation activities, and signal organization commitment. Nonfinancial incentives could include dedicated time for innovation activities and recognition. Financial incentives are important and include funding for solution design and business development activities, as well as granting equity (ownership) to founding clinicians. As new businesses are established, the role of the clinician provides another avenue for incentives, including playing a key role in the selection of the founding CEO and other leadership positions, continuing to help shape and refine the product, and playing a continued advisory and/or governance role as the business is launched and grows.

Infrastructure and support for venture building

As ideas are generated by the clinical entrepreneur, well-defined processes and resourcing to support market evaluation, go-to-market strategies, solution development, product testing and refinement, and access to funding must be in place. This disciplined and clearly articulated process involves bringing in specialized resources, such as data scientists, programmers, product developers, and those with business acumen (finance, marketing, etc.). Access to data from the health system will almost always be required, so both the platform for the provision of this data and the processes for requesting and granting access needs to be designed in a way that is fit-for-purpose. When a new venture is launched, the CEO search will be a critical step. It is essential that the CEO bring relevant experience and a strong track record of building new businesses. As such, it will be highly unlikely that the CEO will be the clinical entrepreneur. Access to pre-seed capital is critical, with access to multi-year funding as milestones are achieved. With support, the clinical entrepreneur can lead efforts to test and refine solutions within the health system, playing a critical role in guiding workflow redesign and change management.



Summary

As health care organizations continue to address long-standing issues around care delivery, efficiency, and customer experience, unleashing the transformative power of the clinical entrepreneur should be explored. There is no better insight into the challenges facing health care than those provided by the clinicians serving on the front lines of today's fragmented, complex, and often inefficient system. When clinical entrepreneurship is encouraged, the result is both an evolution (innovation) and revolution (transformation) driven by a natural desire to claim agency over pressing issues. The ability to identify problems and shape solutions can become natural extensions of the clinician when there is supportive leadership, fit-for-purpose training to coax and cultivate innovations, and adequate funding and incentives.

There is no better insight into the challenges facing health care than those provided by the clinicians serving on the front lines of today's fragmented, complex, and often inefficient system.

The mutual benefits of cultivating and sustaining a robust clinical entrepreneurial model cannot be understated. For clinicians, these new activities can provide a sense of purpose and agency over issues and reignite passion for the practice of medicine, as well as offer attractive financial benefits. For the health system, the opportunity for economic growth associated with successful venture building is noteworthy. Potentially more impactful is the transformation and cultural shift that can occur within the health system as clinicians engage in entrepreneurial efforts. Given these benefits, health care organizations should consider taking the important step of cultivating the next generation of clinical entrepreneurs.



SHEBA ARC

A case study on harnessing the power of clinical entrepreneurship

In 2019, Sheba Medical Center, renowned among the top 10 hospitals in the world, established the Accelerate, Redesign, Collaborate (ARC) Innovation Center to drive the future of health care. Within this innovative ecosystem, its focus on cultivating and harnessing the power of clinical entrepreneurship has led to skyrocketing growth. The impact of this work has resulted in an innovation flywheel, leading to groundbreaking, transformative solutions that enhance patient care, improve the physician experience, and create operational efficiency. The program's success with clinical entrepreneurship is a testament to the collaborative and supportive environment fostered by Sheba ARC, which enables clinicians and startups to thrive and bring their innovations to life.

Sheba ARC embodies the four fundamental requirements to create sustainable clinical entrepreneurship:

Culture of innovation and entrepreneurship:

ARC's mandate for innovation and transformation is supported by Sheba's CEO—driving resources, recognition, and financial incentives. This culture fosters global partnerships across pharma, medtech, payers, health systems, and government entities externally, while also driving adoption and transformation within the Sheba Medical Center system.

Programming, mentoring, and community building:

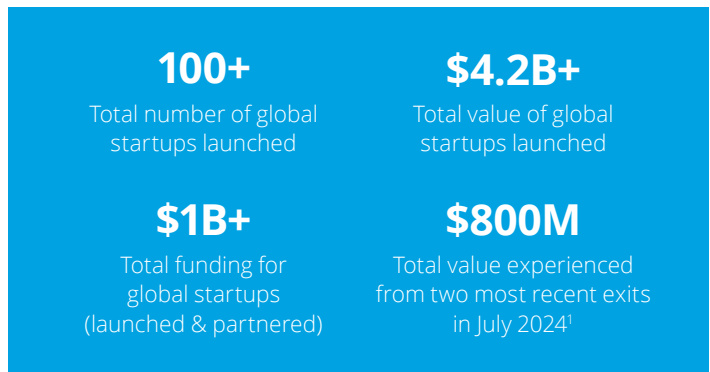
Sheba-ARC offers formal and informal community-building avenues. The SPARC program (Sheba Entrepreneurship Program @ARC), co-developed with Reichman University's Zell Entrepreneurship Program, provides a 12-week bootcamp to cohorts of 20–25 clinical entrepreneurs. Mentorship from experienced entrepreneurs, VC representatives, industry experts, and ARC alumni further strengthens the innovation community. This global program is offered to both Sheba Medical Center clinicians and those outside the Sheba system, offering diversity of thought and experience. The program has been expanded beyond physicians to include nursing and other clinical providers. To date, Sheba has produced 300 clinical entrepreneurs.

Meaningful incentives for the clinical entrepreneur:

Clinicians retain a 35% equity share, net of ARC's direct investment, and are encouraged to stay involved with their startups through CEO selection and ongoing advisory roles. Recognition from Sheba's CEO further motivates clinicians.

Infrastructure and support for venture building:

ARC provides a comprehensive ecosystem for venture building, including workshops, review cycles, seed capital, and piloting opportunities within Sheba Medical Center. This approach accelerates the development and deployment of scalable, effective solutions.



Focus areas:



Precision medicine



Medical devices



Extended reality



Remote care



Artificial intelligence

Source: 1. Gail Weinreb, "Alcon completes acquisition of Israeli co Belkin Vision," Globes, July 3, 2024; Walla! Money, "Sheba Medical Center's heart valve company sold for \$300 million," Jerusalem Post, updated July 16, 2024.

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Endnotes

1. Ha Hoang and Markus Permann, "[Physician entrepreneurship: A study of early career physicians' founding motivations and actions](#)," *Social Science & Medicine* 339 (December 2023): 116393.
2. Ibid.
3. Newsweek, "[World's Best Hospitals 2024](#)," accessed February 2025.



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