



Inspiring Healthcare Leaders
Accelerating Change

Designing the Future of Healthcare
A System for New Care Model Development to Drive
Breakthrough Results

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1. The Need for Systemic Change

A Time for Innovation

Within every disruption is the seed of opportunity. Which sounds good and hopeful. But, after months of the kind of disruption that has left an entire sector of the economy reeling and exhausted, who has the strength for opportunity?

To grab a seed in a storm requires both preparedness and new ways of thinking.

Most health-system processes are reactionary in nature. From the dawn of medicine, the work has been designed to wait for things to happen and then respond. Good outcomes often rely upon the heroics of individual providers or care teams in a system that is simply exhausting. As it is designed today, the system produces errors, harm, suboptimal outcomes, and unmet needs. The pandemic of 2020 showed us how quickly our systems and caregivers could be overwhelmed, overrun, and unable to adapt to new demand.

We did see health systems respond to patient surges – or a lack of patients, due to fears of visiting hospitals and clinics – with inventive experiments in care delivery. But we also saw fixes create insurmountable issues in unexpected areas. This is not a new dynamic. It happens nearly every time that we try to optimize or correct for one piece of a complex system. Think about the implementation of electronic medical records and the documentation burden that placed on physicians. The fix in many places was to hire a lot of medical scribes. But this just added to payroll without really removing the burden from physicians of a broken system.

Healthcare organizations are made up of many interlocking systems and processes. Who knows what part of the foundation will crumble when a pillar is moved? This fact has made many organizations hesitant to really change, much less innovate.

True innovation in healthcare delivery requires deep knowledge of both the global system and its most important element: the patient. And by “the patient,” we mean both all patients and every patient. This kind of thinking and action requires regular practice. But we have seen organizations develop a kind of muscular flexibility, a habit of thinking systemically while obsessively focused on the patient that makes true innovation possible.

Here, we will lay out a new system that has succeeded in doing just that. It is both an organizational practice and a way to look at our system structures in order to embed a reflex for innovation to meet changing demand.

The Core Offerings of Health Systems – Care Models

Let’s begin with the core offerings of a health system, which provides care and treatment in order to improve physical and emotional health. What are those really? When asked, some

people focus on physical locations, describing clinics and hospital facilities as a core offering. Other people might zero in on the doctors and healthcare professionals that deliver the care. But these are discrete elements, pieces of the larger comprehensive view needed to understand the core, value-producing offerings in healthcare delivery.

Care models are the core offerings that pull everything together. They are the purposeful alignment and coordination of all of the resources required to deliver a set of services and experiences that produce desired outcomes for individuals. Health systems are built to support and deliver a portfolio of care models for different patients and conditions. Successful care models meet the needs of patients, provide a desirable place to work for care teams, and also produce sustainable business results for the broader health system. *Figure 1.0* is a high-level illustration of a care model and its corresponding elements: people, process, equipment, methods, locations, and information all aligned, coordinated, and integrated toward a common aim.

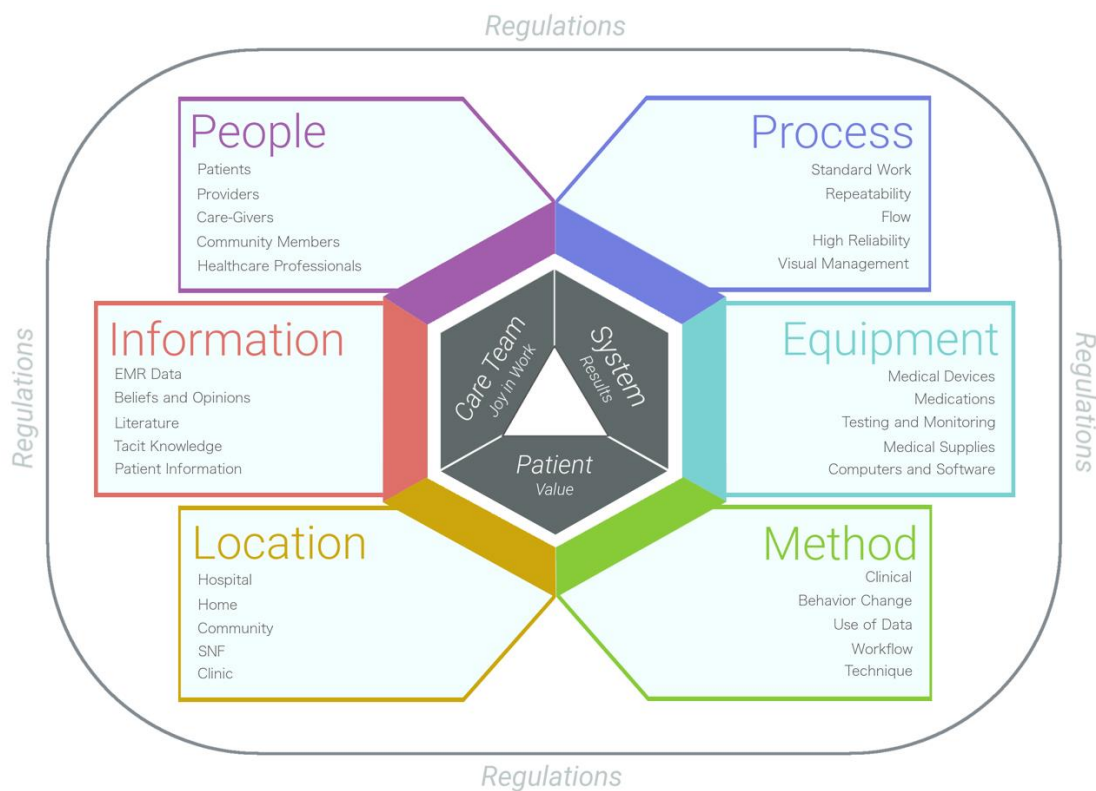


Figure 1.0 – The Care Model

As an example, consider primary care. There are different primary care models across health systems, though most have a similar underlying structure. At the center is a relationship between a primary care provider (usually a physician or nurse practitioner) and a patient. Care is delivered through office visits in a clinic setting with a set of medical devices and supplies. The number of visits is based on the health status of the patient and information is documented through a series of notes in the medical record. Payment has traditionally been based on the patient being in the

exam office. All of these elements combined and working together define the core offering of traditional primary care—its care model.

Today's Care Models

Even before the spread of COVID-19, existing care models have struggled to produce desired results. Healthcare costs have risen for decades, provider and care team burnout has steadily gotten worse, patients are increasingly frustrated by a confusing system that even experts struggle to navigate, all while quality outcomes are suboptimal.

Many of the care models being delivered today have changed very little from their original designs. Most were founded on a mindset of treating sickness and disease rather than creating health. They were designed to react to problems rather than proactively identify and solve issues before they arise. In many respects, care models of today operate in an outdated hierarchy, relying too heavily on physicians as the funnel for decisions, allocation of work, and problem solving. As a result, physicians, nurses, pharmacists, mental health professionals, and other care staff are incredibly underutilized, most working at 40-60% of licensure level or desired level of work. Much of the care is based upon individual performance when teamwork is more important than ever. It is remarkable that with so much social and technological change happening today, care models have changed very little. Consumers expect to access everything within seconds at a tap of their finger but have to wait weeks or even months to get an appointment, even if their health does not require them to come into the clinic at all, and they would prefer not to.

These problems are not new, but few leaders have been able to make significant changes to the care models themselves. Most of the organization's time and energy is needed just to keep the existing system running. Energy is spent on things like adapting to changing regulations, putting out fires in current operations, or preparing for a joint commission or CMS audit. Building systems for organizational alignment and operational excellence can help reduce this burden dramatically. However, even with these systems in place there is only a small amount of energy available each year to prepare the organization for the future. What leaders do with this energy determines whether a health system will achieve dramatically different results. In this way, the challenge of great leaders is to strike a balance between running the system of today and building the system of the future.

Most leaders prepare for the future by supporting or improving existing care models. This may mean developing new digital solutions to overlay the existing clinic flows or improving existing processes through eliminating waste and non-value-added work. Energy may also be spent redesigning the look and feel of the physical space in hospitals and clinics. These types of initiatives improve key performance indicators of today's system, but do not address core flaws in the care models themselves. With the underlying system unaltered, over time these initiatives have diminishing returns and limited upside. There is still a mismatch between what healthcare services are being delivered, who is delivering them, what patients actually need, and the results that patients desire. In fact, efforts that bolster existing care models often wind up further

entrenching them as the way to do work, making change even more difficult in the future. In other words, as the late systems thinker Russel Ackoff said, “The righter you do the wrong thing, the wronger you become.” Operational excellence alone will not get us where we need to be.

To address this, health systems must include the development of new care models in the foundation of their change strategy. Care models – the very core of health systems’ value proposition – must be examined, questioned, and reimaged. And then new care models must be spread to the rest of the system to replace those that exist today. Care models are complex with many moving parts. Developing, spreading, and scaling new ones requires capability that few have built. Bellin Health in northeast Wisconsin, Atrius Health in eastern Massachusetts, Legacy Health in western Oregon, and the University of Massachusetts Health System in central Massachusetts have all invested in building this capability. Over the coming years a system for new care model development will be required to successfully attract and retain customers. Let’s see what that system looks like.

2. A System for New Care Model Development

New Care Model Development in Action: Two Cases

In 2014 at Bellin Health in Wisconsin, leaders understood that the primary-care delivery system needed to change. Implementation of a new software system made a bad situation worse. Physicians reported being burned out, overworked with documentation, and feeling disconnected from their patients. Leaders also knew the existing primary care model was not well positioned to support future value-based contracts or the patient experience and quality goals they set out to achieve.

Using a clearly defined process, a steering team of physicians, other caregivers, support and administrative staff met weekly to find ways to meet physician needs, along with system needs – preparing the organization for risk-based contracting – and patient needs. The team’s roadmap consisted of knowledge generation, establishing the specifications for design, creating the high-level model cell design, activating the team, engaging the individual in their own health, and an ongoing cycle of feedback and improvement. Once a model cell was functioning at desired levels of specification, the design was spread through all of primary care and then to specialty care and chronic disease conditions. The new care model was called advanced Team Based Care (aTBC).

Over the coming years, the aTBC care model was spread across Bellin Health’s practices, eventually reaching all 130 primary care providers by 2018. It produced dramatically different results. Overall provider satisfaction improved from 70% to 90%. Simultaneously, the percent of open primary care panels went from 88.5% to 100%, and 96.6% of patients indicated they were able to obtain an appointment as soon as they thought it was needed compared to 70.7% in the previous care model. Age-appropriate screening results across all indicators increased by 40% on

average compared to the traditional model. Quality metrics were 5.2% higher on average across all indicators, an increase on top of already upper quartile national performance. Revenue from billing increased by \$724 per patient, related in part to higher rates of immunizations, cancer screenings with mammography, and colonoscopies. Billing for RN blood pressure checks and extended care team services helped make the aTBC model financially viable. At the same time, aTBC decreased the cost per patient per month from \$940 to \$796 in Bellin Health's Pioneer ACO population. Hospital admissions decreased 5% due to the ability of ambulatory teams to manage more complex patients and panel size for primary care providers increased by an average of 8% from 2016-2018.¹

This is one example of what is possible through the repeatable process of designing, developing, spreading, and scaling new care models. Done right, new care model development dramatically changes results across all performance indicators, as seen in the work at Bellin Health, by identifying patterns of sub-optimization that exist in the current system. The goal of this work is to deliver better value to patients – clearly seen in the next example – while improving joy-in-work for care teams and delivering sustainable business results. This is accomplished by addressing unmet patient needs, built around meeting patients where they are on their life journey.

This is a hard shift from current thinking that expects patients to adapt to the health system's needs and schedules. Teams begin by achieving a deep understanding of what is common and what is unique within a population. In other words, they identify and address needs that are common across all patients while simultaneously ascertaining needs that are unique for each individual. Only with deep knowledge of the population can care models be efficient and also personalized, which is the key to delivering better value.

In 2015, Atrius Health in Massachusetts launched an initiative to create a new care model for high-risk elders. Studying the population offered insights into the range of unique medical needs, and also where overlap in care processes could lie. However, the team went beyond the medical and identified that a common need expressed by many in the population was to “stay in my home.” This became the way the team defined a win from the perspective of the patient's life journey and drove the design of the new care model. The team learned that many times elderly patients were forced to come into the office or the emergency room for minor but urgent health issues because those were the only care modalities available. This often led to unnecessary downstream ED and hospital utilization, and poor patient outcomes. In response, the team worked to develop a home-based urgent care model for elderly patients which they called Care in Place. Visiting nurses drove to patients' homes to address concerns in real time and then relay information to a medical control officer who could diagnose and direct treatment, often preventing a visit to the ER and meeting patients' core need to “stay in my home.”²

Addressing joy-in-work for providers and care teams is another foundational element of this work. Teams design work so that caregivers are working at the top of their license and in ways that are meaningful to them. This is possible through deeply understanding the actual level of

care needed for each patient as well as the mismatch between services and care needs in today's care models. It presents an opportunity to rethink who is on the care team, their workflows, and their roles in order to achieve better patient outcomes. By meeting patients' needs in a more complete way, team members feel a deeper sense of contribution to the patient experience, and in turn, find more joy in their work. The team developing the Care in Place model at Atrius Health spoke with providers and many different members of the care team to understand their needs and pain points. They learned that frail elderly patients in the existing care models caused providers and care teams significant emotional fatigue. These patients frequently ended up in the hospital for things that could have been prevented had the right care been available at the right time. This made care teams feel that they were never doing enough. By keeping elderly patients out of the hospital – meeting the need to “stay in my home” – and not adding work onto already overwhelming clinic loads, the Care in Place care model improved joy-in-work for the care teams.²

Finally, new care models must deliver sustainable results for the system overall. At the core, this means a sustainable financial model with increased revenue and realignment of resources to offset new design-related expenses. Better care outcomes, better individual experiences, and a far more satisfied staff for the same or better bottom line sounds like a tall order. Add to that, it must be accomplished within the existing payment environment and its blend of fee-for-service, pay-for-performance, and full-risk. It is achievable.

This is possible because close to half of the care team's work in existing care models is not top-of-license, which is damaging in both fee-for-service and risk-based arrangements. Sustainable financial performance is achieved by maximizing existing underutilized resources and revamping how revenue gets generated. At Atrius Health, the Care in Place team learned that a significant amount of high-level ER and hospital care could be avoided through upstream home visits by an RN and NP medical control officer. This reduced pressure on overburdened ER doctors and use of costly facilities, while still maintaining a viable business model for the new care model. Furthermore, by avoiding unnecessary ER and hospital care, it provided a large decrease in total cost of care for the population, further preparing the organization to take on more financial risk. Improved system performance, better patient value, and increased joy-in-work for the care team allowed the team to successfully scale the model across the organization. At scale, Care in Place prevents close to 100 unnecessary hospitalizations, and saves the organization roughly \$1 million annually.³

Reframing the Health System with Four Primary Value Streams

Developing new care models and achieving the results described above requires the coordination of many different resources across the system. Creating a new care system at such a large scale is very different work compared to what most people in healthcare delivery are used to. In other industries, this type of work is not new. A robust research and development capability is required for survival in many product-driven companies. R&D teams must reliably and repeatedly dream up, design, and develop new offerings to remain viable and competitive in future markets. While

an R&D lens is not a traditional way of conceptualizing healthcare delivery, adopting this frame can be helpful when considering how to organize resources for the purpose of developing new care models.

Leaders in product-driven industries often conceptualize their organizations as being comprised of four primary value streams. A value stream is a set of processes and information flow that delivers value to an end customer. That customer might be a patient, a clinician, or an internal employee who uses a specific process to complete their work effectively. The financial analyst is the customer of the accounts receivable work, for example. The four primary value streams are shown in *Figure 2.0*. They work in concert to achieve overall organizational excellence. These include:

1. Development Value Stream – develops new products and services
2. Demand Generation Value Stream – identifies markets and creates customer demand for the products and services
3. Delivery Value Stream – manufactures, builds and/or delivers the products and services to customers
4. Support Value Stream – provides the necessary supporting activities for development, delivery, and demand generation.

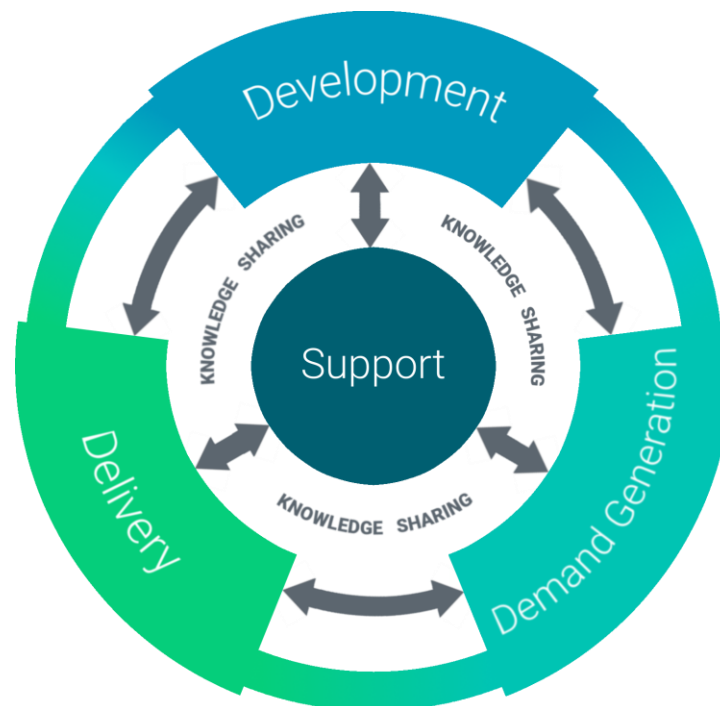


Figure 2.0 – Four Primary Value Streams

In product-driven companies, the delivery value stream includes activities such as managing supply chains, assembly lines, and distribution centers. Processes are designed for high

repeatability and value is clearly – and often narrowly – defined. By contrast, the development value stream does not begin with a narrow or settled definition of value. Its purpose is to find unmet needs that can be met with new products and services. The development value stream includes research and testing networks, product development offices, and prototyping facilities. Productivity is measured in terms of new knowledge created, development cycle time and cost, and the performance of the new product or service that has been developed. Processes in the development value stream are designed to produce new and unique outputs every time. This is accomplished by generating new knowledge about customers, competitors, and the broader environment. New knowledge inspires new ideas for products and services that are prototyped, tested, and built to beat the competition in the market.

In healthcare, the majority of activities occur in the delivery value stream. Existing care models repeatedly deliver to create value for patients. Members of the care team are the operators that deliver the care in various facilities. Performance is often measured by number of patients seen (volume of output), cost per encounter (cost per unit), quality of care (number of defects), and patient experience (also number of defects). Improvement efforts often seek to standardize and reduce waste in the existing care model processes in order to decrease variability in the system and improve these measures.

Outside of delivery, most of the other roles within health systems map onto the demand generation and support value streams. The development value stream is often completely absent as shown in *Figure 3.0*. Instead, development of new service lines or care models is considered an add-on to individuals’ and teams’ regular jobs. Rarely does this responsibility fall to anyone with expertise in development processes.

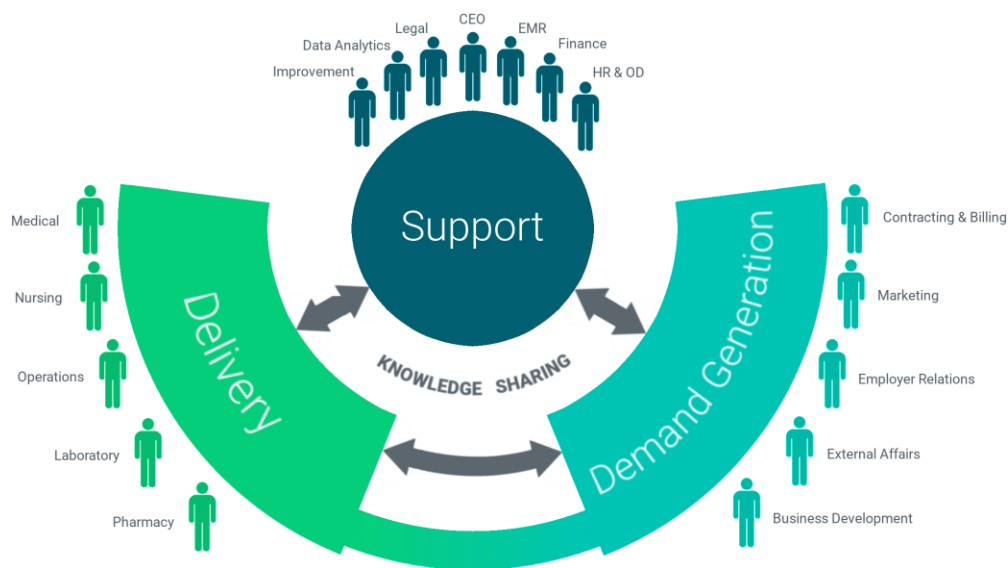


Figure 3.0 – Current Roles in Health Systems Lack a Development Value Stream

To take on the work of new care model development, leaders need to think of development as a distinct function. A different structure for managing the work is critical because there are different processes and different ways of measuring productivity. It must provide line of sight across the whole organization so that new care models are developed with the full system in mind. Leaders must also create a safe space where development processes can thrive and people on the team can be creative, take risks, and learn. To accomplish this, development work needs to be pulled outside of the traditional health system reporting mechanisms that have been designed to support the delivery value stream. Without this change, leaders and employees will back away from development because experimenting with dramatically different ideas and processes will negatively impact their numbers.

Alignment – Strategic Prioritization of the Work

At any given time, an organization can only execute on a small number of significant breakthrough initiatives (usually two-three), each with an accompanying portfolio of projects. Breakthrough initiatives are defined as work that is so important, failure to deliver on these initiatives will threaten the organization's future. New care model development might be a breakthrough initiative, or it may be included in the underlying portfolio of projects that make up the work of a major initiative. At Bellin, for instance, the breakthrough initiative was to improve the health of the population; the new care model for primary care was one of the projects to achieve that.

This is particularly important to note because there is a lower limit to the scope of new care model development. Total primary care redesign, as in the aTBC example from Bellin Health, required investment and coordination of significant organizational resources. The development of Atrius Health's Care in Place model, while smaller and more targeted in scope than Bellin's aTBC, still required a dedicated team and set of resources. Leaders must determine how development efforts integrate into the organization's overall priorities and portfolio of work in order to effectively manage these resource needs.

Over time, organizations build capability in the people and processes needed to develop new care models. After multiple years of effort, Bellin Health and Atrius Health have created the capacity and capability to repeatedly drive innovation through radical new care model design. This has sped up the generation of new knowledge, which allows them to accelerate the pace of change. In other words, they now have systems in place to more quickly identify the opportunities for innovation and leverage them for dramatically different results. In this way, developing the capability for new care model development should also be factored into resource prioritization along with the results and outcomes of the new care models being developed.

People – Who Needs to Be Involved

New care model development requires two levels of organizational involvement: senior leaders and a development team. Senior leadership must set the appropriate stage that allows the

development team to be successful. The development team must utilize a thoughtful, disciplined, and rigorous approach to reimagine the future.

Execution of strategy requires senior leaders to manage resource availability so that the total portfolio of projects and initiatives across the health system maintains a cadence and rhythm that produce results. New care model development is one area of this portfolio with complex resource needs that span many areas of the health system. It will not succeed if senior leaders fail to align and get the required areas on board to contribute fully. To navigate this, a subset of senior leaders should form a group to champion the new care model development capability as a key strategic priority. Backed by the broader senior leadership team, this subset of leaders must identify the necessary talent, roles, and competencies to be pulled together for the development team, and guide and shepherd the initiative as it progresses.

Once the development team is pulled together, it must navigate a complex initiative while holding in tension a number of desired outcomes. At its core, care model development is driven by the knowledge and creativity of the team members. Putting the right team together is the most critical aspect of setting up a development value stream. It must consist of humble and curious individuals that are enthusiastic about participating and have an entrepreneurial spirit—a desire to build something new that is radically different than what exists today. Individuals with a strong entrepreneurial spirit are unhappy with the way things are today and are most fulfilled when they can disrupt the status quo, even if it might cause conflict with colleagues.

Team members must have knowledge and expertise in key areas related to the care model. First and foremost, this means clinical experts, but it also includes IT, EMR, billing, facilities, legal, process experts, and others. While some roles on the team can be part-time, there is a need to have a core group that is fully dedicated to the work. This helps grow the development value stream because it ensures deep focus on building the necessary competencies and processes.

The leader of the care model development team should resemble what many product development offices call a chief engineer. This leader must understand the importance of the different subsystems in a care model: clinical expertise, contracting and billing, operations, IT, EMR, and others. The leader also needs a deep understanding of the needs and lifestyle of the specific customer segment for which the care model is intended. Chief engineers are developed into their roles over many years, so finding the right combinations of skills, mindset and knowledge can be tricky in health systems where development work has not been explicitly organized. Good candidates for this role are usually considered to be the best and brightest in the organization. Humility, curiosity, and enthusiasm are paramount. For the Care in Place care model at Atrius Health, this role was filled by Dr. Pippa Shulman, a geriatrician with a fierce vision for a better future, along with excellent leadership and interpersonal skills. Dr. Shulman balanced her deep understanding of the needs of the population and cutting-edge geriatrics medicine with the new knowledge generated by the development team. This, combined with her credibility with leaders across the system, allowed her and the team to make key design decisions and partnerships that led to the success of the care model.³

A critical challenge of setting up and managing a high-functioning development team is getting the right combination of idealists and hopeful pragmatists. Hopeful pragmatists see a broken system and want to make it better, but first need to understand all of the intricacies and details that are causing problems. They drive deeper understanding through detailed study and discovery which paves the way to design future solutions that work within the system's constraints. However, hopeful pragmatists can often get stuck in analysis paralysis without idealists by their side who can paint a clear and compelling picture of what a better future looks like. Idealists cast ambitious goals that create tension with the hopeful pragmatist members of the team who then must work to figure out how to make it work. Truly amazing development teams need both personality types. Managing the tensions that will arise requires thoughtfulness and a healthy dose of trust between the development team members.

Finally, it is again helpful to remember that this work is usually new for everyone involved. Capabilities are built over time and only knowledge and experience allow teams to move faster and take on larger scope initiatives. For example, after completing the Care in Place model at Atrius Health, Dr. Shulman and her team went on to partner with a venture-backed startup, Medically Home. With combined resources, they developed a fully scalable hospital-at-home care model that replaces 30% of inpatient care with home-based care and delivers equal or better-quality outcomes at 70% the cost of traditional inpatient care. The results of the Medically Home care model are revolutionary, but it was multiple years of learning and experience that prepared the team to take on work of that scope.³

Process – How the Work is Accomplished

The care model development team is aligned around a repeatable design process to organize and coordinate their work. The goal of the process is to create new usable knowledge, then leverage it to deliver a different set of results. The process moves through different phases to create knowledge, design a new care model, build a model cell, and then spread and scale that care model to the entire system. There are different ways to codify design as a process, but all include a common set of activities. *Figure 4.0* is one way to represent five major steps of design.

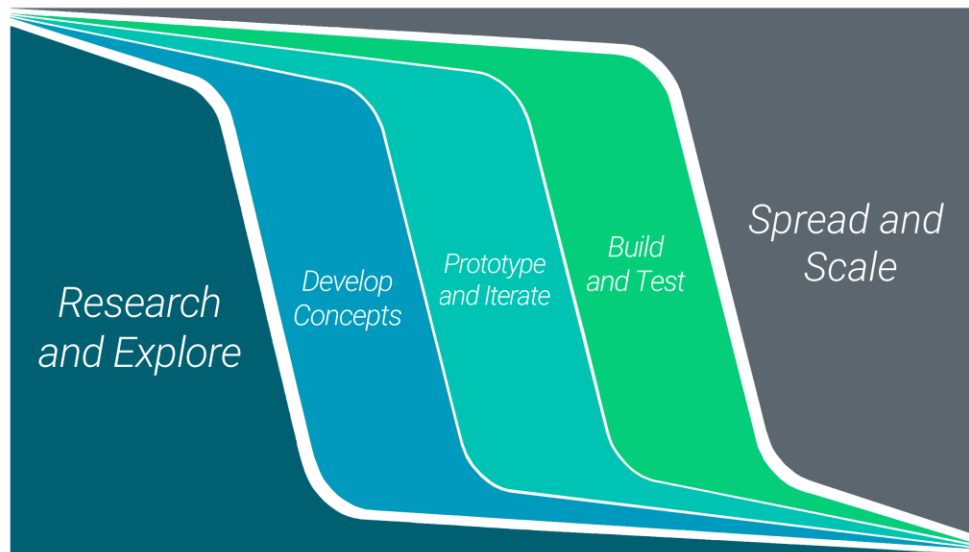


Figure 4.0 – A Design Process

Applying a design process to care models has unique challenges. It may take longer than leaders are accustomed to and will require patience. Depending on scope and complexity, new care model development projects can range from 9-36 months in length—the latter representing something like a full system flip to a new primary care model across 20+ clinics. The Care in Place initiative at Atrius Health took 11 months to move through the first four phases, and an additional year of effort by operations and support teams to spread and scale to more than 20 clinics. Over time, speed tends to increase as reusable knowledge created in each new design cycle allows acceleration. However, when a new development team is beginning their first design cycle, the maxim “go slow to go fast” is helpful to set the appropriate frame and expectation.

Design thinking and human-centered design have taken root in many health systems. However, it is rarely applied at the scope of care models. Most design teams in health systems focus on one aspect of the care model such as new device development or smaller initiatives that give frontline team members new tools to unleash their creativity. These efforts rarely lead to significant systemic investigations and new designs. Care model development, by contrast, leverages the process of design, but with a much larger scope, breaking off appropriately sized chunks for meaningful impact and coordinating a broad team of leaders and experts, all while considering the entirety of the system in the design process.

In early 2019, leaders at Legacy Health in Oregon were interested in creating a human-centered design team to drive innovation, for instance. They began by asking an important first question: What are we designing? Through deep discussion and reflection on their market position, they believed that designing a new facility or digital experience alone would not help them reach their strategic goals. They also felt that incremental design at the front-line would do little to solve their higher-level strategic goal of expanding into a new, highly competitive geography. Leaders

ultimately decided to pull together a dedicated team and launched a design process targeted at developing a new care model to target a segment of patients with unique needs. (This work has been ongoing as of this writing).

In the Research and Explore phase of the design process, the team sets the stage for how care should be delivered in the future. A deep and thorough analysis of data as well as user research uncovers possibility and potential to impact results for a population. It also identifies key leverage points and high return on investment opportunities. Work in this phase is entirely focused on the creation of new usable knowledge. When a team has reached a critical mass of new knowledge, it can move onto the next phase of the design process. For the Care in Place team at Atrius Health, the development team conducted multiple in-depth interviews with patients in their homes. They also studied utilization patterns and spoke with subject matter experts across the system to uncover patterns of sub-optimization. Over a four-month period, the research revealed many opportunities where new care models could dramatically improve results.² Knowledge generated in this phase should include, but not be limited to the following areas:

- Understanding the customer (individual/patient) deeper than ever before
- Understanding the total health demand of a population
- Understanding the transactional environment (What is the relationship between us, our competitors, and our customers?)
- Understanding the industry environment (What is happening in healthcare?)
- Understanding the macro environment (What is happening on planet earth?)

In the Develop Concepts phase of the design process, the team uses all of the new knowledge generated in the Research and Explore phase, while also taking into account organizational strategic goals, and comes up with radical new ideas for the who, what, where, when and why of the new care model. It is important to allow for dedicated time in this phase, not just a single-day event. Ideation is a great opportunity to involve multiple stakeholders in a fun and engaging exercise. The more ideas collected as inputs, the better chance a team has for breakthrough thinking.

In the Prototype and Iterate phase of the design process, the team must find ways to experiment as quickly and as cheaply as possible to validate or invalidate the design ideas. Things rarely work how we imagine – especially new, untested ideas. Hypotheses must be tested as to whether ideas meet customer needs, match demand to capacity, win against competitors, and are financially viable. Before fully building out the Care in Place model at Atrius Health, the development team prototyped for proof of concept. They conducted a small number of urgent home-visits in the target population using nurse practitioners from a per-diem pool, with close oversight of a physician. The prototypes allowed the team to quickly build confidence in the new model before investing more heavily in the technology and staffing required for a model cell.² Some may also refer to this as minimum viable product testing.

In the Build and Test phase, the development team will have confidence in a particular direction and vision of a future care model gained through rapid prototyping. From here they must build and test a model cell of the new care model that continuously delivers care to real patients with sustainable operations. This involves set-based design where multiple design options are tested simultaneously to identify the best options. Everything must be evaluated against five design filters in order to find the optimal balance between clinical excellence, joy-in-work, system sustainability, patient experience, and holistic design. New measurement and feedback systems must be developed to track a new definition of performance. The model cell, must be successfully built in a single area, achieve explicitly articulated design specifications, and be proven stable before moving to the final phase and being spread to other areas. Detailed process flows must be defined with accompanying standard work to clearly outline every role in each step. This documentation becomes vital when communicating the new design across the organization and aligning the necessary resources for the next phase. The model cell for Care in Place was built over a 15-week period. With a gradual ramp up of staffing and coverage, 37 home-based urgent care visits were delivered that prevented 13 unnecessary ED visits over that time period.

Spread and Scale – The Critical Final Phase

In the final phase of the design process, the care model is spread and scaled to the entire organization. To be fully realized, a new care model must extend to multiple sites and it must become the new way to deliver care for the whole system. Spread and scale have proven difficult to accomplish regardless of industry and healthcare is no different. Most attempts at care redesign have failed to achieve the scope and reach originally intended. Failure often has little to do with the inherent design, but instead the social side of change and the underlying support systems. Successful efforts in this phase must have processes to address these issues.

To start, it is helpful to distinguish the concepts of spread and scale from one another. Spread is the process of expanding a tested design across more areas over time, usually in a sequenced manner in order to continually maintain the integrity of the design criteria and desired performance results. Scale is the process of investing in fixed costs and creating fixed infrastructure that serves the tested design at larger scope in order to decrease operational costs of the new care model over time. Both spread and scale are required for success.

To start, a spread plan must be sequenced at a controlled and reliable pace. A new design with new roles, relationships, workflows and technical skills may not only be a new way of doing but also a new way of being. As such, spread must be understood as a social process and the pace should reflect the speed of social change. Groundwork must be laid during earlier phases of the design process to prepare key individuals in the organization for the changes associated with the new care model. At each stage of spread, local leaders and care teams must be committed to adopting the new way. This requires critical conversations regarding the new care model. Real results from initial testing can be used to pave the way and convince individuals that may still be skeptical of the new care model.

Presentations and conversations with key stakeholders should be facilitated by representatives of the development team and/or senior leadership team that are most similar to the target audience. Whenever possible, physicians should present to physicians. Operations leaders should present to their peers. Senior leaders need to continually communicate and alleviate fears that will crop up in every corner of the organization regarding the change. However, presentations and discussions alone are rarely sufficient to convince all stakeholders to adopt a new way of working. Local stakeholders must also be given a chance to kick the tires and add their fingerprints and ideas into the new design. However, this must be balanced with a detailed check of design criteria from the model cell to ensure integrity of the care model specifications that matter most to its overall performance. This also prevents local leaders from recreating the wheel with every new phase of spread.

The first phase of a spread plan takes the care model and spreads it from the model cell to a small group of additional settings. It requires rigorous measurement to ensure integrity of design and to determine the ability of the existing infrastructure to support the additional load. Subsequent phases of spread continue to roll out to additional areas on a manageable level, with each new phase of spread placing additional weight on operations until the new care model becomes the predominant care model for the system.

As a care model spreads to more areas of a system, cracks will emerge. Often, model cell teams fail to realize that a new care model in a single area can be successfully held together with “duct tape and wire” – in other words, by adapting the existing system infrastructure to make the new care model work. However, once a change moves from the model cell to subsequent areas of spread it is critical that the system infrastructure is adapted and/or designed to support the new care model. This is the work of scale. New care models are simply not scalable without an organizational chassis that is consistent with the new way of thinking and the new care model standard work. Aligned and embedded support systems need to be in place to accommodate the intricacies of the new design. Infrastructure can range from finance systems, billing practices, facilities, compensation, leadership structures, training and competency development, robust standard management systems, communications, analytics, strategic partnerships, and others.

For example, a new care model may be designed so that different care team members do the work traditionally performed by a physician. This could be an RN seeing chronic care patients and charging at a level two office visit code. However, if that visit was traditionally part of physicians’ overall compensation plan, a different compensation model must be designed if the new care model is going to be embraced by physicians.

Often, the depth and complexity of the infrastructure changes needed will increase as more sites transition to the new care model. As a continuation of the example above, the model cell could use existing resources to train the RNs in the competencies required to bill at level two office visit codes for chronic care patients. However, as the model moves through phases of spread, the sheer number of RNs to be trained will overwhelm the system. Existing resources and processes will not be enough to train the entire workforce which could be in the hundreds or thousands of

RNs. The investment required to scale is greater, and also requires new ways of thinking. For example, a virtual on-demand learning platform could be built to support competency building in existing staff, or new partnerships with local colleges could be formed to redesign curriculum around the new care model to prepare new hires.

The depth and complexity of infrastructure investment necessitates a plan to map out the future and should include lead time to plan, budget, build, and evaluate. Without addressing the organization’s infrastructure, the weight of the new care model will overwhelm the existing system which was created in a different era to support different care models. Building this new infrastructure is the work of scale and is what enables the new care model to expand over time.

The relationship between spread and scale is critical to achieving the scope and reach intended. Spread speaks to the breadth, pace and extension of an idea over a wider area, while scale relates to required support system infrastructure necessary for the new idea to flourish. Spread and scale must work in tandem for the change to achieve its desired intent. A mismatch between the design of the care model and infrastructure required to support it will quickly derail the spread plan. Because of this, the number and timing of phases in a spread plan can not only be determined by the number of areas the new care model is intended to cover, but also the ability to ramp up corresponding infrastructure. Coordinating this effort shifts a large amount of prioritization responsibility onto the key senior leaders supporting the work. They must coordinate work across the organization to plan and sequence the efforts required to spread and scale the new care model. To accomplish this level of coordination, there must be an intention by senior leaders to have the care model spread across the entire organization at the outset. *Figure 5.0* below is one way to understand the components of spread and scale—the final phase of the design process for new care models.

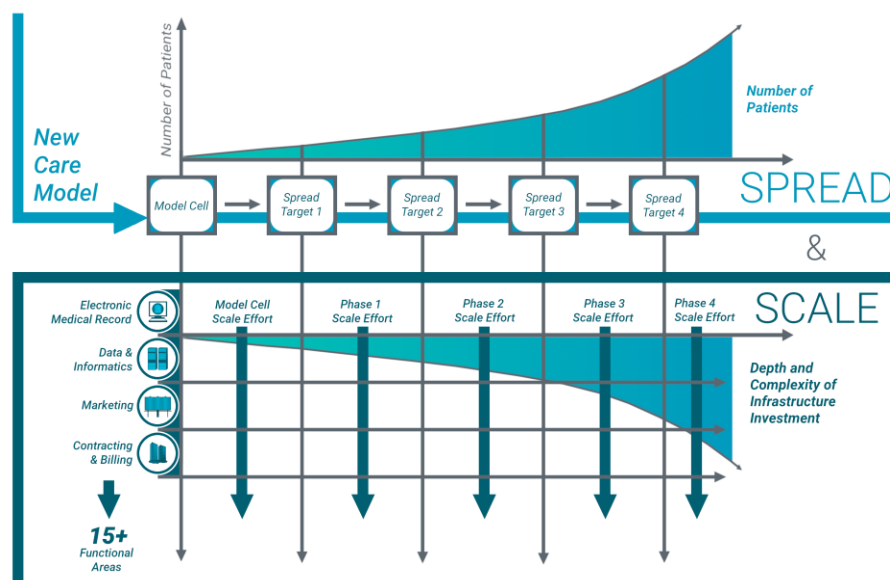


Figure 5.0 – The Relationship Between Spread and Scale

Based on the results of the model cell, the Care in Place model was spread to cover patients for over 20 additional clinics at Atrius Health. One of the critical elements of scale that the development team needed to address to meet the targets was the staffing required to cover home-visits in an expanded geographic area. Such a large increase in volume required a different way of thinking about the underlying delivery infrastructure to support the care model. To address this, the development team collaborated with a visiting nurse association in eastern Massachusetts, VNA Care Network, to design new workflows that allowed VNA nurses to deliver the Care in Place home-visit. As the model expanded to new regions, the VNA infrastructure was able to accommodate the new visit demand.

Addressing Reimbursement Barriers

Most health systems are in a risky position navigating multiple payment methodologies, needing to adapt and change quickly based on each insurance contract negotiation. To be blunt, this dynamic is what halts positive change at a large scale. Leaders are being pushed and tugged to move away from fee-for-service but find it hard to move forward because of the inherent financial implications of taking on too much financial risk without being ready. On the flip side, a health system that gets too good at coordinating care ends up decreasing utilization and, in a fee-for-service environment, pays a stiff price in the form of eroded top-line revenue. Moving too quickly or delaying too long both have significant, negative financial consequences. The path forward requires changes in the level of care coordination and level of financial risk to increase in tandem. The relationship between financial risk and care coordination can be thought of as a narrow corridor that leaders must navigate to avoid a negative profit margin for the system.

Figure 6.0 provides a picture of this narrow corridor and the subsequent dangers of falling out of the corridor zone.

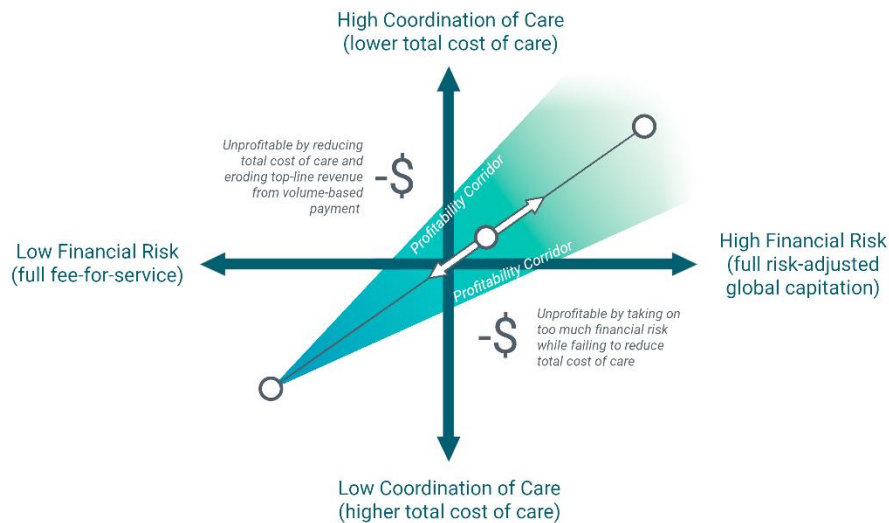


Figure 6.0 – The Payment Model Profitability Corridor

Most health system leaders realize they will be living in a variety of payment types along the corridor. While there may be a desire to pursue more risk, current care models are not constructed to be successful across the growing variety of payment methodologies. Conventional wisdom is that care models can only be designed for one payment methodology or another, and that a single design for all payment structures is not possible. As a result, care models are often built for a fee-for-service environment and a “bolt on” mentality is used to create separate processes for other payment types in an attempt to manage the various risk scenarios. This approach must be avoided when developing new care models. Treating each payment methodology as unique is complex to manage, costly, and difficult to scale. Instead, leaders must adopt the thinking that care models can be financially viable in both a fee-for-service and value-based environment simultaneously. Again, this is primarily possible by shifting roles to maximize top-of-license work. Making this work in the fee-for-service environment may require negotiations with payers to allow for billing the new work that extended care team members take on as non-top-of-license work is shifted off of physicians or other providers.

In 2018, the University of Massachusetts Memorial Health System (UMass Memorial) embarked on a new care model development initiative headed by Dr. Mark Manning. The aim was to build a new model cell for internal medicine that could become a blueprint to spread to the rest of the organization. The new care model saw significant improvement in physician satisfaction and positive progress on quality and patient satisfaction, but a key breakthrough for the team was also in preparing the organization for value-based payment while still primarily in a fee-for-service environment. The new care model expanded the size of the core care team by adding multiple new medical office assistants (MOAs) with expanded roles. The MOAs took on new care coordination activities and dramatically shifted non-top-of-license work off of physicians and other care providers. The added care coordination has helped position the organization to take on more financial risk. At the same time, under existing fee-for-service contracts, the model also delivered a 10% increase in contribution margin for the system and visit volumes grew by 5%. In this way, UMass Memorial better positioned itself for success in a global capitation environment, while still maintaining financial viability in a fee-for-service world.

3. Recommendations

1. Create Clarity Around Your System’s Current Portfolio of Care Models

Review the portfolio of current care models and how they are performing. Which care models are providing you with competitive advantage and winning in the market? Which care models are struggling to perform, are preventing you from taking on more financial risk, or are considered by many to be fundamentally flawed? Have improvement initiatives focused on these care models repeatedly failed to deliver needed performance gains? Finally, are there gaps in the portfolio that require new care models? Create a list of the care models that are operating well and those that are ripe for disruption.

It is likely that an enormous amount of organizational effort is already being targeted at this portfolio of care models. Take inventory and understand the nature of the effort being spent and on which care models. Which initiatives are focused on changing or creating new care models, and which are focused on supporting existing ones? Are there initiatives working to further support and entrench broken care models that are ripe for disruption? Is there a common design process and development framework for the initiatives focused on creating new care models? These questions will reveal opportunities to free up capacity for new care model development.

2. Align Your Starting Point within Strategic Priorities

New care models should be created in alignment with the organization's key strategic initiatives in order to contribute to the breakthrough results that are most important to the system. Identify areas within your strategic plan where there is high impact but also high ambiguity. These are gaps in the portfolio of initiatives where future solutions are difficult to imagine, and desired performance results will not be possible without new knowledge and different thinking. The scope of these high-ambiguity areas will vary in size and contribute to the broader portfolio of projects required to achieve breakthrough results. In this way, new care models should be developed in tandem with operational excellence and other types of initiatives to accomplish this.

At Bellin Health, the area identified was primary care redesign, which was part of a broader population health strategy. The resulting aTBC model left no part of the organization untouched or unchanged – a true transformation of the delivery system. While the results of a total primary care redesign may be desirable, care model development at this scale is not for the faint of heart. Design at this scale will fail if not integrated into one of the broader strategic initiatives because it won't be able to leverage connections with all of the resources needed. Other examples of initiatives at this scale could include specialty care delivery redesign or comprehensive chronic care redesign.

Alternatively, the Care in Place model at Atrius health resulted from choosing a smaller and more targeted area of focus within a broader portfolio focused on improving elder care. Day-to-day processes and flows at Atrius Health clinics remained mostly untouched by Care in Place which focused on care delivered outside of the clinic. The model had less impact on the existing infrastructure of the health system when compared with the total primary care redesign at Bellin Health. Starting with a smaller scope helped Atrius Health build baseline capability in new care model development, preparing the team and organization to take on larger transformative initiatives in the future.

3. Build a Coalition to Inspire and Create Excitement for New Care Model Development

Some people in your organization may still believe that today's care models will be viable in the future, and all available organizational energy should be dedicated to support them. Many others understand that the current care models are broken but are so entrenched in the system that they struggle to imagine what a better future could look like. Change at the scope of care models will not be possible without a critical mass of support by leaders and care team members. Convincing them starts with the strategic realization that the old, worn out, reactive system needs to be replaced with a proactive design that can adapt to a changing environment. This will require

brave and honest leadership to open the door to essential conversations about the shortfalls of current care model design and the inability to adapt with speed and focus needed. Forward-thinking physician leaders can be a good place to find vocal advocates and start this pursuit. The goal is to build a coalition of influencers who believe that existing care models will not get us where we need to go, and that systemic redesign is therefore required to move forward. The uphill battle of new care model development will need to rely on this support from influential members of the organization to push through the political and social barriers that inevitably crop up.

4. Form the Governance Team Responsible for Building and Leading the New Care Model Development Capability

Convene the core subgroup of senior leaders to lay out the care model development capability as a strategic priority. Particular attention should be focused on how the work connects with other initiatives in the organization's total portfolio. This team should be responsible for securing the resources needed to build the care model development system and overseeing the effective execution of projects over time. As development work ramps up, the core senior leaders on this team must ensure tight alignment across the organization. Knowledge created by the development team should be shared with parts of the organization where it can be useful. Similarly, new learnings from across the organization should be shared with the development team.

Over the course of the design process, a number of organizational tensions must be held in balance. Everything must be evaluated against five design filters: clinical excellence, joy-in-work, system sustainability, patient experience, and holistic design. Some of these tensions will be rooted in the infrastructure, including the availability of clinical and non-clinical FTEs, reimbursement rules of the organization's payer contracts, capabilities and limitations of existing IT infrastructure, clinician culture and preferences, and physical space and facilities. A new care model will challenge the status quo in these areas. At times this may mean that the design of the care model has to be molded to the existing systems and processes of the organization. Usually, the organization will need to make changes to adapt to the new care model. These tradeoff decisions must be brokered between the development team and the leaders across the system who will need to make changes in their areas to support the new care model. As a whole, members of the governance team need to have the knowledge and influence to navigate and broker these tradeoff decisions to find the optimal balance that maintains the integrity of the new care model design and does not put unnecessary burden on the rest of the organization.

5. Assemble the Development Team

Assembling the right group of people for the development team is paramount. Individuals may need to be pulled from different parts of the organization or reassigned from other work. It can take many months to make necessary shifts to accomplish this. Take the time you need to get the right people involved, not just whomever is available. It may slow down the timeline on the front end but having the right team will accelerate the work in the long run. Freeing up capacity from initiatives that were supporting broken care models can help free capacity to move FTEs around.

The size and makeup of the development team depends on the scope and nature of the initiative, but all should have the following roles:

- Project Leader (Creates vision, identifies and facilitates key decisions)
- Core Team (Primary doers, conducting research and organizing development)
- Extended Team (Subject-matter experts in key technical areas; partially dedicated)
- Ad Hoc Team (Additional expertise pulled in as needed)
- Future Operations Teams (Leaders and operators who will deliver the care model after development)

Don't wait for everyone in the list above to become fully available or dedicated at their intended level before starting the work. The first phase of the design process can be accomplished through a few facilitated sessions with senior leaders around project scope and goals and a couple of dedicated and passionate core team members that can begin the work. The early team members begin building new knowledge while other individuals, who may be more difficult to reassign like EMR developers or providers, are in the process of being freed up from existing work to join the team. This allows for an organic growth of the team as the new capability develops, and an easier, pull-based transition of resources.

6. Align Around a Common Process to be Followed

Large-scale development is different compared to most work done inside health systems. While design expertise may exist, rarely has it been applied at the scope and magnitude of the care model. Getting the governance and development teams to agree on a high-level process to follow is critical to align the team and work. An outside coach with experience in large-scale development efforts can be extremely helpful, if not necessary for success. Ensure you have the necessary process expertise before launching a complex care model development initiative.

7. Dedicate Space for Visualization

The use of a dedicated visual room to manage large-scale development is a key technique that dramatically accelerates the work of new care model development. Identify open physical space where the team can be somewhat separated from the rest of the organization. A single conference room can work just fine to start. The walls should be used to visually capture the progress of the work – to enable team members to tell the story of the work to new members. This replaces project management documents and digital presentations. Visualizing the creation and management of new knowledge is a capability that needs to be learned. A dedicated space also allows the team to control access to the project information and also creates a unique sub-culture in the team. This has come to be best practice in most advanced startup and product development environments, such as Google Venture's "war room" and lean product development offices' use of the *obeya*.

8. Set Up a Funding Structure

New care model development must be funded properly to be successful. These are not typically new dollars but a reallocation of money that is going to one of the breakthrough initiatives or

other expenses. A useful framework consists of three buckets of funding. Ensure that funds are available in the first two buckets, and that there is a plan in place to address the third when it is needed.

a) Core Team Operating Budget

At many points throughout a project, the core team may have relatively low cost but immediate needs. This could range from purchasing a relevant new technology for team members to familiarize themselves with or offering an honorarium to participants in interviews. \$5,000 is a good starting point to set aside for the core team operating budget.

b) Governance Approval Budget

Beyond the lower-cost immediate needs, the development team may have larger needs. This could include paying for a provider's time to run an extended test of a new process or hiring an outside firm to conduct a quantitative survey of the local market. \$20,000 - \$50,000 is a ballpark sum to set aside for this bucket which leaders on the governance team should control.

c) Capital Investment

In the final stages of a project, capital may be needed to spread and scale the new care model. By this point, a robust care model has been developed through rigorous testing. Data exists to prove the new model's effectiveness when compared to the old way. Financial models based in real results clearly show the return on investment that will be realized through spread and scale. The decision to invest by the organization at this level is a strategic decision that may involve the entire senior leadership team and board of directors.

Conclusion

The healthcare industry is at an inflection point. There is growing consensus that many of the care models on which health systems are founded are fundamentally flawed and time limited. Results and outcomes in quality, cost, care-team burnout, and patient experience only reinforce this collective belief. Leaders have a choice to reinforce, invest, and exploit existing care models, or take a bold step to create the future by designing new care models to replace the existing ones. Taking this step requires a quantum shift in thinking. Groundwork for change must be laid that will lead to better outcomes, lower costs, and a sustainable way of life for the care teams at the center of the system. This will require investment in development and the exploration of new ideas and concepts. Achieving the right balance between exploitation of existing care models and the exploration of new ones is key. Building a new care model development system is a coordinated way to achieve this balance and create the health system of the future that we desperately need, while embedding the practice of flexibility into our organizations.

In two upcoming papers we will provide a more detailed guide for setting up and accomplishing new care model development, including the tools and strategies we are using. Then, we will discuss how to leverage new care model development to execute a broader population health strategy. All papers will be available on the Catalysis website: createvalue.org.

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