PHARM Rx OVATION®

ADVOCATE for Resources, ADVANCE Pharmacy Practice & ACCELERATE Your Pharmacy Career

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I would like to dedicate this book...

TO MY PARENTS,
for encouraging me to
dream big and be myself;

TO MY HUSBAND & CHILDREN,
for making life fun
and supporting my career passions;

TO ALL PHARMOVATORS,
for your desire to innovate pharmacy
practice and serve patients.

CONTENTS

INTRODUCTION

"Innovation — the ability to see change as an opportunity — not a threat."
—Steve Jobs

Pause for a moment and imagine yourself at work. Close your eyes and imagine yourself in the room where you spend most of your working hours. Take a few deep breaths. Now, imagine what your week would look like if you had all the resources you needed.

If you weren't constantly frustrated by…

- Limited Resources
- Technician Shortages
- Drug Shortages
- Misaligned Reimbursement
- Having to Explain Your Value
- Being Asked to Do More with Less
- Being Overwhelmed
- Burnout
- Self-Sabotage

What would your week look like without daily discouragement?
What if you had what you needed to succeed?

I've asked myself these questions for years, and have been on a quest to answer them for my team, departments I consult for, and other pharmacy leaders like you. My strengths have always been strategy and project management; creating bold strategic plans and executing them is what I do best.

But pharmacy practice is my true passion. I've supported the creation of well over 250 positions in different health systems throughout my career. I've been speaking on the topic of pharmacy practice advancement for over 6 years. I'**m on a journey to justify resources for**

pharmacy and inspire a bold practice advancement movement.

One milestone along this journey began in late 2017. I'm living in Connecticut with my family — my husband and three kiddos — scrolling through LinkedIn when I come across a post by Anna Garrett, a pharmacist leader I follow, but, at that time, hadn't yet met in person. I read groggily as I sip my tea. She's hosting a new conference in Asheville, North Carolina, the following spring called the Medipreneurs Summit.

One thing you should know about me is that I love conferences. I mean I REALLY love them. I get so jazzed learning about pharmacy practice and advancements in our field. In college, I ran for a leadership position and answered the question, "What would you do if you had unlimited funds?" with "I would require everyone to attend a conference of their choice for professional development every year. All expenses paid." To me, there's nothing like conference energy. Everyone is away from "regular life" for a few days, staying in a nice hotel, and getting to really geek out on things that excite them. You're with your people. You all love the same things. You're passionate about the field you're in. There's a certain inspiration from conferences that's hard to find anywhere else.

So when the inaugural Medipreneurs conference dates were announced for April 2018, I was excited to be part of the first group to attend.

The following season was one of immense transition. To date, in my career, I'd already justified the creation of over 75 new positions in pharmacy. I'd seen what pharmacy departments can do when properly equipped. I knew the tools that it took to get there. And I was looking for a way to share those tools with more pharmacy leaders.

Beyond my existential desire to affect change on a new level, I also accepted a new position in Cincinnati, moved my family to Ohio, and come April, we are definitely ready for a break from so much change and transition. We loaded up the car and drove five and a half hours to North Carolina, where my husband, Richard, found an outdoor zip-lining adventure for the kids and I drank lots of hot tea while planning and dreaming alongside other entrepreneurs in the medical field.

Saturday morning, I listened intently to Lisa Larter's keynote address titled, "Jump: Use your Gifts to Live your Dreams." She speaks about bringing your strengths to the forefront of your career and finding ways to integrate your passion and expertise. My mind begins to

buzz. Something in my brain finally clicks.

I suddenly know my next steps as if they've been laid before me in stone. I write down — yes, I still have the notes! — a pharmacy-specific program. Later that afternoon in a break-out session the ideas keep flowing. Sitting at half-moon tables covered in crisp white tablecloths I brainstorm with other medical professionals. **A pharmacy-specific program training those in leadership to be bold and advocate for what we need to provide the services we want to provide. We can do more with more!**

That day, Pharmovation was born (and yes, I even wrote this name down to capture the need for innovation as we advance). Exactly one year later, at the second Medipreneurs conference, I launched the course. And two years later, this book came into being.

Pharmovation is a marriage of my strengths and passions, exactly what Lisa Larter prescribed in 2018. This book contains the information, skills, tactics, and strategies you need to innovate pharmacy practice at your organization.

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Before we jump in, let's get acquainted. This book assumes that you're a pharmacy professional or in some sort of leadership role adjacent to a pharmacy team. Perhaps you're both. You may serve at a stand-alone hospital, be part of a health system pharmacy or work in another area of pharmacy practice.

You're a professional dedicated to practicing at the top of your license, serving as many patients as possible in the most effective way you're able.

This book will help you determine what you need and strategically implement these needs so you won't have to only imagine what you could do with more. You'll finally be able to overcome the frustration of health system pharmacy chaos with career development & innovative strategic planning.

Pharmovation is the only method of its kind. It will not only show you exactly what to do to accelerate your career and advocate for resources, but ultimately, how to advance pharmacy practice to bring joy to your work and improve patient outcomes.

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Let's take a closer look at what we'll get into over the next few hundred pages. A mantra of mine that you'll see repeated throughout the book is:

"Pharmacy can do more with more."™
—Kimber Boothe

I believe this in the very core of my being. Pharmacy can do more with more. We can improve patient safety, optimize medication use, and enhance patient care with more resources, more training, more advocacy, more everything. We CAN achieve the quadruple aim of quality, patient experience, cost, and provider engagement.

In designing the Pharmovation program, I've taken time to work with other leaders, investigated pharmacist perspectives and confirmed which key topics and competencies bring rapid success. Beyond that, I've created downloadable materials that will allow you to immediately apply what you are learning. You'll find the QR code at the end of each chapter that will take you to the Pharmovation Implementation Guide where you will find extra goodies and resources.

The chapters themselves are ordered in such a way to support your development. While you're free to skip around and read in whatever order you please, there is a method to the madness. In the first half of the book, we'll explore ways to innovate practice by taking an in-depth look at opportunity, enterprise, strategy, services, and technology. Later on, you'll be stretched to innovate *yourself* through leadership, development, and ultimately, the execution of all the knowledge you've acquired.

Briefly, each chapter will help you achieve a specific objective.

- **Mindset**: Learn the importance of mindset to your success and how to incorporate it in your pharmovation journey.
- **Opportunity**: Understand why staying aware of the bigger picture is vital. Realize that there is a huge need for pharmacists.
- **Enterprise**: Capitalize on the value of the integration and reach of the pharmacy enterprise.
- **Strategy**: Know how to justify resources for both small and large needs.
- **Services**: Be excited about the needs and opportunities for pharmacists and technicians to be accountable and innovative with their roles.
- **Technology**: Be empowered to justify new technology to meet

the needs of both you and your patients.

- **Leadership**: Practice increased leadership and accountability regardless of your level in the organization.
- **Development**: Take ownership of your career and encourage leadership growth by completing a 2-year development plan.
- **Execution**: Be confident and able to realize the tools in this book by integrating learning into practice.

Pharmovation Framework

Throughout the book, you'll also see these boxes with suggested action steps to accelerate your development.

Take Action Now

- Access the Pharmovation Implementation Guide to support your journey and implementation at www.pharmovationguide.com or use the QR code on the next page.
- Join the Pharmovator Community and introduce yourself at www.kimberboothe.com/community!
- Set aside time to dedicate to this book each day or week. Put it in your calendar!

I encourage you to take your time digesting all that's within these pages. This is not a book that's meant to be speed-read or glanced through and forgotten about, doomed to gather dust on a distant shelf.

This book will, if you let it, change your pharmacy practice, bring joy back into your career, and help you develop into the healthcare professional you're meant to be.

You will see this QR code at the end of every chapter. It allows you to access the Pharmovation Implementation Guide. Alternatively, you can also visit www.pharmovationguide.com!

Now, let's do this!

Chapter 1

Pharmovation MINDSET

"Whether you think you can or you think you can't, you are right."
—Henry Ford

Jumping back in time to 2015, well before Pharmovation was a thought in my imagination, I'd started a business. I just wasn't sure exactly where it was going. It was two parts career coaching, one part speaking at pharmacy conferences. I enjoyed it but was looking for a bigger change. At the time I was working at Bayer, on the "Big Pharma" side of things and, while my time there had been positive, I realized this season was coming to a close. I felt ready to get back into a hospital with the skills I'd gained on the corporate ladder.

Through some career coaching, I'd identified that I wanted to stay in leadership and return to health systems. I knew I could have more of an impact there. So I went home. Back to my old stomping grounds. Back to a pharmacy enterprise.

Back to New Haven, Connecticut. I was hired as the Director of Clinical Services at Yale New Haven Health. During my interview we spoke a lot about advancing pharmacy practice and accelerating transformation. And practice advancement became my north star. I put forth a plan to prioritize medication reconciliation within the system. As you will find in the following chapters, research will agree that focusing on correct medication histories and safe transition of care decreases medication discrepancies while patients enjoy improved outcomes. I had an ambitious timeline and big plans — probably from my years in big pharma and fascination with the business side of things.

I knew there was room for improvement and was eager to work with my team. In our first meeting they said they were prepared to ask for funding to hire 2 new pharmacy technicians. The new positions would prioritize patients on 10 or more meds, and make sure medication lists were accurate. This would only provide 10% of total patients the additional team support for medical reconciliation.

It wasn't a bad plan. That wasn't the problem. It was timid. It was thinking small. Begging for the funding to serve merely 10% of their patients to the level they thought necessary? TEN PERCENT?! We can do better than that.

And we did.

For a year we worked on a business plan to get what we needed, not what we thought we could scrape by with. Within 18 months, we'd hired enough staff (more than 14 technicians and many other pharmacist and resident positions) to do 100% admission medication reconciliation. We had to justify it, plan for it, and fight to get it. It wasn't easy.

My team dared to think bigger. They opened their minds to what was possible instead of thinking small. This mindset is crucial to succeeding in innovating your pharmacy practice. We must think outside the box, ask for what we need (what we REALLY need), and work together to justify the expense. As leaders of the pharmacy community, we fight for the resources and positions our team (and patients) need to succeed. In order to succeed in innovating your pharmacy practice, you must have the right mindset.

In this chapter, you'll learn the importance of mindset to your success and how to incorporate it in your Pharmovation journey. We'll talk about the key aspects of innovation, intrapreneurship, change & transformation, and wrap up with mindset. These are foundational ways of thinking that will set you up for success throughout your career.

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Innovation

In this section, we'll focus on…

- What is Innovation?
- Benefits of Innovation
- Barriers to Innovation
- How to Innovate

What is Innovation?

Developing your innovation skill and making it a habit is critical to success. A well-known innovator of our time is Steve Jobs, who said, "Innovation is the ability to see change as an opportunity — not a threat." But innovation is not restricted to CEOs. It's important at work

and useful in daily life. As we grow and adapt to change individuals and managers need to break from traditional ways of thinking and create and nurture an environment of innovation.

To begin, let's define innovation for the purposes of this book. We've got to be on the same page to go on this journey together.

Innovation is…

- A new idea, method, or device.[1]
- The application of better solutions that meet new requirements, unarticulated needs, or existing market needs.[2]
- Executing an idea which addresses a specific challenge and achieves value for both the company and the customer (aka health organization and patient).[3]

The first definition of innovation above — a new idea, method, or device — is perhaps the most common. We tend to think of innovation as something new. And while this certainly is an example of innovation, the second and third definitions are often overlooked as innovative.

While we think of innovation as a single action or the introduction of something wholly "new," it's often part of a larger chain of events. For example, someone generally begins with an **idea**. This can be a concept, opinion, or belief. From there, they seek to solve a problem they perceive with a new invention. The **invention** is the creation of a product or introduction of a new process. At some point later on, someone (perhaps a different someone) improves on or makes a significant contribution to an existing product, process or service with commercialization. This improvement is **innovation**. For example, the bicycle was an invention, while the electric bicycle is an innovation on the original product. Or take the world wide web, a ground-breaking invention. Since the invention of the internet, many innovators have made their mark. Facebook, Google, and Skype, to name a few.

Let's look further at descriptions of different ways to describe innovations — outcome of the innovation, degree of innovativeness, and degree of change.

The Outcome of Innovation: Is typically a product, platform, service or process. Launching a new or improved product or service to the market, or even process innovation, which is finding better or more efficient ways of producing existing products for delivery of existing services.

Degree of Innovativeness or Novelty: Innovations may be expected or unexpected. Incremental innovation with new product updates

or versions of technology are expected by the user. We expect to update our phones and have new features available to us every so often. This innovation sustains product use and does not significantly affect existing markets. Innovation can also be radical or revolutionary within a product, showcasing a much better version than previously available but still not affecting the existing market.

- An incremental innovation being where we do the same thing, only better.
- A radical innovation is wholly a new idea to the world but serves an existing market.

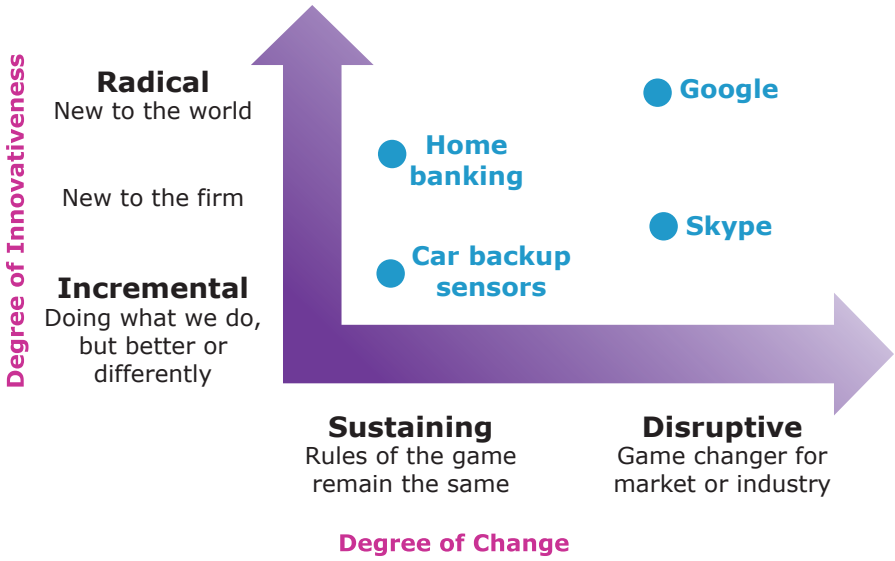
Degree of Change: Innovation can be sustaining or disruptive. Sustaining does not significantly affect existing markets compared to disruptive ones that creates a new market entirely by providing a different set of values, unexpectedly overtaking an existing market with unexpected change.

- A sustaining change meaning that the rules of the game remain the same.
- A disruptive change is a game changer completely, inventing or overtaking a market or industry.

Outcome of the Innovation	• **Product** • **Platform** • **Service** • **Process**
Degree of Innovativeness or Novelty	• **Incremental/Evolutionary:** innovation that is an expected improvement, a product in an existing market. • **Semiradical/Substantial** • **Radical/Revolutionary:** unexpected, but does not affect existing markets
Degree of Change	• **Sustaining:** does not significantly affect existing markets • **Disruptive:** creates a new market by providing a different set of values, which ultimately and unexpectedly overtakes an existing market

Innovation Descriptions

Through these descriptions we can think of innovation as existing on a graph. The x-axis is the degree of change moving from sustaining to disruptive and the y-axis is the degree of innovativeness moving from incremental to radical.



Innovation Examples

Examples of these would be...

Sustaining and Incremental: back up sensors in a car. Fundamentally, it is the same way we back up, and the car isn't new, but the backup sensor is an improved safety feature.

Sustaining and Radical: online banking. The nature of banking does not change. You still make deposits and withdrawals and track your expenses. But it's now online. It's a big change for the user but does not create a new market.

Disruptive and Incremental: Skype. Skype works almost exactly like a phone call. In fact, you can even use it to call landlines. But since it utilizes the connectivity of the internet, it's MUCH cheaper to call anywhere in the world. It completely changes the game for telecommunications companies.

Disruptive and Radical: Google. Google works like nothing else the consumer has seen until this point. It's similar to an encyclopedia, but you don't have to leaf through to find answers yourself. Plus, it searches the entire internet (including Wikipedia... Which is another great example of innovation) and gives you seemingly endless results. A complete game changer for both the user and existing markets.

Now that we have had innovation defined for us, we will learn about its benefits.

Benefits of Innovation

Now, what are the benefits of an innovation? Well, virtually all of the economic growth that has occurred since the 18th century is ultimately attributable to innovation.

Innovative companies are ones who are able to both innovate AND adopt new ideas quickly. They're **adaptable** with flexibility in their strategies, structure, and culture. They're **competitive** with better processes, services, and business models. Because of this, they have higher margins and stock returns (if publicly traded). **Companies that do not invest in innovation put their future at risk.**

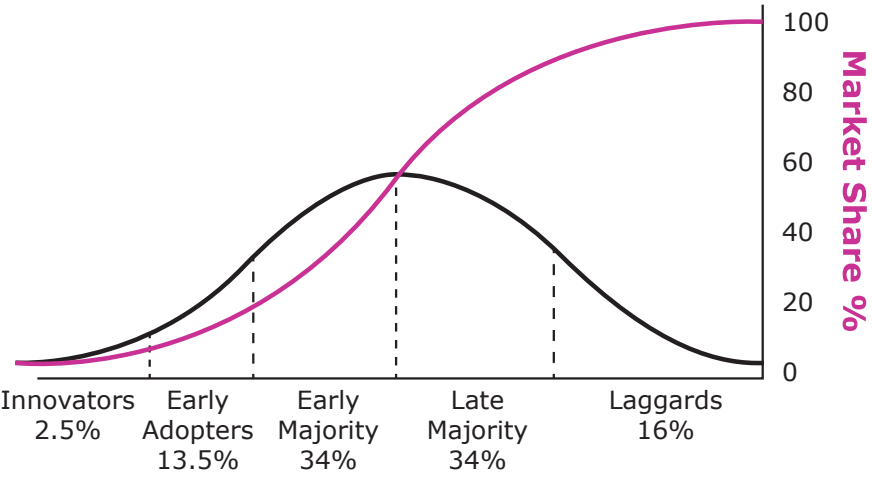
> ***"Innovation is not just about disruption, it can also be about adopting new ideas faster."***
> —Kimber Boothe

In the book *Diffusion of Innovations*, author E. M. Rogers explains that ideas spread by the method of communication channels over time. He describes the diffusion through four steps[4]:

1. Innovation
2. Communication
3. Time
4. Social System

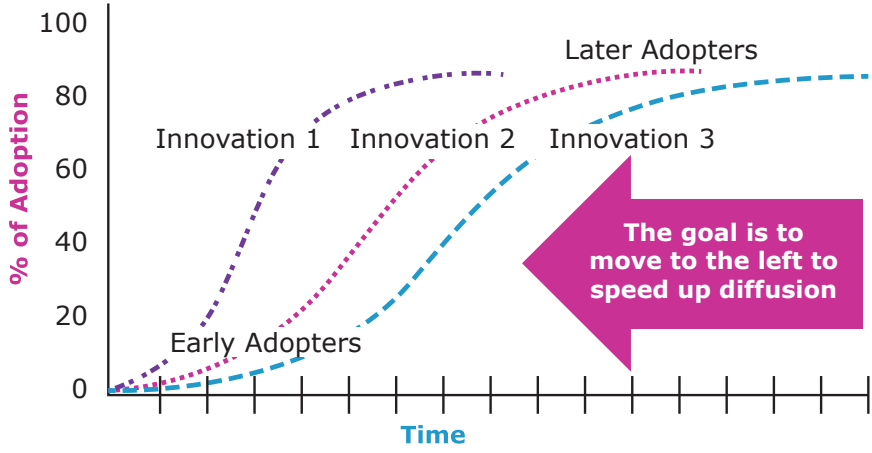
This means that innovation requires good communication, ample time, and a functioning social system in order to fully take root and affect change. You can see a common chart below where innovators create and early adopters and the early majority are taking advantage of this new innovation sooner compared to the late majority and laggards such that over time, you reach a hundred percent of diffusion. The goal, therefore, is to shorten the amount of time it takes for a new idea to be adopted. This requires more active communication as well as having early adopters of a new idea work as ambassadors (through the existing social system) to help others get on board.

In healthcare, we often see organizations putting their future at risk through what we call the Evidence-Practice Gap. The Evidence-Practice Gap looks at the time it takes to implement a new idea broadly. How long does it take a new idea (with sufficient evidence to validate its worthiness) to become common practice? Research suggests that it sometimes takes more than a decade to implement research results in clinical practice. Does this seem appropriate to you?



Adopter Categories[4]

Our goal should be, in most cases, to speed up the diffusion. So if you can move these curves to the left, you will speed up the time that something is adopted and implemented. If we have something that is of good evidence, for example, when we think about having pharmacists or medication history technicians in certain clinical areas, it should not take 10 years to put that into full use. The adoption of the electronic health record was sped up through the American Recovery and Reinvestment act, which tied an incentive to adoption.



Innovation Adoption Differences[4]

This is something to watch for in your own organization. While many companies believe they are committed to innovation, they do not invest the time, people, or money needed to support any true innovation.

You can make a difference by advocating to support innovation and implement new evidence-based practices sooner rather than later.

Barriers to Innovation

Unfortunately, innovation isn't necessarily easy. You may encounter some of the following barriers to innovation and creative thinking in your organization[5]:

- **Negative Attitudes**: A tendency to focus on the negative aspects of problems and expend energy on worry, as opposed to seeking the inherent opportunities in a situation.
- **Fear of Failure**: A fear of looking foolish or being laughed at.
- **Executive Stress**: Not having time to think creatively. The over-stressed person finds it difficult to think objectively at all. Unwanted stress reduces the quality of all mental processes.
- **Following Rules**: Some rules are necessary, but others encourage mental laziness. A tendency to conform to accepted patterns of belief or thought — the rules and limitations of the status quo — can hamper creative breakthroughs.
- **Making Assumptions**: A failure to identify and examine the assumptions you are making to ensure they are not excluding new ideas. Many unconscious assumptions, in particular, restrict thinking.
- **Over-Reliance on Logic**: Investing all your intellectual capital into logical or analytical thinking — the step-by-step approach can exclude imagination, intuition, feeling, or humor.

Instead, organizations must adjust to a positive outlook by seeking opportunities in new situations and realizing that failure is a necessary stepping stone to success. Furthermore, it's been shown that long-term corporate success is linked to the ability to innovate.[5] Managing day-to-day operations is important, but it is new game-changing breakthroughs that will launch companies into new markets, enable rapid growth, and create high return on investment. Companies that challenge their own assumptions will be headed for a more successful future.

Now that we know the barriers of innovation, we will learn how to innovate.

How to Innovate

Innovation isn't something that just happens. It must be systematically fostered and supported within organizations. Companies aiming to encourage innovation should consider the following systematic steps, adapted from *Innovation and Entrepreneurship: Practice and Principles* by P.F. Drucker.[6]

Systematic Innovation Steps:

1. **Systematic Analysis of Opportunities**: Purposeful, systematic innovation begins with an analysis of the opportunities through the 7 sources framework.
2. **Analyze the Opportunity**: See if people will be interested in using the innovation — look, ask, listen. Innovation is both conceptual and perceptual. "Successful innovators look at figures, and they look at people. They work out analytically what the innovation has to be to satisfy an opportunity. And then they go out and look at the customers, the users, to see what their expectations, their values, and their needs are."
3. **Simple and Focused**: "An innovation, to be effective, has to be simple and focused. It should do only one thing, otherwise, it confuses. All effective innovations are breathtakingly simple. Indeed, the greatest praise an innovation can receive is for people to say: 'This is obvious. Why didn't I think of it?'"
4. **Start Small**: By appealing to a small, limited market, a product or service requires little money and few people to produce and sell it. As the market grows, the company has time to fine-tune its processes and stay ahead of the emerging competition.
5. **Aim for Market Leadership**: A successful innovation aims at leadership within a given market or industry. If an innovation does not aim at leadership in the beginning, it is unlikely to be innovative enough to successfully establish itself. Leadership here can mean dominating a small market niche.

Now, let's talk about those seven opportunities (or sources) that Drucker spoke of for innovation that you want to assess. Internal areas of opportunity are listed on the top section and external on the bottom.

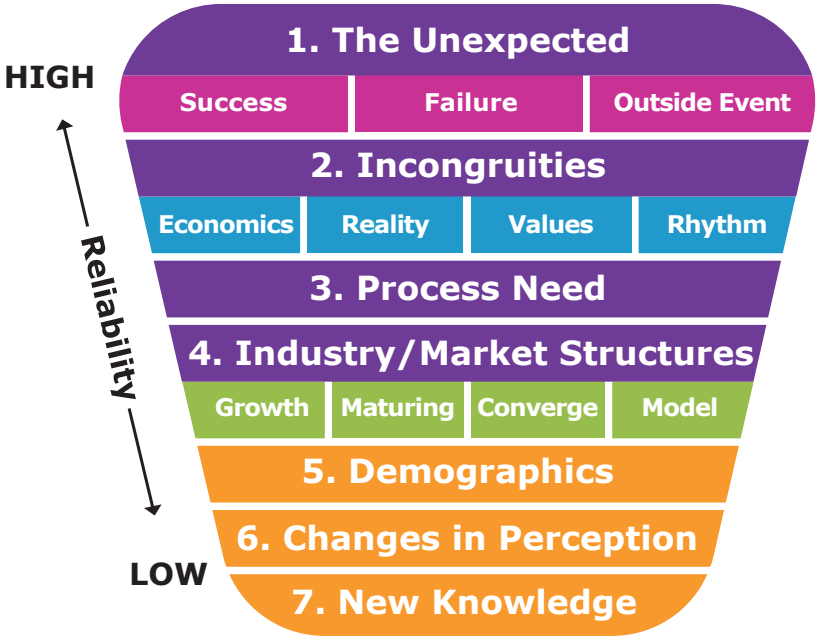
The first source is the unexpected — the unexpected successes, the unexpected failures, and the unexpected outside events. You want to look to see where you have opportunities. Second, you want to look to see where there is incongruity between reality as it is and reality as it should be. If I give an example here of pharmacy and healthcare, when we look at nurses who are supposed to barcode scan medications when they're administering them. There's an incongruity between what is happening and what should happen because those rates are not always at a hundred percent. There is an innovation needed for the process. This is an important one that I think we have a lot of opportunity for.

Third, we want to look at how we can perfect a process that already exists, replace a link that is weak, or supply a link that is missing. We can find these process needs all over the place when we look

at healthcare. Fourth is changes in industry structure or market that can catch everybody unaware. So we want to look at where there's opportunities for growth, maturing markets, converging markets, and other model markets. This is where it's important. And we'll talk about this in the strategy chapter for looking at what the changing forces impacting us are so we can be better prepared for them.

The fifth source is demographics, looking at changes in population size, age composition, educational level employment, status, or income are important. Even looking at the demographics of our own healthcare workforce is important. Then there are changes in perception, the sixth source, when the customer goes from seeing the glass half full to the glass half empty or vice versa. We want to understand those potential changes in perception.

And then finally, number seven is new knowledge. And this is not just having technical or scientific breakthroughs, but the innovative use of knowledge creates new products or services. These are the seven sources or opportunities that you can think about in an organized way to look for opportunities for innovation in your practice areas.



7 Sources for Innovation[6]

Now there are some innovation do's and dont's that I wanted to share with you as shown in this table. I want to make one highlight regarding customer feedback. Something that Steve Jobs had said years ago was he would never use a customer focus group to come up with innovations. Customers may not come up with these innovative ideas. You want to listen to their pain points and barriers to identify the innovative solution. He likes to say that a customer never would have come up with the iPod.

Innovation Do's	Innovation Dont's
Make innovation a process	Leaders just ask for ideas
Make innovation part of your culture	Accept the status quo
Build your persuasion skills	No buy-in from executives
Build change management skills	Same old thinking, same old results
Take customer input and build upon it as customers may not identify innovation	Avoid segmentalist organizations working in silos
Plan for integrative organization	Rely on customer feedback sessions
Accept big and small innovative ideas	Demand disruptive innovation
Consider a wide range of alternatives (resources, people, methods, business models)	Neglect alternatives
Know what you're trying to solve	Work on innovation only in a rush
Invest time, people, and money	Only have creative ideas and not implement innovation

Innovation Do's and Dont's

Another angle for tackling innovation comes to us from *The Innovation Secrets of Steve Jobs* by Carmine Gallo.[7]

7 Innovative Principles:

1. **Do what you love**: Think differently about your career.
2. **Put a dent in the universe**: Think differently about your vision.
3. **Kickstart your brain**: Think differently about how you think.
4. **Sell dreams, not products**: Think differently about your customers.
5. **Say no to 1,000 things**: Think differently about design.
6. **Create insanely great experiences**: Think differently about your brand experience.
7. **Master the message**: Think differently about your story.

While all these principles and ideas are well and good, innovation cannot be theoretical. It must become a habit. Following a process for innovative thinking and resulting behaviors will result in habitual innovation in a company or organization. Habit forming itself can become a habit, from the incorporation of key triggers, conditions, and words into your daily routine.

Here are few tips for making innovation a habit[8]:

1. Constantly connect the dots.
2. Commit to asking questions.
3. Actively try new things.
4. Find points of intersection with others.
5. Have a sense of purpose.
6. Cross-pollinate ideas.
7. Make innovation a regular part of your daily routine.

In summary, **innovation is executing an idea which addresses a specific challenge and achieves value for both the company and customer.** It does not have to be just disruptive innovation. Small incremental innovations are important for both products and services as well as our processes. Innovation has many benefits, but many barriers arise related to mindset, limiting belief, and lack of process. However, there are systematic steps we can follow in order to make innovation a habit instead of an occasional happy accident.

Take Action Now

- Think of a source of opportunity for innovation in pharmacy.
- Share your thoughts in the Pharmovator Community.

Next, we'll spend some time looking at the difference between entrepreneurship and intrapreneurship. Never heard of intrapreneurship? That's ok, in the next few pages you'll know what it is, the benefits it offers, how it can be implemented in your organization, and the common barriers we encounter with implementation.

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Entrepreneurship & Intrapreneurship

In this section, we'll focus on…

- What are Entrepreneurship & Intrapreneurship?
- Benefits of Intrapreneurship
- Implementation of Intrapreneurship
- Barriers to Intrapreneurship

What are Entrepreneurship & Intrapreneurship?

Let's begin with the more commonly known entrepreneur. **An entrepreneur is a person who organizes and manages any enterprise, especially a business, usually with considerable initiative and risk**.[9]

And while an entrepreneurial spirit is something to applaud and admire, many people are unable to become entrepreneurs due to lack of funding, manpower, strong backing, or branding. Or simply, fear. The truth is that most employees work and will continue to work in corporations. The question is: how can we support the entrepreneurial mindset and spirit within organizations? The answer is "Intrapreneurship."

An intrapreneur is a person within a large corporation who takes direct responsibility for turning an idea into a profitable finished product through assertive risk taking and innovation.[10] This is often an employee of a large corporation who is given freedom and financial support to create new products, services, systems, etc, and does not have to follow the corporation's usual routines or protocols. It's the system wherein the principles of entrepreneurship are practiced within the boundaries of the firm. Other terms commonly used are internal entrepreneur, entrepreneur on the job, and corporate entrepreneurship.

Looking at it historically, we see that intrapreneurship is not a new idea but is increasing in popularity as an important component of business. A famous early example is the Post-It note from 3M. A metaphorical "intrapreneurial home run" from 1974. Then in 1978, Gifford Pinchot created and coined this term as "dreamers, who do. Those who take the hands-on responsibility for creating innovation of any kind within a business."[11] In the mid-80s *Time Magazine* published an article titled "Here Come the Intrapreneurs" and Steve Jobs started an intrapreneurship team to create the Macintosh. Then in 1992 the

word was added to the *American Heritage Dictionary*. In '94, Ken Kutaragi's intrapreneurial venture led to the development and launch of the Sony PlayStation and by 2014 Forbes declared intrapreneurs to be the most valuable employees of an organization. As of 2015, 28% of multinational corporations had intrapreneurial initiatives.

This is not a new idea and not a dying trend. Intrapreneurs are here to stay. But let's further differentiate entrepreneurs from intrapreneurs in the areas of status, independence, ownership, capital, resources, risk, operation, orientation, profit, and norms and rules.

Differences	Entrepreneur	Intrapreneur
Status	Owner of business	Employee
Independence	Works independently	Semi-independent, depends on organization governance
Ownership	Ownership of the business/firm	Only manages the business
Capital	Raises the requisite capital themselves	Does not raise any money
Resources	Must find all necessary resources	Access to core business resources, but must leverage them
Risk	Assumes all business risk	Only some risk related to project
Operation	From outside the organization	Within the organization
Orientation	Sets up their own enterprise	Enterprise within organization
Profit	Entitled to returns/profits from business	Fixed salary, potential bonus
Norms & Rules	Frames norms & rules of business	Bound by organizational norms & rules

Entrepreneur & Intrapreneur Differentiation

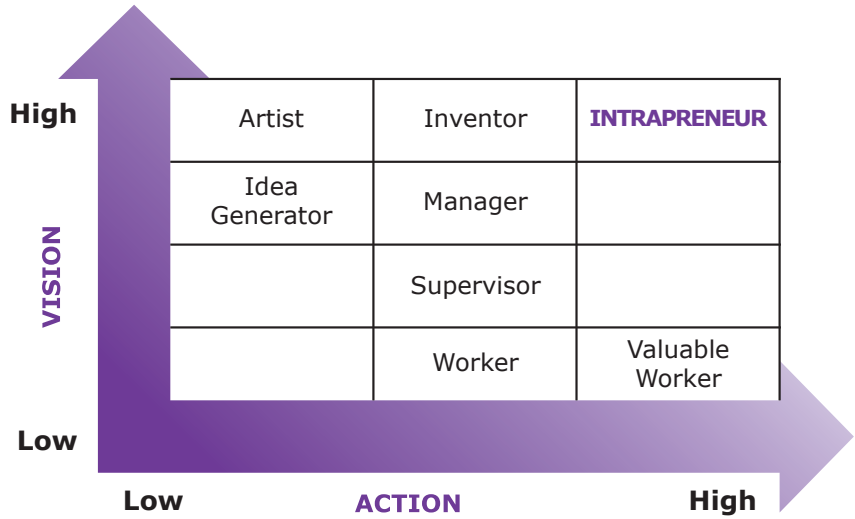
Entrepreneurs are owners of their own businesses. They work independently and raise the requisite capital themselves. They must find all necessary resources on their own, assume all business risk, and set up their own enterprise. They must also decide how to operate the business and frame norms and culture within the business. In return, they're entitled to profits from the business as decided with other investors.

In contrast, an intrapreneur is an employee of an organization who works semi-independently depending on organizational governance. They only manage their project but have no ownership of the business. They don't have to raise any money, hunt down resources, or assume the entire risk of a project as they're supported by their company. They're also bound by the rules and norms of the organization they work within and continue to pull a fixed salary (although they may earn a bonus or raise!) after their initiative is complete.

To support you in identifying who the intrapreneurs are in your own

organizations, assess them through the intrapreneurial grid. This clarifies the roles from a vision and action perspective.

Moving from left to right is the low to high action. And moving from top to bottom is low to high vision. Workers tend to have low vision and valuable workers tend to take more action. Now, moving up in the middle, your people with increasing vision tend to be higher in leadership roles, from supervisors to managers. Inventors possess the highest vision, they can become an intrapreneur when they grow in action.



Intrapreneurial Grid[11]

An intrapreneur is someone with a high degree of vision and high ability to act. Some examples are Art Fry the inventor of the 3M Post-It Note mentioned above. He had a problem with his bookmark falling out of his choir book each Sunday morning and concluded that the non-permanent glue 3M had been developing at the time could be channeled for this use.

Or look at Jim Lynch, cleaning the gutters of his home in Massachusetts. It suddenly occurred to him that this was the perfect job to outsource to a robot and, since his company was in robotics, he asked his boss if he could work on this project as a side part of his job. The company supported him and now hosts a regular event called an "Idea Bake-Off" where employees get up to 10 minutes to present their pitches for new ideas or products.

It seems unnecessary to mention (and yet of course I will) Google at this point. They are a huge supporter of intrapreneurship within the

organization, even earmarking 20% of their employees time to spend on creative projects outside their specific job titles. This investment has been well worth the time, benefiting the organization by creating Google Analytics, Gmail, Google AdWords and so much more.

This final example relates to healthcare — the Walmart Care Clinic. Alicia Ledlie was put in charge of this new venture to get it off the ground. While it wasn't specifically her idea, she did lead the charge to bring this idea into reality.

Now that we understand the difference between entrepreneurship and intrapreneurship, we will study its benefits.

Benefits of Intrapreneurship

If you're still asking the question "Why should my organization support intrapreneurship?" let me break it down even further. It's well known that intrapreneurship initiatives improve innovation, growth, and employee engagement, which are important to consider when a company is trying to grow.[12] Companies that foster innovation (through intrapreneurship) perform better. They also tend to have more products coming out and create more venture capital investments. Finally, intrapreneurship empowers and motivates employees, so they tend to be happier and more committed. Organizations with happier and committed employees are able to reduce staff turnover by 87%. Not to mention that up to 70% of successful entrepreneurs have come up with their business idea while working for a previous employer.[13]

By this logic, if companies supported intrapreneurship instead of stifling innovation, there are almost countless ideas their employees have for the organization (and world!) to benefit from. So many ideas could be the products of companies instead of new enterprises. Of course, we don't want to discourage people who have strong desires to be entrepreneurs, that drive should be supported. But when we think of how few people actually go off to become entrepreneurs, we can conclude that companies are losing access to a lot of great ideas still inside the organization simply by not being open to new ideas and insights.

Implementation of Intrapreneurship

Here are some key characteristics intrapreneurs and entrepreneurs have. They're not all encompassing, but they are something to look out for when trying to identify who might have this ability within your organization, or think about it for yourself.

Intrapreneurs are…

- Results Driven
- Action Oriented
- Creative
- Original
- Self-Confident
- Risk-Tolerant
- Ambitious
- Persistent
- Influencing
- High Energy
- Interpersonal
- Innovative

Next, I wanted to share some work that Gordon Pinchot did surrounding intrapreneurship.[14] These are known as…

The Intrapreneur's 10 Commandments:

1. Come to work each day willing to be fired.
2. Circumvent any orders aimed at stopping your dream.
3. Do any job needed to make your project work, regardless of your job description.
4. Find people to help you.
5. Follow your intuition about the people you choose and work only with the best.
6. Work underground as long as you can — publicity triggers the corporate immune mechanism.
7. Never bet on a race unless you are running in it.
8. Remember it is easier to ask for forgiveness than for permission.
9. Be true to your goals, but be realistic about the ways to achieve them.
10. Honor your sponsors.

Since publishing these, Pinchot has added a few additional commandments with added clarity,[14] which are…

- Ask for advice before asking for resources.
- Express gratitude.
- Build your team, intrapreneuring is not a solo activity.
- Share credit widely.
- Keep the best interests of the company and its customers in mind, especially when you have to bend the rules to circumvent the bureaucracy.
- Don't **ask** to be fired; even as you bend the rules and act without

permission, use all the political skill you and your sponsors can muster to move the project forward without making waves.

These rules and commandments make it clear that most people work within a culture that does NOT support intrapreneurship. It is an uphill battle and will likely be a difficult road to follow. Since this is the widespread general assumption, how can we build organizations that encourage and uplift intrapreneurs? Because the fact is that at least 25% of your employees are already intrapreneurs in terms of mindset and creativity. With some support and encouragement, these abilities can be tapped into for the benefit of the organization and the consumer.

Now that we know more about the individual intrapreneur characteristics, how can we make this part of our daily routines in our practices? Here are some key ways to build a culture of intrapreneurship.[15]

1. Show you mean business.
2. Include your entire organization.
3. Seek out the intrapreneurs already there.
4. Make time for innovation and creativity.
5. Actively promote the activities.
6. Make failure acceptable and reward success.

Remember that when you're venturing into these new areas you will likely be unsuccessful at first, but don't feel that this means you shouldn't try. In fact, you should model the spirit of intrapreneurship yourself by showing others that failure is acceptable. Many people say you want to fail fast so that you can move on and find the best solutions. Failure is simply part of the process of progress.

Intrapreneurship can be further enabled through the following. You can also foster a culture of intrapreneurship by empowering individuals and leadership that pro-actively embrace intrapreneurship. You can set clear definitions and metrics for what success means. Intrapreneurship is not a short game and intrapreneurs should not be sanctioned for failing. Additionally, internal collaboration is a must for intrapreneurship: bust the silos, break down the walls by creating spaces for interaction and collaboration, and launch internal professional social networks. You may also want to host innovation-driven events like boot camps or hackathons. These not only deliver great ideas with sound business potential, they also act as platforms for scouting talent. Beginner intrapreneurs usually have less developed entrepreneurial skills — support them by pairing with seasoned mentors to help navigate through difficulties and setbacks.

Barriers to Intrapreneurship

Be aware that there are many barriers to intrapreneurship in the following categories. Luckily, many of these barriers can be overcome with focused initiatives. I'll highlight just a few.

Barriers to Intrapreneurship[16]:

Systems
- Misdirected Reward and Evaluation Systems
- Oppressive Control Systems
- Inflexible Budgeting Systems
- Overly Rigid, Formal Planning Systems

Structures
- Too Many Hierarchical Levels
- Responsibility Without Authority
- Top-Down Management
- Lack of Accountability for Innovation & Change

Strategic Direction
- Absence of Innovation Goals
- No Formal Strategy for Entrepreneurship
- Lack of Commitment From Senior Executives
- No Entrepreneurial Role Models at the Top

Policies & Procedures
- Long, Complex Approval Cycles
- Extensive Red-Tape & Documentation Requirements
- Over-Reliance on Established Rules of Thumb
- Unrealistic Performance Criteria

People
- Fear of Failure
- Resistance to Change
- Parochial Bias
- "Turf" Protection
- Complacency
- Short-Term Orientation
- Inappropriate Skills and Talents for Managing Entrepreneurial Change

Culture
- Ill-Defined Values
- Lack of Consensus Over Value & Norm Priorities
- Lack of Fit of Values with Current Competitive Context
- Values Conflict with Innovativeness, Risk-Taking, and Proactiveness

In summary, intrapreneurship is practicing entrepreneurship within a corporation. It benefits ***both*** the company and the employee. Implementation occurs best within a structured approach. Barriers to implementation range from systems to culture but ***can*** be overcome.

Next, we'll look at the change and transformation necessary to innovate.

Take Action Now

- Begin thinking about how intrapreneurship can be utilized in healthcare.
- Share your thoughts in the Pharmovator community.

•••

Change & Transformation

In this section, we'll focus on…

- What are Change & Transformation?
- Why is Change Important?
- Change Management

Change and transformation are foundational concepts and competencies related to Pharmovation.

"Change is the only constant."
—Heraclitus

What are Change & Transformation?

First, some definitions. To change is to make or become different.[17] It can also be to make things better as compared to the past. While Heraclitus aptly states that change is always happening, in an organization it's necessary to manage change so it does not overtake or overwhelm those it affects.[18] Whereas change management is the management of change and development within a business or similar organization. Transformation goes beyond typical change and can be defined as a thorough or dramatic change in form or appearance.[19] It's an act, process, or instance of transforming or being transformed.[19]

Transformation can also be seen as successfully reaching a new vision for the future.

Now that we've defined our terms, we'll spend some time understanding why this concept is important in our overall topic of pharmacy innovation and practice.

Let's look more closely at the difference between change and transformation. Change is typically thought of as a fix or improvement on what already exists. For example, iPhone 3 vs. iPhone 4 vs. iPhone 10 and so on. Transformation is a complete overhaul of the status quo, a new creation using present tools. This can be best illustrated through the caterpillar who transforms into the unrecognizable creature of a butterfly through metamorphosis.

Why is Change Important?

Within the concepts of innovation and intrapreneurship that we've already discussed are a lot of implied changes. Facilitating this change with grace and agility is paramount since innovation and intrapreneurship cannot happen without it. And yet, while change is inevitable, most humans are not very good at it. We must overcome many hurdles when facing change such as:

- **Change Fatigue**: Prior experiences with poorly managed change.
- **Lack of Skills**: Organizations may lack the necessary skills to properly manage change.
- **Lack of Ownership**: A certain style of leadership prefers a top-down approach where those enacting certain changes have no ownership over what's happening.

Now I'd like to share with you the Kubler-Ross Change Curve.[20]

This model describes the four stages that most people go through as they adjust to change. It's a well-known curve, and is unfortunately similar to the curve we see when people move through grief.

Now, when a change is first introduced, people's initial reaction may be shock or denial as they react to the challenge of their status quo. This is stage one of the change curve. Then, once the reality of change starts to hit people tend to react negatively, moving to stage two. They may fear the impact, feel angry, and actively resist or protest against the changes. Some will wrongly fear the negative consequences of change. Others will correctly identify real threats to their position.

STAGE	1	2	3	4
STATE	Status Quo	Disruption	Exploration	Rebuilding
REACTION	Shock, Denial	Anger, Fear	Acceptance	Commitment

The Kubler-Ross Change Curve[20]

As a result, the organization experiences disruption, which if not carefully managed, can quickly spiral into chaos. Because, for as long as people resist the change and remain in stage two of the change curve, the change will be unsuccessful (at least for those who react in this way). And this is a stressful and unpleasant stage for everyone. It's much healthier to move to stage three of the change curve, where pessimism and resistance give way to some optimism and acceptance.

At stage three, people stop focusing on what they have lost. They start to let go and accept the changes. They begin testing and exploring what that change means for them. They learn the reality of what's good, what's not so good, and how they must adapt. Finally we arrive at stage four: rebuilding and commitment.

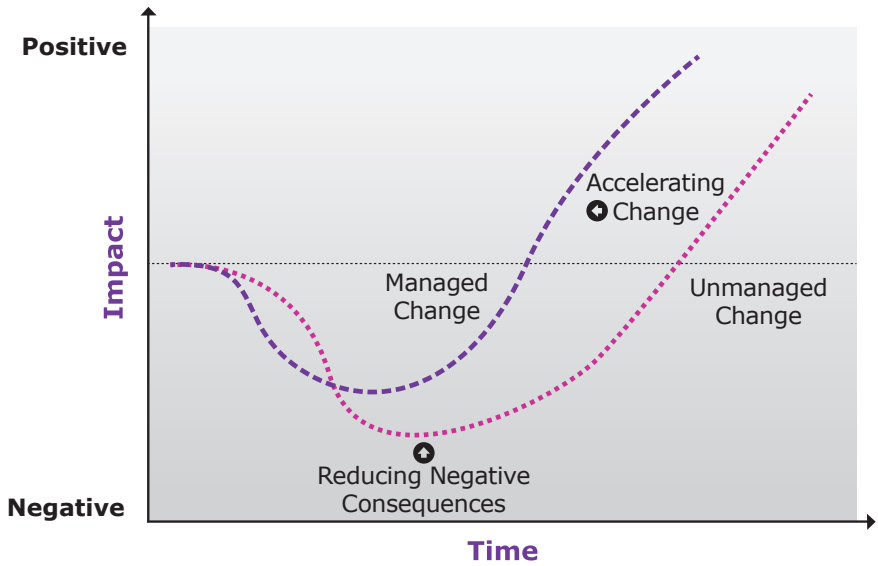
In stage four, people not only accept the changes, but start to embrace them. They rebuild their ways of working. Only when people get to this stage can the organization really start to reap the benefits of change.

Change Management

Managing change as a leader in your organization has many steps. You must understand the change that's about to take place, plan for it carefully, implement it thoughtfully, and communicate well about what's going to happen to those it will affect.

Two common frameworks for managing change in an organization are PROSCI-ADKAR[21] and Kotter's 8 steps.[22] We'll explore both in detail shortly.

Remember that however you choose to manage change, you'll want to incorporate planning for change as part of any project plan. Do not ignore the planning step. Through this process you'll be able to gauge the level of management needed based on the impact of the change or transformation. Planning will help you prepare to minimize the negative impact and improve the speed at which people adapt to the change. Your aim will be to reduce negative consequences by accelerating change. Give individuals the information and help they need. This will increase your likelihood of success.



Using the Change Curve[20]

First let's discuss the PROSCI-ADKAR method of change management. ADKAR stands for[21]:

- **Awareness**: This step occurs as a pre-contemplation stage before plans are set in stone. You must be aware of what is and isn't working in your organizations. Research to find out what your options are. Communicate to others that there is a problem and focus attention on the most important reasons that a change must be made.
- **Desire**: This next stage is when you are contemplating what form of change you'll eventually implement. You must communicate benefits for the adoption of a new method of working (ex: Scrum).

Then you'll identify the risks involved in the impending change. Finally, you'll build momentum and excitement for what's to come as well as address fears by those this change will affect.

- **Knowledge**: Now you're preparing to enact change. You must use this time to learn new technical skills. Learn to think as a team, how to time box and share information. You should also set reasonable targets and goals during this phase.
- **Action**: Finally, it's time for action. During this phase you must employ a suitable governance framework and train team members on the basics. Make sure you start small and are communicating openly. Don't enact change through stealth. Adjust processes as necessary.
- **Reinforcement**: The last phase is maintenance, ensuring that the change you've implemented will continue to be part of future processes. In this phase you may wish to engage coaches or mentors, identify those who are adjusting to the change most effectively, and learn from your early mistakes.

Throughout the process of ADKAR, you'll want to ask different questions depending on which phase you're currently in. You'll also work with evolving objectives. Let's look deeper.[21]

- **Awareness**: What is the nature of the change? Why is change needed? What is the risk of not changing? *Objective: To have all involved understand why a change is necessary.*
- **Desire**: What's in it for me? Why should I choose this path? *Objective: For all involved to desire the particular forthcoming change.*
- **Knowledge**: How should we change? What training do we need? What new processes will be involved? What tools should we use? What new skills must we acquire? *Objective: That all involved will know how to adopt the imminent changes.*
- **Action**: What must I do to implement this change? What will show that the desired change has occurred? *Objective: For those involved to confidently be able to implement the change.*
- **Reinforcement**: What actions increase the likelihood that change will continue? What rewards and recognition should accompany those who excel in this new environment? *Objective: For the change to be permanent and successful.*

John Kotter offers another change management plan of action. He calls it the 8-step process for leading change. These 8 steps are broken down into three phases[22]: creating the climate for change, engaging and enabling the organization, and implementing and sustaining change.

They are[22]:

Creating the Climate for Change
1. Create Urgency
2. Form a Powerful Coalition
3. Create a Vision for Change

Engaging & Enabling the Organization
4. Communicate the Vision
5. Empower Action
6. Create Quick Wins

Implementing & Sustaining for Change
7. Build On the Change
8. Make It Stick

In my career, I've used both the PROSCI and Kotter methods within different organizations. I can confidently say from experience that they both work well. It's just a matter of choosing one, using it, and sticking to it. However, if you have a method your organization currently uses — go with that one. Keeping the same terminology your organization already understands will be in your favor. But, if your organization has no method to manage change now would be a good time to work with organizational developers and other leaders to start using one.

Tying these last few sections together, I'd like to share this quote:

"The entrepreneur always searches for change, responds to it, and exploits it as an opportunity."
—Peter Drucker

As intrapreneuers, we have the opportunity to create innovation in our organizations by recognizing opportunities for change and putting a plan in place to address them.

In summary, we covered change and transformation are vital to the success of our organizations. The four-stage change curve can be long, but the negative impact can be minimized if you provide the appropriate communication. Change management can be facilitated through structured frameworks, such as ADKAR and Kotter.

We will revisit the topic of change management later in the chapter on execution, so you can put it into practice after you've planned for your new innovations. For now, let's move on to mindset.

Mindset

In this section, we'll focus on…
- Importance of Mastering Mindset
- Common Mindsets
- Overcome Barriers to Effective Minds

Importance of Mastering Mindset

The term "mindset" often brings up other commonly associated words, such as attitude, and when thinking about mindset, we often focus on the positive aspects, such as optimism and purpose. Unfortunately, mindset can also have some negative connotations.

It is interesting that mindset can be defined in many different ways:

- A fixed mental attitude or disposition that predetermines a person's responses to and interpretations of situations.[23]
- A person's usual attitude or mental state is his or her mindset.[24]
- A mental inclination, tendency, or habit.[25]
- The established set of attitudes held by someone.[26]
- A person's way of thinking and their opinions.[27]

The most simplistic yet meaningful definition I have found is this:

*Mindset is a **habitual** or characteristic mental state that determines how you will interpret and respond to situations.*[24]

The word habitual is bold because I think it is so important with tying together what the definition really is. Habits are automatic, they just come to you naturally. And a great thing about a habit is it is something you can learn and practice.

We can think of mindset as a predictable loop. When we start with the mindset, it really is the basis for all of the resulting performance that we have. Moving from mindset, we have the resulting attitude,

Mindset Performance Loop

which is how we act and have our attitude portrayed to others. Other people can see the behaviors that we are actually doing. Then, people can see the physical actions we take and how they lead to the results we see and our overall performance. You can see how mindset is really the key to all of this. Now, you could end up with having poor actions and poor behaviors and still have a good mindset. But if you don't start with a good mindset, it's hard to have success throughout this path.

You've likely heard the famous quote from Henry Ford that I used at the beginning of this chapter: "Whether you think you can or you think you can't, you're right." And guess what? Henry Ford ***is*** right. The great news is that you can change your attitude and mindset just by deciding to. It is up to you. You don't need special skills or a charismatic personality to decide to think differently.

Mindset hugely impacts our reality and the importance of it in healthcare cannot be overstated. I'm sorry to remind you (as you likely already know) of the burnout epidemic in healthcare. I've been doing more and more research in this area and studies consistently show that up to 50% of physicians report symptoms of burnout while 30% of nurses seek new jobs within a year. Turnover is up and morale is down. The common trend is that stress leads to burnout which leads to higher turnover, higher levels of depression, low morale, anxiety, and unfortunately, increased rates of suicide.

Research from the Action Collaborative on Clinical Well-Being and Resilience reveals some startling statistics. High percentages of turnover, suicidal ideation and depression have become the norm.[28]

It's great that this organization exists, and they are starting to look at pharmacists as well. And burnout is becoming a regular phenomenon earlier and earlier in pharmacists' careers.[29] Research shows 64% of critical care pharmacists meet criteria for high degree of burnout, with higher frequencies at the start of many people's careers.[29] 50% of health system pharmacists in another study met criteria for a high degree burnout.[29]

While we don't have time to go into all the varied and detailed aspects of burnout, I do want to focus on one intervention strategy that has proven effective, and that is your mindset. There are many risk factors and intervention strategies to combat the burnout epidemic. Mindset is one of the most critical; how we approach stressful periods and situations is an important part of how we thrive in our careers and prevent burnout from taking hold.

It's important to remember that not all stress is bad. But sustained levels of stress are not good for our health. Additionally, how stress is perceived is just as important as the amount. Specifically, individuals who both perceived that stress affects their health and who reported a large amount of stress have a 43% increased risk of premature death. But those who can control that perceived level of stress based on how a more positive mindset can significantly reduce their risk.

Common Mindsets

While it's impossible to list all the types of mindsets a person may have. Here are a few common mindsets[30]:

Positively Perceived Mindsets
- Productive
- Short-term
- Creative
- Confident
- Social
- Growth
- Business
- Dreamer
- Gratitude

Negatively Perceived Mindsets
- Lazy
- Fixed
- Fear
- Envy
- Follower
- Greed

So, remember mindset is this habitual nature that can vary. You may have a more positive mindset in one area and more negative mindset in another area.

Carol Dweck, author of *Mindset: The New Psychology of Success* writes, "Mindset reveals how great parents, teachers, managers, and athletes can put this idea to use to foster outstanding accomplishment."[31]

From the myriad of options above, let's take a closer look at the idea of a fixed mindset vs. a growth mindset. **Beliefs** - A person with a fixed mindset believes that their abilities are fixed, and that intelligence is static while a growth mindset believes their abilities and intelligence can be developed. **Focus** - Those with a fixed mindset are focused on performance and outcomes. They don't want to look bad.

A growth mindset focuses on a desire to learn. **Challenges** - Fixed mindset folks avoid challenges while a growth mindset embraces them. **Obstacles** - When obstacles cross their paths, a fixed mindset is likely to give up easily while a growth mindset will likely persist. **Effort** - When it comes to effort, those with a fixed mindset view effort as fruitless while a growth mindset sees effort as the path to mastery. **Criticism** - A fixed mindset is likely to ignore criticism while a growth mindset attempts to learn from any criticism or feedback they receive. **Success of Others** - Finally, those with a fixed mindset are easily threatened by the success of others while others' success is inspiring to those with a growth mindset. **Result** - The result of these opposing mindsets is that those with fixed mindsets plateau early and achieve less than their full potential. Those with growth mindsets reach ever-higher levels of achievement because they put no limits on themselves.

So, can you see the obvious difference? Perhaps you see this in your own home or at work. Notice how your children or other family members approach challenges. Observe how your team members receive criticism. Find ways to foster a growth mindset in those you lead and teach

An important way to do this is by being aware of how we come across to others. This has a lot to do with mindset. The attitude we present and behaviors people see is their reality. If we show up negative and say things like, "Why does this happen to me? I can't do it. Life isn't fair." Then others will react negatively and follow suit. How can we overcome barriers to effective mindsets?

Overcome Barriers to Effective Mindsets

Here is a four step strategy to cultivate an effective mindset[31]:

1. **Listen to yourself**: The voice of a fixed mindset will stop you from following the path to success. You want to use your thought awareness to recognize negative thinking.
2. **Recognize you have a choice**: Simply put, you can control your mindset by making a decision. Only you can control it. No one else can do this for you.
3. **Challenge your fixed mindset**: If you begin to hear yourself thinking negative, fixed thoughts like, "I'm not smart enough/ good enough," remember that your abilities can be developed.
4. **Take action**: Practice growth mindset regularly. Encourage your team to do so as well. Support and coach them to encourage learning and open discussion.

In researching for this book, I came across something closely related to the burnout epidemic I'd love to unpack here. It's a program by the Institute for Healthcare Improvement (IHI) called "Improving Joy in Work", which is a specific type of framework.[32] They offer a new approach when looking at the challenge of burnout by flipping the focus to the positive aspects of work. Adopting positive attitudes in this manner has been identified as important to both wellness and resilience. And if you haven't figured it out, I'm definitely a big fan of positive attitude and its impact on our overall mindset.

Here are the specific framework steps for leaders[32]:

- Ask the staff, "What matters to you?"
- Identify unique impediments to joy in work in a local context.
- Commit to a systems approach to making joy in work a shared responsibility at all levels of the organization.
- Use improvement science to test approaches to improving joy in work in your organization (which is not surprising given this is IHI).

While we don't have space to go into all the aspects of this brilliant work, I'll pick out a few more highlights focused on the wellness and resilience piece of the puzzle. It's shown that health and wellness, self care, cultivating resilience and stress management, role modeling, having a system of appreciation for the whole person with work life balance, mental health, and depression and anxiety support has monumental impacts on an individual's ability to regularly find joy in work.[32] This is really where the positive mindset comes into play. Understanding the difference between harmful and positive stress, focusing on the positive, and finding balance for yourself and your team are all aspects that will serve you well in your Pharmovation journey.

Finally, I want to share with you two more traits that will help you develop a right mindset for this work. They are resilience and grit. **Grit** is perseverance and passion for long-term goals. It's the motivational drive that keeps you on a difficult task over a sustained period of time. **Resilience** involves the ability to get back up when you've been knocked down or to come back stronger after a loss. It's the optimism to continue when you've experienced some failures and times are tough.[33]

Now, when I am feeling down or concerned that I can't go on, I will tell myself a little internal mantra that goes, "I am resilient, and I can get through this; I am resilient and I can get through this." That's a little mantra that I say to myself in my head. I also say these kinds of things when I'm doing my nighttime meditation. If I'm having some negative thoughts then I move on to my typical meditation, which is to keep

repeating the term “release, release, release.” So to reaffirm all that we have discussed here, grit and resilience are just as important as the other traits that we’ve talked about for adopting an effective mindset.

It is my desire to see all mindsets and attitudes changed from more negative to more positive types:

From	To
Fixed	Growth
Closed	Open
Victim	Creator
Powerless	Empowered
Reactive	Proactive
Unaccountable	Accountable
Timid	Bold

For our profession, we have to move beyond reactive thinking and action. We need to stop thinking the onus is all on the physicians. As pharmacists, we need to be accountable for the entire medication use process. Being bold is really important for me as this was my word of the year and is necessary to achieve the transformation we desire.

In summary, I hope you now realize that mastering your mindset and supporting your team’s mindset is vital in healthcare. While there are many different ways to describe mindset they can be summarized into two main categories: Fixed and Growth. While it’s not easy to change your mindset, it is changeable, and the good news is it is entirely within your power. There are several steps you can take to overcome barriers to an effective mindset.

Take Action Now

- Complete the Mindset Worksheet in the Pharmovation Implementation Guide to assess your score and identify actions you might take.
- Share these actions in the Pharmovator Community.

I hope you will take the above actions towards cultivating the type of mindset that will serve you best as you move forward in your Pharmovation journey. Remember, it’s YOUR time.

To support you incorporating the learnings from this chapter, access the Pharmovation Implementation Guide. Visit www.pharmovationguide.com or scan the QR code below for full access!

Chapter 2

Pharmovation OPPORTUNITY

"Pharmacy can do more with MORE."™
—Kimber Boothe

My husband, Richard, works in aviation. His entire career, even before college, has been spent at airports and working for international airlines. It is his passion, and he knows every aspect of the operations for his role as aircraft dispatcher and private pilot. While flying seems dangerous to the casual observer (you are in a steel cage barreling at hundreds of miles an hour through the sky after all) the processes in place to assure the safety of all involved are meticulous, well-planned, and followed to the letter every time a plane's wheels lift off the tarmac.

The safety processes in aviation are often looked to by healthcare leaders to draw comparisons and implement similar processes. This is not an uncommon conversation for us to have at the dinner table actually. There is an absolute necessity for processes and procedures as we have the safety of those in our care to consider. My husband's responsible for those on the plane and I, as a pharmacy leader, am responsible for the safety of every patient in our care. Unfortunately, aviation is doing a much better job ensuring the safety of those in their care. They have a myriad of checklists, processes, and procedures that are followed, without fail, each flight. When a safety event does occur, a massive investigation follows, procedures are updated, those responsible are held accountable and everything possible is done to ensure that a similar event doesn't happen again. Because when a plane goes down, hundreds of people are dead or injured, and it's a massive tragedy. It's a rare event. It's big news.

Yet in the healthcare system, if you look at patients who die or incur morbidity (undue pain and suffering) through human error it's like a plane crash every two weeks. EVERY TWO WEEKS. It's absurd. And it's a wholly unnecessary tragedy. The systems simply aren't in place to double check human error or hold those who make errors responsible. While technology is advancing, it isn't integrated in a

way that helps reduce errors as much as possible. Sometimes this is because we have not built the knowledge to implement and other times it is because we have not advocated adding the needed technology. At the end of the day, technology can't be integrated without the people. And the people can't integrate technology appropriately without proper systems and frameworks in place to do so.

That's where Pharmovation comes in. How are we orchestrating the framework of our organizations to support lower levels of morbidity and mortality for patients while supporting our team members to perform their jobs with more confidence and joy?

In this chapter, we'll discuss why staying aware of the bigger picture (even while conducting daily tasks) is so vital. There is a huge need for well-trained and innovative pharmacists and technicians in the healthcare system. We'll unpack why that is, look at the need and opportunities available, explore the current landscape, and ultimately agree that there are many possibilities for pharmacy to increase involvement in disruptive innovation to improve patient care.

Need & Opportunity

In this section, we'll look at…
- Need
- Pharmacy Workforce
- Opportunity

Need

Let's start with the need. There are some important trends that are affecting pharmacy practice, including…

- Prescription Volume
- Drug Spending Increase
- Aging Population
- Complex Regimens
- Physician Shortage
- Transition to Value

Current trends show that there is increased spending on prescription drugs driven mostly because of a 21% increase in average drug

price and a 5% increase in utilization since 2014.[34] Overall we see an increase in spending of 26% on prescriptions which is higher than in other sectors including inpatient care, outpatient care, and professional services which only rose 16%. The utilization across all of these areas is comparable between 3-5%. The only area we see a decrease in utilization is inpatient care as we transition more and more to outpatient procedures and care.[34]

The rise in prescription spending is driven by specialty medications at a higher price per unit and we will dive deeper into that trend coming up. Specialty drugs are more complex than most prescription medications and are used to treat patients with serious and often life-threatening conditions including cancer, hepatitis C, rheumatoid arthritis, HIV/AIDS, etc. While many can be taken orally, most require injection or infusion with special administration, storage, and delivery requirements. Their development leads to higher prices, and comprehensive care is required for education and monitoring.

It's important to note that prescription drugs account for about 10% of our overall national healthcare expenditures. Hospitals and other types of care account for much more, and we have shown in separate studies that prescription spending is helpful to reducing those other costs of care.[35]

A source I rely on to monitor current trends, growth, and development over time is the Kaiser Family Foundation (KFF) Health System Tracker. They keep track of average annual growth rates for select service types such as physicians, hospitals, and prescriptions. From their data, we see a steadying and more balanced growth of prescription spend over this past decade (~4%) as compared to the prior two decades (7-13%), where you see significant growth in prescription spending.[35]

What's also important to keep an eye on is spending on specialty drugs vs. traditional drug trends. For instance, back in 2014, we saw a huge bump in the use of specialty medications and in their pricing, resulting in a 22% increase in per capita spending. But since 2014 we've seen this specialty drug spending decrease and come down to more mirror that of the other non-specialty spending.

The final piece of information from the Kaiser Health Family Foundation I want to draw your attention to is the annual change in per capita prescription drug spending compared to total healthcare spending. We again see another peak of specialty drugs prior to 2000. Then an increase in prescription spending that was above total healthcare spending around 2014. Unfortunately, this specific data

has not been updated since 2017, but future projections indicate this coming decade will see pharmacy spending mirror total healthcare spending more closely.[36]

Related to prescription volume is the increased aging population in the United States. In fact, the aging population shows a 135% increase in those over 75 occurring by the year 2050.[37] The result will be a change in the elderly population over 65 from 35 million in 2000 to more than 80 million in 2050. Among this aging population (and other populations but most significantly with those over 75) there is an increase in the complexity of medication regimens.[38]

To add to the complex regimen trend, we must look at the drugs in the pipeline for development. Pharma, which represents the biopharmaceutical companies, compiles data on research pipelines and differentiate first in class drugs. First-in-class drugs tend to be those more unique medications that are not me-too drugs that are bringing significant advances to the market. The majority of drugs in our research pipelines are fitting the potentially first-in-class definition, which does lead to more complexity and need for more medication expertise.[38]

More expensive medication and complex medication regimes used by an aging population under no direct supervision combined with a shortage of providers represents a deeper emerging issue.

By the year 2030, the Association of American Medical Colleges (AAMC) projects a shortage of between 40,000 and 121,000 physicians.[39] The provider shortage is yet another area that is leading to a need for increase in pharmacy services. This shortage is then broken down by specific specialty areas as well as the determined retirement age of each physician. Each plays a role in determining the shortage. If primary care physicians choose to retire two years later, then we have about 20,000 physicians. Whereas the current status predicts that we will only have about 10,000 full-time equivalent physicians. But if physicians decide to retire earlier, we could be left with only about 2,500 primary care physicians. Another possibility falls somewhere in the middle, if physicians decline their hours instead of fully retiring, there will be a significant impact on surgical specialties especially, but all areas of the healthcare workforce will be impacted.

In the State of the Nation's Health Workforce, The Association of Academic Health Centers (AAHC) summarizes it like this: "The dysfunction in public and private health workforce policy and infrastructure is an outgrowth of decentralized decision-making in health workforce education, planning, development and policy making (out of order)... the costs and consequences of our collective failure to act

effectively are accelerating due to looming socioeconomic forces that leave no time for further delay (out of time)."[40] So, you may have seen there have been some initiatives to help more people get into medical school and some debt forgiveness. Pharmacists can definitely play a role in repairing the dysfunction and filling gaps created by the shortage. Several of our national organizations have had conversations on how pharmacists can be included in the solution.

We must focus on the transition to value. This was laid out by the Institute for Healthcare Improvement some years ago and summarized by a triple aim for healthcare.[41] Subsequently a fourth area — provider engagement — has been added, but let us first explore the triple aims. These are: improving patient experience, achieving better health through improved outcomes, and managing and reducing costs. So when we think about our role as pharmacists in a struggling system, we must think about it holistically, with these three aims in mind.

We are seeing that the payers are moving from fee for service to more fee for value models. We'll cover this further in later chapters, but from a high level, when we look at some of the care models compared to the provider's financial risks, we do see a movement towards more complex models with significantly more financial risks put on the provider. For instance, the move from a shared savings model to bundled payments, to partial capitation, to global capitation, where you are expected to care for a patient with a set amount of money. This shift has moved us towards more clinically integrated networks, evidence-based coordinated care, and having more patient and population centers.[41]

Pharmacy Workforce

There are current concerns that our supply of pharmacists exceeds the demand, and I will argue that we should be able to increase the demand based on the factors we just discussed. The factors impacting the pharmacy workforce are complex and a comprehensive analysis is beyond the scope of this chapter. We will review the key data sources and metrics to shed light on the pharmacy workforce supply and demand.

Back in 2002, D.A. Knapp wrote an article projecting the need for pharmacists vs. the pharmacists available in 2020.[42] This is then broken down by different categories such as order fulfillment, primary services, secondary/tertiary services and then indirect or other services. While they projected a reduction in the need for pharmacists in order fulfillment, overall the projected need for total pharmacists was 417,000 with a supply of 260,000. Yet, the research estimated a shortage of about 157,000 pharmacists. Fortunately, we do have about 320,000

pharmacists practicing in the United States (nearly 60,000 more than Knapp predicted would be available), yet we still haven't reached the predicted level of demand for pharmacists and pharmacy services. With this increased demand for pharmacists, my hope is that more pharmacists will join the force to advance practice and help achieve the triple aim set out by the Institute for Healthcare Improvement.

Let's compare these projections with the current Bureau of Labor Statistics and its recent job Outlook 2019 to 2029. While pharmacist job growth is projected at -3% with 311,000 employed, technicians see double that in need, a projection of 4% with 438,000 employed.[43] For both professions this projection slowed compared to projections in 2016 and does not take into consideration retirements.[44] Either way the projections are far short of the 417,000 pharmacists projected by D.A. Knapp.

The Pharmacy Manpower Project, Inc. completed surveys to assess supply and demand of pharmacists in the workforce and reported in the Pharmacist Demand Indicator (PDI).[45] In short, the research showed that the supply of pharmacists was not meeting the demand from 2008-2015. Beginning in 2016 the PDI showed the demand was in balance with supply and the supply even exceeded demand in some regions. Specialized roles and management were in more demand than general or staff positions.[46]

Since the PDI, The Pharmacy Manpower Project was renamed to the Pharmacy Workforce Center, Inc. and they updated the report methodology to create the Pharmacy Demand Report (PDR). This information is intended to be utilized by the pharmacy profession and other stakeholders to assess and follow the trends for various career opportunities for pharmacists and pharmacy technicians on an individual state, region, and metropolitan area level. Positions across a multitude of different roles were considered, including clinical pharmacists, hospital pharmacists, other pharmacists, pharmacy directors, retail pharmacists as well as pharmacy technicians. This research helps us understand that demand for pharmacists is not simply one type of job posting or position, but a whole network of jobs and skills necessary to fulfill needs within the pharmacy network — from clinical pharmacists to technicians and everything in between. The posting quotient is the number of positions posted and normalized based on the number of pharmacists or technicians within the state. Let's look at a few examples comparing 2019 and 2020. In Alabama, there were 10 postings per thousand licensed pharmacists in 2019. And that was down to 4.5 in 2020. My state of Ohio is at 34 and it is maintained at 34. There are some states where there was an increase, like in Rhode Island, but for the most part, most states have declined in the number of postings per thousand pharmacists.

Now this differs from our technicians where for the most part we do see there is an increase in the number of technician postings per thousand technicians. And what's important also to notice is there are a lot more postings per thousand technicians than there are for pharmacists. For example, in Alabama, you see 232 positions posted per thousand technicians. And that actually did slightly decrease from 2019 to 2020. And again, if we jumped down to Ohio, where I live, we have 392, which increased to 453.

In fact, the demand for pharmacy technicians has increased dramatically over the past decade.[47] The good news is we do have more technicians becoming certified, which is very positive, and this is definitely an important part of practice advancement and will be an important part of considerations for Pharmovation execution. So this just shows the number of certified technicians across the country by state. And we do have a total of about 289,000 certified technicians.

A final benchmark I want to note here to bring home the need available for pharmacy professionals is the American Society of Health System Pharmacists (ASHP) national survey.[48] They conduct a survey every year to benchmark and discover how many pharmacists and technicians are staffed in hospitals across the country. This is normalized by dividing by every hundred occupied beds. The 2019 (most recent at the time of writing) survey showed approximately 19 pharmacists and 17 technicians per hundred beds.[48] This ratio has been increasing steadily, partially due to antimicrobial stewardship and medication history technician work, and likely due to some of the other elements we've discussed such as complexity of meds and higher acuity patients. Keep in mind that this metric is for acute care only and I am seeing similar trends in support of expanding ambulatory pharmacy services.

Part of the concern with the supply of pharmacists is pharmacy school enrollment and that the growth in the number of pharmacy schools has increased and outpaced other healthcare professions beginning in the early 2000s.[49] A challenge we see here is that students graduate with a significant amount of debt, which raises a question about a pharmacist's return on investment (ROI) from their schooling to their projected career. A study a few years back showed clearly that while pharmacists' salaries have increased steadily since 2002, it doesn't keep pace with the increase of schooling costs.[50]

With all this data, I don't see a good forecast to project the true quantified need for qualified pharmacists and technicians based on the vast needs related to medication use. Even today I see jobs go unfilled for months to a year all around the country. We have to find ways to be innovative about getting people in the right place. Given the trends presented here

and shown in research, I still believe that pharmacy can do more with more. And we will need to advocate for more as we continue.

Let's put our pharmacy team members to good use in order to advance practice.

What to Watch for

I do not think we have a good forecast to predict the true quantified need for pharmacists given the trends presented.

Pharmacy Can Do More with More!
(And it looks like we have more)

Opportunity

Now that we've broadly outlined the need for qualified pharmacists, I'd like to quickly touch on the opportunities available and the role of pharmacists in expanding sectors. As we turn to examine this opportunity angle, I want to clarify that there's a role for pharmacists in so many sectors and that this is by no means meant to be all-inclusive.

Pharmacists have an opportunity to serve patients in many sectors including:

- Quality
- Patient Experience
- Electronic Health Record (EHR)
- Prescription Volume
- Aging Population
- Complex Medication
- Adverse Drug Events
- Physician Shortage
- Accountable Care Organization
- Opioids
- And MORE!

Role of Pharmacy
ACO: Accountable Care Organization
CBO: Congressional Budget Office
EHR: Electronic Health Record

Perhaps some of the above are sectors you'd not considered before. And we touch patients in so many areas across the continuum of care from ambulatory to acute care pharmacy, to specialty & outpatient pharmacy to clinic & home infusion. So these are just some of the main touch points where patients come into contact with pharmacies and our medication services.

Pharmacy Continuity Touch Points

But as we further understand pharmacy's role within the healthcare enterprise, we'll see that pharmacy is an integrated system of business units with accountability for clinical and essential outcomes related to medication use across the continuum of care within a health system. This covers operations, acute care clinical services, ambulatory care, outpatient pharmacy and other managed pharmacy solutions and business services. There are so many aspects that the pharmacy enterprise of our health systems touch these days.

To sum up, there are several important trends that support the need for pharmacy. While the pharmacy workforce is trending to have a surplus of pharmacists graduating in the coming years there are significant gaps when it comes to utilizing these trained professionals to their utmost capacity. There are some great opportunities ahead for pharmacy to address recent trends and meet the needs of patients.

Let's continue by discussing the wider landscape of pharmacy and how this comes alongside disruptive innovations in the field.

•••

Landscape

In this section, we'll look at…
- Healthcare Landscape
- Pharmacy Landscape

Healthcare Landscape

Next, we'll be looking at some scans and forecasts for healthcare overall and pharmacy. In keeping with our theme of the chapter, these will continue to put the entire field in perspective — past, present and future — as we begin to strategize and plan for our own organizations' innovations.

First, let's discuss the American Hospital Association's (AHA) environmental scan from 2019.[51] Environmental scans will become an important part of what you'll be assessing as part of your situational analysis and strategic planning moving forward. The AHA is a great place to start since they publish this nearly every year — what they see as the forecast and key things that impact health systems in the United States.

In 2019, their top picks were consumerism, innovations (such as technological advances), chronic disease management, volume to value, social determinants of health, and new entrants to care.[51]

The AHA also partners with a few other organizations through the Society for Health Care & Strategy Market Development (SHSMD) to create a tool called Futurescan.[52] Summarized here are the key topics that the study predicted we should be considering moving forward. Included is disruptive innovation and the impact of new entrants on the future of healthcare, the dual transformation of healthcare and

how that will be the key to sustainability moving forward. Also, the changing face of strategic health care partnerships, how to build a resilient health care organization, and technologies that are shaping the future of health and medicine. Additionally, we should consider that frictionless health care requires a connected healing ecosystem. In addressing the aging population in America (as mentioned before) they also offer a five part solution to healthy aging plus the assertion that innovation is key to the future viability of Medicaid.[52]

When we consider all of these, we see that they can easily integrate with pharmacy. There are obvious areas where pharmacy can make a positive impact and lend support and help to each of these areas.

Another excellent resource to consider is the American Council of Healthcare Executives (ACHE). It's an organization that goes beyond pharmacy to include other healthcare leaders and a perfect place for the necessary multidisciplinary conversations we should be having. Every year or two they aggregate research and release the top issues confronting hospitals. In 2019 they listed financial challenges, personnel shortages, behavioral health/addiction issues, government mandates, patient safety and quality, access to care, and patient satisfaction as the leading challenges to be addressed.[53] These are all important to keep in mind, again, not only to find ways that pharmacists can help to solve these issues and address concerns, but also when you're writing business plans and strategically pitching these plans to senior leaders. **Keep in mind that these are the things at the top of their to-do list. Anything you can do to help ease these specific burdens and stresses is highly beneficial to your plan getting approved.**

Pharmacy Landscape

Another forecast I always turn to is the American Society of Health System (ASHP) pharmacy forecast.[54] Each year, they publish a forecast that covers the next three years of trends. All of them are valuable. We'll be looking into this topic again in later chapters but it's important to introduce now as we discuss the landscape and disruptive innovation. Some of the top trends from 2020 were patient-centered care, pharmacy education and workforce, pharmacy leadership, evidence-based pharmacy practice, pharmacy supply chain, healthcare marketplace, healthcare reform, and black swan events — which ironically occurred in full force in 2020 with the pandemic.[54] Then, the 2021 pharmacy forecast included these topics: global supply chain, access to healthcare, analytics and big data, healthcare financing and delivery, patient safety, pharmacy enterprise and the pharmacy workforce.[55]

I want to tease this out a bit and look at a few specific details. Each of the sections of the forecast goes into some key recommendations for us to consider. This is what rises to the top after surveying pharmacy leaders as to what is likely to happen and what we need to act upon. Again, we'll revisit this as part of situational analysis later when you will score your organization, but I want to introduce some background now.

- **Global Supply Chain**: Global supply chain in particular highlights the scarcity of pharmacy resources. We want to help support the pandemic-related surge and follow up. Publicly reported quality measures are important here. Then, working on legislation we can help reduce some of the unnecessary spending on medications and help to improve the quality of the manufacturing processes.
- **Access to Healthcare**: We should be supporting telehealth and helping to implement and permanently put into place telepharmacy rules. Technicians need to be broadly and effectively utilized and move into enhanced technician training and roles. In short, we should make permanent any of the expanded scope of practice that was implemented in response to the pandemic. They want greater harmonization of formularies and formula decision-making processes, and they want policies related to non-FDA regulated therapies.
- **Analytics and Big Data**: Under analytics and big data, the forecast calls to recruit, resource, and expand the team of pharmacists in health informatics. We should begin to work more collaboratively and support the competence and capabilities of our team members around artificial intelligence. Then in turn, we can support all aspects of patient care across systems. In particular, analytics and patient outcomes should drive the strategic direction of our operations and clinical services. We need the data. We want to focus on improving our informatics, residency training programs and support, and have the data that we need. And finally, the last suggestion relates to the opportunities and limitations of our big data as we want to assure that we have outcomes that can be assessed.
- **Healthcare Financing and Delivery**: Collaborate with our government affairs teams and jointly establish a pharmacy policy platform. We want to monitor trends in drug contracting and fulfillment. Then, we want to have financial performance and positioning of the healthcare system that helps to cultivate strong relationships with our system financial leaders. Finally, we want to be able to evaluate every aspect of the pharmacy enterprise with respect to value offered to the patient and the system. This evaluation could mean both internally and built on external partnerships.
- **Patient Safety**: We want to have pharmacists placed in organization-wide roles related to patient safety. We want to be able to ask

provocative questions on how harm can be eliminated by getting all of that detail from our staff and team members. We want to engage in setting the health system and patient safety priorities beyond the medication use process. So as I like to say, anytime a medication is being considered, prescribed, ordered, or monitored, a pharmacist needs to be accountable for the process. We need to be aware of that and engage. We then want to have new patient safety measures and monitoring strategies. We want to make sure we have a formulary system to systematically identify the quality and quantity of our evidence. And we want to make sure we are addressing the wellbeing needs of our team.

- **Pharmacy Enterprise**: We want to look at expansion into ambulatory sites and telehealth settings, including the underserved and remote areas. We want to provide transitions of care medication services, medication reconciliation services, and documentation of our services is important. Finally, we need comprehensive medication management services for high risk and chronic patients, as well as for pharmacist, ambulatory, and population health management.
- **Pharmacy Workforce**: We want to work towards recognition of ambulatory care pharmacists as primary care providers within the health system. We should be looking at productivity and revenue generation benchmarks. Develop ambulatory care operational systems that: promote credentialing, billing, coding, and documentation for pharmacists' providers; achieve financial sustainability; align with the state and federal requirements for prescribing pharmacists. Then to have advanced technician roles and leadership positions and to assess auto verification adoption, and finally, to have an impact on the decreasing pharmacy student numbers. So while we've talked about the projected increase in surplus, there is significant concern that a shortage could be coming as we have less students going into pharmacy school and what impact that could have in the near term of the services that student pharmacists provide during their internships, rotations, as well as during residency programs.

In these forecasts, you can see a rising trend toward transitions of care, where historically health systems have been acute-care-focused. Now we ask, what are the innovations available and what innovations should we be looking to foster in order to address the above forecasted issues?

In summary, we learned that the broader healthcare landscape and pharmacy landscape is primed for innovation to advance practice and solve the unmet needs identified in these environmental scans.

Disruptive Innovation

In this section, we'll look at…
- What is Disruptive Innovation?
- Market Forces
- Healthcare Disruptive Innovation

What is Disruptive Innovation?

Here is where we begin our conversation about disruptive innovation in the pharmacy industry. First, I want to remind us of what our innovation descriptions are.[56]

The outcome of any innovation is a new or improved product, service, platform, or process. The degree of innovativeness or novelty can be categorized as[56]:

- **Incremental or Evolutionary**: Innovation that is an expected improvement on an existing product.
- **Radical or Revolutionary**: This is unexpected but does not affect existing markets.

Finally, we have the degree of change to consider. This is broken into two categories. First, sustaining change, which does not significantly affect existing markets. And second, disruptive change which creates a new market by providing a different set of values. This ultimately and unexpectedly overtakes an existing market.

Ok, with these definitions in place, let's take a look at some of the disruptive innovations currently happening to pinpoint where it already occurs frequently. Clayton Christensen is a well-known author on this topic, who's written a disruptive solution for healthcare called *The Innovator's Prescription*.[57] He coined the phrase ***disruptive innovation*** as an "Innovation that creates a new market and value network and eventually disrupts an existing market and value network, displacing established market-leading firms, products, and alliances."[57]

So, we can look at disruptive innovation as scary or as a potential positive, either way we need to be aware of it. Since we've already discussed disruptive innovation in the previous chapter, I don't want to spend too much time on it here. But bring back to mind examples like Apple, Uber, Amazon, and Google.

Market Forces

Over the last few years, there have been significant market forces that have impacted healthcare. One such force was the creation of new healthcare companies with large organizations like Amazon, Berkshire Hathaway, and JP Morgan, which was subsequently disbanded. We see a lot of vertical integration happening with insurance companies. We have Amazon acquiring PillPack and other organizations who banded together and created their own generic drug company because of drug supply issues. There are significant disruptive innovations occurring in the market today. Some of them are exciting and some of them haven't yet achieved their full plan.

We also see market forces with government influence where, over these last few years, The Department of Health and Human Services (HHS) is significantly trying to move forward. There is now a blueprint they created around prescription pricing, including improved competition, better negotiation incentives for lower list price and lowering of out-of-pocket costs. While most of this has not yet come to fruition because of the complexity of the system, you can see that it is at the forefront.[58]

Healthcare Disruptive Innovation

Now let's dive into where disruptive innovation shows itself in the healthcare industry. The AHA Center for Health Innovation studies these trends and noted that 2018 in particular was a year of unprecedented disruptive innovation.[59] These disruptions included: Apple announcing an iPhone health records feature; Amazon, Berkshire Hathaway, and JP Morgan Chase enter a healthcare partnership; Apple to roll out AC wellness on-site clinics for employees; Uber Health to help health care providers get patients to their appointments, Cigna Express Scripts announces a merger; Google offshoot launches a virtual diabetes clinic; Apple patents could make iPhones a medical device; Amazon's Alexa division adds a healthcare team; Walgreens and Humana to start in-store senior health care clinics; Amazon buys the online pharmacy, PillPack; Humana private equity firms close Kindred Curo deals; Tech giants partner on developing common EHR standards; Cigna-Express Scripts merger moves forward with conditions.

We see examples from nearly every month that change the way healthcare operates in significant ways. More and more of these disruptive innovations begin to touch on medication and medicines, where pharmacists have both a vested interest and a responsibility to be involved at the top levels. We see large companies merging and partnering on a regular basis. We must be aware. We must pay attention. And we must be part of these changes to ensure patient safety.

I have highlighted several of the innovative companies that are touching medications. For example, we have Amazon shown with some of the various things that they're doing around healthcare, such as their purchasing of PillPack and getting closer to patients with that acquisition. They are also creating virtual care pilots, investing in machine learning, and betting on blockchain. We have CVS Healthcare, obviously expanding beyond pharmacy to health hubs, stepping into in-home dialysis, and addressing social determinants of health. We see the same thing with Walgreens, which is also expanding and doing some innovative, disruptive things such as establishing medicare service centers, expanding digital marketplace. Their clinic strategy is evolving as they close most of the in-store health clinics while keeping those run by local health systems and expand partnership in senior clinics.[59]

Another element we must keep in mind akin to partnerships and mergers are the vertical integrations we increasingly see. United Healthcare, Aetna, Cigna, Anthem, Humana and BlueCross BlueShield all own their own pharmacies and pharmacy benefit managers.[60] The vertical integration includes the insurance companies at the top, the PBM owned by the insurer, the specialty and mail order pharmacy they own or integrate with, and even the provider services run by the insurer separate from the health systems. This integration is something to watch as a lack of transparency and steering can happen when these payers also have their own providers and pharmacies. We must advocate for patients at these levels, making sure we serve them as well as possible.

From the ASHP Forecast we see the following recommendations to watch out for as disruptive forces.[61]

- **Dismantling the Affordable Care Act**: Pharmacists should provide data that describe efforts to improve patient care. Of course, that did not end up happening. The affordable care act is still in place, but that was a significant issue and continues to be a need again for us to provide documentation of our value.
- **Pricing of Pharmaceuticals and Transparency**: Pharmacists must advocate publicly for patients suffering from egregiously high drug prices. We should endorse transparency in drug pricing due to contracts and arrangements by manufacturers, pharmacy benefits managers, and wholesalers should be demanded.
- **Drug Manufacturing by Health Systems**: Assessed as unlikely outside of one entry and Group Purchasing Organization.
- **Nontraditional Participants in Healthcare Delivery**: Find ways to partner and develop new strategies for care.
- **Additional Forces to Consider**: Change management to make bold changes with flawless execution.

In summary, with all of this information that's ever-changing, mind you, we cannot deny that keeping a view on the big picture of the healthcare system and pharmacy's place within that system is an important responsibility for pharmacy leaders. When developing strategy, we can see how it's imperative to keep an eye on environmental scans and forecasts. We must be aware of this and discuss how to navigate recent disruptive innovations as they provide both challenges and opportunities.

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As we come towards the end of this chapter, you can see how the background regarding need, opportunity, landscape, and disruptive innovation will finally weave together into the overarching framework of the pharmacy enterprise today. It's time for our mantra friends…

Pharmacy can do more with more.

- More knowledge, more advocates, more funding, more strategies, better services, better leadership, well-integrated technology, and excellent execution.
- In short, pharmacy can do more with innovation. You might even say: *Pharmovation*. See what I did there?

With this background of the current and ever-evolving state of pharmacy, we will, in the rest of this book, discuss how we can affect change for the better in our industry. **In the coming pages you'll learn exactly what to do to advocate for resources, advance pharmacy practice, and accelerate your career, to bring joy to your work while improving patient outcomes.**

To support you incorporating the learnings from this chapter, access the Pharmovation Implementation Guide. Visit www.pharmovationguide.com or scan the QR code below for full access!

Chapter 3

Pharmovation ENTERPRISE

"Health is a state of complete physical, mental, and social well being and not merely the absence of disease or infirmity."
—World Health Organization

I attended the University of Connecticut for my undergraduate degree. My freshman year, I knew I wanted to be a pharmacist. I thought I knew what that entailed. But I was about to get a rude awakening. I was extremely naive to the health system as a whole. Because then, more so than now, the health system was extremely disparate and disconnected.

When I came home during spring break, my parents told me that my mother had been diagnosed with lung cancer. They had received the diagnosis a few weeks earlier but waited to tell me in person. She began treatment right away for metastatic lung cancer. That summer, I drove her to appointments and helped her navigate through the labyrinth of the healthcare system. Healthcare is a system I thought I knew something about, but negotiating it personally is still so difficult. While my mother had wonderful members on her treatment team, we had limited opportunities to speak to a pharmacist about her medications. As a pharmacy student at the time, I recognized this as a huge missed opportunity.

An additional difficulty was traversing through the many different points of care. My mother had chemo at one place, radiation at another location, her primary care physician's office down the road, and her oncology specialist at a separate complex. It was a maze to say the least. On top of which, I had to print her medical records from one hospital to take to her next appointment. There was simply no continuity of care. And still, with all these separate locations, there was no pharmacist on her team. Not at the oncologist, the primary care office, or anywhere. No one oversaw her total care. No one understood or considered how separately prescribed medications might interact or interfere with one another.

While at one of her radiation treatments, she began to complain of acute pain; she was unable to move her legs. What we didn't know at

the time was the cancer had spread to her bones as well. Her leg had broken just walking to the car. I called an ambulance. She was rushed into surgery, and we thought she'd be able to recover and then we'd refocus on treating the cancer. Ultimately, she never left the hospital.

Unfortunately, this story is all too common. Many of us have had similar experiences with family members or loved ones. I don't know how, or if, my mother's outcome could have been changed, but I do know that there was no one overseeing the whole process of her treatment. No one to ensure a safe continuity of care. She had so many places to go to get the treatment she needed. So many touch points along the way. Nothing was integrated. No one comprehensively reconciled her medications, or considered how they might affect each other.

Better hand-offs can happen within a system. Now, the hospital where she received treatment has a comprehensive cancer center. A lot of aspects have improved drastically since 1993, but there's still a need to watch patient touchpoints closely. Many hospitals still provide oncology medications without a pharmacist involved. This must be changed to ensure patient safety, not just in oncology, but across the board.

In this chapter, the objective is to capitalize on the value of the integration and reach of the pharmacy enterprise. We'll start by looking at the big picture of healthcare, which will help us step back and think about where pharmacy fits into that picture. Next, we will think about the business of healthcare and answer the question or whether healthcare is a business. This will help us start to think about return on investment and how we create our strategic plans. Further, we will explore the history of pharmacy enterprise: where the term comes from, how it is used, and how it encompasses the larger and more important role within the health system. We'll also explore the vast scope of the pharmacy enterprise and you'll begin to assess your own organization with the useful Pharmovation Implementation Guide.

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The Big Picture

In this section, we'll look at…

- What are Health & Healthcare?
- US Healthcare Status
- Role of Health Systems
- How Does Pharmacy Fit In?

Since we've already spent some time covering healthcare landscape trends and disruptive innovations in previous chapters, it's time to take another step back and look at the big picture of healthcare. Understanding our why will help us to connect the dots to our Mission and Vision as we prepare to create our strategy.

What are Health & Healthcare?

We'll start by attempting to answer the question "What is health, and what is healthcare?" all while taking the pulse of the US healthcare status on the whole. We will be looking at the role of health systems and discovering how pharmacy fits within it all.

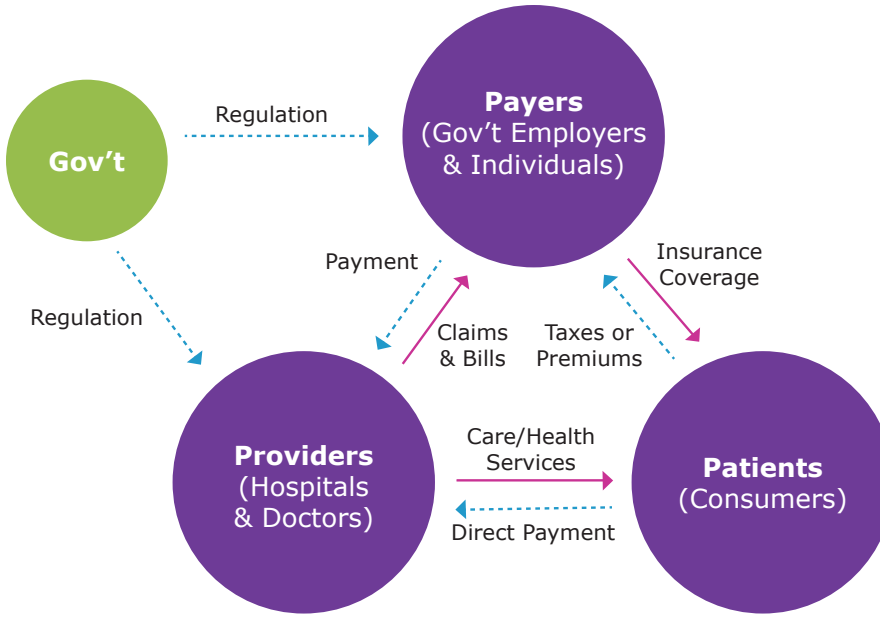
As I mentioned at the beginning of the chapter, according to the World Health Organization (WHO), "Health is a state of complete physical, mental, and social well being and not merely the absence of disease or infirmity." And yet, we usually consider healthcare to be only the treatment of disease or malfunction. We look to doctors and hospitals when something goes wrong.

Let's instead give healthcare a broader and more encompassing definition that includes preventative care.

Healthcare:

- The **organized** provision of **medical care** to individuals or a community.[62]
- The field concerned with the **maintenance or restoration** of the health of the **body or mind**.[63]
- The **prevention, treatment, and management** of illness and the **preservation of mental and physical well being** through the services offered by the medical and allied health professions.[64]

Now, let's look at the healthcare constituents. We often think about the patient as the center of our healthcare continuum, but that's not necessarily the case. In truth, there are four major constituents. We have the patients (the consumers), the payers (usually government employers or individuals), providers (including hospitals, doctors, and pharmacists), as well as the government.[65] Considering all these components, we see that healthcare is provided through exchange of payments and insurance coverage, while the government plays a role providing regulations to both payers and providers.



Healthcare Constituents[65]

US Healthcare Status

Let's jump into the status of US healthcare. The OECD or the Organization for Economic Cooperation and Development, is a global organization of many countries who get together and assess different metrics impartially. One of the frameworks they've created is for health system performance. In this case, we're not talking about health systems like we think of in the United States, but the broader concept of health care. They've created a framework that illustrates comparisons between countries which shows the health status of populations and health system performance. They use indicator by indicator analysis and snapshots to compare performance in five key areas: health status, risk factors for health, access to care, quality of care, and healthcare resources.[66]

Now, luckily, most countries have universal healthcare coverage. This promotes equitable access for needed health care services, and quality of care has generally been improving. But, this has come at a cost with health spending now accounting for about 9% of the gross domestic product for the average country.[66]

Now, I want to dig in and discuss a few comparisons across these domains. Shown here are the health status risk factors for health access to care and quality of care, comparing the OECD average to that of the

United States. If you're interested in the specifics of other countries, it's all available via their website. See the references for more details.

When we look at life expectancy, this has remained fairly flat for the US. We line up pretty much with the OECD average.[66] However, when we dive deeper into these statistics, we see that with both avoidable mortality (deaths per hundred thousand people), and chronic disease morbidity (diabetes prevalence), the US is doing worse than the OECD average.[66]

We do a bit better when it comes to overall self-related health issues, like risk factors for health and smoking. We have fewer than average smokers, which is good. Alcohol consumption is about on average, while we're significantly worse than the OECD average when it comes to obesity.[66] This is interesting because they've recently lowered the BMI target from 30 to 25, so either way the US is doing poorly in this category. Moving on to access to care, the US population that's eligible for core services related to insurance coverage and financial protection is much worse than the OECD average. Although this has gotten better over the last eight years when we've expanded health insurance with US financial protections.[66] Also again, we're significantly worse when it comes to primary care because we have many uninsured or under-insured individuals. The last measure to highlight is that of quality of care. Here, the US is on average with effective primary care and avoidable admissions for asthma or COPD. We're also on par with the average effective secondary care, which is shown as a 30-day mortality following an acute myocardial infarction. Finally, regarding effective cancer care, using a breast cancer five-year net survival rate, we are doing better than average. As you can see, there are clearly areas for improvement and our healthcare system is far from perfect.

Next, I want to discuss life expectancy. The OECD also has extensive research on this topic showing the life expectancy growth between 1970 and 2017. Japan has the highest life expectancy of 84.2 years, above the OECD average life expectancy of 80.7 years.[66] Again, the US comes nowhere near the top, with an average life expectancy of only 78.6 years, which is behind Chile, Slovenia, and Greece (among other countries).

The last big measure OECD considers are the health resources used. We look here at health spending and see that the US is significantly higher than other countries. We also have the highest health spending at 16.9% of GDP compared to a world average of only 9%.[66] We are spending more money than other countries and have a lower life expectancy, higher obesity, and higher rates of avoidable deaths per hundred thousand people to show for it. All in all, not great.

Now, before moving on, I do want to consider pharmacists. While I can't tie any direct correlations to this, I find it interesting to compare and understand how many practicing pharmacists there are. The OECD average is 83 pharmacists per 100,000 people in a population, and most countries have seen an increase in practicing pharmacists over the past two decades. With this metric, the US is above average with 95 pharmacists per 100,000, which has increased slightly from 2000 to 2017.[66]

Role of Health Systems

Let's shift now and look at the health system inside the US. The Agency for Healthcare Research and Quality (AHRQ) created the Comparative Health System Performance (CHSP) Initiative to study how healthcare systems promote evidence-based practices in delivering care. They then disseminate findings broadly across health systems nationally. To me, this is quite interesting because there isn't as much direct research being done around the specific effort of how health systems are performing. These initiatives have been around for a while, and there are a few key data points that I want to share with you.

Specifically, here are their listed objectives[67]:

- Classify and characterize types of health systems and compare their performance in terms of clinical and cost outcomes.
- Identify characteristics of high performing health systems.
- Evaluate the role of patient-centered outcomes research (PCOR) in health system performance.
- Disseminate findings broadly to help diffuse PCOR evidence across health systems nationally.

When we look at doing this type of research, of course, it's important to first define what a health system is before we can actually compare health systems.

So first, what is a healthcare system?

In the United States, a health care system is...

- An organization that includes **at least one hospital** and **at least one group of physicians** that provides comprehensive care (including primary and specialty care) who are **connected** with each other and with the hospital through **common ownership** or joint management.[68]
- An accountable care organization is not, by itself, indicative of joint management.[68]

So, now we've got a definition to work with. Let's look at some of the statistics of the health systems in the United States.

A lot of vertical integration has occurred even over just the past five years. In 2018, at least half of physicians were practicing as part of health systems instead of independently, which is up from 40% in 2016.[66] In looking at the number of hospitals and hospital beds, 70% and nearly 90% respectively are affiliated with a health system. The number of systems is growing as well. In 2016 there were 626 systems, which grew to 637 in 2018. The overwhelming majority are still nonprofit organizations. This will be an important point to remember when we start discussing healthcare as a business.[67] Of note, the average health system in the US has over 900 beds.

While we'll go more into detail with statistics later in our Strategy chapter, I want to briefly mention how healthcare systems measure performance. Typically, they measure clinical quality, cost, access, equity, patient experience, and patient safety (among others). They'll also consider organizational responsiveness, care coordination, community service, physician work-life satisfaction, governance, and innovation.[67] There are also performance measure sets currently in use including: Commonwealth Fund's State Scorecard on Health Systems Performance, CMS Hospital Compare, Minimum Data Set, The National Health Service (United Kingdom), Star Rating System, The Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) Survey, Baldrige criteria, National Committee for Quality Assurance's Healthcare Effectiveness Data and Information Set (HEDIS). Other combinations include adherence to clinical practice guidelines, in hospital mortality rates to measure quality, and costs per episode of care, or hospital operating performance. It's helpful to understand what measures health care systems are looking at when we begin to put together strategies we'd like to implement for our teams. We cannot justify resources unless we understand what's important to the system, and how we can improve these metrics. How can you strategize within the system?

How Does Pharmacy Fit In?

Now we ask, how does pharmacy fit into this system? We know that medicines play a crucial role in controlling future healthcare costs. It's important for us to know this and help others (particularly those who aren't pharmacists) understand it as well. We can shift the paradigm here by helping others (CEOs or CFOs for example) see the savings associated with properly administered medications. Medicines, if used correctly, help patients live longer, healthier lives, and are one of the most cost-effective therapies that we can deploy.

Of course, I firmly believe that allowing a pharmacist to optimize the use of medications and medication outcomes is critical to healthcare quality. In fact, data shows that medicine plays a huge role in controlling future healthcare costs where we can shift the paradigm to preventative care. For every dollar spent on a certain type of medication, this results in $3-10 of savings in reductions of hospitalization and emergency room visits. Properly administered medication shows a 10% reduction in the cancer death rates, which totals approximately $4.4 trillion in overall economic value.[69] We also see governmental organizations, like the congressional budget office, crediting the Medicare Part D program with savings on other medicinal costs. When the government considers the investment they made when paying for Medicare Part D, it ultimately resulted in surprising savings in other places in the healthcare budget. In short — investing in medication proved to be an excellent choice.

Another example is the cure rate for Hepatitis C, which is now above 90%. This dramatically decreases the burden of disease within the US healthcare system and the overall economy.[69] Just a few examples to show how medications fit into the overall health of the healthcare system. Now let's talk about where pharmacists fit in themselves.

"Patients achieve optimal health and medication outcomes with pharmacists as essential and accountable providers within patient-centered, team-based healthcare."
—Joint Commission of Pharmacy Practitioners (JCPP)

I love the Joint Commission of Pharmacy Practitioners (JCPP) and this statement that touts the value of pharmacists improving patient outcomes. But, luckily, we also have non-pharmacy related organizations supporting this claim.[70,71,72] The Patient Centered Primary Care Collaborative supported the role of pharmacists in the "Patient-Centered Medical Home: Integrating Comprehensive Medication Management to Optimize Patient Outcomes" document. We also have the US Surgeon General's report from 2011, which talks about "Improving Patient and Health System Outcomes through Advanced Pharmacy Practice." And we have "The Expanding Role of Pharmacists in a Transformed Health Care System," which is from the National Governors Association (NGA). I highly recommend reading each of these papers.

In summary, as pharmacists our ultimate "WHY" is to support health — a state of complete physical, mental and social well being. We

do this within the context of the US healthcare system being about average as compared to other countries — we are not above and beyond those practicing around the globe. We also see that the role of health systems is increasing and understand we must find ways to work within those systems. We can feel confident in our choice of profession knowing that pharmacy is the perfect profession to be in, if we wish to improve medication outcomes. We have a unique opportunity to support the health and well being of our patients.

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Business of Healthcare

In this section, we'll learn about…
- Business vs. Right
- Healthcare Reimbursement

Business vs. Right

Is healthcare a business or a right? This debate is almost unique to the United States, as most other countries provide healthcare through universal healthcare coverage. But, this coverage does come at a cost and with significant government intervention.

Let's begin with assuming healthcare is a right. Then, we have to look at our constitution. In our constitution, it is not mentioned specifically, however many advocates for healthcare as a right point to the 9th amendment, which protects all of the rights of the people that are not mentioned specifically elsewhere in the constitution. And yet, many interpret the 9th amendment to mean that the government cannot intervene in your personal life.

Let's now look at the possibility that it's a business[73]:

- An organization or economic system where goods and services are exchanged for one another, or for money.
- Every business requires some form of investment and enough customers to whom its output can be sold on a consistent basis in order to make a profit.
- Businesses can be privately owned, not-for-profit, or state-owned.

Looking at these definitions of business and the current state of healthcare in the United States, it seems clear that it fits the descriptions on the previous page. Healthcare is a type of business. Let's go a little bit further though, because I would love for healthcare to be a right. And, I want everyone to have equal access. It's a free market after all. Wait, is it a free market? That's another question to answer.

A free market...

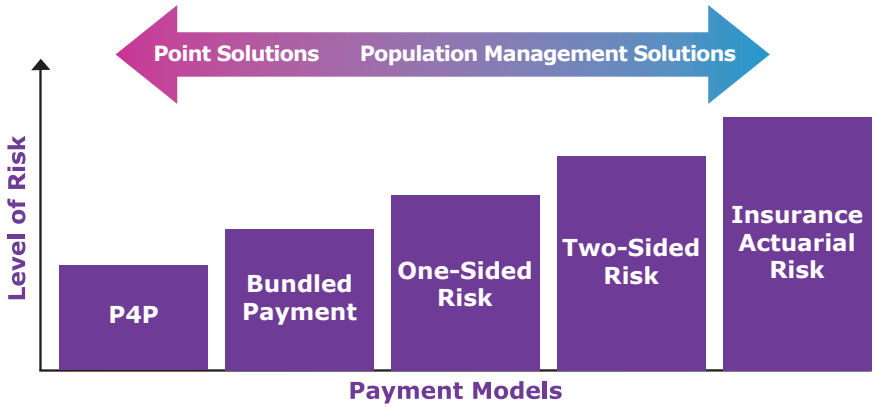
- Is an economic system in which prices are determined by unrestricted competition between privately owned businesses.
- Leads to optimized supply and demand, reduced costs, and innovation.

Healthcare does not exist in a free market. It is under a lot of regulation, has high barriers to entry (licensure, training, etc.), and requires participants to utilize certain providers. Remember the constituents of healthcare we discussed in the previous chapter: patients (consumers), payers (government, employers, individuals), providers (hospitals, doctors), and the government (regulating the payers and providers). We see that healthcare cannot exist as a free market enterprise where there is simply business and consumer, supply and demand. In fact, usually the consumer is not the one paying directly for the goods/services received. There are other intermediaries involved. Healthcare may be more like a business than a universal right in the United States, but it's a very complicated system to say the least.

Healthcare Reimbursement

Let's look now at how healthcare is reimbursed. Traditional payment models are based on your location of care, with nuances related to how each payment is calculated and are documented in the respective Medicare Prospective Payment System (PPS). Physicians are reimbursed based on relative value units. Outpatient hospitals and surgery centers are paid based on an average patient visit charge called an Ambulatory Payment Classification (APC). Then inpatient acute care and long-term acute care (LTAC) is paid based on an MS-DRG or a diagnosis related group. And skilled nursing facilities (SNF)and home health are paid differently based on Resource Utilization Group (RUG).

We have evolving models of reimbursement along a scale of risk.



Evolving Reimbursement Models[74]

We see here lower levels of risk to newer payment models. These increase the risk and move towards more patient population management solutions, moving from P4P (pay for performance) to bundle payments. In a bundled payment, you're paid for a group of activities, such as being paid for 30 days after a transplant patient, regardless of what happens to that patient. Then we have a one- sided risk model and a two-sided risk model, where both the payer and the provider have risks to additional actuarial risk.

	2008	2010	2012	2014	2015	2018	2019
Legislation Passed	MIPPA	ACA		PAMA	MACRA		
Program Implemented			ESRD-QIP, HVBP, HRRP	HAC	VM	SNF-VBP	APMs, MIPS

Legislation
- ACA: Affordable Care Act
- MACRA: Medicare Access & CHIP Reauthorization Act of 2015
- MIPPA: Medicare Improvements for Patients & Providers Act
- PAMA: Protecting Access to Medicare Act

Program
- APMs: Alternative Payment Models
- ESRD-QIP: End-Stage Renal Disease Quality Incentive Program
- HACRP: Hospital-Aquired Condition Reduction Program
- HRRP: Hospital Readmissions Reduction Program
- HVBP: Hospital Value-Based Purchasing Program
- MIPS: Merit-Based Incentive Payment System
- VM: Value Modifier, or Physician Value-Based Modifier (PVBM)
- SNFVBP: Skilled Nursing Facility Value-Based Purchasing Program

CMS Value-Based Programs[74]

CMS is the leader in this area of transitioning to value-based programs. And of course, as the big payer with our Medicare patients, they often lead the way and many other insurance companies follow suit. Shown here are the changes over time in the various CMS value-based program models. Various initiatives have occurred over time, and we are now in the era of these alternative payment models (APM), and the merit-based incentive payment system (MIPS).

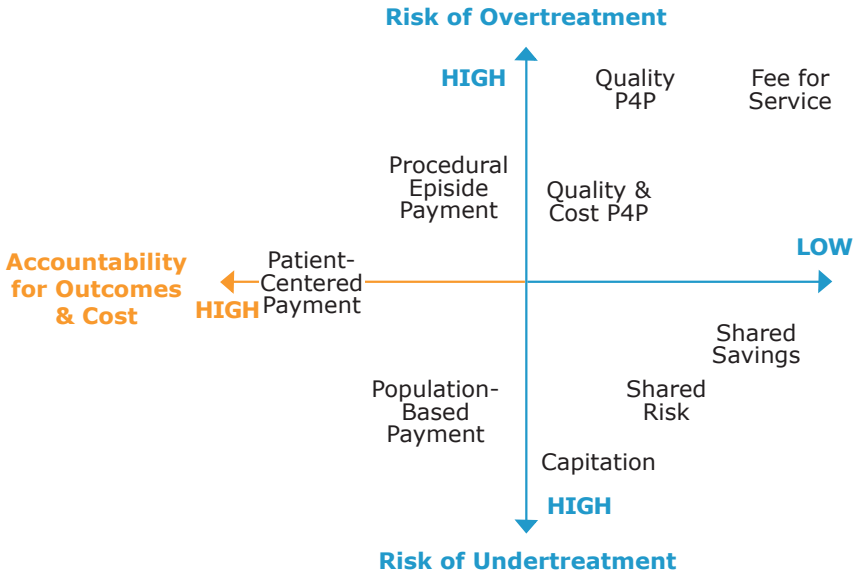
Now, I'd like to touch on the Quality Payment Program (QPP) through CMS.[75] This program began on January 1, 2017. Prior to QPP, payment increases for Medicare services were set by the Sustainable Growth Rate (SGR) law. This capped spending increases according to the growth in the Medicare population and had a modest allowance for inflation. However, as clinicians increased their utilization of services, the reimbursement for each unit of service had to be adjusted downward to hold costs constant. In practice, the SGR would have resulted in large decreases in the Physician Fee Schedule, which was not sustainable. To avoid these decreases in reimbursement, Congress had to pass a new law (every year) authorizing the current fee schedule and a small increase for inflation. With the Medicare Access and CHIP Reauthorization Act of 2015 (MACRA), CMS did away with the SGR.

Now we are able to reward high-value, high-quality Medicare clinicians with payment increases — while at the same time reducing payments to those clinicians who aren't meeting performance standards. CMS seeks to improve Medicare by helping clinicians focus on caring for their patients, rather than filling out paperwork. CMS will continue to listen and take steps towards reducing burdens for clinicians and improving health outcomes for Medicare patients. Clinicians have two tracks to choose from in the Quality Payment Program based on their practice size, specialty, location, or patient population: Merit-based Incentive Payment System (MIPS) or Advanced Alternative Payment Models.[75]

It's important to understand why we are trying to do this research to get to better payment models, because there are definitely strengths and weaknesses of the current payment models. Take a look at the graph on the next page. Shown there in the middle arrow, along the y-axis, you can move from a high risk of overtreatment to a higher risk of undertreatment. Along the center x-axis, moving from right to left, you can move from a low to high accountability for outcomes and costs.

Ok, so why does this matter? It matters because when you look at other forms of payment, such as the typical fee for service (you do a service, I pay you), you have a significantly higher chance of overtreatment because people are incentivized to get paid more for additional services. Unfortunately, things like this happen and there's no

way really to measure accountability or patient-centered care with that. So, then we moved more toward quality pay for performance, but you then still have the risk of overtreatment, or even undertreatment. When a payor is only paying a certain amount of money, such as with a capitation, you can risk undertreating because of how the provider will be reimbursed.



Strengths & Weaknesses of Payment Models[76]

So, then we move toward population-based payments, or procedural episodes, which did improve upon patient-centeredness, but these also have risk of overtreatment. We're trying to move toward a patient-centered payment model in order to have the best fit of a balanced and correct amount of treatment while also maintaining the highest amount of accountability for both cost and outcome. It's an uphill battle and not an easy puzzle to solve.

Here are a few innovative model categories that healthcare organizations are starting to work with in order to find a solution[77]:

- **Accountable Care**: Accountable Care Organizations and similar care models are designed to incentivize health care providers to become accountable for a patient population and to invest in infrastructure and redesigned care processes that provide for coordinated care, and high quality, efficient service delivery.
- **Episode-based Payment Initiatives**: Under these models, health care providers are held accountable for the cost and

quality of care beneficiaries receive during an episode of care, which usually begins with a triggering health care event (such as a hospitalization or chemotherapy administration) and extends for a limited period of time thereafter.

- **Primary Care Transformation**: Primary care providers are a key point of contact for patients' health care needs. Strengthening and increasing access to primary care is critical to promoting health and reducing overall health care costs. Advanced primary care practices — also called "medical homes" — utilize a team-based approach, while emphasizing prevention, health information technology, care coordination, and shared decision making among patients and their providers.
- **Initiatives Focused on the Medicaid and CHIP Population**: Medicaid and the Children's Health Insurance Program (CHIP) are administered by the states but are jointly funded by the federal government and states. Initiatives in this category are administered by the participating states.
- **Initiatives Focused on the Medicare-Medicaid Enrollees**: The Medicare and Medicaid programs were designed with distinct purposes. Individuals enrolled in both Medicare and Medicaid (the "dual eligibles") account for a disproportionate share of the programs' expenditures. A fully integrated, person-centered system of care that ensures that all their needs are met could better serve this population in a high quality, cost effective manner.
- **Initiatives to Accelerate the Development and Testing of New Payment and Service Delivery Models**: Many of the innovations necessary to improve the health care system will come from local communities and health care leaders across the entire country. By partnering with these local and regional stakeholders, CMS can help accelerate the testing of models today that may be the next breakthrough tomorrow.
- **Initiatives to Speed the Adoption of Best Practices**: Recent studies indicate that it takes nearly 17 years on average before best practices — backed by research — are incorporated into widespread clinical practice. Even then, the application of the knowledge is very uneven. The Innovation Center is partnering with a broad range of health care providers, federal agencies, professional societies, and other experts and stakeholders to test new models for disseminating evidence-based best practices and significantly increasing the speed of adoption.

Implementation of these innovative models is really research happening actively where these models are not available in every state or in every region. I encourage you to see what's available or in transition in your local area at **https://innovation.cms.gov.**

I want to touch a bit on medication reimbursement and medication-specific quality measures before we round out this section. Medications are reimbursed differently in different settings. This isn't always known to care providers. They don't always understand the impact of medications or the cost that will incur. For example, on the inpatient side, medication costs are included in the overall DRG (or diagnosis-related group) payment. So if a hospital is reimbursed $5,000 for an admission, and the medication costs $100 or $1,000, the hospital is still reimbursed the same amount. But on the outpatient side, most medications are reimbursed at an average manufacturer's price (AMP) with a discount, with a small dispensing fee on top. At our infusion centers, for example, medications are reimbursed with an average sales price (ASP), plus 6% or -22.5% for 340B medications. And, there's usually an added procedural code which covers administrative costs. Our goal should always be to reduce the total cost of care. And as we have talked about the value of medications, it's usually worth spending the money on medications, but it's important to really understand the total cost.

We'll talk more about this in the Strategy chapter coming up, but the Pharmacy Quality Alliance (PQA) is an organization that spends a lot of time looking at this. It supports a variety of sectors within the overall healthcare marketplace from accreditation programs to the pharmacy paid performance measure and more. They create measures such as performance measures on adherence, appropriate medication use, medication safety, medication therapy, management, and monitoring measures. Plus, they've also created quality improvement indicators. Again, we'll come back to this in a bit, but I wanted to make you aware of this organization as it does have a vested interest in medication costs for both the healthcare system and the patient.

In summary, we've discerned that at this present time, healthcare operates more as a business than a right in the United States, healthcare reimbursement is complex and changing, and the pharmacist must understand how we can impact value and manage medication costs as well as reimbursement.

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History of the Pharmacy Enterprise

In this section, we'll explore…

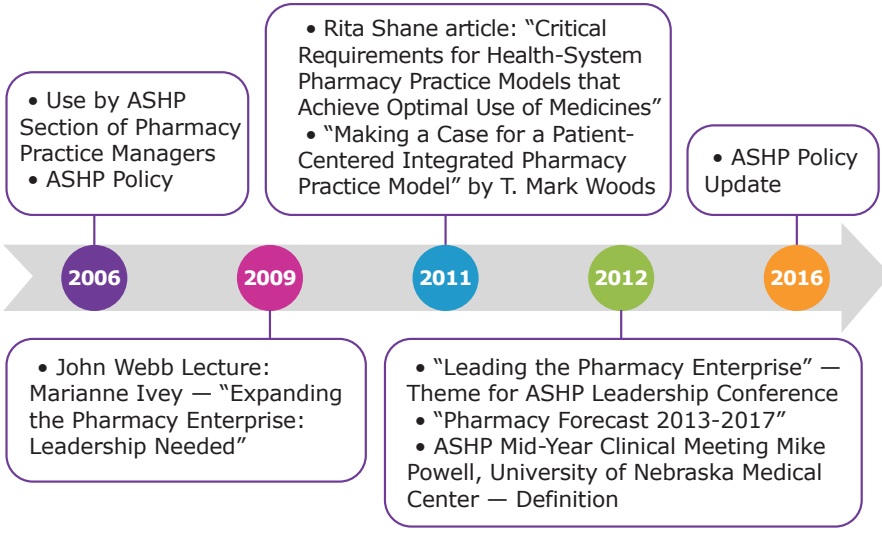
- What is the Pharmacy Enterprise?
- The History
- The Chief Pharmacy Officer

Let's now take a look at the history of the pharmacy enterprise. Personally, I love discussing the pharmacy enterprise. I find that when we're looking at ways to innovate pharmacy practice, thinking about the scope of this enterprise is an important opportunity for us in terms of how we define our services.

What is the Pharmacy Enterprise?

So, what is the pharmacy enterprise? Maybe you've heard of it. Maybe you haven't. This phrase is a fairly recent addition to the pharmacy lexicon that has been used commonly since 2006. The pharmacy enterprise is "an integrated system of business units with accountability for clinical and financial outcomes related to medication use across the continuum of care in a health system."[78] The term pharmacy enterprise was created to encompass the concept that pharmacy is much bigger and more important to the success of our health systems than the term pharmacy department implied.

The History



History of the Pharmacy Enterprise[78,79]

As we said, this term began its journey back in 2006 as part of the ASHP section of pharmacy practice managers. At that time, it was also used within ASHP policy. Then, in 2009, a John Webb lecture given by Marianne Ivey was titled, "Expanding the Pharmacy Enterprise: Leadership Needed." In 2011 two articles were published to give this new term credence: Rita Shane wrote "Critical Requirements for

Health-System Pharmacy Practice Models That Achieve Optimal Use of Medicines" and T. Mark Woods wrote "Making a Case for a Patient-Centered Integrated Pharmacy Practice Model." 2012 was a busy year for the history of the pharmacy enterprise. The ASHP Leadership Conference theme was "Leading the Pharmacy Enterprise," the Pharmacy Forecast 2013-2017 included recommendations with the term, and finally Mike Powell provided an expanded definition at the Midyear Clinical Meeting. Most recently, in 2016, the ASHP updated their policies to reflect the phrase as it's understood.

The first ASHP Policy in 2006 described the pharmacy enterprise as an outlet for pharmacists to advocate for a high level of **coordination** of all **components** of the **pharmacy experience** in hospitals and health systems for the purpose of optimizing the value of drug therapy and medication use safely. Further, ASHP encourages pharmacy department leaders to develop and maintain **patient-centered practice models** and integrate these practices into their team. The components of the pharmacy enterprise include general and specialized **clinical practice, drug use policy, product acquisition and inventory control, product preparation and distribution, medication use safety**, and other **quality initiatives**.[80]

But what exactly does it mean to lead a pharmacy enterprise?

We have this definition from Mike Powell in 2012 which is a helpful place to begin[81]:

- An **integrated** system of **pharmacy business units** organized with **accountability** for the medication use process across the continuum of care to **meet the needs of patients** as they **transition** from different levels of the health care delivery system.
- The pharmacy enterprise is organized to **innovate** to meet the **needs of the health care delivery system and patients,** and to **assure continuity of care, assuring medication adherence**, favorable medication use **outcomes**, and **new revenue streams**.
- The pharmacy operates with both **clinical and business goals** in support of the broader health care delivery system.
- This definition implies **accountability for the medication-use process across the continuum of care**.

I love this definition. It's thorough and all-inclusive. But it's a bit long to remember at the drop of a hat, which is why we also have the more succinct definition we used before: the pharmacy enterprise is "an integrated system of business units with accountability for clinical and financial outcomes related to medication use across the continuum of care in a health system".[78]

We now have some pharmacy enterprise history, we'll focus on the role of Chief Pharmacy Officer.

The Chief Pharmacy Officer

Keeping these in mind, it was becoming clear to the wider healthcare enterprise that pharmacy had an important overall role to play within the system. Thus was born the concept of chief pharmacy officer. The first published appeal for hospitals to create the role of chief pharmacy officer comes from Harold Godwin, who had retired from the University of Kansas Medical Center after 35 years. While there, he was also a professor and chair of pharmacy practice. In 2000, in a commentary in the *American Journal of Health System Pharmacy* (AJHP) he wrote, "it would seem that a health system also needs to have a chief pharmacy officer who has recognition and organizational parody with the other O's in the hospital."

The CPO should be responsible for drug use control policies throughout the organization. In order to implement a cohesive, consolidated enterprise approach, pharmacy must be supported by the appropriate organizational structure and leadership positioning at an executive level. By 2005, this idea gained further traction in the article "Rationale for Having a Chief Pharmacy Officer in a Healthcare Organization."[82] By 2019 the ASHP was fully on board, and began recommending that health systems capitalize on the strategic business and patient care strengths of pharmacists by proactively recruiting them into C-suite positions.[78]

To sum up, the term pharmacy enterprise encompasses the concept that pharmacy is much bigger and more important to the success of our health systems than the term pharmacy department implies. Pharmacy must be supported at the appropriate organizational level, ideally in the C-suite.

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Pharmacy Enterprise Scope

In this section, we'll look at…

- Benefits of the Pharmacy Enterprise
- Pharmacy Enterprise Scope
- Assessment

Benefits of the Pharmacy Enterprise

Here are a few examples of potential benefits to the pharmacy enterprise system[78]:

- "If medications are managed appropriately, we will control costs, improve outcomes, and not only eliminate readmissions, but prevent many admissions in the first place."
- "...without managing the entire medication continuum, we cannot achieve the operational, quality, and safety efficiencies required for success in the world of accountable care."

So the big picture idea is that the pharmacy enterprise allows us, as pharmacy leaders, to tie together the entire continuum of care and reach pharmacy's full value. As an organization builds on a pharmacy enterprise platform to deliver increasing internal value to the organization, it provides value even to their external markets. Four strategies in particular to realize full value.

First, the pharmacy enterprise works to **counteract inflationary price pressures**. This is an ongoing challenge for our organizations, and pharmacy is well suited to negotiate with suppliers and respond to price and supply fluctuations, managing drug shortages, switching products, and working clinically to use the best, most available, and cost-effective product.

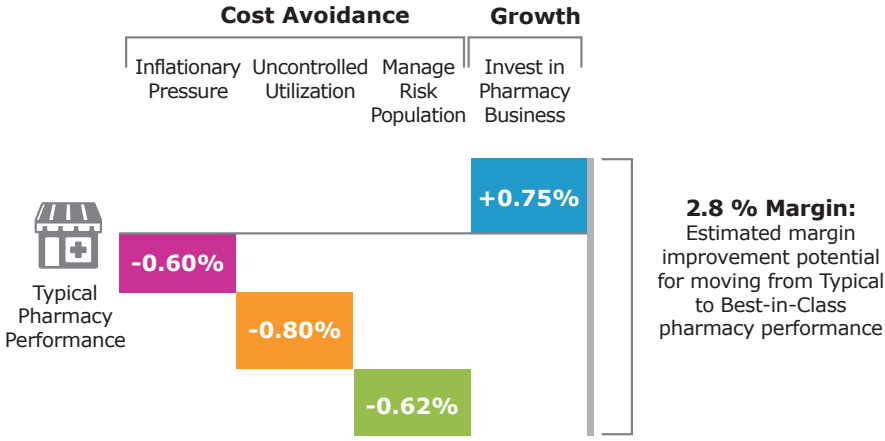
Next, the pharmacy enterprise works to **hard-wire high value prescribing**. We know that from what I like to call "formulary stewardship," that we can influence and use the appropriate cost-effective medications and create guardrails for high-cost medication use. These are great aspects to consider for innovation, and pharmacy is well-positioned to find new ways to do this.

Third, the pharmacy enterprise can **leverage pharmacy assets to reduce total cost of care**. We have opportunities to manage our employee drug benefits, potentially through our in-house pharmacies. And, we can develop sustainable pharmacy care management programs, where we add value such as reducing readmissions and improving value based payments.

Finally, the pharmacy enterprise creates a **principled pharmacy business strategy**. This is where we can have the opportunity to really look at the whole enterprise and formalize our business status. We can systemize script capture through our pharmacies and potentially scale and diversify our operating model into new, innovative solutions, which we'll

also talk about in the upcoming chapters. When you tie this all together, there is potentially a huge impact on the margin there.[83]

When you consider typical pharmacy performance, and then add in the potential margin impact of the initiatives outlined above for best-in-class performance, what we see is that a high performing health system can improve around that total margin by 2.8%.[83] While that percentage doesn't sound particularly high, this can be the entire margin of an organization with the average of 2-3%. Let's look at it in real budgetary terms showing cost avoidance/expense reduction and growth through revenue generation.



Enterprise Margin Potential[83]

Here are some specific examples of enterprise initiative success. Over a span of seven years, the Johns Hopkins Hospital Antibiotic Stewardship Program saw a savings of $17 million. Intermountain Health's centralized supply chain center found new approaches to reduce expenses and saved $1.2 million in one budgetary year. University of Chicago Medicine saw improved ambulatory access and decreased copays per patient on specialty drugs by identifying medication assistance and savings programs. This amounted to patient savings of 77.2%. Finally, Novant Health's launch of a system-wide outpatient pharmacy business allowed them to diversify their income streams and bring in an additional $50 million of capital.[84] These four examples addressed expense and revenue by minimizing unwarranted clinical variation, finding new approaches to reduce expense, improving ambulatory excess, and exploring diversified revenue streams respectively.

Pharmacy Enterprise Scope

We've spoken about the pharmacy enterprise as an integrated system of business units with accountability for clinical and financial outcomes related to medication use across the continuum of care in a health system. And we've talked about a few of the "buckets" that I see in terms of service lines, but I'd like to clearly list them here.

Pharmacy enterprise activities can — and should — be related to…

- Operations
- Acute Care Clinical Service
- Ambulatory Care
- Outpatient Pharmacy
- Business & Managed Pharmacy Solutions

Operations	Acute Care Clinical Service	Outpatient Pharmacy	Ambulatory Care	Business & Managed Pharmacy Solutions
Dispensing & Workflow	Clinical Practice Model	Outpatient/ Retail	Clinic-Based Clinical Pharmacy Services	340B Program
IT & Robotics	Clinical Practice Standards/ Stewardship	Mail Order/ Home Delivery	Clinic-Based Pharmacy Visits	Payer Population Health
Supply Chain & Procurement	Formulary Management/ Stewardship	Discharge Medication Delivery	Centralized Virtual Clinical Services	Payer Relationships
Inventory Management	Pharmacog-enomics	Specialty Pharmacy	Telehealth	Business Development
Centralized Compounding & Repackaging	Medication Safety	MTM/ Vaccines	Population Health	Pharmacy Benefit Manager (PBM) Shared or Integrated Models
Sterile Compounding 797/800	Pharmacy Informatics/ Clinical Decision Support	Home Infusion 503A	Pharmacog-enomics	
Provider Clinic & Urgent Care Med Fulfillment	Pharmacy Education & Residency	Bulk Compounding 503B	Employee Health/ Wellness Programs	
Diversion Management	Quality & VBP Goals	Patient Advocacy/ Medication Assistance		
Infusion Centers	Research			

Scope of the Pharmacy Enterprise

Let's look at this in a little more detail. What is shown below is kind of a checklist, of the key components in each of the service line areas for pharmacy. It includes the most common things to consider, as well as some new and innovative topics. We'll go further into detail in the services and technology chapters, but this is a great place to start for these foundational pieces of the pharmacy enterprise.

We'll now transition from the scope of enterprise to working on assessment.

Assessment

For your own work, you'll find the Pharmacy Enterprise Assessment available for download in the Pharmovation Implementation Guide.

Under each column you'll do two things:

1. List known activities currently available as related to the category.
2. Grade your organization on how it's integrating these innovations.

You'll grade on a scale from 1-5.

1. Fully Implemented/Optimized
2. Partially Implemented
3. Known Opportunity
4. Needs to Evaluate Further
5. Not Interested (or doesn't apply to my organization)

For example, you'll use a number one or color in green if that is something that is fully integrated. So, if you have already optimized your dispensing and workflow technology within your organization, you would put a number one right next to that. If you've partially implemented your clinical practice model, you can make it a two. Remember, this is your internal document that you have a chance to utilize, so don't hold back. Be honest with yourself. It's okay.

I'm looking forward to hearing your known opportunities you identified in our online Pharmovator Community. This can be an extremely useful tool in moving forward with strategy in the coming chapters.

In summary, the approach to the pharmacy department as an enterprise has many benefits. The scope of enterprise is vast and growing. We are learning and really thinking about innovation opportunities where pharmacy can play a roll. An enterprise assessment can be a useful tool in strategic planning, and it becomes a very good visual to share as you navigate and talk to your leaders to justify and advocate for those resources.

Take Action Now

- Fill out the pharmacy enterprise assessment in the Pharmovation Implementation Guide (available through the link/QR code below).
- Share in the Pharmovator Community your top 3 known opportunities.

To support you incorporating the learnings from this chapter, access the Pharmovation Implementation Guide. Visit www.pharmovationguide.com or scan the QR code below for full access!