Volume 1 Issue 1 Spring 2024

Hypothesis

Perspectives, Insights, & Thought Leadership In The Life Sciences

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Letter From Our Editor-in-Chief

It's a pleasure to introduce you to the inaugural issue of *Hypothesis* – a new magazine providing perspectives, insights, and thought leadership in the life sciences. With three issues a year, *Hypothesis* strives to be the go-to publication for Canadian life sciences professionals. *Hypothesis* will bring you up to date on industry news, follow people on the move, and share conversations with inspirational voices. Most importantly, we'll help you better understand the health care environment around you, and the issues that impact the success of Canadian life sciences companies and brands.

Every issue will include the voice of a physician, who will provide a wide-ranging perspective on all things medicine and disease management. We'll also always feature an interview with a patient, to remind you of your 'why' and help you understand more about your patients' journeys to diagnosis and therapy.

Another recurring feature of *Hypothesis* will be important conversations with key thought leaders about shifts in how we're thinking about health care. In this inaugural issue, we talk to Drew Taylor, CEO of Acorn Labs, a regenerative medicine company, about where he sees longevity medicine going, and what the evidence says about how we can live better, longer lives. In future issues, we'll be speaking to thought leaders in Health Investment Banking, AI, obesity research, and more.

With an ever-growing footprint of pharmaceutical and biotech operations in Canada, Canada's life sciences industry is coming into its own. We hope you enjoy this issue and that you'll share it with your peers. We welcome your feedback and look forward to hearing from you about how we can continue to provide relevant and timely information!

Welcome aboard!

Lea

Lea Prevel Katsanis, PhD
is a Professor in the Department of Marketing at the John Molson School of Business at Concordia University. Katsanis who spent many years working around the world for major global pharmaceutical brands, is the author of Global Issues in Pharmaceutical Marketing.

You Have to Start Somewhere

Biden's Health Care Policy Changes Will Be Remembered for Decades to Come

By Rohit Khanna, MBA, MSc, MPH

Say what you will about the economy. And his foreign policy. And his age. And all the rest of his baggage.

But whether Joe Biden is re-elected or not, his healthcare policy changes will be remembered for decades to come.

Yes, there are still humongous challenges, like the expunging of millions of Medicaid (i.e. low income) enrollees for the first time since 2020, after a pandemic policy meant to prevent vulnerable people from suddenly losing health coverage expired earlier this spring when the U.S. declared an official end to the Covid-19 public health emergency, to name one.[1]

But Biden's laser focus on increasing access to healthcare and lowering healthcare costs may truly be his lasting legacy. Firstly, there is the Inflation Reduction Act, which has sweeping healthcare implications for tens of millions of Americans, including capping insulin costs at $35 per month, lowering Medicare Part D prescription drug costs, and making adult vaccines available at no cost. But two pillars of the Inflation Reduction Act on their own are potentially seismic in their impact on healthcare costs if they are implemented and enforced as expected: allowing Medicare to negotiate directly with participating drug companies to improve access to innovative treatments for people with Medicare and lower costs for the Medicare program; and requiring drug companies that raise their drug prices faster than the rate of inflation to pay Medicare a rebate.[2]

But that's not all. The Biden administration has also cracked down on 'junk insurance' plans that have lured Americans into paying for plans that offer little to no coverage and discriminate on the basis of pre-existing

conditions. Biden is also trying to implement policies that will severely curtail surprise medical billing which leaves millions of Americans on the hook for health care costs they thought were covered by their health plan. Examples of this include scenarios when people require emergency care and are taken to the nearest hospital instead of one that is 'approved' under their health plan, or when an individual undergoes surgery at an 'approved' hospital only to find out that the anesthesiologist who provided their services is actually from an 'unapproved' hospital.[3]

But that's not all.

The Biden administration is also cracking down on predatorial medical debt providers. According to a recent White House press release, "Increasingly, health care providers are signing up patients for third-party medical credit cards and loans to help pay for care. These credit cards often include teaser rates and deferred interest features that lead to higher costs for consumers and may be offered even when low- or no-cost alternatives, such as zero-interest payment plans, financial assistance, or health coverage may be available. Health care providers may be promoting these products because they could allow providers to get paid faster, outsource servicing and collections costs to third parties, receive a higher payment from consumers who otherwise would pay a discounted price for care, and in some circumstances, receive a share of the interest revenue gained by the third-party financial company."[3]

Biden is also fighting hard to increase coverage and access for adult mental health services. He is also making it easier for children to get access to mental health services through their school. His policies have also resurrected the Cancer Moonshot with hundreds of millions of dollars for funding aimed at finding new ways to detect and treat cancer.

The criticisms abound. Where will we get the money? How long will it take to see the results of all these policies? Shouldn't we be focusing on the larger economy and addressing more urgent issues?

No matter. When Biden leaves office in either 2024 or 2028, he will have left an indelible imprint on America's struggle to provide more equitable access to healthcare at a lower cost. And he will have delivered a resounding message to pharmaceutical manufacturers, insurance companies, intermediaries like pharmacy benefit managers, and hospital systems: you need to be part of the solution.

By 'starting somewhere', Biden has shown that the big beast of U.S. healthcare, while an indomitable foe, can be cut down into manageable pieces to be addressed. He has shown that bipartisan support for issues that affect every day Americans, well, every day, is possible to achieve.

Although we face geopolitical risk everywhere, a sputtering economy on the verge of recession, out-of-control technology that seems to be outpacing our ability to regulate it, one thing is clear from Joe Biden's first term in office: if you aim at nothing, you will hit nothing.

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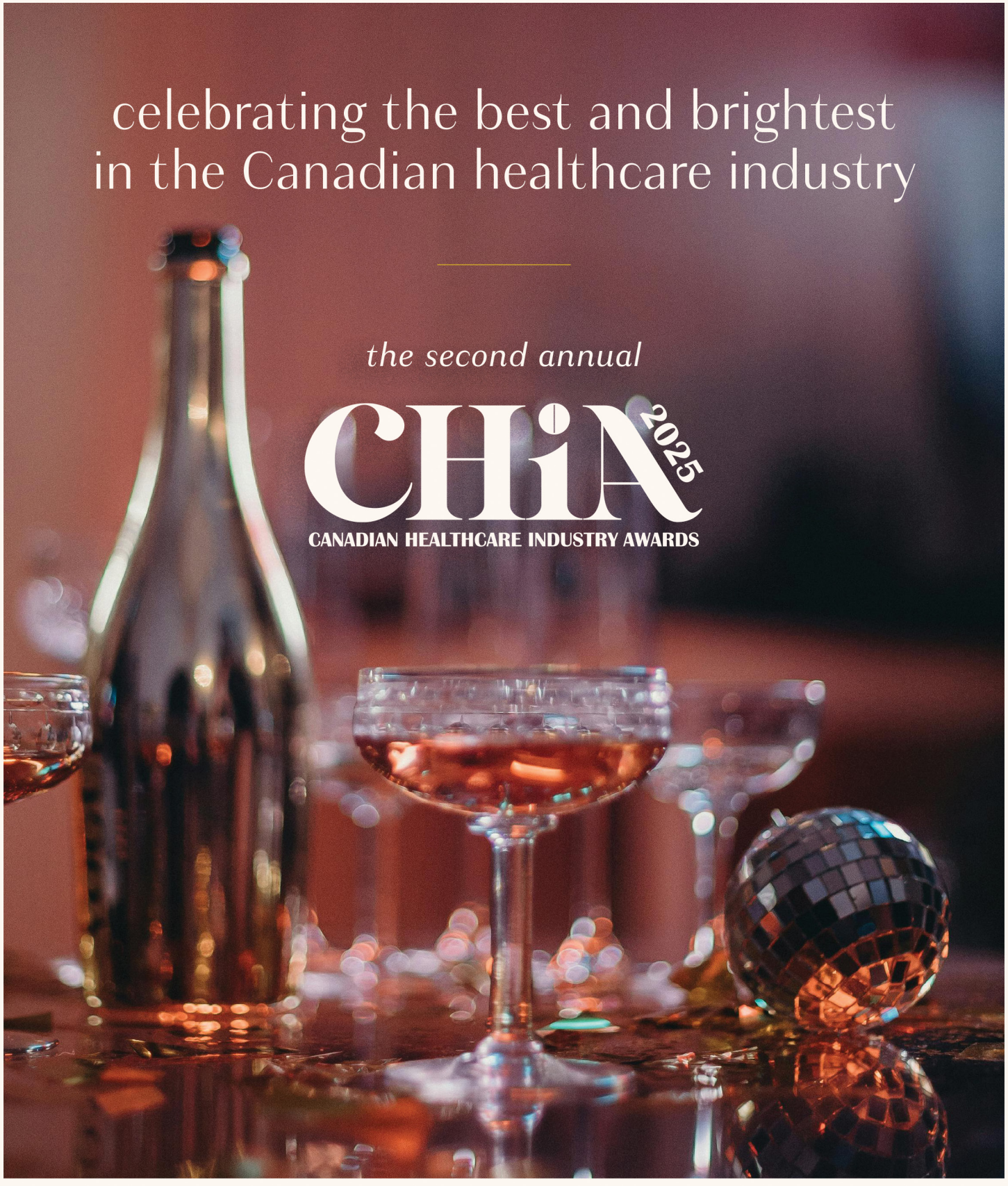

Nominations for the second annual Canadian Healthcare Industry Awards will open in June 2024. More information coming soon.
canadianhealthcareindustryawards.com

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Healing Thyself: The Future of Regenerative Medicine

A Conversation With Drew Taylor, CEO of Acorn Labs

Dr. Drew Taylor is a pioneer in the field of regenerative medicine. Convinced about the potential for regenerative medicine to prevent disease and slow aging, he launched a company that banks people's stem cells, ensuring they'll have access to higher quality cells for future regenerative applications. Taylor spoke with the president of Catalytic Health and publisher of Hypothesis, Rohit Khanna, about the the current state of regenerative and longevity medicine.

This conversation will focus on your role as CEO of Acorn Biolabs, but I want to first ask you about your somewhat unconventional career before your current role – as an athlete and a scientist.

I studied pre-med at the University of Michigan and completed a Master's degree in molecular biology there, while I played baseball for the Wolverines. I was accepted into Medical School, but was also offered to sign with the Toronto Blue Jays to play professionally at the same time. As it was not possible to play professionally while in an MD program, I chose to pursue a PhD in Biomedical Engineering at the University of Toronto, which was a more flexible program and allowed me to play in the minor leagues while continuing my education. While in Toronto, I got drawn into the world of regenerative medicine and the idea of using our own cellular materials to restore our systems. After graduating, I worked with the Division of Orthopedics at Mount Sinai Hospital, researching soft tissue regeneration. From there, I took an opportunity to jump into the world of venture capital. During my tenure at EPA Capital Management, we invested in 28 start-ups, the vast majority of which were Canadian. That work gave me the opportunity to get together with others who were interested in regenerative medicine, and that's how Acorn Biolabs was born.

> ***"Acorn Biolabs stores patients stem cells so that when they might need them later on in life for regenerative medicine, they have younger, high quality cells."***

That's incredible that you played professional baseball, and you have experience in both bench science and venture capital realms. What inspired you to start Acorn Biolabs?

At Mount Sinai, I realized the biggest limitation to delivering regenerative medicine is a patient's age. One of the projects I worked on was to translate successful cartilage regeneration studies from animals to humans. We quickly realized that the cells we extracted from young patients performed much better than those we took from older patients with osteoarthritis. I realized that if we want to be successful in regenerative orthopedics, 3D organ printing, and skin health, we need to have access to high-quality cells from the patient.

At Acorn, we extract and store patients' stem cells so they have access to them years later. It's preventative medicine. We want the best version of you tucked away so that we can leverage that later, in this new burgeoning field of regenerative medicine.

When we talk about cellular regeneration, how different are cells in your lung from cells in your brain, or other parts of your body?

Most somatic cells in the body have a complete genetic code. The genes can be dialled up or down.Those dials are what makes cells do what they're supposed to do; they're what make a cell a liver cell, or a skin cell, and so on. Then, we have undifferentiated cells, or stem cells. These are cells that have the potential to become any cell type. There are deposits of stem cells throughout our bodies. Much of the focus of regenerative medicine right now is targeting stem cells, which we call pluripotent because they have a multitude of potentials. But in 2012, the Nobel Prize was awarded to Japanese researcher Shinya Yamanaka for his discovery showing it's possible to program mature cells to induce pluripotent stem cells. His discovery has opened up the potential of taking a simple cell sample from a patient and turning that cell into any different cell type in the body.

Is there a difference between regenerative and longevity medicine?

They definitely overlap. Most diseases that we're looking to treat with regenerative medicine are related to aging. There is a big shift from seeing the aging process as inevitable to something medicine can treat.

Photo by James Wheeler on Unsplash

We know that we can intervene in the aging process because we know that there is a biological aging process that is different from chronological age. We've all met 75-year-olds who are healthier and have more of a zest for life than many 55-year-olds.

When we talk about longevity medicine, are we talking about living longer, or living healthier, or both?

To me, 'healthspan medicine' is a better term than longevity medicine. We're trying not only to increase the number of years that we have, but the quality of those years. This concept is not new. Julius Caesar once looked up at the stars and pondered if he'd live to the ripe old age of 42. We don't think like that today, because we've been able to extend the human lifespan through access to healthy food, clean water, sewer systems, and antibiotics. We've been able to stave off some of those stressors that damage us or fast-track the aging process and shorten our lives. Now we say we'd like to live to 90, and I think our children will have a very different expectation for how long they want to live. When people hear about longevity medicine, they think, 'Isn't that messing with nature?' It's important to remember that living longer, richer, healthier lives has been a consistent goal throughout history.

We're seeing several references to slowing the aging process in popular culture right now. There's the documentary, The Longevity Film, and Chris Hemsworth's Limitless series. Many influencers in this space talk about eating well, positive thinking, and so on. As a scientist, what importance do you place on one's mindset and lifestyle when it comes to longevity?

> ***"Some people think longevity medicine is 'messing with nature.' But Julius Caesar once pondered if he'd live to the ripe old age of 42. Living longer, richer, healthier lives has been a consistent goal throughout history."***

There are indeed molecular cues that occur in response to those feelings of happiness, peace, laughter, positive thinking, and spirituality. All those elements can release chemicals in our brains that enhance our health. Purpose is another important element of a long, healthy life. Whether our purpose is supporting friends, raising children, or contributing to the betterment of society, purpose inspires us to get out of bed and challenge our brains and bodies. While we know that too much stress can age our bodies, research is also showing how some degree of stressors helps us. For example, there are some early studies suggesting the cold plunge – or immersing the body in very cold water for several minutes – shocks the body to release anti-inflammatory proteins and other molecules that promote cellular health, to maintain your health in the face of this adversity. To me, aiming to live a life with purpose helps people to strike that balance between stress and inner calm.

One criticism of longevity medicine is that it isn't backed by gold standard, randomized clinical trials. How do you respond to this critique?

Randomized, controlled trials are difficult when it comes to longevity science because there are so many confounding factors, and on top of that, research suggests people react differently to various longevity interventions. For example, there are places around the world where people tend to live longer, and the predominant diet is often completely different from one "longevity hotspot" to the next. I think we respond differently to different interventions not only on a population level, but also an individual level. This is why, in cancer, we're starting to see treatments based on genetics. With the inclusion of artificial intelligence (AI) into treatment algorithms, we can access tremendous amounts of data across a very diverse range of datasets. This idea of personalized medicine is going hand in hand with regenerative medicine and longevity medicine.

I appreciate that randomized, controlled trials are difficult to conduct in personalized medicine, where you're often adapting treatments to each patient. At the same time, regulatory bodies require that these technologies be tested in a standardized, controlled fashion. Do you see a future where public and private health insurers are paying for approved longevity therapies?

Currently, people seeking longevity therapies are paying for them out of pocket. Some types of regenerative medicine will continue to only be available for paying customers, like stem cell treatments for skin aging, for example. Merz Aesthetics is an important investor into Acorn Labs because they realize the future of cosmetic medicine is in using the body's own cells, rather than artificial fillers.

On the other hand, if we bank someone's stem cells and 30 years down the road, they develop Parkinson's, we could potentially cure their disease by replacing their diseased neurons with their 30-year younger cells. I see a future where health care systems are paying for some, but not all, regenerative medicine technologies. I think it's also important to remember that every new technology is only available to a small subset of the population, at first. As the technologies become more scalable and affordable, the availability expands.

The National Institutes of Health has a department that is focused on aging. Academic institutions like Stanford have put tremendous resources into gerontology and geriatrics. Saudi Arabia's Hevolution platform is offering grants for cutting-edge research into anti-aging. On the private investor side, billionaires like Peter Thiel, Larry Ellison, and Jeff Bezos are investing in various longevity projects. When it comes to longevity science, do you think the private sector will out-compete government and academic initiatives?

> ***Private investments mean we don't have to wait on the grant cycle to advance innovations. The public sector serves as a necessary check to ensure that longevity interventions are safe, effective, and ethical.***

I think both public and private sector will be vital to longevity science. Private investments mean we don't have to wait on the grant cycle to advance innovation. The public sector serves as a necessary check on private sector research and development in this area, both in terms of scrutinizing the scientific claims and ensuring that interventions are safe, effective, and ethical. I know patients who have undergone unregulated stem cell treatments outside of North America, and it has gone very wrong. There is a danger in jumping the line.

Where do you see regenerative medicine going in the next 20 years?

The next 20 years in regenerative medicine will be phenomenal. We're on the cusp of a great leap in innovation. The Wright brothers created an airplane that travelled 120 feet. That technology did not immediately deliver a benefit to humanity, but it fast-forwarded research and technology development that ultimately transformed the way we live. Around 35 years after that first flight, a passenger airplane flew across the Atlantic Ocean. Thirty years after that, we had landed on the moon. Applying this timeline to regenerative medicine, I would say we have just crossed the Atlantic. That's where we are now. We're hoping to deliver repair mechanisms to our bodies in cosmetic, athletic, and orthopedic applications, with platelet-rich plasma and platelet-rich fibrin. There is a lot of interest in stem cell-derived exosomes, which can carry proteins to cells. There are many exciting avenues, and I think it won't be long before we're reaching the moon with regenerative medicine.

Listen to the Podcast

Drew Taylor, Founder and CEO, Acorn Biolabs
holds a Ph.D. in Biomedical Engineering from the University of Toronto, an MSc from the University of Michigan in Molecular, Cellular, and Developmental Biology, was part of the Mount Sinai Hospital BioEngineering Skeletal Tissues Team, served as Chief Science Officer for Epic Capital Management, a health tech VC, and has also played professional baseball in the minor leagues within the Toronto Blue Jays and Philadelphia Phillies organizations.

Incorporate Values Into Brand Strategy

By Lea Prevel Katsanis, PhD, Alan Williams, Kajan Srirangan, BSc, PhD

In this article, we provide you with a summary of our latest research about values, brand portfolio strategy, and reputation recently published in the *International Journal of Pharmaceutical and Healthcare Marketing*. We also highlight the recommendations we made for improving brand reputation and relationships with key stakeholders To read the full article, please Click Here.

Why are values important?

It is well established that leading pharmaceutical companies, as with most major firms across all industries, routinely publish their values in annual reports and on company websites for the benefit of both shareholders and the general public. They are meant to convey the guiding principles behind a company's actions as well as to guide employee behavior; usually, companies claim to adhere to the goals expressed by them. PwC's CEO Pulse Survey of 1,400 CEOs in approximately 80 countries highlighted that 75% of CEOs are changing their values and code of conduct, and 96% of them agreed that they need to explain how their company's values influence the business decisions they make. Company reputation is also important to these CEOs as measured by external ratings such as the Gallup polls for the general public; and equally important are those lists intended for the business community, such as the Fortune Most Admired Companies list, as these ratings are seen by both the business community and the public at large.

Why are we interested in values and pharmaceutical industry reputation? For the last 20 years or so, the pharmaceutical industry has suffered from a negative reputation with the general public, primarily, but not exclusively, as a result of their pricing policies. This reputation improved during the COVID-19 pandemic with the development of vaccines by various firms and the improvement of trust and increased transparency by the industry; however, it returned back to lower levels post-pandemic. Historically, organizational reputation is linked to company values - and these values are linked to financial performance (higher dollar sales); therefore, it is important to consider the role of values in light of this changing industry reputation. Values are also linked to market orientation, but only in the most general sense. We wanted to look at this phenomenon more deeply and from a new perspective in our research: what is the role of values with respect to reputation, market orientation and financial performance and why should it matter to pharmaceutical marketers? How can pharmaceutical marketers improve this reputation that extends from their brands to the overall reputation of the company?

We wanted to understand why values positively influence financial performance, and we believe that it is the composition or strategic direction of a company's brands – in fact, we think it goes beyond simple market

Historically, organizational reputation is linked to company values - and these values are linked to financial performance (higher dollar sales); therefore, it is important to consider the role of values in light of this changing industry reputation.

Task Outward: Competent		Ethical Inward: Interpersonal	
Innovation	8	Integrity	12
Performance	5	Respect	7
Patient Focus	5	Teamwork	4
Quality	4	Collaboration	3
Customer Focus	3	Trust	2
Excellence	3	Fairness	1
Flexibility	3	Empathy	1
Science Focus	2	Honesty	1
Create Value	2	Healthy Workplace	1
Speed	2		
Efficient	1		
Total Mentions	**38**	**Total Mentions**	**32**
Ethical Outward: Community		**Task Inward: Character**	
Accountability	6	Passion	3
Ethics	5	Courage	3
Diversity/Inclusivity	4	Competitiveness	2
Community	4	Leadership	2
Improves Lives	3	Entrepreneurial	1
Transparency	2	Perseverance	1
Access to Health	1		
Communication	1		
Total Mentions	**26**	**Total Mentions**	**12**

Table 1. *Espoused values for the top 20 pharmaceutical companies; Authors' own work*

orientation to the particular grouping of a company's values and their brand portfolio as a whole. Portfolio composition, in addition to values, thus affect the overall reputation of a company by virtue of the marketing strategies they pursue. The importance of the brand portfolio cannot be underestimated as the key to success for pharmaceutical companies – some with diverse portfolios, and others, with very specialized ones.

Prior to our study, there was no research to date that specifically relates brand portfolios to reputation. Portfolio composition may go unnoticed because it may be considered part of financial performance (i.e., dollar sales), and thus, is not parsed out for examination. For pharmaceutical firms, this composition is reflective of where a company places its therapeutic class emphasis. Companies in a shared value group with similar portfolios may have a particular way they communicate with their customers about their products; and that these shared values are then reflected in the overall reputation for the company.

The research – what we examined

First, we identified a published and well-established grouping of company values for organizing the pharmaceutical companies into specific groups.There are four categories for these stated, or espoused values: outward facing/ethical values; outward facing/ task values; inward facing/ethical values, and inward facing/task values.

Outward facing/ethical values (outside the organization) are those that represent the community, and include stakeholders, customers, and service; as well as democracy and diversity (14 different values). Outward facing/task values emphasize competence, and include stakeholders, customers, service, and value for money; as well as enterprise, growth and innovation

Name	2019 rx Sales $	% Top Three Brands
Roche	48.2	40.6
Novartis	46.1	18.9
Pfizer	43.7	32.1
Merck	40.9	44.2
Bristol Myers Squibb	40.7	64
Johnson & Johnson	40.1	33
Sanofi	34.9	22
AbbVie	32.4	79.2
GSK	31.3	24.6
Takeda	29.2	26.3
Astra Zeneca	23.2	30.6
Amgen	22.2	49.5
Gilead	21.7	52.5
Eli Lilly	20.1	45
Bayer	18.6	44.6
Novo Nordisk	18.3	41
Boehringer Ingelheim	15.6	28.2
Allergan	15.2	32
Astellas	11.4	52.2
Biogen	11.4	72

Table 2. *Pharmaceutical company sales and percentage of top three brands: Source: Evaluate Pharma as reported in Pharmaceutical Executive (Christel, 2020) ; Authors' own work*

(20 different values). Inward facing/ethical values (inside the organization) involve the interpersonal nature of the firm, and include individuality, learning, and transparency; as well as collaboration, teamwork and respect (15 different values). Inward facing/task values include those that emphasize character, and include challenge, ambition and confidence; as well as achievement, enthusiasm and passion (16 different values).

It is well accepted that a company must both espouse its values **(Table 1.)** and then visibly live up to these values for them to be effectively accepted by stakeholders. We also analyzed pharmaceutical company performance using the Nine Core Values (agility, innovation, respect, integrity, performance, diversity, execution, collaboration and customer) from Sloan MIT's Culture 500 database and combined it with data extracted from Glassdoor employee reviews.

Our next step was to identify the specific values held by the top 20 global pharmaceutical companies based on what appears on their company websites and other

Company	Grouping Based on Value Count & Portfolio Composition		
Group1 Competent	**Dominant**	**Secondary**	**Portfolio Composition**
Novo Nordisk	TO	EI	Specialty
Amgen	TO	EI	Diverse
Pfizer	TO	EI	Diverse
Bayer	TO	EI	Diverse
Novartis	TO	EI	Diverse
Astra Zeneca	TO	TI	Diverse
BMS	TO	EO	Diverse
Group 2 Community			
Allergan	EO	TO	Specialty
Biogen	EO	TO	Specialty
J&J	EO	TO	Specialty
AbbVie	EO	TO	Specialty
Merck	EO	TO	Diverse
Astellas	EO	TO	Specialty
Gilead	EO	TO	Specialty
Group 3 Interpersonal			
Roche	EI	TI	Diverse
Eli Lilly	EI	TO	Specialty
GSK	EI	TO	Diverse
Sanofi	EI	TI	Diverse
Takeda	EI	TI	Diverse
Boehringer Ingleheim	EI	TI	Specialty
Legend: TO = Task Outward; TI = Task Inward; EO = Ethical Outward; EI = Ethical Inward			

Table 4. *Pharmaceutical Company Groupings based on cluster analysis; Authors' own work*

company materials. We then sorted each company's values and grouped them statistically. Finally, we examined the "brand portfolio composition" (based on their top three brands) of these company groupings to determine if this had an effect on overall reputation. We made no judgments regarding the firms' specific choices of values or brand portfolios as part of their strategies.

The sample for our research was composed of the 20 leading global pharmaceutical companies (64.8% of industry sales) and their top three brands compiled by *Evaluate Pharma*, a publicly available source for pharmaceutical industry level data, and reported by

Diverse Portfolio Companies (1)	Drug/Class	Specialized Portfolio Companies (2)	Drug/Class
Novartis	*Cosentyx*/RA	Roche	*Avastin*/oncology
	Gilenya/MS		*Rituxan*/oncology
	Lucentis/ophthalmology		*Herceptin*/oncology
Pfizer	*Prevnar 13*/vaccine	Johnson & Johnson	*Stelara*/oncology
	Ibrance/oncology		*Remicade*/IBS & RA
	Lyrica/analgesi		*Darzalex*/oncology
Merck	*Keytruda*/oncology	AbbVie	*Humira*/RA
	Gardasil/vaccine		*Imbruvca*/oncology
	Januvia/diabetes		*Mavyret*/oncology
	Revlimid/oncology	Gilead	*Biktarvy*/HIV
Bristol Myers Squibb	*Eliquis*/CV disease		*Genvoya*/HIV
	Optivo/oncology		*Truvada*/HIV
Sanofi	*Lantus*/diabetes	Eli Lilly	*Trulicity*/diabetes
	Dupixent/respiratory		*Humalog*/diabetes
	Pentacel/vaccine		*Alimta*/oncology
GSK	*Triumeq*/HIV	Nova Nordisk	*Victoza*/diabetes
	Shingrix/vaccine		*NovoRapid*/diabetes
	Advair/asthma		*Ozempic*/diabetes
Takada	*Entyvio*/RA	Boehringer Ingelheim	*Jardiance*/diabetes
	Vyanase/ADHD		*Spiriva*/respiratory
	Gammagard Liquid/neurology		*Tradjenta*/diabetes
AstraZeneca	*Tagrisso*/oncology	Allergan	*Botox*/neurologic
	Symbicort Turbuhaler/respiratory		*Botox Cosmetic*/dermatologic
	Brillinta/CV disease		*Juvederm*/dermatologic cosmetic
Amgen	*Enbrel*/RA	Astellas	*Xlandi*/urology
	Neulasta/oncology- hematologic		*Myrbetriq*/urology
	Prolia/osteoporosis		*Prograf*/organ rejection
Bayer	*Xarelto*/CV disease	Biogen	*Tecfidera*/MS
	Eylea/ophthalmic		*Spinraza*/neurology
	Mirena/gynecology		*Tysabri*/MS

Table 3. *Therapeutic class Classification of top three brands by Company: Source Evaluate Pharma as reported in Pharmaceutical Executive Christel (2020); Authors' own work*

Cluster	Brand Portfolio Composition	Primary Espoused Value & # Mentions	Espoused/Lived Score %	Reputation Score %
Competent	Diverse (1.1)	Innovation (8)	Average (68.8)	Below Average (58.4)
Community	Specialized (1.9)	Accountability (6)	Average (61.2)	Average (61.4)
Interpersonal	Diverse/Specialized (1.5)	Integrity (12)	Average (66.9)	Below Average (57.8)

Table 5. *Company Group Profile: Summary of Findings; Authors' own work*

the business magazine *Pharmaceutical Executive* **(Table 2).**

While there are individual company differences on both metrics, average total sales are $28.4 billion, with the top brands accounting for approximately 42% of total company sales. These brands were categorized based on the therapeutic class of each; and then, the company was classified as either a "diverse" emphasis firm or a "specialty" emphasis firm. If at least two out of three of a company's brands were in the same therapeutic area, it was labelled as having a specialty emphasis. Ten firms in the sample were classified as diverse, and ten were classified as specialty **(Table 3)**.

We used Reputation International's *RepTrak* Index *(www.reptrak.com)* and the *Access to Medicine* Index *(www.accesstomedicine.org)* to calculate a composite reputation score for each company because each index rated at least 17 of the 20 major pharmaceutical companies on different, but complimentary criteria.

The results – what we found

Our research revealed three distinct groupings for the industry based on their values and portfolio composition, and we labelled them the Competent group (with a diverse portfolio); the Community group (with a specialty portfolio) and the Interpersonal group (with a mixed portfolio) **(Table 4)**.

For the Competent group, the espoused values with the highest mentions were Innovation and Customer/ Patient Focus. The Community group shows Accountability and Ethics as the most frequently mentioned values. Finally, the Interpersonal group contains Integrity and Respect as the most frequently mentioned values. The Competent group contains three of the top five firms based on dollar sales; with the remaining groups containing one of each. We note here that companies in other groups may possess values not represented in their group; however, they do not have these in common for classification purposes of this analysis. The Competent group has the highest mean percentile of lived values; the lowest mean percentile of lived values is held by the Community group when compared to the rest of the sample.

The highest mean reputation score was in the Community group (above average score) with the lowest mean reputation score for the Interpersonal group (below average score). While some individual companies had average or above average scores for their reputation, when all the companies were grouped, the mean reputation scores regardless of group were below average based on the two indices used.

In summary, the Community group was different from the others with respect to a specialized brand portfolio composition and the highest relative reputation score. The Interpersonal group had the greatest variation in the composition of its brand portfolio and the lowest relative reputation score. Finally, the Competent group had the highest relative score on its lived values **(Table 5).**

What are the key takeaways?

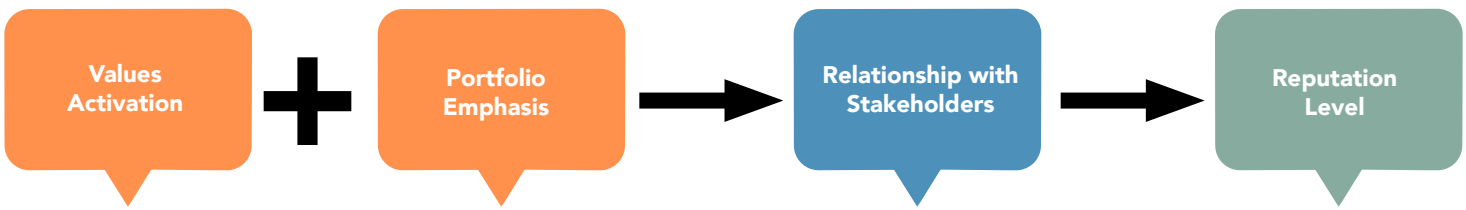

Figure 1*. The Relationship Between Pharmaceutical Company Values and Reputation*

One of our most important insights is that value activation together with brand portfolio emphasis influences the stakeholder relationship, which in turn, influences reputation level **(Figure 1).** Put another way, if you combine your company's values with the strengths of your particular brand portfolio, it will lead to an improved overall reputation because of the relationship you have with your stakeholders. Let's take a look at why this happens.

We noted that all of the top 20 firms are successful regardless of their top three brand portfolio composition – so this is not an issue. Rather, our research suggests that a specialty emphasis results in greater connection to the company's therapeutic community of physicians and patients, and that this results in a higher relative reputation. We believe this is a function of their access infrastructure - their network of patient support programs (PSPs) which foster strong links between the company, physicians and their patients – and not because firms with diverse portfolios have lesser relationships with their customers. Firms with predominantly small molecule drugs or other therapeutic treatments may not possess the same type of infrastructure. In addition, these values may either be better communicated, or communicated more directly to customers because of the PSP infrastructure, and thus result in higher reputational ratings for the Community group.

In contrast, firms in the Competent and some in the Interpersonal group with diverse portfolios show lower mean reputational percentiles, but have generally higher sales than the Community group. It may be that those with brands that have larger patient segments (i.e., cardiovascular disease) may not have the same infrastructure to reach their communities as specialized firms. In addition, some companies in other groups, such Novo Nordisk (in the Competent group/diabetes) and Roche (in the Interpersonal group/ oncology), also have a specialty focus and also have similar relationships with their therapeutic communities as the Community group. It may be, that in the long-term patent expirations and gaps in research and development pipelines may cause this profile to change over time; but based on the data provided here, brand portfolio specialization as a proxy for therapeutic community relationships appears to be a qualitative contributor to reputation.

In addition, the Community group holds exclusively outward facing values, and in particular, has accountability and ethics as their dominant characteristics; this differs from the other two groups which have some element of inward facing values either as a dominant or secondary characteristic. They also hold the outward facing values of innovation and customer for their secondary characteristic (like the Competent group). We believe that outward facing values may be better understood by rating organizations which may result in higher reputation ratings; it may also be assumed that pharmaceutical companies by definition are perceived as innovative – and therefore, this value does not necessarily translate into higher reputation scores.

We observed that the Interpersonal group had the lowest mean reputation percentile of the three groups; and lower than the sample mean. It is possible that exclusively inward facing values are not well communicated externally, even though half the firms in this group have specialty brand portfolios and likely have the infrastructure to relate to their therapeutic communities.

How can you activate values with your brands for better reputation?

Marketers should capitalize on whatever values are already held by their companies that are relevant to their brand mission to harness strong relationships with physician and patient stakeholders. We do not recommend any specific value groupings or specific values – we believe all are valid provided they are both espoused and lived by the organization.

In addition, all firms, regardless of the type of portfolio they possess, should develop and maintain and strong ties with their therapeutic communities, through both their professional sales representatives and medical science liaisons to boost brand reputation. They should also utilize the current technologies available to them for non-personal communication. The ability to reach therapeutic communities is easier for firms with a specialty brand access infrastructure that provides physician and nursing support to patients through their PSPs. However, we note that Pfizer (in the Competent group) is the first to offer a PSP for its small molecule drug Vyndaqel™ here in Canada. Some pharmaceutical firms may wish to consider this strategy if they face a similar situation with a small molecule compound for the treatment of a difficult-to-diagnose disease entity offered at a premium price: this may result in closer relationships with their therapeutic communities. The trend towards personalization and therapeutic emphasis, aligned with others, may emerge to be an important competitive differentiating factor among companies.

All marketers should endeavour to utilize, when appropriate, cutting-edge digital and omnichannel marketing strategies to physicians and patients, as the industry has still much more work to do in this area, and still lags behind other industries. A newer area applicable to therapeutic communities is that of customer experience (CX) and experience management (XM) for patients and these are particularly important for PSPs. It is predicted that these methods will help pharmaceutical companies develop trust and improved relationships with both patients and physicians. Ultimately, it will also increase direct contact with both the professional and patient audiences, and allow the firm to better communicate its values for the performance of the brand portfolio. It is further recommended that values for individual brands or therapeutic classes be linked to the values of the firm through their communication channels for enhanced performance.

We hope you find these strategy recommendations worthwhile, and that you activate values at all levels of marketing in your organization for improved relationships with all stakeholders and an overall better reputation.

Listen to the Podcast

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Alan Williams
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Kajan Srirangan, BSc, PhD
earned a BSc and PhD in Chemical Engineering from the University of Waterloo and an MBA from the John Molson School of Business. He has held various roles in pharmaceutical market access, HEOR, and marketing. Prior to this, he was a researcher at the Canadian National Research Council, developing next-generation biologics in oncology, immunology and respiratory disease.

Information on the Latest Drug Approvals and Reimbursement Milestones

Brukinsa™ (zanubrutinib), manufactured by **BeiGene** , was approved by Health Canada for the treatment of relapsed and refractory follicular lymphoma. BeiGene also recently announced the public listing of Brukinsa (zanubrutinib) in Ontario and Quebec for adults with chronic lymphocytic leukemia.

Rexulti™ (brexipiprazole), co-developed by **Otsuka and Lundbeck**, has been approved by Health Canada for the treatment of Alzheimer's patients with aggressive behaviour that doesn't respond to other medications.

Columvi™ (glofitamab), manufactured by **Roche**, was positively recommended by the Canadian Agency for Drugs and Technologies and Health (CADTH) and Quebec's Institut National Excellence en Santé et Services Sociaux (INESSS), for adult patients with relapsed or refractory diffuse large B-cell lymphoma.

Elrexfio™ (elranatamab-bcmm), from **Pfizer**, is now approved in Canada for the treatment of adults with relapsed or refractory multiple myeloma. Patients are eligible if their disease progressed after at least three lines of therapy, including a proteasome inhibitor, an immunomodulatory agent and an anti-CD38 monoclonal antibody.

Keytruda™ (pembrolizumab), an immunotherapy developed by **Merck**, was authorized by Health Canada as a first-line treatment for patients with HER2-positive gastric or gastroesophageal junction adenocarcinomas that express high levels of PD-L1.

Vyalev™ (foslevodopa/foscarbidopa), manufactured by **AbbVie**, became the first 24-hour subcutaneous infusion to get Health Canada approval for the treatment of advanced Parkinson's disease.

Myfembree™ (relugolix/estradiol/norethisterone acetate), sponsored by Sumitomo Pharma and Pfizer, is now approved in Canada for the management of pain from endometriosis and heavy menstrual bleeding associated with uterine fibroids.

ABSORICA LD™ (isotretinoin), from **Sun Pharma Canada**, has been authorized by Health Canada for the treatment of severe acne in patients 12 and older.

Litfulo™ (ritlecitinib), a dual JAK3/TEC inhibitor from **Pfizer Canada**, was the first treatment approved by Health Canada to treat severe alopecia area. It is indicated for people aged 12 and older.

Olumiant™ (baricitinib), a JAK inhibitor supported by **Lilly Canada**, became the second medication authorized by Health Canada for the treatment of severe alopecia areata in adults.

Xtandi™ (enzalutamide), sponsored by **Astellas Canada**, has been approved in Canada, making it the only treatment for high-risk patients with non-metastatic castration-sensitive prostate cancer.

Jardiance™ (empagliflozin), from **Eli Lilly and Boehringer Ingelheim**, received Health Canada authorization for the treatment of adults with chronic kidney disease.

Uplizna™ (inebilizumab), manufactured by **Amgen company Horizon Therapeutics**, was approved by Health Canada to treat people with neuromyelitis optica spectrum disorder, a rare autoimmune condition.

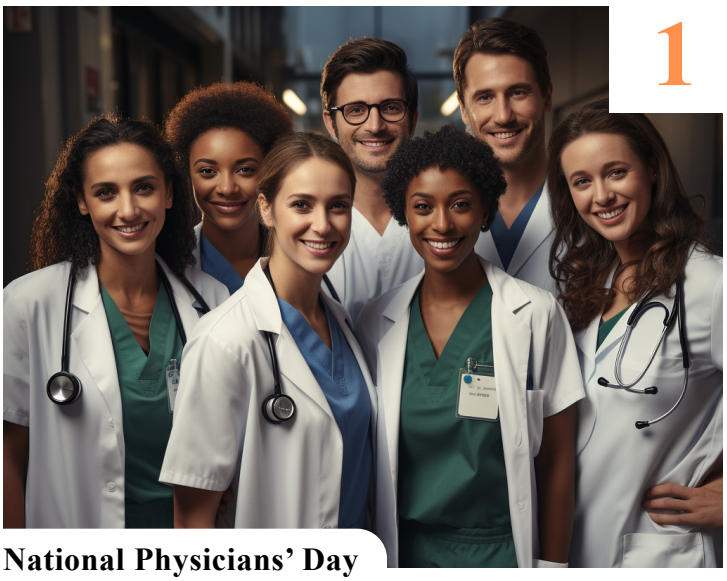
Abrysvo™, the bivalent respiratory syncytial virus (RSV) vaccine developed by **Pfizer**, is now available in Canada for older adults and pregnant people (to protect infants).

Beqvez™ (fidanacogene elaparvovec), a viral vector-based gene therapy developed by **Pfizer,** has been approved in Canada for the treatment of adults with moderate to severe hemophilia B.

Pemazyre™ (pemigatinib), manufactured by **Incyte**, is now publicly available in Quebec, making it the first province to reimburse the drug. The targeted therapy is indicated for patients with advanced bile duct cancer (cholangiocarcinoma).

Sumitomo Pharma announces the availability of **ORGOVYX® (relugolix)** in Canada, the first and only oral androgen deprivation therapy treatment for men with advanced prostate cancer.

MAY 2024



1

National Physicians' Day

On May 1st, Celebrate National Physicians' Day, honoring Dr. Emily Stowe, Canada's first female physician to practice in Canada.

7

World Asthma Day

May 7th, World Health Organization collaborative organization founded in 1993. WAD is held each May to raise awareness of Asthma worldwide.

Ankylosing Spondylitis Awareness Month
Bladder Cancer Awareness Month
Brain Tumour Awareness Month
Cystic Fibrosis Month
Guillan-Barre Syndrome Awareness Month
Melanoma and Skin Cancer Awareness Month
Hypertension Awareness Month
Lupus Awareness Month
Melanoma and Skin Cancer
Awareness Month
Vision Health Month
Mental Health Week - May 6 to 10
World Pulmonary Hypertension Day - May 5*
Heart Failure Awareness Week - May 5 to 11
World Asthma Day – May 7
Check Your Skin Day - May 8*
World Ovarian Cancer Day - May 8*
HAE Day - May 16
World Lupus Day - May 10*
National Nursing Week - May 6 to 12
Fibromyalgia Awareness Day - May 12

6-12

National Nursing Week

From May 6-12th, National Nurses Week honors the invaluable c ontributions nurses offer to communities.

International Awareness Day for Chronic
Immunological and Neurological Diseases - May 12*
World Hypertension Day - May 17*
World IBD Day - May 19*
World Schizophrenia and Psychosis Day - May 24*
World Multiple Sclerosis Day (MS) - May 30*

Source: www.canada.ca/en/health-canada/services/calendar-health-promotion-days.html
Events marked with an asterisk (*) take place on the same day every year.

JUNE 2024

10

Action Anxiety Day

On June 10th, We encourage Canadians to actively engage in raising awareness and educating others about anxiety.

ALS Awareness Month
Brain Injury Awarness Month
Canadian Men's Health Month
National Cancer Wellness Awareness Day - June 26
World Scleroderma Day - June 29*

JULY 2024

24

International Self-Care Day

On July 24th, we celebrate International Self-care Day, urging individuals to prioritize activities that promote mental, physical, and spiritual well-being. Photo by Jessica Rockowitz on Unsplash

National Injury Prevention Day - July 5*
Glioblastoma Awareness Day - July 17*
World Hepatitis Day - July 28*

AUGUST 2024

31

International Overdose Awareness Day

International Overdose Awareness Day (IOAD) is the world's largest campaign to end overdose, remember those lost without stigma, and honor grieving families.

Gastroparesis Awareness Month
Spinal Muscular Atrophy Awareness Month
World PVNH Disorder Awareness Day - August 7*
International Youth Day - August 12*
World Pancreatic Cancer Day – August 17*
World Humanitarian Day - August 19*

Charting New Waters

From Physician Shortages to Online Medical Misinformation to AI: How Medicine Can Navigate Complex Challenges

A Q&A with Dr. Remo Panaccione, Director of the Inflammatory Bowel Disease Unit at the University of Calgary

As an expert in inflammatory bowel disease and long-time medical educator, Dr. Remo Panaccione is an advocate for access to innovative therapies for his patients. We sat down with the Directorof the Inflammatory Bowel Disease Unit at the University of Calgary, to discuss important trends in medicine.

One of the hats you wear is Assistant Dean for MD Admissions at the University of Calgary. What trends are you noticing in medical school enrollment?

Across North America, we're seeing increasing diversity. Medical schools, in general, have been striving to increase representation from traditionally underrepresented minorities, including those who are socioeconomically disadvantaged and what we call

> ***Every year, thousands of Canadians go abroad for medical school. We need to increase class sizes in medical schools by at least 50% in the next five years to avoid severe physician shortages.***

'non-traditional applicants' such as applicants who are above age 35. The goal is to have the medical profession better reflect the patient populations that we're serving. Historically, medical students have largely been from white families and from families of a high socioeconomic status.

The admission process is much more holistic, compared to when I applied for medical school. We consider a broader range of attributes, beyond a grade point average or medical college admissions test (MCAT) scores. We consider each applicant's experiences providing service to others, their leadership qualities, and many other non-academic factors. Of course, people still need the academic bandwidth to learn everything they need to learn in medicine and integrate those learnings into clinical practice. We aim to strike the balance – admitting medical students who have high academic competence as well as lived experiences that reflects the populations they serve.

The Grossman School of Medicine in New York, along with others, have announced full tuition scholarships for medical students. Can free tuition play a role in helping to combat physician shortages?

Medical school is much more expensive in the U.S., and I don't think the cost of medical school is as much of a barrier here. Instead, the biggest barrier here is that we have insufficient medical school positions to train the physicians of the future. Every year, thousands of Canadians who couldn't get into a medical school here move to places like Ireland, Australia, and the Caribbean to study medicine. But it's difficult for those individuals to get licensed to practice in Canada, because they're considered international medical graduates.

As I see it, we need to increase the class sizes in medical schools across the country by at least 50% within the next five years, or else we'll be in a lot of trouble regarding physician shortages. Currently, more physicians are retiring than are entering the profession. We're also seeing family medicine residency positions going unfilled, especially in more rural and remote communities.

I want to talk about another big challenge facing medicine right now, which is medical misinformation, whether that's COVID-related or otherwise. What are your thoughts on how we ended up here?

I think this misinformation is driven by both ideological beliefs and financial interests. I used to see ads inviting patients to a session on inflammatory bowel disease or diabetes, and it was clear the speaker was touting an unproven cure. I used to go to those as a medical expert and challenge people: "What's the science? How many patients have you treated?" Social media, websites, and blogs provide a much larger, more fertile ground for the dissemination of medical misinformation, due to its wide reach and the ease of sharing content, and often that content is not challenged. Celebrities and influencers, who have no background in the sciences, wield significant influence over their followers. The very firm stances that they shared about what they believed regarding COVID-19 and vaccination did incredible harm.

When patients bring up some unscientific claims they've heard, I say "The people you are listening to don't have a lens on your care. It's not about you, it's about them." It's up to us in medicine to speak intelligently and debunk some of these claims. When patients say, they read about a diet or a pill that's a cure for inflammatory bowel disease, I say, "if someone had the cure for anything, it would have been adopted around the world, and they'd win the Nobel prize." I tell patients that when people peddling cures are challenged by those in the know, they tend to disappear.

Let's pivot to the Canadian health system. Among Organisation for Economic Co-operation and Development (OECD) nations, we rank 19th out of 20 in terms of the time between a drug's approval and public reimbursement. Why can't regulators streamline this process?

This is a topic near and dear to my heart. I think the Canadian Agency for Drugs and Technologies in Health

(CADTH) and the Institut National d'Excellence en Santé et Services Sociaux (INESSS) have lost sight of what their mandate is. They often do a scientific review of the data for safety and efficacy, duplicating the efforts of Health Canada. Instead, they should be focusing on the cost effectiveness of the therapy.

These health technology assessment bodies can lose sight of the fact that we need innovation in this country. There needs to be more stakeholder engagement and collaboration to improve the drug reimbursement process. Companies will be less willing to go through the long process of launching a drug in Canada if their therapy isn't reimbursed, or if it's reimbursed at the same cost as a biosimilar medication or a generic medication, which is much less expensive to develop.

> ***Too often, health technology assessors are duplicating the efforts of Health Canada. We need more stakeholder engagement and collaboration to improve the drug reimbursement process***

Speaking of innovative medicines, what's the next frontier for IBD?

We need to break what we call the "therapeutic ceiling," which has existed for about a quarter of a century. Despite the addition of novel therapies over the years, we still have low overall rates of clinical remission, or the ability to achieve mucosal healing in the short term. That is starting to change, however. Many of us are now combining therapies in clinical practice, and there are several ongoing clinical trials evaluating these combination approaches. It could be the combination of two drugs, or a drug and a diet approach, or a drug and a therapy that alters the microbiome. Gene therapies also hold promise as a potential approach for IBD. Researchers are exploring various strategies to target underlying mechanisms of inflammation. For example, gene therapy could target T-cells or macrophages to modulate and restore immune balance. There is some early data that gene therapy could enhance the barrier function and the epithelial integrity of the GI tract.

The final thing I want to pick your brain about is artificial intelligence (AI). Proponents of AI in healthcare claim it can reduce mundane tasks for the physician, so they can spend more time interacting with patients, as well as significantly speed up drug discovery. Have you formed an opinion around where you think AI could best be used, and how it should be regulated?

For transparency, I act as a senior advisor for one of the major health care AI companies here in Canada. I do see huge potential in AI. There is definitely a place for AI in medical imaging and diagnostics. AI-based image analysis tools can enhance diagnostic accuracy, reduce interpretation errors, and even expedite the delivery of critical results. Drug discovery and development is another big one. AI could change the way companies do research and development. If they get a no-go signal quite early, the investment they would otherwise have spent could then be allocated more fruitfully. At the clinical level, AI can support clinical decision making, especially from the perspective of avoiding prescription medical errors, which can cost the system millions of dollars each year and obviously harm patients. Overall, I think, AI is about augmenting human capabilities. I don't think it's going to replace physicians. Of course, regulation will be extremely important in ensuring patient safety and the ethical use of AI, and to maintain public trust in healthcare technologies.

Do you think patients should be informed if AI has been involved in supporting the clinician's clinical decision making?

I think we need to develop a regulatory framework around AI in medicine with all stakeholders, including patients, health care professionals, technology developers and hospital boards. That framework should prioritize transparency, because that's the only way to build trust in AI-based healthcare technologies and ensure accountability. That transparency goes beyond informing patients that AI augmented the X-ray interpretation, as an example. Information should be shared on how accurate the AI model is, and what the testing process was to ensure that the AI model

works as well as a human, or better. There is a lot of knowledge translation that needs to happen.

My final question, have you read any good books lately?

I'm reading *Lead It Like Lasso* by Marnie Stockman. She's a business expert who has translated lessons from the TV show, Ted Lasso, into leadership advice. Ted Lasso is a fictional show about the determined coach of a beleaguered soccer team in England. Outside of medicine, my other passion is soccer. I've played since I was a child and I've coached for many years, including at the national championship level. I loved the show and I'm very much enjoying the book. The book talks about the importance of core values and how to empower your teams to believe in themselves. At this stage of my career, I want to look at things a little differently.

Listen to the Podcast

Remo Panaccione, MD, FRCPC
is a Professor of Medicine, and the Director of the Inflammatory Bowel Disease Unit at the University of Calgary where is also serves as the Dean of MD Admissions and Director of the IBD Fellowship Program. He holds the Crohn's Colitis Canada Endowed Research Chair in Inflammatory Bowel Disease. He was awarded the 2020 Crohn's Colitis Canada Outstanding Physician of the Year and has been recently recognized as a Clarivate Research Scholar for being cited in the top 1% of researchers cited in the world.

A Conversation with Dr. Soania Mathur: Patient and Parkinson's Advocate

Dr. Soania Mathur is a patient and a physician. She was diagnosed with young-onset Parkinson disease at age 28. She continued her family practice, while growing her family, for 12 more years, before the burden of living with the disease required her to resign clinical practice. She now focuses her time on Parkinson's disease advocacy. She is the cofounder of PD Avengers, a global network of Parkinson's disease patients and organizations. Dr. Mathur is also involved with many other Parkinson's research and advocacy groups.

Can you tell our readers about yourself, and what it was like to be diagnosed with Parkinson's disease at such a young age?

I grew up in Nova Scotia, the only child of two immigrant parents from India. I attended medical school in Nova Scotia, where I met my husband. We moved to Toronto for my residency in family medicine. I had just begun my family practice when I noticed a tremor in my right pinky finger. I was expecting my first daughter at the time. Like all good doctors, I ignored my own health situation. But once the tremor became more constant, my husband, who is also a physician, said, "You need to go get it checked out." I saw a neurologist who did a series of clinical tests, and he quite astutely said, "I think you have young-onset Parkinsons disease." My first reaction, like many people's reaction when they're diagnosed with this at a young age, was "I'm too young for this. You're obviously wrong." When the diagnosis was confirmed, I intellectually accepted it, but emotionally, I didn't accept it. I had two more beautiful daughters. We built a house. I was able to distract myself with the busyness of life.

For a good 10 years, I didn't tell my extended family and wider social circle that I had Parkinson's. I felt it would be a pity party. I didn't want to be seen as lesser. I didn't want to be seen as less capable at work. Eventually, the disease got to the point where I could no longer ignore it. Once I started telling people that I had Parkinson's, the burden of hiding the diagnosis was lifted. Everyone was very supportive.

Thank you for sharing that. It takes a great deal of bravery to share one's story openly, which is something you do as well on your website, www.unshakeablemd.com. Can you talk about the connections you've made within the Parkinson's patient community?

One of the things that keeps me going is the incredible community I have of people living with Parkinson's disease. I'm involved in several different organizations, and I have a core support group of people living with this disease who are at a similar stage of life as me.

> ***"I was pregnant with my first daughter at the time of my diagnosis. My first reaction was "I'm too young for this.You're obviously wrong."***

We learn from each other about the practical aspects of how to cope with this disease and how to live well with this disease. In some ways, we learn even more from each other than we do from our medical teams, who don't have the experiences of living with the disease.

Parkinson's affects the whole family unit, your immediate family, your extended social circle. I have a tremendous amount of respect for care partners, because I think it's far easier to live this than to witness it. Watching someone who you love suffer is very difficult. The early years were probably more difficult for my husband because I hadn't come to terms with the diagnosis. If I was struggling to open a jar, I'd ask, "Why aren't you helping me?" But when he would help, I'd say, "Why are you helping me, because you think I can't do it?" But as I learned to accept the disease and depend on him, we both learned to openly communicate how

> ***Initially, the focus of therapy was on treating the motor symptoms. Now, it's about modifying the disease itself.***

we're feeling. That's been key to the success of our relationship.

That's really powerful. Overcoming stigma and connecting with others from a place of acceptance is so spiritually healing. From a clinical perspective, can you talk about the next frontier of Parkinson's disease treatments?

For the first several years after my diagnosis, the therapeutic focus was about replacing the dopamine, and finding faster, more comprehensive ways of delivering dopamine. Now, we recognize that Parkinson's disease is not just a dopamine-related disease and it's not just a motor disease. The non-motor symptoms can be quite extensive. They can include pain, sleep problems, constipation, urinary issues, depression, and anxiety. Now the focus of therapy is on both the motor and the non-motor symptoms, as well as modifying the disease process. Focused ultrasound and deep-brain stimulation are becoming more available to patients. I'm very heartened to see that shift.

The Michael J. Fox Foundation has been instrumental in driving therapeutic innovation in Parkinson's disease. Can you tell me about meeting Michael J. Fox?

I've been lucky enough to meet him a few times. He's very humble and down to earth, not pretentious at all. I sit on the patient council for the Michael J. Fox Foundation, which is such a remarkable foundation. They've raised more money for Parkinsons disease research than any non-governmental agency. Michael illustrates the power of story. His story resonated with people and allowed him to create a platform from which to educate the public about Parkinson's. It's not easy to share your own inner struggles with this disease, and he has done so with such grace and optimism.

It's been inspiring. How can industry better support and collaborate with patients and families affected by Parkinson's disease?

A couple of things come to mind. First, the patient voice should be paramount to research, from the initial stages of conceptualizing the research topic, to developing the research protocol, through to the recruitment phase and the analysis phase. The outcome measures should be ones that highly impact the quality of life of Parkinson's patients. The findings should also be disseminated with the patient perspective in mind. It's important to avoid the unwarranted hype that can occur when drugs are presented in the media. When I first got involved in Parkinson's advocacy, many researchers weren't having meaningful conversations with patients with Parkinson's disease. That isolation is so counterproductive. Patients might need something totally different for their quality of life compared to what you think would help.

I would also encourage industry representatives to remember that they are ultimately serving a global community. Parkinson's disease patients in many low-income countries around the world don't even have access to simple therapies like dopamine replacement medications. Their quality of life is far worse than it is for people in high-income countries. We need industry to expand their efforts to give back to Parkinson's communities around the world.

Thank you, this is really helpful advice. For those reading this article who would like to donate to Parkinson's disease organizations, do you have any suggestions?

I'm the cofounder of PD Avengers, which is unifying people living with Parkinson's and Parkinson's disease advocacy groups around the world. By bringing together our voices, we can better advocate for increased research funding for Parkinson's and ensure that patients have influence in research decisions.

Parkinson Canada does a great deal of work here in Canada, and of course, the Michael J. Fox Foundation provides a tremendous amount in research grants. The Davis Phinney Foundation in the U.S. helps people to live well with this disease. I'd also like to highlight the important efforts of the Brian Grant Foundation

and Parkinson's Foundation. Whether you are more interested in supporting community care or research or advocacy, there are so many great organizations out there. You will definitely find one that resonates with you.

Listen to the Podcast

Soania Mathur, MD
is a family physician living outside of Toronto, Ontario, Canada who resigned from her clinical practice twelve years following her diagnosis of Young Onset Parkinson's Disease at age 28. Now she is a dedicated speaker, writer, educator, and Parkinson's advocate. Her platform, UnshakeableMD (www.unshakeablemd.com) serves as a resource for patient education as well as an outlet for her personal experiences with this disease. Dr. Mathur is an active speaker in Canada and internationally, serves on committees and boards for several organizations and has authored a number of published papers and online pieces that focus on patient education, empowerment, and the vital importance of involving patients in all areas of clinical research. Recently she co-founded PD Avengers, a self-funded, global alliance of Parkinson's advocates dedicated to unifying the global PD community to add urgency to the areas of wellness, research, and advocacy, to end Parkinson's (www.pdavengers.com).

Move Fast and Fix Things: The Rewards and Challenges of Leading a Small Biotech Firm at a Time of Great Uncertainty

Thinking about a future in management? Anand Janack, General Manager of BioCryst Canada, spoke to Hypothesis publisher Rohit Khanna, about his career path, the advantages and challenges of working within a smaller pharmaceutical organization, and his advice for those who want to follow in his footsteps. As a leader of a company focused on rare disease, Janack also spoke about how to challenge the bureaucratic hurdles stalling Canada's reimbursement process.

Can you tell us about your background?

I'm a pharmacist by training, and I also have an MBA. I wanted to be a musician, but my father, being very academically driven, steered me in the pharmacy direction. I have no regrets about that. I started my career at an independent pharmacy, in a small clinic. I had a very good relationship with the physicians, so I could make medical recommendations. But I always had a bit of an entrepreneurial and business bent as well. I pivoted to the pharmaceutical industry where my first role was in Medical as a Medical Science Liaison/ Medical Information Associate, and then decided to do an MBA. Eventually, I moved to the commercial realm, gaining experience in many different roles at several life sciences companies in Canada.

I've been really fortunate in my career to have really good mentors, who have seen something in me that perhaps I didn't see in myself. They have pushed me out of my comfort zone. There's the saying that "a good mentor is someone who speaks your name in a room when you're not there" and I've had many of those.

Every business leader has a book that serves as that North Star for their management style. What's your favorite business book and what's the key lesson from it?

It's funny, mine is a book that's more than 20 years old. It's *Who Moved My Cheese* by Dr. Spencer Johnson. I didn't appreciate the book as much when I first read it, but over time, and after having worked in different environments, the lessons from that book ring truer and truer with every passing year. The book emphasizes the ideas of resilience, of how to affect your environment, and recognizing the aspects in your life and work that you can influence and change. The lessons from that book influence my perspective on a day-to-day basis.

> ***"In a small company, you roll up your sleeves and you figure out how to get it done. The learnings are immeasurable."***

You're leading a small biotech company, and you've also worked at very large pharmaceutical companies including Zeneca (now AstraZeneca) and Pfizer. What are the challenges that you face leading a small organization that you didn't face in a large multinational company?

In the rare disease space, we need to work fast. We know that there are patients out there that are desperately waiting for treatments or therapies. What that means is if something needs to get done, and there's no one else to do it, you are the person who is going to do it. You roll up your sleeves and you figure out how to get it done. But the learnings you get from working at a small organization are immeasurable. You get the opportunity to be part of building up an organization and seeing the growth, not only of the business, but also the people. I enjoy seeing my team members grow and helping along that growth journey. Big organizations have more resources, but also more challenges. In a bigger organization, getting buy-in takes a huge amount of effort and time. In smaller organizations such as BioCryst, everyone has the ability to move fast and contribute to important decisions.

As a general manager, you're in charge of hiring. What are the traits that you look for when it comes to hiring for a smaller company?

The number one thing I look for is coachability. I look for people who are open to feedback and learning,

and I mean actually being open, not just paying lip service to it. I look for the type of person who will say in a meeting, "I didn't consider that. That's something I'm going to look into." I also look for someone who asks the question, "Why can't we try this?" or "What's stopping us from doing it this way?" That tells me the person is solution-oriented and looking to change how we're doing things.

BioCryst's predominant area of specialty is hereditary angioedema, a difficult disease that afflicts about 1,000 Canadians, and can cause swelling in the limbs and even laryngeal swelling. You're involved in all areas of the company's operations, including advocacy, reimbursement, and much more. Can you talk about your day-to-day role?

As the general manager, I need to have a bird's eye view of where the organization is and how the different functions link together. With every decision that I make, I have to consider the future implications. The biggest implication being how will this decision affect the patient? How will that affect reimbursement?In supporting for example, clinical trial design, when considering decisions around eligibility or endpoints, what are the long term impacts going to be? Will it help Canadian patients? What are we missing?

I know that you are eminently aware that Canada takes far too long, compared to peer nations, to publicly reimburse drugs after they're approved. What's your opinion on why this is the case?

BioCryst has been operating in Canada now for a little under two years. The decision to come to a country like Canada is a very brave one, because of the timelines that are required to get public access. It takes us over 700 days, on average, to give patients public access to therapies, after they've been approved. In the UK, the timeline is about nine months.

The issue goes beyond any one agency in Canada, such as PMPRB, CADTH, pCPA. Presently there are uncertainties when it comes to reimbursement and as a general rule businesses gravitate to where there is certainty. That uncertainty is leading companies to make decisions to not establish a presence in Canada.

Canadians are fortunate that a company like BioCryst has set up in Canada during a time of uncertainty. There are other companies who have done this as well, such as ArgenX, and Rhythm to name a few, and Canada as a whole is better for it. These are companies that are hiring some of the best individuals in the pharmaceutical industry worldwide. Canada is a great source of global talent. We're bringing great companies to Canada, and we're employing great Canadians to cement access in a time of great uncertainty in this country. I think biotech companies in Canada should be commended for this commitment to Canadian patients.

"My friend passed away of cancer earlier this year, after being unable to get access to a newer therapy that was available in the US. That's the tragic reality of the Canadian system."

There are cases where a drug will be reimbursed in major jurisdictions around the world and in all Canadian provinces but one. Many patients are angry and frustrated, but people are busy. It's hard to get Canadians to recognize the problem until it really matters. How do you see patient engagement in this country?

I understand the anger and frustration firsthand. My friend passed away of cancer earlier this year, after being unable to get access to a newer therapy that was available in the US. That's the tragic reality of the Canadian system. Pharmacare might even exacerbate the problem as a national formulary may preclude newer therapies. The pCPA is, in theory, a solution, and hopefully the pCPA process improves so that companies can negotiate on an equitable basis across provinces. We need to be cautious, however, that any solution doesn't have unintentional consequences. It's possible that moving to what is seen as an equitable, public system means that access to innovative products becomes even more limited.

Do you have any advice for aspiring general managers?

My first recommendation is to never think of yourself as ever being a general manager. Yes, you need to know your product inside out, and you need to be the subject matter expert, but humility is key. You also want to make sure that you're always looking for ways to develop professionally. I'm not talking necessarily about an MBA or leadership courses. It's about looking for opportunities to help other people and to gain experience in different aspects of the business, not solely for the purposes of a career stepping stone, but for gaining a broader level of knowledge.

While it's important to be humble, it's equally important to not be afriad to contribute when you have ideas, to bring people to your way of thinking, or equally to be

open to having your perspective change. To do this, you have to listen to really understand. As to whether people should pursue management through the finance or medical track, I don't think that necessarily matters. What matters is whether or not people take notice of the value that you're bringing, ultimately.

Where do you see AI having application in healthcare?

One interesting application is pharmacovigilance reporting. Rather than having to comb through medical journals to find adverse events, AI technology can scan the journals. There are applications in reimbursement as well. Currently, prior authorization forms can be rejected because of a missing laboratory value or a small piece of missing medical history information, which can delay the patient's initiation on a drug by months. AI could prevent this by scanning the forms and ensuring that the information is complete and correct.

Lastly, if you could invite any three people to dinner, who's on the invite list? I'll allow time travel, so feel free to choose historical figures.

Terry Fox is a hero of mine, so he would be number one. I'm in awe of the decision he made to run across the country and raise money for cancer despite the incredible physical challenges he was facing. Secondly, I would choose Mahatma Gandhi, who demonstrated incredible resilience and determination. Finally, I would invite my father, who passed away about seven years ago. He would have loved to have met Gandhi as well.

Listen to the Podcast

Anand Janack
leads BioCryst Canada ULC as the VP/General Manager of the organization. He is a Healthcare Professional having trained as a Pharmacist and holds an MBA from the Schulich School of Business. Over his 20+ year career he has touched and led multiple facets of the healthcare industry including progressive roles with AstraZeneca, Wyeth (now Pfizer), Medtronic, Alexion, and most recently Emergent BioSolutions. He thrives in ambiguity and finding solutions by looking at non-conventional approaches. What he enjoys the most is developing and stretching his team and colleagues to their full growth potential. Anand has been married to Kirsten for over 23 years, has two children, Marek and Mira and his Boxer Charles Henry Walker III.

Who's Doing What and Who's Going Where

Tania Alexanders is starting a new position as Director, Centre of Excellence, Medical Education at ***AstraZeneca.***

Alex Bazhanov has joined ***GSK*** as the Shingrix™ Direct-to-Consumer Manager.

Natalie Bedard is joining the ***Sanofi*** team as Commercial Sales Lead and to be part of a new paradigm that brings fresh hope in Autoimmune Type 1 Diabetes.

Darren Breckenridge is starting a new position as Associate Director, Marketing Strategy at ***Novartis.***

Wissam Chahrour starting a new position new position as Medical director, Neuroscience, Vaccines & Immunology at ***Takeda Canada Inc.***

Norman Chan has embarked on a new role as the Therapeutic Area Lead, Ophthalmology at ***Astellas Pharma Canada.***

Mélanie Deslauriers is now the Oncology Commercial Director in Hematology at ***GSK.***

Wendy Dobson-Belaire started her role as the National Sales Manager in Oncology in ***GSK's*** Hematology division.

David Elmore is joining ***Acadia Pharmaceuticals Inc***. as Commercial Director

Tiffany Erner joined ***LEO Pharma*** team as a Senior Marketing Manager in Dermatology.

Maria Ferraiuolo has taken on the role of National Medical Education Manager at ***Eli Lilly and Company.***

Melissa Fudge has joined the team as Oncology Medical Training Leader Capabilities at ***AstraZeneca.***

Laura Garofalo started a new position as Associate Director, Medical Education Strategy & Execution at the ***Janssen Pharmaceutical Companies*** of ***Johnson & Johnson.***

Pierre Gaudreault assumes a new role of CEO at ***Alimentiv Inc.***

Danielle Gillis has commenced a new role as the National Medical Field Manager - CVR and Women's Health at ***Bayer***.

Lynne O'Halloran was hired as ***Paladin Labs'*** Specialty Pharmaceutical Sales Representative.

Bettina Hamelin has been appointed as the new President at ***Innovative Medicines Canada (IMC).***

Terry House is starting a new role as the National Digital Health Executive at ***Abbott.***

Samra Rehman started her new role as Marketing Manager at ***Astra Zeneca.***

Graham Watson have begun a new role as the Business Unit Head, Oncology & Specialty Care at ***Astellas Pharma Canada.***

Please submit your selection for our "People on the Move" section, celebrating the advancements of your colleagues, for upcoming issues via email to info@catalytichealth.com.