# The Complexity of 21st Century Health Care

**Jeremy Fish, M.D. and William Bergquist, Ph.D.**

> Everything is interwoven, and the web is holy; none of its parts are unconnected. They are composed harmoniously, and together they compose the world. One world, made up of all things. One divinity, present in them all. — Marcus Aurelius, Meditations

COVID-19 may be the single most impactful disruptive force in contemporary healthcare history—yet it does not disrupt alone. It is fully interwoven in a complex web of health care perspectives and practices--and is fully connected to the many other societal challenges facing us in the mid-21st Century.

As Marcus Aurelius noted many centuries ago, everything is interwoven and COVID provides some of the most vivid thread for the tapestry being woven in contemporary life. There is much we can learn from our COVID experiences that would benefit not only our understanding of 21st Century health care systems, but also more generally the nature and dynamics of all complex systems in which we live and work.

## Preface: Enter COVID-19/What Do We Do?

A challenging situation is easily portrayed regarding COVID. It is surging through the American health care system – which is one of the largest, most complex human systems on earth. As a powerful force of nature, COVID is disrupting a long tradition of system inertia in the United States. It is still not clear who will win. The American health care system has successfully resisted most bold new initiatives and external pressure from outside agencies—triumphantly overcoming regulators coming from the halls of justice and power.

What other industry that consumes trillions of dollars primarily settles its court cases for decades without trials? What other industry piles on thousands of new regulations, yet seems to experience little visible change in overall operations? There are likely no other industries that create more waste than the budgets of most nations annually with little progress in reducing those wastes despite decades of effort. The closest human-built innovation to disrupt healthcare in the past twenty years was the 2010 Affordable Care Act—which continues to struggle to reach more universal coverage at more affordable prices. It struggles due to enormous political push-back and inertia--despite rising public support and enormous financial investments.

Leading, working within, and receiving care within contemporary healthcare is often an overwhelmingly complex and exhausting challenge for even the most skilled and adaptable leaders, healthcare workers and people. Physicians have generally shifted from being small, independent contractors vital to the provision of care to becoming massive medical groups who

wrestle with enormous health systems and health plans to get their piece of the massive healthcare spending pie.

Health systems and health plans spend billions every year to try to influence the behavior of physicians, yet most of that investment is to create more and more complex billing and coding practices that tie the physicians up in knots and take them away from essential patient care activities. A few physicians pursue medical group, health system and health plan leadership roles—yet face being ejected from the physician culture as having "gone over to the dark side."

In the midst of these complex challenges to improving healthcare delivery to every American, COVID-19 continues to surge through our health systems nearly 3 years into the Pandemic. It is creating an unrelenting urgency to adapt and innovate. Telehealth capabilities were available over a decade ago—-yet healthcare inertia left it < 1 % of care provision until COVID-19 struck and opened the floodgates of Telehealth—with CMS demonstrating rare agility to allow for billing for this new activity within weeks. It seems that COVID-19 is quite effective as a disruptor and is emulating the observation offered by Aurelius. COVID is profoundly disruptive precisely because it is interwoven with all other aspects of health care—and even the fundamental values of human society.

One of us [JF] notes that his own healthcare system had a Telehealth capability in place prior to COVID-19—yet when we road-tested it in real-time with COVID we found it wanting and quickly shifted to an EPIC-integrated Zoom interface that has served us very well. That transformation from all-in-person to all-virtual happened in a matter of weeks—something that may have taken a decade or more in pre-COVID times. Yet, we generally have the same leaders in place now as we had prior to COVID.

How can our healthcare leaders build the right new skills to lead healthcare in the post-COVID era? How is complexity confronted in the world of mid-21st Century health care? What puzzles, problems, dilemmas, polarities and mysteries has COVID-19 revealed to contemporary healthcare and how can we harness these opportunities to continue to inertia-busting impacts of COVID-19 on the pace of innovation and transformation in healthcare? How has COVID-19 amplified the pace of Volatility, Uncertainty, Complexity, and Ambiguity in healthcare settings. Which skill sets will both current and emerging healthcare leaders need to seize the opportunity for comprehensive innovation in healthcare in the era of COVID-19? What type of leader will emerge to effectively navigate Aurelius' interwoven world?

## VUCA Plus Meets COVID-19 in American Health Care

The challenges in mid-21st Century American Health Care are many and quite diverse. They become even more diverse when COVID enters this system of care. They can be captured, in part, through the introduction of six words: volatility, uncertainty, complexity, ambiguity, turbulence and contradiction. Together these interacting and intertwining challenges constitute what we label VUCA-Plus. We will dwell briefly on the meaning to be assigned to each of the four original elements of VUCA and then

introduce VUCA-Plus terms. We relate all six of these elements to the impact of COVID on the American Health Care system.

## The Four Elements of VUCA

*Complexity* concerns the many elements and dynamic interaction among elements that have to be taken into account, while *Volatility* refers to the rate and shifting rate of change among the elements. The other two terms have to do with epistemology (the way in which knowledge is acquired and reality is defined). *Ambiguity* concerns the assessment of both the evidence available regarding reality and the meaning assigned to this reality. The fourth term, *Uncertainty*, is about the stability of any assessment being made regarding reality. Does reality change over a short period of time? Why do an extensive assessment if our world is constantly shifting?

COVID adds a new element to the health care system, thus increasing complexity. It also increases volatility because various strains emerge that require new treatments. It seems that this virus is re-evolving faster than our medial understanding. With the rapid changes and inability to keep up with this very "smart" virus, the level of uncertainty is on the rise.

We assumed that our world of increasingly sophisticated medical research and health care planning would soon enable us to "get hold" of the virus and provide clarity regarding its treatment and future. Such is clearly not the case—and the American public is becoming increasingly impatient and restless in the face of this uncertainty. All of this, in turn, leads to the fourth major condition: ambiguity. At times we don't even know what we don't know about COVID-19. It has become a mystery with many perspectives to be honored and many culprits to be blamed. We have met a very skillful and resilient opponent that (who) seems to fully understand the human condition and its weaknesses.

## An Expanded VUCA

VUCA is deservedly becoming the coin-of-the-realm among contemporary organizational analysts. These four terms (volatility, uncertainty, complexity and ambiguity) clearly capture much of the dynamics swirling around in the perfect storm of contemporary American health care life—with COVID amplifying everything. However, our categories expand upon VUCA We suggest that leaders in health care systems also are faced with an environment of turbulence and contradiction—that suggest something about the success of COVID-19.

In describing *Turbulence*, we turn to a metaphor offered by Peter Vaill (2008). He suggests that we are living in a "white water" world. This white-water world represents a turbulent system. Furthermore, we go beyond Vaill's analysis and propose that this white-water system incorporates four subsystems that are exemplified by the properties of a turbulent stream: (1) rapid change (flowing segment of the stream), (2) cyclical change (the stream's whirlpools), (3) stability/non-change (the "stagnant" segment of the stream), and (4) chaos (the segment of a stream existing between the other three segments).

COVID is rapidly changes, seems to operate in cycles, creates chaos (in terms of both prediction and control). Perhaps of greatest importance is the highly stable (and often stagnant) health care system in which it is now swirling about. COVID knows that we can't keep up and that the structures we have built

to protect us from chaos are now actually contributing to our ineffectiveness in addressing the COVID challenge—thus creating even more chaos.

With regard to *Contradiction*, we can identify the frequent presence of contradictory constructions and interpretations of reality and the differing meaning assigning to the reality that is being constructed in American health care. As we will not repeatedly in this essay, there are alternative perspectives on the treatment of COVID that are both contradictory and valid.

What do we do? It seems that we are living and leading in a world of contradiction. We must make health-care related decisions that are contingent and subject to frequent review and modification. Obviously, Turbulence and Contradiction are strongly influenced by and tightly interweave with all four of the VUCA challenges. We will use the term *VUCA-Plus* with this expansion on the description of a VUCA environment. Taken together with COVID, these six conditions of VUCA-Plus have created a whitewater world that we cannot readily navigate.

## The Evolution of Healthcare and The Leadership Journey in a World of VUCA-Plus

Healthcare's origin story emerges from the faith-based institutions in Western Culture---the term professional stems from Catholicism and many early physicians grew out from the clergy and in less densely populated areas of the US were the same person. The primary relationship of the physician has been the doctor/patient relationship---a very private, confessional level relationship steeped in mystery and overloaded with expectations for healings and cures. For much of American life finding the right doctor was essential and master-apprentice was the primary means of training and developing new doctors.

### From Cottage Industry to Big Business

As a cottage industry, physicians owned their practices and the patients who visited them there were considered their patients. With the emergence and necessity of hospitals growing in the 20th Century and the rise of health insurance in America, we saw a rise in Hospital Administrators, whose primary role was to attract enough local physicians to select their hospital. Catering to physicians came in the form of free food, Doctor's lounges, and growing technological capabilities to entice physicians to utilize their hospitals. Health plans established themselves as a means for a broader array of people to access the growing alliance of physicians and hospitals to provide comprehensive care for nearly any ailment. Powerful medicines like antibiotics and insulin further launched physicians into powerful trust and support of the public as the stewards of healthcare.

However, by the late 20th Century Healthcare began to shift from a cottage industry of small-business physicians and hospitals into a massive healthcare industrial complex---shifting ownership from physicians into what is now termed the American Healthcare System, a vast array of Healthcare Purchasers (the public, governments, and businesses), Healthcare Plans (insurers both commercial and governmental), Health Delivery Systems (hospitals and clinics), Medical Groups (Independent Physician Associations and Foundation Medical Groups), a few Integrated Systems (Health Plan + Delivery System

+ Medical Group such as Kaiser), Big Pharma, and an array of private consulting firms helping them all figure out what's next. We entered the 21st Century as the largest and most complex adaptive system on earth---consuming trillions of dollars a year yet producing some of the most disappointing health outcomes in the world.

## From Vertical Hierarchy to Team Leadership

The core cultural anchor of healthcare has continued to be vertical hierarchy throughout this tumultuous period has only accelerated in the 21st century in the face of a rising VUCA-Plus environment that is saturated with terrorism, financial disruptions, rising natural disasters—and most recently the COVID-19 pandemic. This environment has exposed many strengths and opportunities for improvement in US Healthcare and Public Health. Aligning physician leadership with healthcare leadership during this period has meant bringing physicians into more and more impactful leadership roles within healthcare systems, health plans and beyond.

COVID-19 has revealed the importance of advancing physician's role in leadership within healthcare even more starkly. Now and into the future physician leaders must build the adaptive and collaborative leadership skills called upon in these times. The stabilizing effects of vertical hierarchy are now being over-run by the imperative to innovate and provide responsive, cost-effective healthcare teams to provide care in an inter-professional team: patient relationship, a relationship centered on the patient, not the physician.

Adapting to these more fluid and dynamic cultural realities will not be a simple undertaking for emerging physician leaders. Like their predecessors, these leaders would prefer to stay focused on direct patient care and not the emerging context within which they perform their clinical activities. Physicians look with some suspicion on the concept of a team of people caring for an individual---despite that reality being true each and every day across every hospital in the nation. Multiple professionals now participate in the healthcare relationship and physician leaders must be equipped with the skills and professional behaviors necessary to achieve more effective, collaborative, aligned and successful teamwork from C-suite to people's homes.

Successful leadership in a stable, fixed, king-of-the-mountain vertical hierarchy requires great individual vigilance, pushing through resistance, determination, grit, and endurance. It takes an individual hero to accomplish things in a mountain-like vertical hierarchy. Trust, like oxygen, can get very thin at the top of the mountain and few stay up in the "death zone" for long---yet getting to the top is the goal, then staying on the top. The physician and healthcare leaders who rose to the top of healthcare's vertical hierarchy will face many challenges shifting from individual hero model toward a team-based, innovation-focused, fluid dynamic of our current VUCA reality. As Ed O'Neill points out in his description of Leadership for Medi-Caid leaders

> *It is the general observation made by one of us that most younger workers have responded more easily to the new demands and have more enthusiastically embraced the opportunity that has come with the crisis. It has also provided an opportunity for some values to have a more emergent and powerful role in our workplaces and society in general, including racial justice,*

> *equity, sustainability, and service. Now is the time to turn to those who are young in years or mind and use their experiences and commitments to empower the experiments that need to be learned from and advanced. (https://www.chcs.org/media/QuickTakes-VUCA_070120.pdf)*

One of us [JF] has personal experience with shifting from an individual hero leadership model well suited to vertical hierarchy, toward a more transformative, adaptive, collaborative leadership model midway through his career guided by Robert Quinn's *Deep Change*, which focuses on the personal transformation that precedes leadership transformation which precedes organizational transformation. Quinn (1996) describes the process of shifting toward transformational leadership like "walking naked into the wilderness", a key step toward vulnerability, transparency, and whole-person engagement in the work of leadership. He compares it to "the slow walk to death" alternative, to disengage fully from our work and simply make-it-through-the-day, knowing if it gets worse, we will simply leave and find another job. Robert Quinn (2004) wrote about Dr. Fish's leadership journey in *Building a Bridge While You Walk on It*. We provide a brief excerpt here regarding insights gained during this journey:

> I [JF]decided to acknowledge my fears and close off my exits. Suddenly, my workplace became a place filled with people doing their best to either avoid deeper dilemmas or face them and grow. The previous importance of titles and roles began to melt away before my eyes. . . . My own change of perspective led me to see a new organization without having changed anyone but myself.

## The Nature of Complexity

VUCA-Plus issues—and issues associated with health care (and COVID) in particular—pose a major, multi-tiered challenge for leaders and other decision-makers in contemporary health care organizations—as well as more generally communities and societies. We focus in particular on the third of the VUCA-Plus characteristics: complexity. We specifically propose that complexity is often manifest in the existence and interplay between five kinds of issues: puzzles, problems, dilemmas, polarities and mysteries.

Each of these health care related issues involves a different landscape and each, in its own way, yields contradictions that we must confront individually and collectively. These multiple landscapes and contradictions produce a level of complexity in mid-21st Century health care that is often baffling and anxiety-producing for those providing leadership in the VUCA-Plus world. We will briefly describe each of these four types of issues, suggest why these issues are particularly challenging and propose ways in which they have been (or could be) most successfully addressed.

### Puzzles

Puzzles are the everyday issues that we all must face. Puzzles have answers. They are uni-dimensional, in that they can be clearly defined and can readily be quantified or at least measured. Puzzles during the era of COVID-19 concern such things as how we schedule time at the supermarket to minimize contact with other shoppers or how do we obtain more protective masks. Puzzles also concern changes in our institutions to accommodate new COVID-19 laws— such as re-arranging an office floor plan or determining how many customers can enter our story at any one time. With a puzzle, the parameters

are clear. The desired outcome of a puzzle-solution process can readily be identified and is often important to (and can be decided by) a relatively small number of people. It is the sort of issue rightly passed to the lowest level of responsibility where the necessary information is available.

Miller and Page (2007) use the metaphor of landscape to distinguish a complex challenge from other types of simpler challenges being faced in various systems, including organizations. They point to the image of a single, dominant mountain peak when describing one type of landscape. Often volcanic in origin, these imposing mountains are clearly the highest point within sight. For those living in or visiting the Western United States, we can point to Mt. Rainer (in western Washington) or Mt. Shasta (in northern California). Mt. Fuji in Japan also exemplifies this type of landscape. You know when you have reached the highest point in the region and there is no doubt regarding the prominence of this peak. Similarly, in the case of puzzles, we know when a satisfactory solution has been identified. We can stand triumphantly at the top of the mountain/puzzle, knowing that we have succeeded.

Furthermore, we can look back down to the path followed in reaching the solution/peak. We can record this path and know that it can be followed again in the future when, once again, we need to reach this peak or solve this puzzle. We have gone to the supermarket at the best time—when there are few other shoppers. The new protective masks arrive at our front door. Our staff members have set up partitions between desks at the office.

**Problems**

We have labeled the second type of issue that we face during the era of COVID-19 as a Problem. Problems can be differentiated from puzzles because there are multiple perspectives that can be applied when analyzing a problem. Several possible solutions are associated with any one problem and multiple criteria are applied to the evaluation of the potential effectiveness of any one solution. There are many more cognitive demands being placed on us when we confront problems than when we confront puzzles—given that problems do not have simple or single solutions.

Problems are multi-dimensional and inter-disciplinary in nature. They are inevitably complicated in that they involve many elements. Any one problem can be viewed from many different points of view that are each creditable; thus, it is unclear when a problem has been successfully resolved. We face the cognitive and emotional challenge of acknowledging multiple realities and solutions.

For example, because of the virus, our community closes unessential businesses, but we find that this devastates our economy. At a more personal level, we want our son to find a way to see his special girlfriend. Yet, we know that this risks his health and the health of other family members given the invasion and disruptive impact of COVID-19. At an even more profound and wrenching level, we want to bring our aging parent to our home and away from their senior living facility (which is threatened with virus). We know, however, that this will jeopardize the health of other family members.

Because the outcome of the problem-solution process itself is of significant interest to many people, often the most important and difficult discussions revolve around agreeing on the criteria for solving a problem. At the level of public policy, the discussions revolve around reducing the number of deaths and keeping the economy from total collapse. How will we know if we have been successful in combating

the virus if we don't even know what "success" would mean: "lives or livelihoods"? At the personal level we must ask questions that are impossible to answer: whose feelings and whose life is most important in this family? We can't even evaluate if the solutions are successful. We will continue to be plagued by the unanswerable question: Did we do the right thing?"

Miller and Page (2007) describe the settings in which what we call problems tend to emerge as "rugged landscapes." As we have already noted, this type of landscape is filled with many mountains of about the same height. Think of the majestic mountain range called the Grand Tetons or the front range of the Rocky Mountains that citizens of Denver Colorado see every day. Compare this with a landscape in which one mountain peak dominates. In a rugged landscape that is complicated, one finds many competing viewpoints about which mountain is higher or which vista is more beautiful. A similar case can be made regarding the challenging problems that must be engaged by all of us individually and collectively during the pandemic invasion.

## Dilemmas

When certain issues that we face appear impervious to a definitive solution, it becomes useful to classify them as Dilemmas. Many problems associated with COVID-19 are actually dilemmas. While dilemmas like problems are complicated, they are also complex, in that each of the many elements embedded in the dilemmas is connected to each (or most) of the other elements (Miller and Page, 2007). We may view the issue from one perspective and take action to alleviate one part of the issue, and we immediately confront another part of the issue, often represented by an opposing point of view offered (with passion) by other members of our family. community or society.

We loosen up our policies regarding the re-opening of businesses and find that rates of infection and death are rising dramatically. We let our son spend wonderful time with his girlfriend. He is very thankful, but other members of our family are fearful and even angry about his "selfish" behavior ("after all this is only a passing infatuation"). Leaders of a society and members of a family may not always recognize a dilemma for what it is.

We tend to see dilemmas in a limited or simplistic way and attempt to deal with them as if they are puzzles or problems. When that happens, we dig ourselves deeper and deeper into the complexity, seriousness, and tragedy. When faced with the multi-faced challenges of a pandemic (such as COVID) we are navigation more of a "swamp" rather than a sea. (Schön, 1991). As Schön notes, we must stay with the "messes" that are located in a swamp long enough to achieve real and sustained solution to the complex issues (dilemmas) we are facing.

At times we find that the issue actually is embedded in several sets of nested dilemmas. One set of conflicting priorities exists within another set of conflicting priorities. For instance, we want to give our son a chance to be in love but are concerned that if we do so other members of our family (and our son himself) will be at risk. This dilemma, in turn, rests inside an even bigger dilemma: we want to be considerate of the feelings experienced by each member of our family; yet we are concerned that feelings take the place of security. We want to live a high-quality life (complete with feelings), yet we

also want to remain alive so that we can have this high-quality life. These are very complex dilemmas - not readily solved puzzles or even complicated problems.

As in the case of problems, dilemmas can be described as “rugged landscapes.” However, because dilemmas involve multiple elements that are intimately interlinked, they are far more than a cluster or range of mountain peaks of similar size. This type of complex landscape is filled not only with many mountains of about the same height, but also with many river valleys and forests. Think of the Appalachian Mountains (in the Eastern United States) or the Alps (in Europe). Compare this with a landscape in which one mountain peak dominates or in which a series of mountains dominate. In a complex, rugged landscape, one finds not only abundant competing viewpoints and values, but also an intricate interweaving of these differing viewpoints and values.

Effectively engaged members of a family, community or society can hold opposing and contradictory views. They can meet the challenge of VUCA-Plus. The sign of a viable family, organization or society is that it can live with and manage its dilemmas in real time, without questioning its identity at every turn in the road, whip-lashing its strategies, tearing and rebuilding its structures reactively, or scapegoating its people.

To return to our landscape metaphor, we may find that we are living not in a complex rugged landscape but in what Miller and Page call a “dancing landscape.” Their term is certainly very appropriate in describing our current challenge. Priorities during the COVID-19 crisis are not only interconnected--they are constantly shifting, and new alliances between old competing perspective are being forged. Clearly, when a world of complexity collides with a world of uncertainty and a world of turbulence, the landscape begins to dance--and we must all learn how to make our families, organizations, communities and societies dance (Kantor, 1989).

## Polarities

Like dilemmas, polarities are not only multi-dimensional with many moving parts—these parts will stand against one another. Polarities are unlike dilemmas, however, in that these parts (and the perspectives and priorities associated with them) don’t just stand there I opposition. They create a dynamic oscillation in the system (often an organization or society) in which they operate. Furthermore, this oscillation can be quite destructive to this system, bringing about either a state of freeze or in stability.

Barry Johnson (1996), the “dean” of polarity management, suggests we are often confronted in our contemporary world with two or more legitimate but opposite forces at work in what we have been calling a condition of contradiction. One then analyzes each side’s benefits and disadvantages. Organizationally, the two or more opposing and contradictory forces are often embodied in “camps.” For example, the health care administrator’s interest in minimizing expenses is pitted against the primary care department’s need to invest in new equipment. A centralized health care system has the need to standardize its offerings, but the offices of specific health care facilities need flexibility in running their daily affairs. Neither position is “wrong.” “Exquisite truth” is to be found in the positions taken by both camps.

The organization is now in the midst of polarization. Someone who recognizes this as a polarity can bring both parties to the table and facilitate a mutual understanding of the respective benefits and possible negative consequences of holding either position to the exclusion of the other. Once the strengths and risks of the two sides are understood, the dialogue is directed to what happens when we try to maximize the benefits of either side at the expense of the other side.

To return to our dancing landscapes, we find (as in the case of dilemmas) that there are multiple mountains to view when we look out over the health care landscape. Once again, as in the case of dilemmas, the landscape is dancing with the impact of VUCA-Plus. However, in the case of polarities there is another force operating that produces the dance. This dynamic is the swinging back and forth between two contradictory and competing polarities. There is oscillation in the dance—with the dancer twirling around to a point of exhaustion or madness.

Back to the mountains. We decide first to climb one of the nearby mountains and then immediately identify the many challenges we would face in seeking to climb this mountain. So, we turn our attention to the second mountain (which is just as tall), yet soon come to recognize that this second mountain has its own barriers. We stand there frozen and stressed. No action is taken and the opportunity to reach either summit is lost. The lost opportunity, in turn, further increases the stress. And the frozen condition seriously damages our personal health as well as our collective organizational health.

For example, let's return to the conclusion in our centralized organization that centralization will lead to much greater efficiency. It turns out that such unilateral bias to one side of a paradox or dilemma soon causes the downsides of that same force to manifest. In our centralized organization, this would mean that we can centralize everything only if we are willing basically to slept at the office and ignore our family, or if as managers we always drive our subordinates to maximum efficiency. Our nights at the office would eventually lead to divorce, just as a 24/7 romance at the exclusion of work would likely lead to destitution. Total centralization causes the incapacity to customize, but totally giving way to the local interests of a subsidiary would drive up the cost to uncompetitive levels.

Barry Johnson warns us that we should not attempt to maximize but rather carefully optimize the degree to which the parties incline toward one side or the other and for how long. Optimizing means that we must find a reasonable and perhaps flexible set-point as we take action in favor of one side or another. Finding these acceptable optimum responses and redefining them again and again is the key to polarity management.

It is wise to encourage regular checkups with the other side of a polarity in order to evaluate to what degree, with what intensity, or for what time period both sides can reap the benefits of one side. This is particularly important given the interconnected nature of complex, turbulent systems with interdependent subsystems. For example, if work-life balance among dedicated health care workers were the issue, our workers would listen to their family's feedback, so as not to overshoot their commitment to work. If our health care CEO cared about balancing her company's financial health with investments for growth, we would encourage this leader to make sure that she regularly brought her conservative CFO as well as her expansionist, visionary head of marketing to the table, agreeing on trade-offs, measurable goals and milestones for evaluating results.

The sign of a viable health care organization is that it can live with and manage its dilemmas, paradoxes and polarities in real time, without questioning its identity at every turn in the road, whip-lashing its strategies, tearing and rebuilding it structures reactively, or scapegoating its people. The dance of oscillation is hard to avoid—but it can (and must) be managed.

## Mysteries

As we begin to address the challenges associated with dancing (and even oscillating) landscapes, we enter a domain in which problems, dilemmas and polarities seem to merge into Mysteries. Mysteries operate at a different level than puzzles, problems, dilemmas or polarities. Mysteries are too complex to understand and are ultimately unknowable. A specific mystery is profound. It is awe-inspiring or just awe-ful. A mystery is inevitably viewed from many different perspectives and is often deeply rooted in a specific culture and tradition. Mysteries have no boundaries, and all aspects are interrelated. COVID-19 is fundamentally a mystery.

We don't know why this horrible virus has afflicted us. At a more sacred level, do we deserve to be "punished." Are the wages of sin now evident? Is this some divine retribution for the inequities and warfare we have inflicted on our fellow human beings. At a more secular and political level, perhaps the virus is just highlighting the cracks in our societies that have been ignored for many years. At yet another level, we might ask if Mother Nature is simply trying to take back her environment—given that we can see all around us the signs of a clearer and less contaminated world (given reduced automobile travel and industrial production).

Mysteries are constituted of multiple and often nested dilemmas. They are beyond rational comprehension and resolution, and they must be viewed with respect. Some mysteries relate to traumatic and devastating events: Why did I get out of the World Trade Center while my desk mate perished? Why did the fire reach our home but not the one next to us? Why did my child die before me? The virus evokes many profound questions of mystery. Why is my mother forced to die alone? Where does all this anger in our society come from? Will this ever end?

While it is often hard to identify or honor the positive mysteries in our life, they can be found during moments of reflection. How did I deserve all these years of health and security? What is my destiny? Why have I been so blessed in my personal and professional life? Why did I fall in love with this person? Why did this remarkable person fall in love with me? How did I ever raise such an exceptional child?

There are even blessed mysteries to be found during this difficult time of COVID-19. Isn't it wonderful that my son has found love during this difficult period? How did I earn so much affection from these people who have been asking me about my health during the pandemic and have reached out to offer support? And most importantly, Mother Nature (speaking through COVID) can be our teacher. We can learn from and engage in major health care reforms based on this learning from COVID.

## Complexity and Discernment: Locus of Control

We perceive mysteries as taking place outside our sphere of influence or control. Psychologists call this an external locus of control and note that some people are inclined to view most issues as outside their

control (that is, as mysteries). By contrast, puzzles are usually perceived as being under our control. Psychologists identify this perspective as an internal locus of control and note that some people are likely to view all issues as being under their control (that is, as puzzles).

Problems, dilemmas and polarities are usually complex mixtures of controllable and uncontrollable elements. Internal and external locus of control exist side by side with one another—especially in the nested dilemmas and in the challenging polarities we often face with the virus. Our task is to discern: what can we control and what can't we control? We will be able to successfully address a problem, dilemma or polarity only by embracing a balanced perspective regarding internal and external loci of control.

One of the most helpful inquiries when confronting problems, dilemmas and (in particular) nested dilemmas and polarities is to identify what is and what is not under one's control, and to do that from a perspective that challenges immediate perceptions. A problem or dilemma that is embedded in a rugged landscape is more likely to have a large proportion of components that are under our partial control than is a problem or dilemma embedded in a dancing landscape—or a polarity that is embedded in (and has likely been the primary cause of) an oscillating landscape. This doesn't mean that we give up on our attempt to lead in a dancing landscape or manage an oscillating landscape. It only means that we need to be patient and persistent in engaging this leadership and management. It won't be easy. But it is vitally important

There are myriad challenges associated with the task of identifying and addressing these five different kinds of issues. First, we typically want our issues to be puzzles that we can control or perhaps mysteries for which we have no responsibility. Puzzles can be solved, and we know when we have solved them. Mysteries are outside our control, so we need not feel responsible for resolving them. But problems, dilemmas and polarities—these are much more difficult to address, and they are swirling around us in abundance.

The perfect storm and big waves created by COVID-19 are clearly present and demanding of navigation skills related to locus of control. During this era, we must determine which aspects of COVID-19 problems, dilemmas and polarities are under our control and which aspects are not. The confusing mixture of internal and external control is inherent in problems, dilemmas and polarities. So is the balancing of competing but valid interests represented by different members of our family, organization, community, and society. Perhaps Mother Nature should also weigh in. That is what makes these issues so difficult to address.

## Confronting Problems

We suspect the greatest mistakes many leaders (including ourselves) have made is to be dealing with a problem, dilemma, polarity or even mystery as if it is a puzzle. One of us [JF] found that Medical Education tended to hone his puzzle skills (memorization, simple solutions, multiple-choice where there is clear right/wrong), He was then introduced into hospital learning, which also tends to focus on making every challenge a puzzle or at most a problem. It was not rare to hear about "problem patients" the ones who didn't just do what the doctor said they wanted them to do, for example.

There is something to human nature that wants to believe all the world is a puzzle that can be fixed and solved through effort alone. Stepping back when treating people's health challenges like a puzzle is not easy to do and, in fact, Fee-for-service encourages us to keep thinking people are a puzzle, just need one more expensive procedure and all will be well!! Or that expensive medicine. That will "fix you". So, the mechanistic, industrial-era mind-set of trying to see humans as machines contributes a great deal to this excessive effort to turn more complicated and complex challenges into puzzles.

### A Faux-Problem Focus

Problem-based learning became a big fad during the 1990's. Describe the problems the patient is having and focus on helping him/her solve their problems...that was a good start. Problem-based notes would keep us focused on problems that the patient brings to our attention. Doctors and health care administrators were making everything into a "problem"---the diseases, the lab results, the patients. This was quite a challenge. The physician would be forced to ask: “How do I and why do I have to solve all their problems? Oh yeah, I'm supposed to be an Individual HERO who goes out and solves all my patient's problems for them....again....” Yet, in many cases, the “problems” were actually puzzles and might even be resolved only with the assistance of other members of the health care team. This focus also didn’t change the relationship between physician and patient. The physician was still in charge.

We would suggest that the real challenge is to keep the problems where they are—in the hands of our patient. The job of the physician is to help be a Sherpa guide for the patient. They must do the climbing themselves. The physician is to help their patient learn to solve his/her own problems. This, of course, produces a dilemma. Am I, as the physician, really helping if I don't "fix" the problem for my patients? The reward systems are in place to reward me for "fixing" people's problems. Do I defy this reward system—and why do I defy it?

I [JF] have shifted my perspective. I began to see myself as needing to practice dilemma-based care. It is vitally important to assure that there are two primary stakeholders in the room---the doctor and the patient. Both have equally important views. This means shifting away from "the doctor is always right" which was how I was trained to think and act.

Three levels of problems frequently seen in the healthcare environment are provided below to give some clarity around keeping challenges framed within proper context:

### Simple Problems

A simple problem is presented when a patient arrives with a single set of symptoms and expectations for being provided with a diagnosis and appropriate treatment. The person’s life is not immediately threatened by the condition and he or she has arrived with specific questions. The clinician rapidly conceives of a diagnosis with which the patient is highly satisfied. The patient agrees to the simple treatment plan, takes the medications prescribed in appropriate fashion. She leaves a message several days later that she is fully recovered and appreciative of the care provided. One can imagine a simple Upper Respiratory Infection, an itchy rash, or a mild headache as examples of simple problems in healthcare.

In the broader organizational context, a simple problem is that the price of splints has risen with the current vendor—and we need to explore alternative vendors to keep prices close to the same. We assign someone to take on this task. He readily agrees to take on this task in a timely fashion. A week later we are told that a new vendor has been selected who has met our agreed upon criteria for pricing and quality of the product.

Simple problems generate little drama or emotional and social challenges, are solved with single person taking on the task in a timely fashion and it's clear when they have been completed. While on the surface, this seems to be nothing more than a puzzle, we would suggest that there is a problem "lurking"—even if it is a simple problem. First, the doctor doesn't simply accept the presenting problem of his patient.

A diagnosis is engaged, with the physician asking questions of their patient that moves beyond the patient's own description of their symptoms and related circumstances. If the patient thought that they already had "all of the answers" (after checking on several Internet sites) then they wouldn't have made the appointment with their family doc. The treatment plan is also likely to be multi-tiered. It might involve some medications, but also recommended lifestyle changes (or at least a gentle reminder to drink less, get more sleep, or spend some time away from the computer).

At an organization level, the decision regarding finding a new vendor is rarely just a puzzle. Multiple criteria must be considered. Numbers rarely provide a definitive answer – whether these numbers relate to price, volume or delivery schedules. Trust requires something that is more qualitative and elusive—especially when it must be assigned to someone or some vendor who is delivering something that will help reduce pain, improve treatment outcomes or even save lives. Health care is an anxiety-filled enterprise that does not allow for many mistakes. Problems abound. Issues being addressed and decisions being made are rarely puzzles.

### Complicated Problems

Complicated problems generally are produced when many simple problems are aligned in some fashion. usually in a serial fashion. This alignment allows a single person to accomplish a set of agreed upon steps. These steps are essential to success and generally must be followed in a specific order, thus making the task complicated. The outcome is relatively predictable, as long as the steps are taking in the proper order and the simple tasks are completed in a pre-agreed upon fashion.

We offer an example of a complicated problem that is present in a doctor's office. A patient arrives with many symptoms that could indicate many different disorders, conditions or diseases. In order to come to a clear conclusion, the doctor and patient must work together on a series of tests to clarify which of many potential conditions may be manifesting in the constellation of symptoms.

The doctor will follow a very well laid out set of steps, beginning with a thorough history. A review will be engaged of all body systems that may be involved in creating the symptoms. The doctor may ask other clinicians who have more expertise regarding specific conditions to evaluate the patient. Together, these physicians will prepare what is called a differential diagnosis (a set of potential conditions,

disorders or diseases being considered). A battery of tests and diagnostic imaging may be ordered and pursued.

At the conclusion of the process, a clear diagnosis is made. A treatment is undertaken that resolves the condition to satisfaction of the doctor and the patient. Although not required to address a complicated health problem, it is not unusual for a physician to bring in other members of the medical community to participate in finding clarity and pathways to success. It is a complicated arrangement--yet all members of the medical team will work within a sequential set of steps that move the complicated problem toward a relatively simple and attainable resolution.

For a healthcare organization, a comparable complicated problem would be discharging a patient from the hospital. There are a series of steps the doctor and healthcare team must follow that lead to the patient eventually being released from the hospital. This is often called "discharge planning." One person is usually in charge of the process to make sure all necessary steps are taken in a sequential manner until the patient is ready, in his or her street clothes, sitting on the hospital bed with a bag full of medications, awaiting his or her family member to pick him up now. The room is not cleaned while the patient waits for his or her ride, the room is only cleaned immediately after the patient leaves, getting it ready for the equally regimented "admission process" to bring a new patient into the room.

In summary, complicated problems are generally sequential multi-step, simple problems all linked together in a series that has been pre-determined and been standardized. Deviations from standard sequential steps can lead to a great deal of confusion and would convert a complicated problem into a rugged or complex problem.

### Rugged Problems

These problems indicate some level of uncertainty and difficulty in finding resolution. The terrain is not a flat plane with a series of simple steps required to move from point A to point B. There are pitfalls and hills to be climbed, brush in the pathway that must be cleared to allow movement forward. Deviations from standard protocol will be required, so that one must go from point A to point C, then perhaps briefly move to point D prior to reversing course to target point B.

In the complicated problem with a differential diagnosis that we described above, a family member arrives and indicates the patient drinks 4 bottles of vodka a day and smokes 2 packs of cigarettes a day. These are two things that the patient declined to admit when asked about smoking and alcohol history by the doctor. And heroin, injected daily. Did he mention he has had a fever for 3 weeks and had a strange rash on his lower limbs?

None of those vital pieces of information were shared with the original doctor. She is now quite perplexed and realizes several vital new diagnoses may be possible given this new information. She was about to say it was Lupus, but with this new information, she needs to evaluate the patient's heart with a special test to see if his heart valve is infected. She orders blood cultures. Maybe she needs to put the patient into the hospital? Can she trust this patient to follow-up with his heroin habit? Will he be deceptive about what is going on?

The doctor asks for a family meeting to gather more information. She explains why she hadn't already hospitalized the patient. This explanation was needed because the patient's spouse is upset that "you aren't taking my husband's condition seriously, why didn't you call me the minute he showed up to clinic? My brother is a doctor—and he says you should have ordered the echocardiogram on my husband weeks ago! "

Now, our simple, stepwise approach is no longer sufficient. The terrain has now become rugged, with multiple perspectives about the landscape and many hilly challenges brought into focus. The doctor's own reputation is now on-the-line. She is worried about litigation and anger in the family. She may feel betrayed by the patient, yet hopefully will not express her anger toward the patient or blame the patient for this rugged terrain she now finds herself in. No one said being a doctor was going to be easy. This newly rugged terrain requires a much more rigorous and team-based approach. The doctor decides to admit the patient to the hospital to help expedite the work-up now that the rugged terrain is much clearer.

In the discharge example of a complicated problem, the discharge becomes rugged when it's discovered that the patient has no family and no insurance to cover the discharge medications. She is homeless and has refused to fill out her Medicaid paperwork. She also has a personality disorder and takes out her anger on the staff. Members of the staff feel fearful when approaching the patient. They will only see her with a security person being present—to assure that the staff member is safe. There is a question as to whether the patient can make her own decisions as her behavior while in the hospital has been erratic. There is some suspicion that she may be injecting a substance through her IV. Staff have found her lethargic in the middle of the day—yet the doctors are not prescribing any sedating medications.

Many extra steps must be added to the otherwise simple discharge processes. Substance use questions must be asked. Specialists must be called in to help clarify mental capacity. A shelter must be found that will accept a patient with an evolving mental health challenge that is as yet ill-defined. It's likely the patient, in her current state, can leave the hospital. Yet it's equally likely that she will be back in the Emergency Department within a couple of days—making this now rugged problem merge toward a dilemma. Is it better to just keep him or her in the hospital or to discharge, knowing she will be back in a number of days, likely in much worse shape?

### From Problem to Dilemma

Doubt creeps into the minds of those who much prefer the routine discharge planning process when each step can be followed in sequential fashion. Even a rugged problem with a more definite outcome seems appealing now. But this problem has reached a level of complexity that more than one pathway now seems important to consider. Scenarios begin to emerge with different rugged terrain to cover. None are seeming simple nor completely safe for the patient or the healthcare team.

Point B may not be achievable or only achievable with inevitable and rapid return to point A. We've lost track of how many deviations from our initial planning we have had to make, now there are multiple people involved in the planning process who may not agree on the right course to take. Multi-perspective, multi-pathway problems are no longer problems, they are dilemmas. They must be

approached in dilemma-resolving ways---collaboratively, exploring pros and cons, moving out of right/wrong and into better/worse dichotomies.

It is quite common for the emergence of dilemmas to create discomfort with those facing the dilemma. It is also quite common not to recognize when we have moved beyond problems into the realm of dilemmas. We try to force the dilemma back into being a problem. One approach is to remove people from the decision process who don't agree with our interpretation. One can also remove steps and determine "we don't need to follow all these steps. This person needs to leave the hospital—so I am writing the discharge order and expect him or her to be gone when I come by tomorrow."

In hockey, this is often called a "power play." Intentional limitations are placed that create a different context for action. In this medical instance the doctor is taking on a higher power role and ordering other members of the team to comply with his game-plan. Ridicule might be used to reduce the voices of those who don't agree with the doctor. Threats of consequences for not following the doctor's discharge order may limit resistance—thus allowing the doctor to feel he or she has "solved the problem of discharging this patient."

Converting a dilemma into a problem comes at a price and can lead to unexpected behaviors on the part of other players or participants in the decision-making process. For example, a senior nurse has seen this doctor inappropriately discharge patients. The doctor shows up minutes to hours later in the ED. The patient gets re-admitted. The senior nurse is tired of over-working his nursing staff by having to go through the intricate discharge and re-admission process.

He worries that his nurses license may be at risk. An administrator may be upset at the rising re-admission rate that is leading to fines by Medicare. So, he waits until the doctor has gone home and tells his staff not to discharge the patient. He calls an administrator to get cover, knowing the doctor will be upset the next day. The doctor may face consequences and surely the relationship between the doctor and the senior nurse may be impacted by events. The doctor might be labelled a disruptive doctor or a problem doctor. She may find fewer consultations coming her way. An inability to engage in dilemma resolution can have far-reaching consequences for those involved in the dilemma and the organizations that are unable to distinguish between problems and dilemmas and engage the team in finding collective solutions and the best pathway forward together.

## Managing Dilemmas

All decisions that patients face are inevitable couched at least within dilemmas. Sometimes they are couched in nested dilemmas and at other times drop clear into the mystery zone. Yet, the training that doctors get only made puzzles and problems in their scope of practice---so now what? Plenty of doctors still try to remove dilemma-thinking from the process. "I operate on you next Thursday or you will die." That is a doctors attempt to remove dilemma-thinking and make a dilemma into a problem. He/she is telescoping to the patient.....you do what I say, or you will die---so don't think about your own views or what matters to you. Don't ask me questions about whether I'm any good at this operation or someone else might not agree with my recommendation.

It takes a healthy physician who has an ego that is no longer involved to state there are 5-6 ways to approach this particularly challenging and complex situation you find yourself in....

> Here are the 5 options most people choose and here is why I am recommending option #3 for you which takes into account X, Y, Z factors that are very important to you and A, B, C factors that are most important to me as your physician. How would you like to proceed? Oh, I see you actually favor option 4, well, here are some potential downsides I want to be sure you've thought about and why I didn't pick that as top choice in your case. Oh, you aren't concerned about those downsides and still strongly prefer option 4, well, that is fantastic news and we can begin your course of treatment now, do you want me to talk to you sister so she is aware of the options and why we are following options 4?

We suggest that there are at least two levels of dilemma.

### Simple Dilemma

These are conditions when there are two opposing and equally weighted options. A simple dilemma in the clinical setting would be when the physician wants to focus on her top priority—prevention of coronary artery disease through lifestyle modification and medications---while the patient wants to focus on his top priority--- consuming alcohol, Vicodin, valium, and tobacco to manage his nerves and chronic pain. It is not infrequent that the physician will reframe the dilemma presented by these opposing priorities by labelling the patient "the problem."

Mis-framing in this way places a right/wrong or either/or choice where a better/same/worse and both/and choice belongs. In a right/wrong and either/or framework---with implied power difference between the physician and the patient being labelled as a "problem patient"---leads to a discussion of how lifestyle choices & medications chosen by the patient are impairing his coronary arteries and the dismissal of any notion of importance of pain management in keeping the patient more active and healthy overall.

Thus, rather than leveraging a dilemma through collaborative shared decision-making---the patient is left with a prescription he will not take for his cholesterol and the need to find an urgent care or emergency room to get a refill of his two medications he has been taking for 6 years from a prior physician. The physician is left believing she has helped assure a longer life for her patient and all she has achieved is to offload the patient's care needs to another physician who may repeat her now codified approach of refusing to refill medications, lecturing the patient, and providing him a prescription he does not want nor will take. With enough of these events, he is labelled as "non-compliant" and might eventually be dismissed from the practice as "pain medicine seeking and non-compliant problem patient." So, instead of a collaborative, engaged, shared decision-making process to leverage opportunities within a simple dilemma, we are left with a falsely "right" physician and a keenly dissatisfied and un-helped "patient" adrift.

If this simple dilemma had been approached as a shared decision to leverage opportunity within the dilemma---which usually requires a transparent conversation about physician bias and patient bias about care priorities---it's entirely possible over time to guide and coach the patient toward reduced

dependence on Vicodin and valium and increase lifestyle approaches and cholesterol medications to address life-threatening risks. Reduction in dependence and increased lifestyle approaches require a trusting and mutually beneficial relationship.

Failure to recognize and act on dilemmas, on the other hand, often leads to reduction of trust and mutually beneficial relationship. Navigating and leveraging dilemmas requires a shift in focus from "I will solve your problem" toward "we will navigate and leverage our dilemma together". This vital shift likely requires that the physician move away from an individual hero mind-set toward a team-player mind-set; away from a fixed mind-set toward a growth-and-learning-mind-set; away from an either/or mind-set toward a both/and mind-set These mind-set shifts and reframings become even more vital when navigating and leveraging complex dilemmas and polarities.

### Complex Dilemmas

These dilemmas are multiple, inter-dependent, relational, multi-factorial in nature. They require that multi-options be engaged—that actually or potentially impact each other. Addressing complex dilemmas can feel like providing a menu of options with various upsides and downsides. Yet, the options are not single destinations, they are pathways that are linked and inter-dependent. Unlike Complicated Problems, they do not naturally fall into a series of ordered decision-nodes. They may feel like 5 bouncing beach balls linked together with elastic dancing across the sea. Pulling on one beach ball can lead to an array of impacts on the other balls, including bouncing off the head of the patient and knocking him under the waves.

This complexity can emerge from the complexity of challenges faced by the patient---physical, mental, behavioral, social, financial, cultural---or can emerge through complexity of potential pathways to follow and the other people (Family, friends, employers, insurance companies) involved in the decisions to be made. Complexity is often magnified by emotional and relational contexts---fear, anger, guilt, grief and the like. Let's look at a common complex dilemma faced by patients every day.

Marty is the sole breadwinner of a family of 6 children and 12 grandchildren---married to Martha for 35 years. He has struggled with multiple health conditions, including glaucoma, diabetes, heart disease, kidney failure requiring dialysis, chronic pain, and depression. Despite these conditions, he has managed to keep working and raise his family, send many of his children to college, etc. Three days ago, he learned he has metastatic lung cancer from his years of smoking and likely only has 6 months to live unless he signs up for experimental chemotherapy that could extend his life by months or end it more quickly due to risk of serious infections related to suppressing his immune system or further damaging his kidneys.

In addition, his daughter is a Naturopath. She has advised him of a mushroom in from Japan that has shown promise with lung cancer in small studies. Another child feels very strongly that he needs to quit his job and travel with their mother since he has been promising to do that for the last 10 years but work has not been flexible enough to allow it. Faced with impending death and many options, some favored by some children and his wife, others favored by his doctors.

How does Marty choose between the many options before him? Can he take the mushroom his daughter advises with the Chemo or will that preclude him from the study? Does he focus on enjoying what limited time he has left or focus the full force of American healthcare and his own family's energy on stretching out his life a bit longer, even if it risks being shorter due to complications of aggressive treatment? Or does he ignore all options and shift his focus to work where he is about to complete a very important legacy project that could improve the lives of thousands of people for years to come?

How does Marty navigate and leverage this complex array of choices and pathways, while optimizing his own life and enhancing his relationships along the way? Is he facing a series of either/ors or can he find a pathway through both/and or better/same/worse that provides him with the right way forward for him? Is quantity of life, quality of life for Marty most important? Or is he focused on how this will impact his family when he is gone? How much will all this cost? Will his insurance cover experimental treatments? Are there other Chemotherapies he is not hearing about because this particular cancer doctor favors this experimental approach? If the cancer doctor scoffs at the Mushroom will that reduce the likelihood of him taking it or increase the likelihood out of loyalty to his daughter who he loves dearly and trusts completely.

Complex dilemmas, when properly identified as such, often lead to more questions before decisions are made. These clarifying questions can help the decision-makers explore potential impacts of various pathways and seek out further information. Recognizing we are in the midst of a complex dilemma with inter-dependent, multiple pathways to choose from can be paralyzing for all parties involved and lead to relational challenges, heightened emotional states, and discomfort for all participants. A physician often needs more people to help her guide the decisions---expanding the team to include social workers, therapists, nurses, pharmacists to help delve more deeply into the complexity of the questions that emerge to help the patient navigate and leverage the complex dilemma.

Defining various options is essential, without the physician or team being overly invested in any particular option. Transparency of pro's and con's becomes essential to help the patient and family see the potential consequences of each pathway. "Can I try the Mushrooms for 3 months and then take the experimental chemo if the mushrooms aren't helping" types of questions begin to emerge. This might be considered an attempt to create a serial pathway through various pathways---essentially reframing the complexity toward a complicated problem with serial steps. Yet, it can provide a pathway to maintain trusting relationships while allowing flexibility in approach.

It would not be unusual for the physician to respond "we can consider that, but if your cancer becomes too advance over the course of those three months or some new complication arises, that may exclude you from the experimental chemotherapy study" at which time the 100 page Experimental Chemo consent form is provided to the patient. So, that effort to shift from complex dilemma to complicated, serial problems is disrupted by the potential inter-dependance of the Mushroom and Experimental Chemo pathways, which may lead to the next attempt by the patient to find a relationally centered navigation of the complex dilemma.

"Can I take the mushroom and the chemo together?" at which the Naturopath daughter says: "the Mushroom has proven safe when given with chemotherapy" while the physician adds "but it hasn't

been studied with this experimental chemo so I would not advise that as it might preclude you from the study." Stymied by these attempts to navigate and leverage the complex dilemma with the current make-up of the decision conversation, it's not rare for all parties to agree to pause and give the patient time to consider his options. He goes home, talks to his neighbor and learns of another cancer doctor who integrates naturopath approaches with chemotherapy---that rare mix of approaches and experiences that might provide just the kind of Sherpa guidance our patient needs to navigate and leverage his complex dilemma.

In some ways we intentionally oversimplified this complex dilemma---primarily focusing on two opposing approaches Naturopath vs Chemotherapy to provide an example of the inter-dependance within complex dilemmas. We could offer the case of another patient with a child who is an acupuncturist specializing in cancer treatments. Yet another case involved a patient who believes in faith-based healing of prayer. In either case, we could easily dance into the complexity for the patient---yet the underlying principles remain the same. Complex dilemmas carry multiple inter-dependent factors and pathways to be taken. Trust and relationships play a pivotal role in navigating through and leveraging opportunities within the complex dilemma. Questions tend to emerge to clarify consequences and impacts of the various options available.

It can be incredibly challenging to have representatives who impact the decisions all together in the same space at the same time. Imagine our patient decides to go with the Experimental Chemo and his health insurance denies payment. Will he go forward and potentially bankrupt his family and lose him home to pay for it? Can his family raise the money online to pay for it? Will that encourage him to choose another pathway, like the Mushroom his daughter advises now? Will he spend his final months fighting the insurance company, spending his last dollar on lawyers and die angry and defeated?

Navigating and leveraging complexity requires multiple perspectives through relationships like teams, families and communities. Seldom can one person even know the options available by himself or through his physician. Patients without families or friends and health insurance may face the same complex dilemma without the necessary support and believe they are in an either/or situation. Do what this doctor recommends or go home and die alone. Facing complex dilemmas with a team of healthcare workers, friends and family is likely the only way to explore all options, ask clarifying questions, and map out a pathway forward most likely to achieve the desired outcome.

## Managing Polarities

Polarities are similar to dilemmas. One of the major differences is that dilemmas are often faced by individuals—be they physicians or patients. Conversely, polarities typically move beyond the scope of any one individual. We would suggest that many conditions of complexity in contemporary health care are founded primarily not in puzzles or even problems or dilemmas, but in polarities. Furthermore, many health care leaders may artificially "force" complexity to "look simple, like a puzzle" which creates challenges such as Case # and Case #4 below.

Reductionism doesn't really work with complexity---it tends to lead to what we call the "amoeba effect". We push on one area (area A) for improvement yet find another area (area B) deteriorating in

response. We don't make the connection, so the next year we push on that other area B and, low and behold, we lose the improvement in area A. So, the next year we double our efforts at doing the same thing we did last time for area A---in fact we create an Area A team to push on it for 5 years with funding, which they do.

That creates a lot of anger in Area B, who demand equal investment and resources, which you eventually feel forced to do, so you now have created two "teams" fighting against each other, taking more and more energy to achieve what seemed much easier 2 years ago. If you are lucky, someone within Team A or Team B (they are really groups who work in Area A and B) comes to tell you what is actually happening, that the two areas are inter-connected and it's much more complex than you think. Traditional leaders will ostracize this person as a "complainer" or "skeptic" and eventually push them out of the company---while the fluid, adaptive, collaborative leader will put this person in charge of both area A and area B and say "we want both area A and area B to work optimally, reducing waste and improving outcomes...take both pots of $$$ and people and let me know how I can help."

### Managing Polarities: Case Study I [Length-of-Stay AND Re-admissions]

Length-of-Stay become a key factor in hospital management in the late 1980's and 1990's as the science of Utilization Management emerged and cost-containment efforts spread across hospital systems. Prior to that era, hospitals were generally paid some portion of what they billed in a class fee-for-service fashion. However, as Managed Care grew into the 1990's and Medicare began bundling payments based on primary diagnosis at time of admission---AKA DRG [Diagnosis Related Group]---to stem the rising tide of hospital cost inflation, hospitals began to manage Length-of-Stay as a means to limit losses or risk refusal of payment for going beyond the limits placed by Managed Care and Medicare DRGs. Looking into the distant past, birth hospitals were once called "lying inns"---as women typically staid in the hospital for about a month after giving birth to regain their strength, make sure their newborn survived the treacherous first month of life, and could return home safely.

So, the average length-of-stay for the birthing process was about 30 days in the 1930's and began to drift down naturally as birth became safer and outcomes more predictable. However, these stays dropped rapidly in the 1990's to point where state legislatures began passing bills to stop hospitals from discharging women the same day as the birth so they could at least sleep a while before being shuffled home with their newborn. Each admission diagnosis was given a general target for length-of-stay based on the average revenue generated, barring complications.

In some cases, hospitals might discharge a patient (thus making a short length-of-stay), then re-admit them the next day, starting a whole new DRG and length-of-stay. In a terrible irony, this was rewarding hospitals for early discharges and re-admissions---indicating that we had a polarity and when the payers rewarded reductions in one pole---length-of-stay---they found themselves with a new pole---rising re-admission rates.

In the mid 2000's, Medicare introduced a remedy for that polarity by instituting a 1% Medicare Fee for hospitals with high 30-day re-admission rates. This new change sent shudders through the hospital

industry and those Fees have been increasing over time, meaning hospitals are now pressured to have short length-of-stay and low re-admission rates.

With the new fee, hospitals worked to reduce re-admission rates to avoid the fee---yet, in so doing, most began to notice a commensurate rise in length-of-stay. Failing to join these two vitally important, inter-defendant outcomes then led to increasing resources spent to decrease Length-of-Stay by one team followed by increasing resources for another team to decrease re-admission rates. These competing teams spend more and more and get diminishing returns---in fact they are likely to yo-yo back and forth depending on which one is most successful at any given time.

Instead of stepping back and saying "Length-of-Stay and Re-Admission rates are two sides of the same polarity" that require we think beyond the "hospital box", the hospital leaders, managers, doctors, nurses and patients are bouncing back-and-forth and draining human and financial resources with limited to no meaningful and sustainable results across both poles.

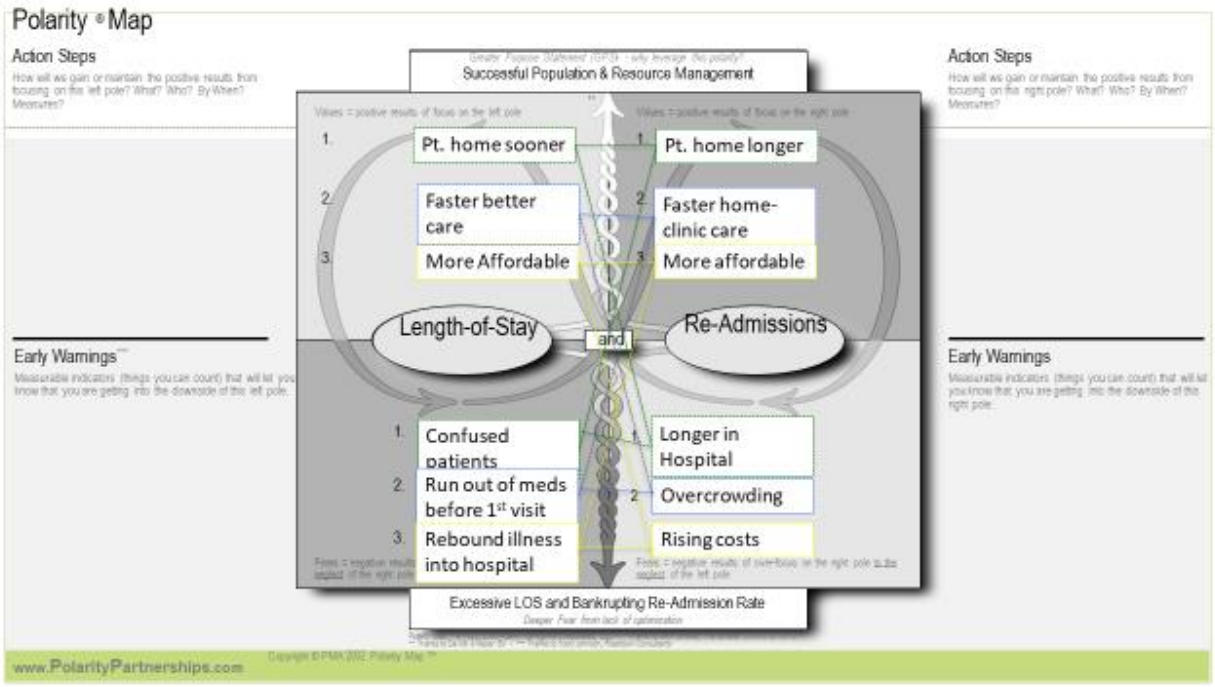
By identifying the Polarity and managing the Polarity of LOS and Re-Admissions, leaders can begin to look beyond the hospital for home-based and ambulatory efforts to decrease the need to stay in the hospital or be-re-admitted, drawing on a singular empowered and integrated team charged with reducing length-of-stay AND reducing-re-admissions---and finding the required partners to achieve both.

It shifts from an either-or, win-lose competition framework between two rival hospital teams towards a both-and, win-win coopetition across the health system and broader community. Many call this both-and approach Value-Based Care & Population Management which are emerging models to move beyond either-or thinking and win-lose implementation toward integrated navigation of complex polarities across the healthcare sector.

By treating a polarity as if it were a problem with a time-bound solution, hospital leaders are inadvertently creating rising costs with limited sustainable improvement. In some ways hospital leaders need to expand their approach to include ambulatory leaders, care managers, home health experts to establish meaningful partnerships in addressing the length-of-stay and re-admission polarity. It is likely limitations of resources in non-hospital settings that is creating the dependence on hospitals to try to manage LOS and re-admission rates, when many of the factors contributing to increasing length-of-stay and re-admissions occur outside of the domain of the hospital.

Expanding the leadership perspective through partnerships will likely expand the horizons of possible ways for patients and health systems to navigate this challenging polarity. It may also mean hospital leaders may need to invest in non-hospital activities to level the resource capabilities across more areas of healthcare and get payers to support that transition so that a robust ambulatory and home-care system can sustain improvements over time and avoid the bouncing beach ball effect of treating a polarity as if it was a simple problem.

Here is one way to represent this polarity in graphic form (as a Polarity Map):




Length-of-Stay has more potential to be addressed by hospital leadership, physicians, nurses, and managers---requiring an inter-professional team to explore reasons for admission and to know the pre-hospital care environment well enough to predict when the patient will be ready for a post-hospital care environment. When those two environments are the same, it is less challenging. However, what happens in the hospital may greatly alter the patient's condition and require a complete change between pre-hospital care environment and post-hospital care environment. That can mean a complete shift for patient, family, and who is caring for the patient after even a brief hospital stay.

The length-of-stay tends to lengthen when the patient's condition has deteriorated, and their out-of-hospital support systems are not adequate to care for them just a few days later. So, the patients change in condition, pre-hospital resources, new post-hospital needs can require complex decision-making and resource allocation to assure a soft landing outside of the hospital. And a loved-one's car breaking down on the way to pick up the patient may be all it takes to confuse the discharge process and lengthen the stay by a day.

Patient factors, family factors, social factors, care team factors, coverage factors all contribute to the complexity of this single pole in our polarity. In fact, these are often the cross-over factors related to increased risk of re-admission. With most of the resources located in the hospital, this can be particularly impactful with patients with low levels of health coverage that charge co-pays for ambulatory services and resources while covering hospital costs at no charge to the patient---thus providing incentive even for the patient to receive care in the much more expensive hospital, than in a clinic.

Because the hospital is seen by the physicians, nurses, patients and families as "the best place to get the best care" it paradoxically can lead to an over-dependance on hospitalization as a solution to complex challenges outside of the hospital. It is much harder to garner resources needed to care for complex patients outside of the hospital---the core challenge impacting both length-of-stay (safer to stay until you are strong enough to handle lower resourced care outside of the hospital) and re-admission rates (it is Friday and we can't get the labs and imaging done quickly enough out here in clinic or in your home, so you need to go back to the hospital to get those things done ASAP).

Resource concentration within hospitals may actually be a primary source of an inability to impact both length-of-stay and re-admission rates. That's likely why most hospitals have longer lengths-of-stay than they believe they are capable of and 75% of hospitals in the United States (or more) get fined by Medicare every year for excessive re-admission rates. Paradoxically, hospitals may need to share their resources in order to reduce length-of-stay and re-admission rates with out-of-hospital care teams and organizations that can help them address this complex polarity.

## Managing Polarities: Case Study II [Hurd Immunity AND NPI/Social Distancing]

Many of those involved in the deliberation regarding a pandemic policy initially framed the policy as an either/or option. Those offering the herd option are taking the follow stand: ". . . the fact remains that herd immunity isn't merely a possible strategy. In the long run it is the only strategy. The question, then, is how to get there responsibly." The proponents of nonpharmaceutical interventions (NPI and social distancing offer an even more absolutist stance: "the withdrawal of a social distance policy is unethical and immoral. It is counter to everything we hold precious as human beings."

We will frame our analysis around these two polar-opposite stances and begin by identifying some of the benefits and disadvantages associated with each policy. The benefits in both cases yield short-term (tactical) and long-term (strategic) outcomes. The disadvantages we offer relate to what we don't know and what might be an unexpected and devastating outcome.

**BENEFITS:**
**NPI/SOCIAL DISTANCE POLICY**

- Preserve commitment to focus on welfare of each individual person
- Reduce pressure on health care workers and facilities
- Establish new social norms and interpersonal behavior patterns that can endure for a long time.

**BENEFITS:**
**HERD IMMUNITY POLICY**

- Build a sustainable world community with most if not all people being immune
- Set realistic expectations regarding short-term impact of virus on human health.
- Set hard but realistic policies regarding health priorities with specific populations.

**DISADVANTAGES:**

**NPI/SOCIAL DISTANCING POLICY**

- May lead to recurrent outbreaks of the virus and ultimately more deaths
- Will sustain global uncertainty about long-term status of human health
- We don't know if social distancing can be sustained by most societies
- May set precedence for short-term solutions to pandemic outbreaks in the future

**DISADVANTAGES:**

**HERD IMMUNITY POLICY**

- We don't know if human societies can really tolerate large scale death rates without reverting to short term actions.
- We don't know what this policy would do in terms of its impact on the ethics and soul of human societies.
- Who would make the decision about who lives and who dies?

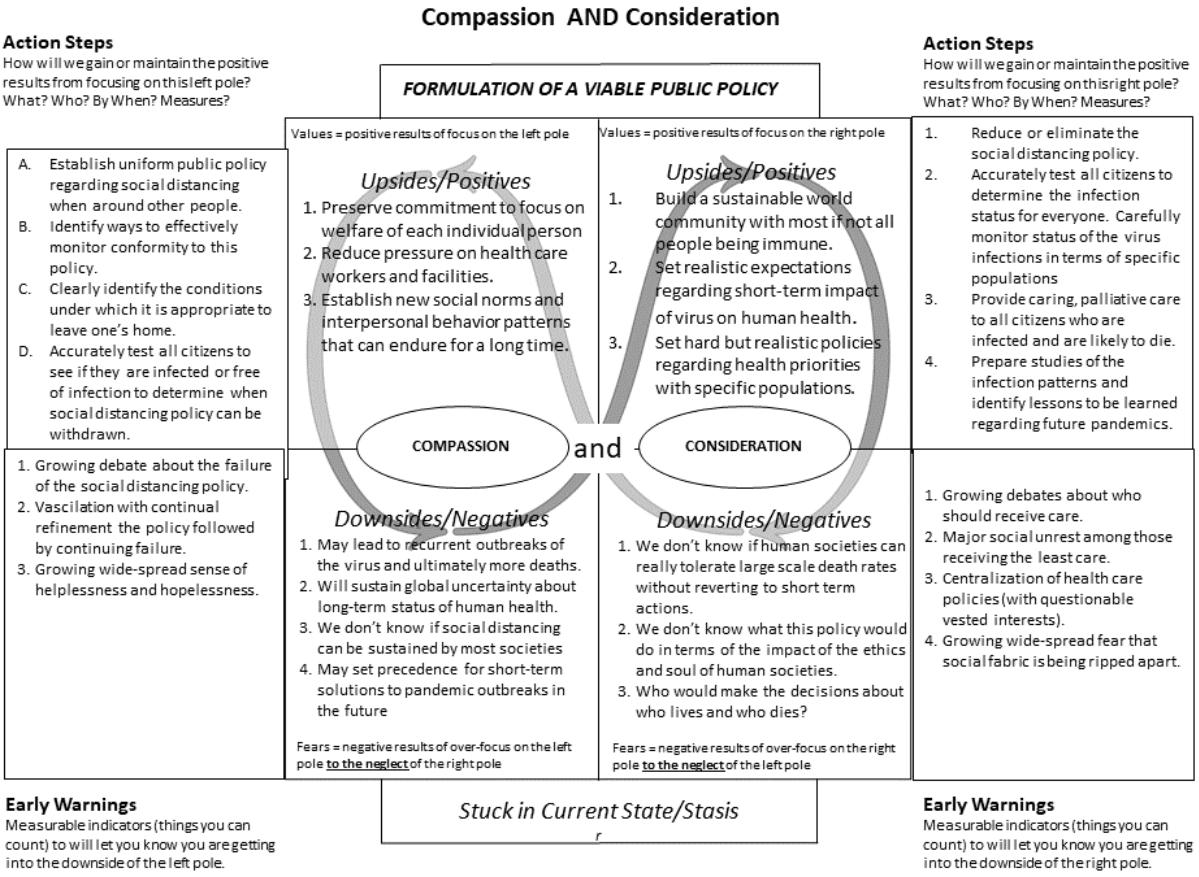
These initial summary statements regarding the pull between two public policies can be framed as a polarity. What tends to occur is that we linger briefly on the advantages inherent in one of the options

(in this case the NPI/social distancing policy). Then we begin to recognize some of the disadvantages associated with this option.

We are pulled to the second option. If social distancing and other preventative actions are not the answer, then we must embrace a herd immunization policy. Yet, as we linger on this second option, we discover that this policy also has its flaws and disadvantages. We are led back to the first policy—and must again face the disadvantages inherent in this first option.

The swing has begun from left top to left bottom to right top, to right bottom, back again to left top. We are whipped back and forth. As anxiety increases regarding the COVERT-19 virus and future pandemic viruses, the vacillation also increases in both intensity and rapidity. This is what the dynamics of polarization is all about. There is inadequate time and attention given to each option.

Here is what the polarity-based dynamics of our policy deliberations might look like if mapped in graphic form. There are several different ways in which polarity can be mapped. This is a variant on the map we provided with regard to length of patient stay:




With this preliminary framing and charting completed, we turn to what happens when we try to *maximize* the benefits of either side at the expense of the other side. In the case of sustaining the

NPI/social distancing policy, the maximization of social distancing and related preventive measures would (as the epidemiological models indicate) tend to delay but ultimately accelerate the rate of infections and ultimately virus-related deaths. Furthermore, we now know that the masks don't necessarily prevent the virus from spreading. The virus comes in through the sides of the masks which most people wore during the COVID-19 crisis (much as water comes in through the edges of our googles, not through the glass). We would soon be in despair regarding the failure of this NPI/social distancing policy. At some point, we might adopt the herd policy, but would probably find that it is too late.

Conversely, if we completely override the NPI/social distancing policy and fully adopt the herd infection policy, then we would witness massive death rates and would be deeply concerned within a short period of time (throughout the world) regarding the "heartlessness" of this policy. We would inevitably find that projections about the potential number of people who would die before herd immunization was established are staggering. We would feel deeply wounded about the decisions being made. If we are religious and view ourselves as culpable, then we might ask our deity for forgiveness. Other members of our society would be inclined to launch a vitriolic attack against those who enacted this grotesque policy. As a result, we are likely to return to a NPI/social distancing policy—though only after many deaths. And the NPI/social distancing policy would still be flawed.

As already noted, we must try to optimize the degree to which we are inclined toward one side or the other as well as the duration of our stay with consideration (or compassion) and enactment of this side. We are to take this approach rather than attempt to maximize any one side. How serious are we about focusing on this one side and how long are we going to sustain this focus? Optimizing also means that we must find a reasonable and perhaps flexible set-point as we act in favor of one side or another. Finding these acceptable optimum responses and repeatedly redefining them is the key to polarity management. This strategy is aligned with the suggestion made by many health policy experts that with future pandemic virus we should periodically adopt a NPI policy, rather than abandoning it all together.

The fundamental recommendation to be made in managing this particular polarity is to remain in the positive domain of each policy option long enough to identify all (or at least most) of the key benefits and potential actions to be taken that maximize these benefits. Time should also be devoted to and attention directed (in a slow and systemic manner) toward identification of potential ways in which the two policies can be brought together on behalf of an integrated response to the pandemic challenge. Consideration and compassion potentially join hands.

This polarity management recommendation is not easily enacted—especially when the stakes are high (as they certainly were in 2020 regarding COVID-19 and will be with any future pandemic crises). As Johnson and others engaged in polarity management have noted, effective management of polarities requires a constant process of vigilance, negotiation, and adjustments. The second option regarding future pandemic invasions that is offered by public health policy experts seems to be aligned with this recommendation of dynamic vigilance.

In agreement with the polarity management experts, those advocating the second option suggest that we must continuously seek and refine a dynamic, flexible balance between consideration and compassion. Each side's beneficial contributions can be enjoyed without engendering serious negative consequences. We must accompany this balance with some immediate, tangible correctives, such as wide-spread distribution of better-designed masks, increased testing and improved tracing.

Johnson has one more important point to make regarding the management of polarities. He identifies the value inherent in setting up an alarm system as a safeguard against overshooting either side of the polarity. It would be prudent to build in an alarm system that warns us when we may be trying to maximize one side and are on the verge of triggering the negative reactions.

The alarm signal for the NPI policy might a growing debate regarding failure of this policy and the continual refinement of this policy by leaders in politics and business. We would observe a struggling system: abundant vacillation, frequent reversal of existing policy, and very short-term implementation, criticism, and abandonment of revised social distancing policies and stay-at-home orders. The signal might also be apparent at a deeper, psychological level. There would be a growing sense of helplessness and hopelessness.

The alarm system for safeguards against the herd immunization policy might be increasing occurrence of debates about who should receive the most care and who should "tragically" be allowed to die (for the sake of the "herd"). Major social unrest might arise among those populations receiving the least care and witnessing what seems to be cavalier societal disregard for their welfare. Control of health care policies might become more centralized and embedded in vested social and economic interests. At this point, the herd policies might be saving lives in the long term—but destroying (forever) the social fabric of the communities in which these policies are being implemented.

Hopefully, with the safeguards in place and the alarm signals clearly articulated, we can address the negative consequences of each option in a constructive manner. As a result, we might even be in a place to formulate an integrative, global policy regarding the handling of recurrent global pandemics (which will occur inevitably in our boundaryless world). We may also find ourselves with more time to appreciate the positive learnings inherent in traumatic events such as COVID-19---global post-traumatic growth if-you-will. Mother Nature is waiting there to teach us. She has provided us with COVID as a powerful disruptor. She hopes that COVID will get our attention and serve as a sufficiently strong motivator to bring about some changes in how we view ourselves, our health care system and our world.

There are a growing number of benefits that have arisen out of the COVID-19 pandemic---such as the unmasking of health inequities across many sectors, telehealth rapid emergence, a broad-based recognition of the shortcomings of fee-for-service payment models (which left many health systems and physicians in financial peril with reduced services early in the pandemic for example) and discovering that healthcare can make rapid innovations in care models when necessary. Expanding and sustaining

these positive outcomes of a traumatic global pandemic will require a learning mind-set, best described by Nelson Mandela: *"I do not lose. I either win or I learn."*

## Acknowledging Mysteries

The "sacred" foundation of medicine -- we are not really very far from the embedding of medicine in specific spiritual traditions. Some of the tension we are facing as a nation has to do with the dimension of mystery – and specifically with major contradictory views on the fundamental nature of the mysterious world that we occupy. We offer a contrast between what we would call a Fundamentalist mind-set (some also call this a Fixed mind-set) and a mystical mind-set (some might call that wholistic). With most of us ordinary humans somewhere in between wondering when the battles will end between the fundamentalists and the wholistic ones.

The advantage of Fundamentalism within a crisis are plenty—especially when the crisis includes that over which we have no control (mysteries). Quick sense and declaration of exactly what is happening. Linkage of what is happening to "larger forces in control of our lives" (God, nature, environment, you name it). Quick agreement as the mysteries (along with the dilemmas and polarities) are converted quickly into us/them dichotomies with tests to prove one's loyalty to one camp or the other.

Fundamentalism is very fast to adapt with the "right people who know the right way and how to test to see if you belong or not." They seem to strip complexity down to puzzles very quickly and then hold to their message no matter what happens---thus appearing very principled and authentic, even if totally and completely out of their minds. Very confusing to many people.

As you can tell, neither of us are not fond of fundamentalism---no matter it's leanings to the left, the right, the center, or otherwise. An important distinction is made by Daniel Kahneman (2011), the Nobel-prize winning behavioral economist, between "fast thinking" and "slow thinking." Fundamentalism relies on fast thinking. The Internet is allowing fundamentalism to spread in ways never thought possible even a decade ago. Now one highly effective fundamentalist communicator can have an audience of millions after a successful Meme or Instagram.

No need to develop local people or followings. We have a pandemic of fundamentalism and cultism as far as we can tell---on both left and right side, although the right side appears to be spreading fastest. We realize getting into these things can complicate the focus on COVID---yet COVID is a virus-pandemic that may provide us insights into other pandemics like Loneliness, Fundamentalism, Terrorism and other grass-fire pandemics raging across the world that contain mysteries as well as problems, dilemmas and polarities—but certainly not just puzzles. Mother Nature is a wonderful teacher that (who) can teach us much about ourselves through the introduction of COVID—if, as Nelson Mandela suggests, we will learn.

## Implications

We believe that it is particularly important to properly identify and discern between solution-accessible puzzles and more elusive problems and polarities. Rather than "seeing the world as a nail, because I

have a hammer" we must recognize that there is much more facing us than a nail and that we need multiple hammers and many other tools regarding health care perspectives and practices. The focus on nails and hammers happens when we distort complexity into simple puzzles and simply problems that can readily be fixed or solved.

Successful mid-21st Century leadership in health care also requires that we shift from either/or thinking to both/and. We must navigate on "turbulent' seas using maps and compasses, rather than right/wrong rules. We must zoom outward and think slowly when facing VUCA, rather than zooming inward toward fast thinking, reductionistic approaches to problem-solving and decision-making.

Perhaps it is most important for our own personal health (and sanity) as leaders in contemporary health care systems that we acknowledge our engagement in a domain of life (and death) that is saturated in mystery. We have always been dancing with the angels and the devil when helping our patients address issues related to their own mortality. In this world of existential threat and profound angst it is particularly seductive to believe that we can overcome death (at least for a while)—or that we can at least be "experts" on what it means to be mortal. The mysteries that we face in the domain of health care have only become even more elusive and complex as we gain more knowledge of and appreciation for the complexity of the illnesses and injuries we are treating.

It is indeed ironic that we know less and less as we learn more and more. Under these ironic conditions it is tempting to adopt a fundamentalist perspective requiring that we accept one right answer and one version of truth and reality. The alternative is to be courageous in the face of multiple right answers and many alternative versions of truth and reality. These answers, truths and realities must all be acknowledged and incorporated in our perspectives regarding and practices engaged in the field of health care.

What then is the source of this courage? We believe that it is somehow embedded in the foundational commitment we have made as professionals in the field of medicine. There is indeed another irony inherent in this commitment: it seems that the very notion of 'profession" is founded in the mysterious realm of spiritual practice. We "profess" our commitment to a specific set of ethics and desired outcomes. In doing so, we join other professionals in a spiritual alliance on behalf of the welfare of all human being. Our world is indeed mysterious—and ultimately quite spiritual in nature.

## Conclusions

In conclusion we turn to an insight offered by William Shakespeare. Specifically, we are reminded of Iago's use of innuendo to destroy the lives of three people. Shakespeare has him compare his actions to pouring pestilence in his ear (using a pandemic metaphor no less):

I'll pour this pestilence into his ear:

That she repeals him for her body's lust,

And by how much she strives to do him good,

She shall undo her credit with the Moor.

So will I turn her virtue into pitch,

And out of her own goodness make the net

That shall enmesh them all.

As the internet allows the minds of many to be "infected" by ideas in an instant, airflight now allows the lives of many to be infected by viruses in a matter of weeks. This is part of the VUCA Plus/ COVID-challenged world we have described. Technology advances lead to new and unexpected exponential changes that we will not catch up with for decades. As the creator of COVID as a disruptor, Mother Nature is sitting back (actually continually reinventing COVID) to see if this technology will be of any assistance. Ironically (at least on the surface), we are re-experiencing Biblical events. Fundamentalists have the first answers in simple terms for us---through their prism of making puzzles out of problems, dilemmas, polarities—and even mysteries. We suspect that Mother Nature is amazed that we are not even moving forward but are instead regressing to a more primitive state of analysis and cure.

Unfortunately, many of the fundamentalists are not really reading (or at least not understanding) the holy scriptures. The Biblical authors have constantly and repeatedly reminded us that our world is mostly a mystery. As mere human beings, we must live with an ignorance of this mystery (called “life”). It is for us to appreciate the complexity that swirls around this mystery and to learn how to dance with the many ways the fundamental mystery is manifest. As leaders in health care systems, and as providers of health care services, we must remain humble and agile. We must be eager life-long learners—for our mysterious world does continue to reveal something about the nature and purpose of life. We only need to be open to and patient in receiving these lessons.

## Afterword: Mother Nature Teaches Us/Can We Learn?

Having finished writing this essay, we find ourselves imagining that Mother Nature (though COVID) has done some of the writing. Mother Nature sees that we in the health care community are very advanced and adaptive (creating effective vaccines in a blink of an eye) and communicating across the world in an instant. However, Mother Nature also sees (and takes careful notes) on the tendency of our health care community to regress back to fundamentalist explanations of our traumatic experiences of COVID. We find false certainty in our view of COVID--in pursuit of false comforts and reduced anxiety.

When faced with the multi-tiered challenges of COVID, we find ourselves, as members of the health care community, being forced out of this comfort zone. We are thrown into a very uncomfortable and exhausting worldwide cognitive dissonance: we want to believe that we are knowledge about and competent in treating COVID—yet find ourselves ignorant and ineffective. Somehow, we must move past this dissonance by accepting our very human need to be of two-conflicting-minds.

One of the minds is rational and driven by data. As health care professionals we are scientific and in search of reality—an objectivist perspective. The other mind is very emotional, meaning-driven, and comfort-seeking. It rejects any objectivist perspective. There is no objective reality. There are only

narratives that can be healing or hurtful. It is up to us, as physicians—and even more importantly, as patients – to make the right choice between these contradictory narratives.

We can learn to accept both aspects of our very human nature. Mother Nature can be our teacher. Perhaps we will find new and creative ways to cohere and align when facing ongoing viral pandemics and idea-demics now and into the future. That is the greatest hope and desire of the two of us, as authors. We would like this essay to contribute in a small way to a journey toward more integrated, accepting, and wise approaches to the puzzles, problems, dilemmas, polarities and mystery of our world.

What are the requirements to successfully navigate the VUCA-Plus world as leaders of a health care system? We suggest that successful navigation begins with recognition that each of the VUCA-Plus challenges exists in the contemporary world of health care. Complexity, in particular, is facing us as we make difficult decisions about health care priorities and delivery. Thank you, Mother Nature for offering us the lifelong learning opportunities of COVID and for being our co-author and teacher. We just wish that the lessons you are teaching us could have been and still could be less harsh. Perhaps, the harshness was needed to get our attention.

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