



# **THE WHARTON HEALTHCARE QUARTERLY**

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## EDITOR'S LETTER

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Happy New Year! We are starting 2015 off with a bang.

I am excited to announce the launch of not one, but two, new standing columns as we expand our coverage of the healthcare landscape:

- Not a Freudian Slip - issues and trends in behavioral/mental health
- Affidavit: Healthcare and the Law - issues and trends in the legal arena

And in the July issue, we plan to include an article which will feature those who have been in the news for their leadership and accomplishments in healthcare.

So without further ado, read on! And be on the lookout soon for the winner of a free WHCMAA membership in follow-up to the *Wharton Healthcare Quarterly* December feedback survey.

**Z. Colette Edwards, WG'84, MD'85**  
Managing Editor



Z. Colette Edwards, WG'84, MD'85  
Managing Editor

To learn more about Colette,  
[click here.](#)

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## THE PRESIDENT'S DESK

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We had our best alumni conference yet. Many thanks go out to the following people: Conference Co-Chairs: John Harris, WG'88; Bryan Bushick, WG'89; Committee planning members: Mitch Goldman, WG'75; Phil Heifetz, WG'96; Fran Kelleher, WG'84; David Kibbe, WG'80; Bob McDonald, WG'92 and Maureen Spivack, WG'86. What a great group of people to work with.

The meeting was a mix of policy, crystal balling, business execution, and catching up with each other. It was a blast and the 150+ people who attended seemed to enjoy the diversity of presenters and attendees. A special thanks goes out to the presenters from Wharton: Mitch Blutt, MD, WG'87; Mark Smith, MD, WG'89; Luciana Soares, WG'03 and; Bill Winkenwerder, MD, WG'86. Other panelists included: Rahul Rajkumar, MD, JD (Acting Deputy Director of the Centers for Medicare and Medicaid Innovation); Aron Ron, MD (CMO, Oscar); Hjalmar Pompe (CEO, Visionscope Technologies); Davide Vigano (CEO, Sensoria); Jon Brilliant (Founder WellDoc); Jay Rosan, MD (VP Health Innovations, Walgreens); and Liz Jurinka (Chief Health Policy Advisor to the Senate Finance Committee).



Column Editor: Jeff Voigt WG'85  
To learn more about Jeff, [click here](#).

At the alumni dinner the evening before the conference, we feted the WHCMAA Alumni Achievement Award recipient, who this year was Dr. Risa Lavizzo-Mourey, WG'86. Risa is the President and CEO of the Robert Wood Johnson Foundation (RWJF) and has held that position since 2003. RWJF is a philanthropic foundation with over \$10 billion assets – focused on healthcare. Dr. Lavizzo-Mourey has focused the work of RWJF on key public health issues such as childhood obesity, achieving the Institute for Healthcare Improvement's (IHI) "triple aim" [improving the health of populations, improving the patient experience (quality of care and patient satisfaction), and reducing the per capita cost], expanding the role of caregivers to help make up for the anticipated shortage of them, and addressing social determinants which impact health. Risa's list of other accomplishments is very impressive and far too long to capture on a single page. Suffice it to say, she is a wonderful example of the type of leaders that emerge from the WHCM program. For those who attended the dinner, thank you for coming and thank you for honoring her. Dr. Lavizzo-Mourey certainly deserves the award she received for all she has done for the health care industry and for the WHCM program.

Also, as part of this year's conference, we held a special dinner for those alumni who contributed at the \$5,000-and-above level to the Alumni Scholarship Fund in honor of June Kinney. Believe it or not, there were over 60 people (alumni and professors) who contributed at least \$5,000 or more to this scholarship. All contributors at the Leadership level received June Kinney bobble heads (a memento I am sure all will treasure; mine is on my work desk). To date we have raised over \$620,000. It is amazing to see how generous we are as a group and how successful many of the graduates have become in terms of financial well-being, and in their effect/influence on the healthcare system. Joseph Wharton would be proud.

What is most revealing about the WHCM program is the coupling of capitalism with social responsibility. Such a combination is a unique mix for any business school. Capitalists take advantage of inefficiencies in the market for their own benefit and that of others. However, the WHCM program also instills in its graduates the need to be socially responsible. This is a result both of the curriculum and of the professors – a nice mix for an education and one that makes you think. This point has been brought to the fore in the types of people who graduate from the program (e.g., Risa above) and in

## THE PRESIDENT'S DESK

*continued*

such causes as the Kinney scholarship.

I would also like to extend a special thank you to the Leonard Davis Institute for holding a [public policy discussion](#) in Washington, DC on October 9, 2014 at the Willard Hotel. Dan Polsky, PhD, the director of LDI, was kind enough to extend an invitation to the WHCM alumni in the DC area. It was really a great event and nice to see so many WHCM alumni attending it. This event was a collaboration between LDI and the newly formed Penn-Wharton Public Policy Institute (PPI). The LDI/PPI collaboration aims to leverage the University's resources to foster better informed policymaking on health care issues related to business and the economy. If you live in DC, or are involved in politics at the state or federal level, my suggestion is to reach out to LDI and/or the PPI and offer your help to maximize the success of this initiative. LDI is planning another one of these events next year in DC – so stay tuned.

We are scheduled to hold 6 Wharton SIRIUS XM Channel 111 healthcare segments. Two have already occurred: Mobile Health hosted by Mitch Goldman, WG'75 on 11/4 and Specialty Pharma on 11/18, whose panelists included Kevin Schulman, MD, WG'88 (and Professor of at Duke University Medical Center and at the Duke Fuqua Business School), David Fajgenbaum, MD (second year Wharton MBA and founder of the Castleman Disease Network), and Professor Patricia Danzon from the Wharton School. Upcoming segments include: State Health Care Exchanges hosted by Professor Skip Rosoff (to take place on 12/2/14 from 12:00-1:00pm); Biopharma Investing hosted by Jay Mohr, WG'91 (founder of Locust Walk Partners); Healthcare Provider Supply and Demand hosted by Jeff Voigt, WG'85, The Changing Business of Retail Pharmacy hosted by Mitch Goldman and Provider and Payer Convergence, also hosted by Mitch.

By the way, Bristol Myers Squibb held a Princeton, NJ corporate event with Wharton on 11/18/14 hosted by Joe Leveque, MD, WG'92, VP of Oncology. It was an absolutely great event focusing on innovations in cancer therapy with a world class group of panelists. Thanks go out to Joe and his group at BMS for holding the event.

Lastly, and as always, get yourself involved in the WHCMAA. We are only as good as the membership we have. From personal experience, what you put into it is what you get out of it. My experience to date is that being involved in the WHCMAA is worth every penny and more. You establish great working relationships, friendships, discover ideas you never would have thought of, and get to work with some of the very brightest people in the healthcare industry.

Sincerely,  
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## OPEN WIDE: REVISITING A TRIED AND TRUE FRIEND

In this quarter's Open Wide column, let's revisit one of the cornerstones not only of dental health itself, but of public health in general. I'm referring to community water fluoridation (CWF), termed by the CDC as "one of the ten great public health achievements of the 20th century," along with vaccination, control of infectious diseases, motor vehicle safety, and decline in deaths from coronary heart disease and stroke. Not bad company to be in.

Some very good background on the history, research, and benefits of fluoridation can be found on the websites of the [CDC](#) and the [National Institute of Dental and Craniofacial Research](#), but salient points are these:

- CWF reduces dental decay on the order of 30-50% compared to non-fluoridated communities.
- The "bang for the buck" is considerable in terms of (1) cost per person per year (ranging from pennies to about a dollar and change, depending on population size) and (2) efficacy (\$1 invested in CWF yields \$38 in avoided treatment costs.)
- Benefits extend across the age spectrum.

In 1945, Grand Rapids, Michigan became the first community in the world to fluoridate its water supply; presently more than 210 million Americans, and about 75% of the population on a municipal water supply, derive its benefits. [Thirty-three years after Grand Rapids, Penn could rightly take some pride in the furtherance of this public health measure. One of its own, Dr. Myron Allukian, Jr., Dental'64, was central to the effort that brought CWF to Boston and 33 surrounding communities in 1978 (more than half the population of Massachusetts at the time), initiating the subsequent considerable reduction in the *4000 cavities that formed daily* in the mouths of children and teenagers in the Boston metropolitan area. (Disclaimer – I had an infinitesimal part in that effort in my last year of dental school and that's when I first met Dr. Allukian. Among other intersections over the years, we currently serve on the Executive Committee of the American Association for Community Dental Programs.)

Despite CWF's vaunted ranking in the public health hierarchy, the demonstrated science and experience behind it, its efficacy and highly efficient cost-benefit payback, it has, since its inception, had to battle, unlike virtually any other comparable public health measure, misinformation, disinformation, scare tactics, baseless "scientific" research, and a slew of other untethered stratagems and ploys that are best encapsulated in one of those classic lines by Col. Jack D. Ripper from 1964's "Dr. Strangelove or: How I Learned to Stop Worrying and Love the Bomb": "Fluoridation is the most monstrously conceived and dangerous communist plot we have ever had to face."

That was 1964. Fifty years later the challenges to CWF continue, but with little humor to offset them. In 2013, in Massachusetts alone, seven communities saw attempts at reversing the measure, fortunately all being rebuffed. But the phenomenon exists nationwide - that same year a major metropolitan area, Portland, Oregon, voted again to prohibit fluoridation. In 2011, Calgary, Alberta voted to stop fluoridation, and already dentists there are beginning to see an increase in the number and severity of dental caries. Perhaps most dramatically, this past summer the health minister of Israel, using an "infringement of personal rights" rationale, ended a decades-long government policy of fluoridating communities of 5000 or more in population. Anti-fluoridation sentiment itself has seemingly assumed epidemic proportions akin to a biological disease.



Column Editor: Harris Contos,  
DMD, WG'80, Asclepius Consulting  
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[click here.](#)



## **OPEN WIDE: REVISITING A TRIED AND TRUE FRIEND**

*continued*

One thing that complicates matters fifty years later – and almost seventy since Grand Rapids – is the Internet, and its social media spawn. Dr. Allukian contrasts the ten-year planning and organizational effort behind the metropolitan Boston fluoridation success in 1978 with the rapidity and pervasiveness of communication (in today's lingo, "messaging").

*"To reach an audience of 50 million people, it took radio 38 years and television 13 years [to accomplish], but it only took the Internet under 4 years. Facebook took only 8 years to reach more than 1 billion users, and Twitter took just 6 years to reach slightly under one-half billion users. In the United States alone, Facebook and Twitter have 166 million and 140 million users, respectively. The reach of the Internet and social media is unprecedented and almost unlimited." (Mertz, A and Allukian M Community Water Fluoridation on the Internet and Social Media. JMassDenSoc, Vol. 63, no. 2 Summer 2014).*

It comes as no surprise that the Internet is hardly the repository of all that is noble, pure, and true, and, as with the irrationality that has assaulted CWF from decades ago, so too has it adapted to the Internet and social media age. The purpose of the Mertz-Allukian study was "to determine the differences in pro- and anti- CWF traffic on the Internet and differences in pro- and anti- CWF use of social media." The study results are sobering and cautionary for health professionals at all levels, as they counter anti-fluoridation claims as well as optimizing their own Internet and social media presence:

- Anti-CWF websites are visited 5 to 60 times more frequently than pro-CWF websites, which means the public retrieves most of its online information about CWF on anti-CWF websites.
- All Facebook Groups and Pages were against CWF.
- The majority of tweets on Twitter were anti-CWF, as were the majority of YouTube videos. So it would appear, anti-CWF organizations use social media much more often and more effectively than do their pro-CWF counterparts. How this translates to implementation or discontinuation of CWF is unknown. During the study period in March 2012 when there was a favorable article on CWF in the *New York Times*, there were more positive tweets for CWF.

Complicating this complication is what I refer to as the "Amazon rating effect," the phenomenon manifest when, for example, a product may have a hundred 4- and 5- star reviews, and a mere handful of 1s and 2s, but the tendency is to pay more attention to the lower rated ones. Such is human nature I suppose, but it might apply to the case of fluoridation. Some tipping point may have been crossed, so now the situation has become one of "Well, I saw it on the Internet, so it must be true!" except here, as the Mertz-Allukina study showed, the "conventional wisdom" of the Internet outweighs fact and accuracy.

For certain, for better (think The Great Society) and for worse (think the eugenics movement), it is difficult if not impossible to separate healthcare from its times.

Community water fluoridation has been a good friend. Though not as spectacularly as the polio vaccine, it does nonetheless share the attributes of preventing morbidity, saving billions of dollars in healthcare costs, and adding to quality of life, all for very cheap money. It needs continued, steady friendship from the medical, dental, public health communities, and the public at large, who have benefited considerably, to withstand and reverse the assaults upon it in this Internet and social media age.

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## THE PHILOSOPHER'S CORNER

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### **Life Lessons:**

If I knew then what I know now, I would have:  
said “no” more often. I was fortunate in my early and mid-career to have a mentor whose introductions led to a wide network of colleagues. As I reflect on how often I said “yes,” I’ve come to realize too often I was responding to my own anxieties about others’ expectations. It would have been much better for those professional anxieties and life experiences to have said “no” more often to the professional opportunities presented to me.

If I knew then what I know now, I would not have:  
stopped playing my fiddle after medical school. I still get to see and hear live music, some months more than others, but the energy of playing with others took the excitement of music to another level. Though over many years I substituted the rewards of great teamwork - especially in direct patient care when resuscitating a trauma patient or other patient in extremis - I’m looking forward to picking up the fiddle again and more than a bit rueful at my clumsiness with the instrument these days.



This month's philosopher  
Steven J. Davidson, MD, WG'89  
To learn more about Steven,  
[click here.](#)

### **Favorite Quotes:**

1. “Never ascribe to malice that which can be explained by ignorance.” - Ralph Waldo Emerson
2. “The risk of a wrong decision is preferable to the terror of indecision.” - Maimonides
3. “Language is the knife that spreads what we feel across the dry crust of someone’s heart.” - Kate Wolf, Lyrics at <http://www.go2lyrics.com/K/Kate+Wolf/>
4. “When you’re getting flak, you’re probably over the target.” - Nick Pisicano, then Executive Director, American Board of Family Practice
5. “Even if you’re on the right track, you’ll get run over standing still.” - Will Rogers

### **Recommended Reading:**

- *And the Band Played On* by Randy Shilts ©1987
- *Cognitive Surplus* by Clay Shirkey ©2010
- *Trust Agents* by Chris Brogan and Julien Smith ©2009
- *Medicine in Denial* by Lawrence L. Weed and Lincoln Weed ©2011, 2013
- *Let Patients Help! "e-patient Dave"* by Dave deBronkart and Dr. Danny Sands ©2013

Column Editor:  
Z. Colette Edwards, WG'84, MD'85  
To learn more about Colette,  
[click here.](#)

## ALUMNI NEWS

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### **Gabriel Luft, WG'13 and Clifford Jones, WG'07**

Earlier this year, The Accountable Care Coalition of Greater New York and AllazoHealth received the Pilot Health Tech NYC award to bring medication adherence services powered by AllazoEngine's predictive analytics to elderly and intellectually and developmentally disabled Medicare Beneficiaries in New York City.

Gabriel Luft is the Executive Director of the Accountable Care Coalition of Greater New York. Clifford Jones is the CEO of AllazoHealth.

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Contact Clifford Jones at: [clifford.jones@allazohealth.com](mailto:clifford.jones@allazohealth.com)

[Learn more.](#)

### **Robert Lieberthal, PhD, WG'11**

Rob and the rest of the Lieberthals are happy to introduce the newest member of the family. Micah Jane was born on August 18, 2014. Mom and baby are doing well, as are Micah's two older brothers, Elliot (4) and Jonah (2).

Contact Dr. Lieberthal at: [rlieberthal@gmail.com](mailto:rlieberthal@gmail.com)

### **Karen Meador, MD, WG'02**

Karen Meador, MD, MBA, has joined the The BDO Center for Healthcare Excellence & Innovation as a Managing Director. Dr. Meador brings a depth of clinical experience to her role, including prior work creating innovative solutions that enhance physician alignment and engagement. She joins BDO's leading cadre of healthcare clinical and business advisory professionals built to deliver transformative services that help healthcare organizations comprehensively redefine operations and processes to respond to patient-centric demands. Dr. Meador is based in Dallas, TX, leading BDO's healthcare advisory practice throughout the Southwest.

Contact Karen at: [kmeador@bdo.com](mailto:kmeador@bdo.com)

[Learn more.](#)

### **Nikhil Bhojwani, WG'02**

Recon Strategy, co-founded by Nikhil Bhojwani, has been selected as one of *CIO Review* magazine's Top 20 healthcare consulting providers. The firm was recognized for "stirring a revolution in the healthcare space," according to a statement by *CIO Review* publisher, Harvi Sachar.

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[Learn more.](#)



## ALUMNI NEWS

*continued*

### **John P. Williams, WG'00**

John P. Williams MD, MBA, Clinical Assistant Professor of Psychiatry at the University of Pennsylvania, recently received several honors. In November 2014, he received the Jack Greenspan Award from the Philadelphia Psychiatric Society. The Greenspan Award is “presented to a psychiatrist who has been out of training for up to five years and has established a private practice, who has excelled in preserving, protecting, and defending the practice of psychiatry in Pennsylvania, or has made a substantial contribution to the Philadelphia Psychiatric Society and/or organized psychiatry.” Dr. Williams was also appointed by Governor Tom Corbett to the Board of Pardons of the Commonwealth of Pennsylvania and, on January 1, 2015, he became President of the Academy of Cognitive Therapy, an international board certifying mental health clinicians in cognitive behavioral therapy.

I hope to get more involved in the program in the coming years.

Contact John at: [jpw@mainlinefamily.com](mailto:jpw@mainlinefamily.com)

### **Gail (Boxer) Marcus, WG'80**

Gail (Boxer) Marcus is CEO of Calloway Labs, a national toxicology lab, which has just been named one of the top 100 women-led businesses in Massachusetts by the Commonwealth Institute.

Contact Gail at: [gmarcus@callowaylabs.com](mailto:gmarcus@callowaylabs.com)

### **Tom Sims, WG '79**

Tom joined International Capital & Management Company (ICMC), a healthcare consulting firm based in St. Thomas, US Virgin Islands, as Strategic Account Manager in November. ICMC delivers fully integrated strategic business solutions that incorporate strategy, finance, lean six sigma, leadership development, project management, service excellence, and information technology.

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[Learn more.](#)

### **John Whitman, WG'78**

John Whitman, who serves as the Executive Director of non-profit The TRECS Institute, was recently awarded a \$242,000 grant from CMS to evaluate the impact of a virtual physician service, enabled through technology, to reduce readmissions from nursing facilities to hospitals. The one year study will include four skilled nursing facilities in Florida and evaluate the impact this service has on improving quality care for residents and estimating the economic impact on each of the participating facilities and the potential economic savings to our healthcare system as a whole if this virtual service were available across the long term care industry.

Contact John at: [jjw19006@aol.com](mailto:jjw19006@aol.com)

## **ALUMNI NEWS**

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### **Georgia Robins Sadler, PhD, WG'73**

Georgia received the University of California School of Medicine's 2014 Excellence in Surgery Research Award. She and husband, Blair (Penn Law '65), welcomed two granddaughters into the family in May (Zoe) and June (Vivienne), joining two-year old grandson, Stellan.

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## NOT A FREUDIAN SLIP: STRIVING TOWARDS HEALTH BEHAVIOR CHANGE - PART 1

### A Different Way to Approach Mental Health:

#### The Biopsychosocial Model

Creating positive changes in health behavior - this goal is perhaps the greatest hope for reducing the ever-growing chronic disease burden around the world. Influencing behavior, however, is a complicated endeavor. It is influenced not only by patients' active medical care, but also their biological tendencies (e.g., hormones, genetics), their social environment (e.g., physical environment, upbringing, education, financial status), and their psychological well-being. One pathway to achieving positive changes in health behavior (and preventing illness altogether) is a focus on mental health.



There is much evidence which indicates poor mental health and the development of mental illness result from a combination of biological, social, and psychological factors – many of which are beyond the ability of traditional mental health services to address.<sup>1</sup> Further, one's mental health impacts all other illness experiences; therefore, if we are able to effect behavior change that improves mental health, positive downstream effects in other areas will often follow (e.g., co-morbidities). An exploration of the impacts of biological, social, and psychological impacts on mental health is warranted to inform efforts to improve overall health outcomes generally and mental health outcomes specifically.

In this multi-part series, we will address how each component of an individual's biopsychosocial (BPS) profile influences mental health and well-being. We will look at health not as a stand-alone entity, but as one that is influenced by multiple factors, including our upbringing, our day-to-day experiences, and our gender.<sup>2</sup> Ultimately, we demonstrate why efforts to both understand and treat ill health must be tailored to the individual. In Part 1, we explore mental health: its impact on a person's lived experience, the importance of addressing mental health in all dimensions of healthcare, and introduce how mental health is influenced by gender.

Mental health is not simply the absence of ill health. It is the state of well-being in which an individual realizes his or her own capabilities, can cope with the normal stresses of life, and can work productively in his or her community.<sup>3</sup> Further, mental wellness is intimately tied to our physical and overall health.<sup>4</sup> Despite its clear importance in the healthcare ecosystem, the number of people impacted is high and efforts to address this impact is low. Today almost 14% of the global burden of disease has been attributed to the chronically disabling nature of depression and other common mental disorders.<sup>5</sup> Depression and anxiety specifically have significant impacts on individuals, employers, and society as a whole. People who suffer from depression experience personal costs: each depressed individual loses an average of 5.6 hours of productive work time per week,<sup>6</sup> is impaired in daily functioning,<sup>7</sup> and is estimated to lose an average of \$10,400 per year in income by the age of 50.<sup>8</sup> The direct human costs include sadness, isolation, hopelessness, and inability to enjoy life; further, depressed individuals are at a much higher risk for suicide,<sup>9</sup> and are 5 times more likely to abuse drugs.<sup>10</sup>

Diseases	Male:Female Death Ratio
Accidents	2.2
Heart Disease	1.5
Cancer	1.4
Diabetes	1.4
Kidney Disease	1.4
Influenza and pneumonia	1.4

Table 1. Male:Female Mortality Ratios in the United States (CDC,2010)



## NOT A FREUDIAN SLIP: STRIVING TOWARDS HEALTH BEHAVIOR CHANGE - PART 1

*continued*

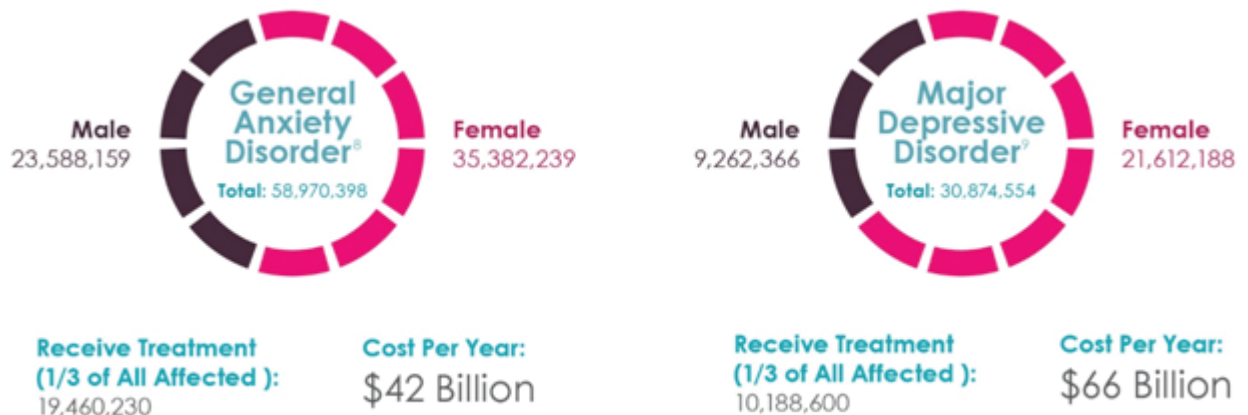


Table 2. Prevalence of Anxiety and Depression in adults in the United States (NIH, 2012)

At a societal level, depression and anxiety result in a high cost burden on our overall medical system. In the U.S., depression and anxiety result in approximately \$57.6 billion in direct medical costs every year.<sup>11</sup> Furthermore, the relationship between mental illness and chronic disease is significant. Individuals struggling with these conditions often experience co-morbidities such as heart disease (17%), diabetes (27%), cancer (40%), and cerebrovascular disease (23%).<sup>12</sup> These co-morbid conditions are negatively impacted by depression and anxiety, where the total healthcare costs for patients with co-morbid conditions with depression are 50% - 100% higher than patients without a depressive disorder.<sup>13</sup>

### Gender Difference in Mental Disorders

**Depression** – Major depression is one of the most common of all mental health disorders. Twice as many women as men experience depression in their lifetime.

**PTSD** – Risk of post-traumatic stress disorder following traumatic experience is two-fold higher in women than men. Women experience markedly worse quality of well-being outcomes than men.

**Anxiety/Panic Disorder** – Women are twice as likely as men to experience an anxiety disorder.

**Suicide** – Women attempt suicide two to three times more often than men; however, four times as many men as women die by suicide.

**Eating Disorders** – 85%-95% of people with anorexia nervosa or bulimia are women.

**Substance Use Disorders** – Women are more likely than men to experience co-occurring mental health and substance use disorders.

Figure 1. Gender Difference in Mental Disorders (NIH, 2012)

These are just a few examples of mental disorders: gender differences are also seen in severe mental health conditions such as schizophrenia, bipolar disorder, etc.

Gender is a critical determinant of mental health. When we consider the rates of common mental disorders – namely stress, anxiety, and depression – we find striking gender differences in diagnoses.<sup>14</sup> Females are 70% more likely to experience depression during their lifetime, 60% more likely to experience anxiety, and are more likely than men (28% and 20% respectively) to experience stress.<sup>15</sup> Is

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## NOT A FREUDIAN SLIP: STRIVING TOWARDS HEALTH BEHAVIOR CHANGE - PART 1

*continued*

there a factor of women seeking help more readily by men and therefore some under-reporting of male stats? If so, does that need to be stated? Women are also at a greater risk for many mental disorders, including PTSD, anxiety, eating disorders, and attempting suicide.<sup>16</sup> There is little question regarding *if* gender influences a person's mental health. The real question is rather, "*why?*"

In part 2 of this series, we will explore how biological mechanisms, specifically genetic and physiological factors, distinguish male behavior from female behavior. Further, we explore how this biology predisposes both men and women to anxiety or depressive symptoms, how men and women differ, and how these differences evolved.

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## **AFFIDAVIT: HEALTHCARE AND THE LAW**

### **BIG DATA OPPORTUNITIES IN HEALTH CARE: PRIVACY AND SECURITY MUST BE PART OF THE DISCUSSION**

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I recently attended a terrific panel event on Big Data in health care sponsored by a Philadelphia-based technology networking group. “Big Data” refers to “data of sufficient volume, complexity, or velocity that it exceeds the capability of conventional current technology or methodology to process or analyze” it.<sup>1</sup> According to IBM, “Every day, we create 2.5 quintillion bytes of data — so much that 90% of the data in the world today has been created in the last two years alone.”<sup>2</sup> Because data is everywhere – in storage, on servers, on private computing devices, in transmission – the opportunities to cull, query, and learn from Big Data are endless. In healthcare, Big Data opens up possibilities in population health, research, personalized medicine, patient education, and advertising. Indeed, the exploration of Big Data is one of the key drivers of healthcare reform.



The panelists at the event offered a sampling of the diverse uses for Big Data: one speaker has developed a sophisticated cognitive computing solution to bring human reasoning to the analytics process; another mines open chat rooms and other sources to find trends in consumer attitudes with respect to specific diseases and treatment options; and a third offers predictive software for risk stratifying patients at admission to anticipate post-discharge needs and reduce readmissions. Another speaker, an analyst for a financial services company, addressed the enormous investment opportunities in electronic health records applications and the data residing in these records. But surprisingly, none of the panelists addressed privacy and security.

Most of us are familiar with HIPAA, the law passed in 1996 to protect personal protected health information (PHI). The HIPAA Privacy Rule safeguards the rights of individuals to control their PHI through notice, consent, access, and other tools. It prohibits the sale of PHI without patient authorization and restricts many uses of PHI for marketing purposes. The HIPAA Security Rule imposes standards to ensure the privacy and integrity of PHI through, for instance, the use of passwords, audits, disaster recovery, and encryption. The Security Rule also imposes extensive (and expensive) notice and other obligations when data is breached. There is a safe harbor for data that has been secured to specific government standards.

HIPAA doesn't apply to everyone. The law specifically covers healthcare providers, health plans, and clearinghouses like billing companies. However, in 2009 HIPAA was amended to also cover business associates, the vendors and subcontractors of providers, health plans, and clearinghouses that handle PHI, as well as all downstream vendors and contractors that handle PHI. The HIPAA net is broad and deep, and violations are expensive. The federal Department of Health and Human Services may fine a violator up to \$1.5 million annually per violation of an identical provision. The Department of Justice may prosecute violators under HIPAA's criminal provisions, including for the intentional sale of PHI. Many states also provide a private right of action for individuals to sue violators. Additionally, there are other federal and state laws that govern the privacy and security of personal health information. The Federal Trade Commission Act empowers the FTC to pursue activity that is unfair, deceptive, or fraudulent, including when personal information is misused for private gain or is insufficiently protected.

So how do HIPAA and Big Data intersect? It depends on the data, who has it, and how and why it is used and disclosed. Let's propose there is an app that allows a patient to research cancer treatment options on the web and to organize his questions in order to have more meaningful discussions with his physician. Data on

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## **AFFIDAVIT: HEALTHCARE AND THE LAW**

### **BIG DATA OPPORTUNITIES IN HEALTH CARE: PRIVACY AND SECURITY MUST BE PART OF THE DISCUSSION** *continued*

the app is protected by high-level encryption. The use of the app requires that the patient give consent for the hospital to exchange the patient's PHI with the developer, and for the developer to perform further studies on the data for population health and other purposes. The developer contracts with an analyst to study how patients use the app, including how long they spend on which sites to research treatments and what follow-up questions they ask, as reported by the physician. The analyst receives the data, including PHI, in a secure storage site and then de-identifies it by stripping out names and addresses but retaining age, condition, and dates of discharge. She delivers the analysis to the developer but retains the data as permitted under the contract. The analyst then re-purposes the data by aggregating it with public data on persons who live in the area served by the hospital, and, through more sophisticated Big Data analysis, their web-based search preferences, and the social media chat rooms they visit. She can determine which persons are frequent web users and their approximate age, and based on their search and chat room preferences, she can posit which may have been recently treated for cancer. With this combined data, she is able to cull a group of individuals who may be interested in purchasing vitamins, wigs, and other commercial products for cancer patients and sell the data to an advertiser who is under contract with a cancer product distributor.

Is this permissible under HIPAA? Maybe; maybe not. The answer depends on a precise HIPAA analysis of several factors: the relationship between the hospital and the app developer; the content of the consent; and if the consent was not sufficient, whether the data was truly "de-identified" under HIPAA's definition.<sup>3</sup> Another critical issue is whether the data was secured according to HIPAA standards. If all of these factors are not satisfied, the parties, and particularly the developer and the analyst, may be subject to a government investigation and HIPAA sanctions. The FTC may also be interested in how the data came to be used for commercial purposes.

Of course, Big Data poses challenges to the government as well. Tracking the data is time-consuming for agencies that are strapped for resources. The government tends to investigate and prosecute when there is an opportunity to hold up a violator in order to teach a lesson, such as when the violator is very large (Facebook), very small (the app developer), or exemplifies a particular problem (the sale of PHI). So if you want to use Big Data in health care, know your risks by recognizing any privacy and security concerns.

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## PART 3 — SUPERFLUIDITY: ENGAGING RESISTANCE TO PICK UP SPEED IN HEALTHCARE

This is the third in a series of four articles about working towards being a “superconducting organization,” where results come faster and are sustainable. In this article, we detail one of the levers that can help build this kind of organization, *Superfluidity*. (Read [Part 1](#) and [Part 2](#).)

### Superfluidity in Healthcare

In today’s healthcare organizations, having a strategy is still key to success. Yet leaders need to pay more attention to changing signals in the environment and adapt quickly. We find the most effective executives know what is *happening across the organization* and in the market by tapping into leaders at all levels. The feedback and insights that emerge inform strategic direction and help leaders anticipate shifting conditions before making a misstep. When an organization leverages this process for results, they move closer to superfluidity, when leaders create positive energy and engagement to speed needed change.



When executives engage people across their organization, they are sometimes surprised by the views they field. Every leader advancing change faces some resistance to change. Often leaders choose to bypass the opposition, identifying “resistors” as having their heads in the sand. But resistance is not necessarily an obstacle — it is a fundamental part of the change process itself. In this article, we show why engaging *with resistance rather than suppressing it is an essential new skill for healthcare leaders*.

### Surprised by Resistance

We have been working with an academic medical center to help them reduce readmissions, when patients return to the hospital with the same ailment within 30 days of discharge. This is a clinical priority but also a financial imperative, as hospitals are now being penalized when these patients return.

The readmissions initiative’s leadership team knew patients often went to the ER within a few days after discharge with almost any kind of problem — because they just were not sure what else to do. Research showed that having nurses make follow-up phone calls would lower readmissions. The leadership team asked us to formulate a plan with them to launch post-discharge phone calls in one hospital. We advised them to look across the hospital and talk to every unit that was already following up with patients over the phone, asking, “How do you do it?”

The leadership team found pieces of the solution across the hospital. One unit had developed a script to ensure every patient got the same information and was asked the same core questions. Others were notifying the health system’s home care agency that also called patients, so patients were not confused by getting two calls in one day. Yet another had given an administrative assistant the task of following up with low-risk patients to maximize use of clinicians’ time.

We helped the leadership team form a cohesive plan with elements *they would not have thought of without their workforce*. They piloted the package on units with the most readmissions, where patients suffered from chronic, debilitating illness. The leaders thought there was no way this would fail — they had taken good ideas from the “bottom up” instead of simply mandating what to do. They were giving nurses the go-ahead to spend time doing something that would directly help patients, and to do it their way.

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## PART 3 — SUPERFLUIDITY: ENGAGING RESISTANCE TO PICK UP SPEED IN HEALTHCARE *continued*

But something unexpected happened. They realized the call logs were very low. The nurses weren't making the calls. The leadership team was upset. They thought they had done the right thing, investing time and energy in putting together a strategy that took people's good ideas into account. And they thought highly of their workforce. Post-discharge calls were clearly in the interest of the very patients that nurses had cared for days earlier. Didn't the nurses care? Were they just lazy? Challenging authority? What was going on?

### **Building Superfluidity**

When we met with the leadership team, we too were surprised. But in our experience with change initiatives, we see a lot of resistance to new behaviors at first. Resistance can feel like running into a brick wall, but that impact is full of potential energy. If you approach resistance *like a kind of jiu jitsu, the energy within the opposition can be flipped to support it*. Resistance can be hard to understand at first, but we find that often, when you peel back the layers, there's helpful information embedded in it.

We thought there must be more to the story. We suggested the leaders return to the units to talk with nurse managers. It turned out there was indeed more going on. When a nurse on duty would call recently discharged patients, she would find one of three things: the patients were fine; they were having serious symptoms and needed to go to the emergency room; or they were having some mild difficulties. The nurses knew exactly what to do in the first and second cases, but in the third case, which was most common, they had nothing to offer. The nurses weren't being lazy — they cared about their patients. They simply felt stuck. The leadership team felt excitement and relief in equal parts. The nurses wanted to make the program work; they were not disengaged. And all the nurses were asking for were more ways to connect the patients to what they needed.

The leaders set up a direct way to make post-discharge appointments. They got the word out there was something new to help patients address mild difficulties. The resisting nurses changed course and call volumes started rising on the key units. Readmission rates dropped, due in part to the power of working with resistance to get to the useful ideas inside. *By listening to workers on the front lines, understanding the sources of their resistance to the change, and working with that resistance, leaders came up with a better solution.*

In the next issue, we will explore how vision and infrastructure — helping your workforce see themselves in the future of your organization and aligning the resources to get them there — can propel your organization from strategy to “superconducting” action quickly.

For more information on this topic or related materials, contact CFAR at [info@cfar.com](mailto:info@cfar.com) or 215.320.3200 or visit our website at <http://www.cfar.com/>.

## ENHANCING DECISION-MAKING WITH SIMULATION-BASED LEARNING TO IMPROVE HEALTH AND HEALTHCARE OUTCOMES

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### The Landscape

The healthcare industry has been in a rapid state of reinvention since President Obama signed the Affordable Care Act in March, 2010. With the continued rollout of new health insurance reforms over the past 4 years, healthcare leaders have been working hard to redesign their organizations.

Among many factors, achieving the “triple aim” of healthcare reform - better care for individuals, better health for populations, and reduced per-capita costs - will be driven by the decisions of healthcare providers and staff. These decisions impact every phase of healthcare delivery, and poor decision-making can lead to negative outcomes for patients and the healthcare system. With increasing penalties for below average performance and reimbursement models tied to health care quality and patient safety, healthcare systems must adopt innovative approaches to educate and train their workforces to incorporate the organizational changes they need to prosper.



### A Novel Solution

In healthcare, educators need to continually evaluate, improve, and refine learner's strategies for decision-making. Most traditional approaches focus only on increasing knowledge or comprehension. Decision Simulation, LLC provides a novel simulation-based education and training platform, DecisionSim.™ This approach is designed to enhance the decision-making skills of healthcare providers and patients, leading to enduring change and improved outcomes.

Leading healthcare organizations have embraced this innovative teaching approach. While the initial focus for many organizations was on a small number of critical clinical decisions made by specialists, as this approach has gained traction, organizations are expanding their use to include areas such as quality improvement (QI) and performance improvement (PI) programs, interdisciplinary team training, and communication skills training. The audiences for these training programs now comprise all types of healthcare professionals, and both clinical support and administrative staff. The next step is to involve the patients themselves, giving them a vehicle to better understand how the decisions they make can affect their health, disease management, and recovery. Leading organizations are now extending their training to this vital audience.

For example, the Department of Veterans Affairs, one of the largest healthcare systems in the U.S., employs DecisionSim on a system-wide basis in a variety of areas, including patient safety, women's health, palliative care, and specialty care. They have also blended DecisionSim with other simulation modalities and deployed DecisionSim simulations in non-clinical areas, such as human resources and operations. This year alone, over 22,000 staff have participated in these training activities.

These learners benefit from the realistic and engaging simulations that have multiple outcomes based upon decisions made, resulting in improved decision-making skills and increased retention. To improve

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## ENHANCING DECISION-MAKING WITH SIMULATION-BASED LEARNING TO IMPROVE HEALTH AND HEALTHCARE OUTCOMES *continued*

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a learner's ability to apply knowledge, healthcare systems are creating scenarios that match the patient population, medical conditions, and situations in which decisions will be made. This deliberate practice in a safe environment offers learners the opportunity to explore the effects of different decisions. Observing those effects and learning from their consequences ultimately forms the basis for better decision-making and encourages the application of these decisions into day-to-day practice. It is this type of enduring change which ultimately leads to better outcomes for patients and the healthcare system.

At another large healthcare system, DecisionSim is being used to improve diagnostic reliability by engaging clinicians with simulations that challenge their current mental models and force them to consider additional diagnoses. These simulations offer a cost-effective approach to increase both the consistency and accuracy of decisions, and share best practices and evidence-based protocols across the organization.

To help the healthcare systems measure the effectiveness of their training programs and the expertise of their learners, DecisionSim collects valuable objective behavioral data on each decision made by the learner, including key metrics such as cost of care and patient satisfaction. This decision data helps educators gain a greater understanding of the learners' decision-making and can be aggregated to gain objective and relevant insights, measure effectiveness, and identify unmet education needs.

As healthcare systems continue to evolve, education and training will be a key component of their success. Leveraging innovative, scalable solutions such as DecisionSim will allow these organizations to ensure their training programs are effective and accelerate the development of the competencies and expertise needed to continue to improve patient and financial outcomes.

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## CAN PATIENT STORIES BE THERAPEUTIC?

Effective health communication is critical for health promotion, behavior changes, and chronic disease management. There are a variety of theoretical approaches to health communication that include the current health climate and social and demographic contexts. The ecological landscape of influence includes policy, community, interpersonal, and intrapersonal factors.<sup>1</sup>



It is challenging to identify tools that can help to inform, engage, motivate, and empower patients to be activated in their care and make the best personal care decisions. The concept of patients drawing strength from the experiences of others is one which resonates with patients and providers. One often hears about the health benefits of listening to the personal stories of others or of writing one's own. We examine evidence that suggests stories can be therapeutic in different settings and explore the mechanisms by which personal stories exert a positive influence on health.

### Patient Stories and Blood Pressure

At the University of Massachusetts Medical School, Dr. Thomas Houston and colleagues conducted a Robert Wood Johnson Foundation and Agency for Healthcare Research and Quality (AHRQ) funded study to determine if an interactive storytelling intervention could affect hypertension in a vulnerable population.<sup>2</sup> Basing their randomized controlled trial on previous studies which demonstrated the ability of narrative communication to break down cognitive resistance to behavior change messages, particularly if the communication were socially relevant, they randomized 299 African American hypertension patients at an Alabama clinic serving the poor. The intervention group received DVDs with videos of the personal stories of similar patients and how they coped with hypertension. The researchers found that among the patients with uncontrolled blood pressure at the start of the study, those receiving the DVDs had significantly lowered hypertension at both 3 and 6 - 9 months following the intervention. They concluded that personal stories, especially those coming from people to whom patients can relate culturally, can improve blood pressure control.

### Generated Stories and Student Health

Gregory Walton and Geoffrey Cohen at Stanford explored the effect of a story intervention on disadvantaged university freshmen who were experiencing greater adversity and therefore had more difficulty with the transition to college. In their study, published in *Science*, students were shown the results of a survey of seniors who had dealt successfully with similar adversity on campus. They were then asked to write their own stories in a way that assumed their own success in a similar fashion and present them in a speech that was video recorded.

The researchers found the disadvantaged intervention group had a significantly improved GPA over the next 3 years compared with the control group. They also had better self-reported health and had significantly fewer doctor visits 3 years post intervention. They attributed these results to the intervention's ability to increase the freshmen's sense of belonging (i.e., "we're not alone in this"), coupled with their heightened sense of self-efficacy in being able to clear a transient hurdle that others to whom they could relate had cleared.<sup>3</sup>

### Expressive Story Writing

Other research on populations with varying demographic characteristics has shown health benefits from generated personal stories about emotional experiences. These are well summarized in an article by Karen Baikie and Kay Wilhelm in the *Advances in Psychiatric Treatment*.<sup>4</sup> While studies show the immediate impact of writing emotionally-involving personal stories can include an increase in distress, negative mood, and physical symptoms, the real benefits are seen longer-term - including fewer stress-related doctor visits, reduced blood pressure, and improved physical symptoms and mood. Studies also have shown that expressive written personal stories can improve lung function in asthmatics, decrease anxiety levels in depressed patients, and improve quality of life for oncology patients.<sup>5</sup>

### Why Do Stories Work?

Theories abound as to why personal stories, both received and generated, appear to be beneficial. Stories are a highly familiar and accessible form

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of communication; "characters" with whom a listener can empathize and find to be interesting can be effectively engaging and hold people's attention, enhancing cognitive impact and memorability. Narrative examples carry a didactic message indirectly, breaking down resistance to behavior change education. There are many more theories, but additional research is needed to identify the elements of stories which lend the greatest therapeutic benefit.<sup>6</sup>

### HerStory

An initiative just underway is one conducted by our start-up, [22otters](#), using a new "virtual support group" for women's health issues. The [free smartphone app](#), known as HerStory, is collecting recorded (audio) patient stories related to breast cancer and allowing patients to search for, listen to, and rate each story with respect to its emotional and educational value. Over time these stories and ratings will be mined to determine the features of the stories that are most effective at helping people cope with breast cancer and other illnesses. The objective is to crowd-source the most meaningful, valuable, and therapeutic stories for breast cancer patients, given that often expert-written content may not meet the contextual and social needs of the patient.<sup>7,8</sup> We see this as a template for other wellness and disease areas where patients could benefit from a social story support network.

### Looking Ahead

The use of storytelling, especially leveraging digital and multimedia tools, is on the rise.<sup>9</sup> The concept of using storytelling in healthcare to develop and build a therapeutic doctor-patient relationship has been termed narrative medicine.<sup>10</sup> While more research is needed to test the value of stories for specific types of patient education and health behavior modification, it is also important to identify the elements of stories that are most effective. More study of the relative benefits of generating personal stories compared with absorbing the stories of others is another area of fertile investigation. But the current research offers a tentative validation of what many feel at an intuitive level - expressing a healthcare message in the form of a narrative involving a person to whom a patient can relate has the potential to be a powerful and therapeutic form of communication in the healthcare setting.

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## RISA LAVIZZO-MOUREY NAMED 2014 RECIPIENT OF THE PRESTIGIOUS WHCMA ACHIEVEMENT AWARD

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Wharton teaches its students to identify inefficiencies in the market – either for their own advantage or to work at fixing them for the good of society. What is most revealing about the WHCM program is the coupling of capitalism with social responsibility. Such a combination is a unique mix for any business school. Capitalists take advantage of inefficiencies in the market for their own benefit and that of others. However, the WHCM program also instills in its graduates the need to be socially responsible. This is a result both of the curriculum and of the professors – a nice mix for an education and one that makes you think.



How many believe that things happen for a reason – that there is an underlying order to life that determines how events turn out? How many of you believe that life is a bunch of random events and that you need to make the best of what life has dealt you? There was a very good article in the *NY Times Review* section on Sunday, 10/19 which discussed this. This article ultimately stated that whatever you believe, the purpose of society is to work hard to ensure the events of human life unfold in a fair and just manner so they become less random.

It is in the manifestation of this purpose where Dr. Risa Lavizzo-Mourey, WG'86 WHCM program, the 2014 Wharton Healthcare Management Alumni Achievement Award winner excels - ensuring human events unfold in a more fair manner for the most people, most especially for those less fortunate. Risa has been the President and CEO of the [Robert Wood Johnson Foundation \(RWJF\)](#) since 2003. The RWJF is a philanthropic foundation with over \$10 billion in assets – focused on healthcare. It seeks to improve the health and healthcare of all Americans - how healthcare is delivered, how it's paid for, and the quality it provides. It provides hundreds of millions of dollars per year to organizations and people with this goal of improving healthcare for all.

On Thursday evening October 30, 2014 over 60 WHCM alumni and guests (including Risa's husband, Robert) gathered in Philadelphia to honor Risa for her lifetime work in healthcare and at the RWJF. Risa has focused the work of RWJF on key public health issues such as:

- childhood obesity
- achieving the Institute for Healthcare Improvement's (IHI) triple aim – improving the health of populations, improving the patient experience (quality of care and patient satisfaction), and reducing the per capita cost
- expanding the role of caregivers to help make up for the anticipated shortage of them
- addressing social factors which impact health

Risa's background includes:

- Professorship at the Perelman School of Medicine and being a Member of the Institute of Medicine
- serving on numerous Boards, including the Smithsonian Board of Regents
- the Federal Government arena, including AHRQ, the White House Healthcare Reform Task Force, the Task Force on Aging Research, the National Committee for Vital and Health

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## **RISA LAVIZZO-MOUREY NAMED 2014 RECIPIENT OF THE PRESTIGIOUS WHCMA ACHIEVEMENT AWARD** *continued*

Statistics, and the President's Advisory Commission on Consumer Protection and Quality in the Health Care Industry

- being a graduate of Harvard Medical School and completing a residency at Brigham and Women's Hospital in Boston
- being a Robert Wood Johnson Scholar at the University of Pennsylvania
- receiving numerous honorary doctorates and other awards for her work at the University of Pennsylvania, the Harvard School of Public Health, the Dept of HHS, the American College of Physicians, the National Library of Medicine, the National Medical Association, and the American Medical Women's Association
- being married for close to 40 years to her husband, Robert, and having 2 children and one grandchild

Risa is an outstanding example of the type of leader the healthcare industry needs to ensure it meets the triple aim of medicine, not just for some, but for all Americans. We are very fortunate to have her as a WHCM alum and as an example for others to follow. We congratulate Risa in receiving the 2014 WHCM Alumni Achievement Award and are grateful for her leadership in healthcare!

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