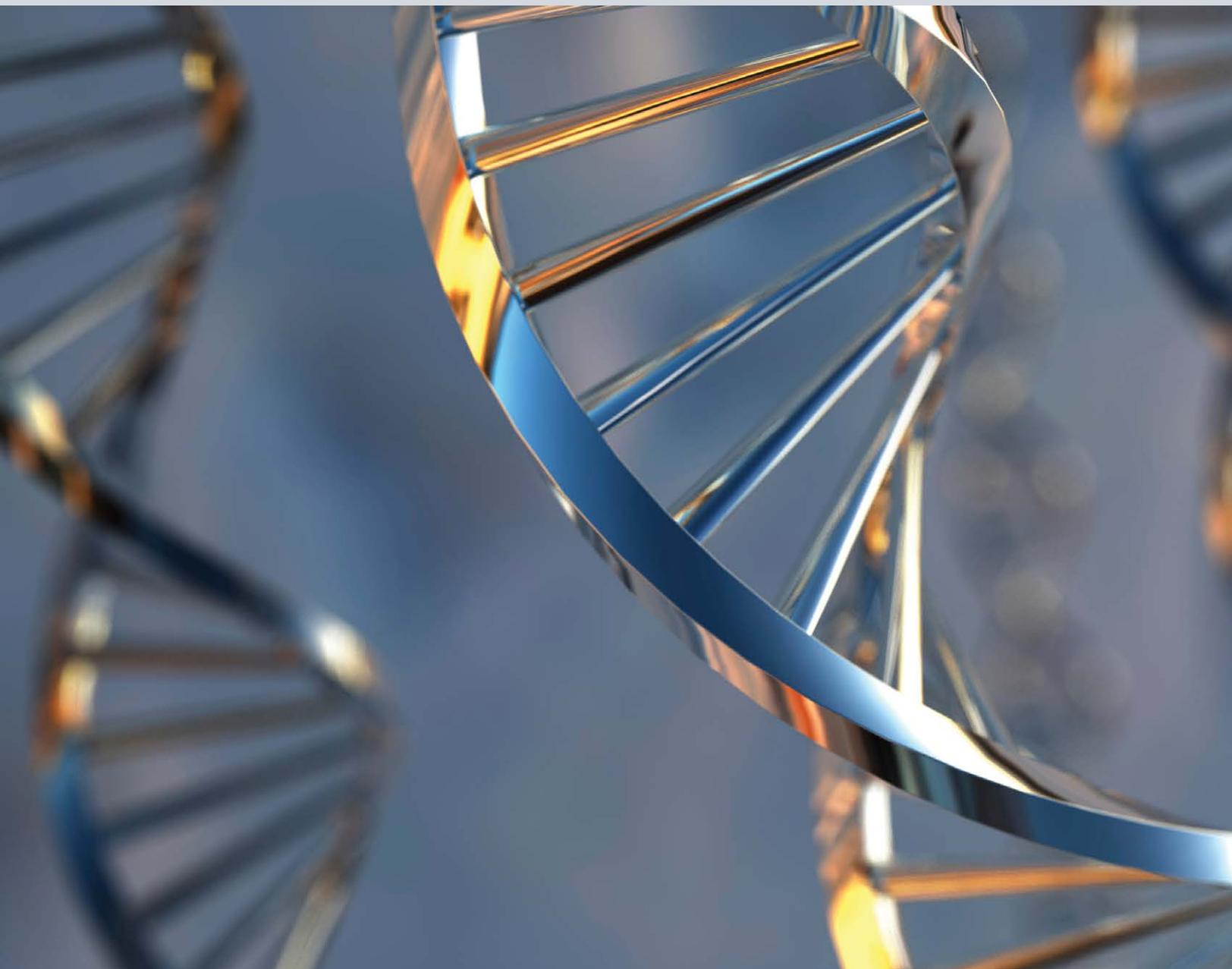




**THE WHARTON  
HEALTHCARE QUARTERLY**

**WINTER 2014  
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## GET INVOLVED

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## EDITOR'S LETTER

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Happy New Year! We are starting 2014 off with a bang, and I hope you enjoy this issue's offerings.

This month we close out several multi-part articles:

- Part 3: From Patient Partner
- Part 2: Healing Relationships and the New Face of Medicine
- Health Disparities Series: Part 2: Breast health Decisions of African American Women: Responsibility Within the Culture

We have a summary of the accomplishments of the WHCMAA in 2013 and information regarding the already busy schedule for 2014.

And besides our standing columns, there are articles which run the gamut from personalized medicine to solutions to the problem of medication non-adherence to advances in the treatment of cancer.

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

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

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

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## THE PRESIDENT'S DESK

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Dear WHCMAA Members and WCHM Alumni:

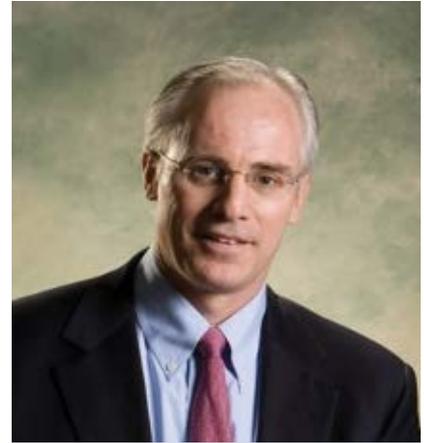
On behalf of the WHCMAA Board, I am pleased to provide the President's Letter and our 2013 Annual Report. This letter and report serve to inform and update our members and alumni of the Association's notable highlights of the year.

Who we are and what we do, revolve around 4 main themes:

- *facilitate lifelong learning and professional development*
- *stimulate interaction and networking throughout the Wharton community and with healthcare industry professionals who are alumni of other Penn graduate schools*
- *support Wharton's Health Care Management program via involvement with students and faculty, and by contributing needed resources such as scholarships*
- *recognize those who have given much*

As we move into CY'2014, I am proud to say we have delivered in a very meaningful way towards these themes. Of note, we:

- generated 14 live events, 10 webinars, and 7 social events in 2013, including the annual [Alumni Conference](#); the spring NYC event (in June, with [June Kinney](#) and hosted by Chris Wilkerson, WG'01), the JP Morgan event in SF (January), and increased interaction with the Wharton health care faculty. This original content supports the lifelong learning initiative. Additionally, the content and social events allow our members to network with each other and other healthcare industry professionals. We also continue to work with the faculty in developing original content and sincerely appreciate their support, insights, and learnings. Of note, in 2013 faculty/alumni interactions included: "State Exchanges" (Professor Scott Harrington); "State Exchanges and the Massachusetts Experience – What Choices Are Consumers Actually Making?" (Professor Amanda Starc); "The High Price of Cancer Care" (Professors Scott Harrington and Skip Rosoff); "Bending the Cost Curve" (Professor Mark Pauly); "Pharma Pricing and Antitrust" (Professor Patricia Danzon), and a CEO roundtable discussion on the ACA (Professor Bob Town). This is a great start to collaboration between the faculty and alumni – which we will continue to build upon.
- initiated the [Alumni Scholarship in honor of June Kinney](#). We have commitments of \$449,000 as of 1/15/14 towards our goal of \$500,000. The earnings from this corpus will provide a scholarship to an incoming first year healthcare MBA student.
- provided \$30,000 in scholarship and volunteer support:
  - In 2013, Ross Stern was awarded the \$15,000 Kissick/Alumni scholarship given to an MBA student between their first and second year. [Ross worked this past summer at the Center for Medicare and Medicaid Innovation](#) in Baltimore and presented on his experience at our 2013 Alumni Conference.
  - gave \$5,000 to the Wharton Global Healthcare Volunteers for their volunteer work in developing countries
  - gave \$10,000 to the Kissick/Alumni scholarship in honor of William Kissick, MD, PhD. Sadly, Professor Kissick passed away in June 2012. He was a beloved Professor of the WHCM program. The Kissick/Alumni scholarship is endowed with over \$300,000, generating



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

## THE PRESIDENT'S DESK

*continued*

income used towards the annual \$15,000 Kissick/Alumni Scholarship. This \$300,000 principal amount (available in perpetuity) is capably managed by our Finance and Investment Committee. Additionally, Patron level members each provide \$260 towards the Kissick/Alumni Scholarship. Thank you Patron members for your generosity!

- awarded the [Alumni Achievement Award to Jay Mohr, WG'91](#). Jay has worked tirelessly for the good of the WHCMAA and the WHCM program and was an outstanding Association President and leader. He certainly deserved this prestigious award.
- continue to have the highest involvement of any Wharton club, with over 17% of WHCM alumni as dues-paying members in the WHCMAA. This tops other Wharton clubs, whose membership averages  $\pm 10\%$ . We have also continued a strong dual membership relationship with the Wharton Club of Boston and the Wharton Club of New Jersey. Over 70 of our WHCMAA membership is made up of dual members. We also have over 47 members listed as affiliate (non-Wharton healthcare MBA and other UPENN health affiliated school alumni) members.

Moving into 2014, there are several new initiatives that will deliver on “our mission.” These include:

- an Alumni Scholarship in honor of June Kinney. June is beloved by all. Fortunately she is not going anywhere for a while. However, isn't it right and fitting that we honor June while she is around and can/should enjoy the accolades?
- development of increased and improved content with the healthcare faculty. There is a wealth of experience and knowledge that we can and should leverage. These interactions not only strengthen our ties to the school but allow us to learn from each other. What's in store for 2014? We will be experimenting with new ways to interact with the faculty, including via the SIRIUS XM radio network and with live streaming events. Stay tuned.
- expanding our base and footprint. We have regional club initiatives (with captains) percolating in Chicago and in DC. Bob McDonald, WG'92 and Fran Kelleher, WG'84 respectively are heading these up. Both have done a very nice job in getting the ball rolling.

I wish to thank the Board and the many alumni volunteers for their work. All of what the Board and our volunteers do is mainly on their time and dime. Without them, the accomplishments above could not be realized. These members do much without any recognition and do so mainly because they want to give back to a program that has been good to them.

We can always use more help. For those who have been sitting on the sidelines, why not dive in and get involved? There are many varied opportunities to do so. So reach out to us.

With best wishes for 2014 to you and yours.

Respectfully,

Jeff Voigt (WG'85)  
President, WHCMAA

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## 2013 ALUMNI CONFERENCE WEEKEND HELD OCTOBER 25TH AND 26TH, 2013

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All I can say is Wow! This was a great conference and weekend. Congratulations go out to Chairman Jay Mohr, WG'91 and those who planned and executed on the conference.

The main activities during the Alumni Conference weekend included:

**1. a career panel** held on October 25, 2013 in Huntsman Hall and coordinated by Amanda Tirrell-Hopkins, WG'86 and Alexis Bernstein, WG'10. This is one of the more unrecognized events during the conference weekend but also one of the more interesting and educational. The career panel's main purpose is to help in career planning for the healthcare MBA students. However, all alumni are invited. There were 3 different panels, each chaired by a Wharton Alum.



- entrepreneurship panel (chaired by Phil Heifetz, WG'96)
- careers in health IT (chaired by Jeff Smith, WG'99)
- careers at provider organizations (chaired by Amanda Tirrell Hopkins, WG'86)

**2. the annual Alumni Dinner** held on October 25, 2013 at Varalli's in downtown Philadelphia and attended by over 50 people. At the dinner, Jay Mohr was awarded the Alumni Achievement Award which is presented to the candidate who demonstrates a history of active contribution to the healthcare field; demonstrates a contribution to knowledge creation; contributes to societal/governmental health issues; demonstrates support for the WHCMAA and exhibits potential for continued career development and success. Jay demonstrated all these attributes in spades. An enjoyable evening was had by all, and it was a great way to help kick off the weekend.

**3. the conference:** As in the past 2 years, the conference was held in Huntsman Hall and lasted the entire day. The theme of the conference was: "A Return to Well-Being: Finding Value in the Healthcare Industry in the Post-Reform Era." Congratulations and thank you's go out to session chairs: Gary Phillips, C'87, WG'91, M'92, RES'97, Maureen Spivack, WG'86 and to Bryan Bushick, MD, WG'89 for each holding provocative and thoughtful panels on:

- "Adapting Corporate Strategies and Business Models in the Post-Reform Era" (Gary)
- "Private Investing Around the Exchanges: Moving from Bricks and Mortar to Wellness" (Maureen)
- "Digital Health Winners: Which Companies Will Best Serve Customers and Investors?" (Bryan)

In addition to the above panels, two keynote sessions were held:

- Richard Marston, PhD, Guy Professor of Finance and Economics, The Wharton School
- Jonathan Blum, Deputy Administrator Centers for Medicare and Medicaid Services (CMS)

Professor Marston's session highlighted the need for rethinking some of our entitlement programs such as Medicare. He cautioned that we as a nation cannot sustain a program where for every \$1 of funding by taxpayers, over \$3 in entitlements is distributed to Medicare beneficiaries. Professor Marston really did a nice job in laying out what may lie ahead as many of us move towards retirement.

Contributor:  
Jeff Voigt, WG'85

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

## 2013 ALUMNI CONFERENCE WEEKEND HELD OCTOBER 25TH AND 26TH, 2013

*continued*

Jonathan Blum, Deputy Administrator and Director for CMS (and a graduate of the Wharton undergraduate program), laid out where Medicare is headed over the next 5 - 10 years. Jon stated that: *"While we may not yet be at the point of where we are 'bending the cost curve,' a number of the initiatives CMS has implemented show promise in realizing this objective."* These initiatives include programs around reducing 30-day readmission rates; paying for quality versus quantity (e.g., through the Medicare Advantage Star Ratings); and focusing on wide geographic spending disparities by Medicare and in closing these gaps.

Based on our alumni network relationships, we had several high level executives speaking at our conference who included: Joe Swedish, CEO Anthem Wellpoint, Marc Miller, WG'99, President Universal Health Services, Jonathan Blum, Deputy Administrator CMS, and C. Michael Long, CEO Lumeris – to name a few. The ability to bring in presenters of this caliber speaks volumes for where we are as an alumni association and as a pre-eminent healthcare program.

Lastly, a special thank you goes out to June and to Chris Aleszczyk for all of their help in coordinating this for the alumni. Without their support, this would not occur. Additionally, we would like to thank LDI's Hoag Levins for his excellent coverage of this event. We look forward to his story on the LDI website. And finally, we would like to thank Nanxi Ling, WG'14 for her excellent photographs of the event. All can be seen on the [WHCMAA website](#). Overall, this was our best conference yet.

The 2014 co-chairs for the alumni conference are Bryan Bushick, WG'89 and John Harris, WG'88. For those interested in helping out, please contact us!

Contact Jeff at: [meddevconsultant@aol.com](mailto:meddevconsultant@aol.com)

## ALUMNI SCHOLARSHIP IN HONOR OF JUNE KINNEY

---

At the 2013 Alumni conference, the WCHMAA officially launched the Alumni Scholarship honoring [June Kinney](#). This honor reflects the enormous regard the alumni have for June, and recognizes her impact on our lives and on the program. For over 30 years, June has provided guidance for many of us as students at Wharton, become a steadfast friend, helped us work through career/life's challenges, and been a tremendous resource.



June Kinney of The Wharton School

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The purpose of this scholarship will be of particular value to the WHCM program. Every year, the program's admissions process selects a new incoming class to the Healthcare Management Program. June reviews every candidate with the goal of getting the best and brightest students and a well-rounded class that will benefit from the Wharton experience as well as contribute to the excellence of the program. According to June, *"We look for that special quality in a candidate that indicates the person has a sense of social mission, as well as those leadership characteristics that will both build community within the class, and contribute to the societal healthcare enterprise after graduation."*

There has always been limited scholarship money available from Wharton, and this level of financial support is significantly less than what other pre-eminent schools such as Harvard and Stanford offer candidates. It has been a struggle for June to distribute limited healthcare scholarship funds to help attract deserving students whose leadership qualities would make a big difference to the sense of community within the program. As June has stated, *"Combining the alumni scholarship with financial aid from Wharton can make the difference in recruiting that type of top person."* Additionally, having these types of people matriculate to Wharton helps our reputation.

To date \$449,000 has been committed towards a goal of \$500,000, with an end date of May 2014 for the campaign. However, some of these committed monies are spread out over several years. Further, the goal is to raise \$500,000 (bankable) by May 2014 in order to initiate this scholarship for the incoming 2015 WHCM MBA class.

We need your help! For those thinking about giving to this worthy cause, please do so by May 2014. Secondly, we need volunteers to help with "the ask." We have established class captains for further outreach. If you are interested in volunteering as a class captain (it is a really easy job and a great way to reconnect with classmates) or in volunteering in any way, please contact us!

A special thank you goes out to the following people who have been instrumental in getting this initiative off the ground and to a place where we now hope to exceed the \$500,000 goal. They are:

- My co-chair of the steering committee, Tracy Johnson, WG'86. Tracy has a "can do" attitude which is infectious. She is an absolute pleasure to work with.
- Steering Committee members: Elayne Howard, WG'76. Elayne's experience in fund raising (She has a company that does this sort of thing.) has been invaluable; Jay Mohr, WG'91 (You didn't think we would let Jay get away so easily, did you?); and Amanda Tirrell-Hopkins, WG'86 (who is always willing to lend a hand and get involved). All have been great to work with and have made this experience truly enjoyable.

Contributor:  
Jeff Voigt, WG'85

To learn more about Jeff,  
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## **ALUMNI SCHOLARSHIP IN HONOR OF JUNE KINNEY** *continued*

- The Implementation Committee co-chairs: Bryan Bushick, WG'89 and Jody Schuhart, WG'84. Bryan and Jody have quickly organized a “feet on the ground” campaign for further outreach over the coming months. Bryan and Jody have identified a number of class captains (too many to mention here) who will be reaching out to you with “the ask.” (Note: The gift towards the scholarship is fully tax-deductible). When asked – please give!

Updates on our progress to the \$500,000 goal will follow over the coming months. We very much look forward to a successful completion of the campaign in May 2014 and will be holding an event after the May 2014 campaign end date thanking those who have given generously of their time and resources.

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## JAY MOHR, WG'91 - 2013 ALUMNI ACHIEVEMENT AWARD RECIPIENT

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On October 25, 2013 at the Alumni Dinner, Jay Mohr, WG'91 was presented with the prestigious Alumni Achievement Award.

Jay Mohr has been very active with the WHCMAA as a board member and most recently as its President. Under his leadership, the WHCMAA has expanded significantly, focusing on lifelong learning, networking, and giving back. An increase in learning content has provided opportunities for the alumni and healthcare program students and faculty to learn from each other. Most recently and again under Jay's leadership, the WHCMAA re-instituted the alumni conference – which is fast becoming a “go to” event for healthcare executives. As mentioned above, the WHCMAA is one of the few UPENN associations that develop its own content. Additionally, Jay implemented new initiatives – expanding membership by including other UPENN programs as affiliate members to the WHCMAA. This has fostered a cross-fertilization of ideas and learning for the WHCMAA and its membership and is a great way for the WHCMAA to expand its influence in the healthcare field.



Speeches by June Kinney and Jeff Voigt emphasized Jay's setting a great example for others to follow: in how to lead your life, how to set an example, and how to get others to buy into your vision. June even stated that if one wants to know what the right thing to do is, follow Jay's example. Good advice, by the way.

Jay's name can now be added to an illustrious group of past WHCMAA alumni achievement award winners, some of whom are the most influential healthcare executives in the field. Past winners include: Marguerite Harrington, WG'76; Bill Garrow, WG'75; Bruce Bradley, WG'72; Perry Pepper, WG'73; Elayne Howard, WG'76; John Eisenberg, MD WG'76; John Whitman, WG'78; Kate Flynn, WG'78; Stan Bernard, MD, WG'88; Beth Somers Stutzman, WG'85; Bill Winkenwerder, MD, WG'86; Tony Buividas, WG'75; G. Phil Schrodel, WG'73; Tracy Johnson, WG'86; Gary Gottlieb, MD, WG'86; David Nash, MD, WG'86; Mitchell Blutt, MD, WG'87; Donald Schwarz, MD, WG'87; and Gary Phillips, MD, WG'91. Nice company to be part of!

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## AN EXPERIENCE AT THE CMS INNOVATION CENTER

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Will Accountable Care Organizations (ACOs) serve as the primary arrangement for healthcare delivery in the future? Through the generosity of the Wharton Healthcare Alumni Association and the Kissick-Alumni Scholarship, this past summer I joined the Seamless Care Models Group at the Center for Medicare and Medicaid Innovation to work toward answering this very important question. The Seamless Care Models Group designed, developed, and is currently piloting the Pioneer ACO Program. At launch, the program included 32 leading healthcare organizations accounting for over 650,000 aligned Medicare beneficiaries and \$9 billion in Medicare fee-for-service spending.



As domestic healthcare evolves from a fee-for-service system that rewards providers for the quantity of services provided regardless of the outcomes produced, to one in which the value of services will factor more heavily into reimbursement, the ACO delivery model has received increasing amounts of attention. ACOs are groups of doctors, hospitals, or other healthcare providers that come together via legal entities to provide coordinated care to a defined population of patients. As part of this arrangement, these providers become responsible, at least partially, for the cost of care. Instead of receiving payments based on the volume of services provided, ACO constituents aim to reduce overall healthcare expenditures and improve patient outcomes via care coordination activities, population risk stratification, service rationalization and patient-physician engagement activities, and make money by outperforming benchmark expenditure levels and sharing in savings.

While it makes intuitive sense that the realignment of incentives under ACO arrangements should solve many of our country's healthcare woes (or is at least a step in the right direction), in reality, a number of questions need to be answered before we can conclude that ACO arrangements in their current form should serve as the model for how healthcare is paid for and delivered in the future – arguably the most significant being whether ACOs actually improve patient outcomes and reduce overall healthcare costs.

When I arrived at the Innovation Center, first year results for the Pioneer ACO Program had just been released. All 32 Pioneers improved patient care, 25 Pioneers reduced hospital readmission rates, 13 Pioneers received a shared savings payment from CMS, 2 pioneers sustained losses large enough to require them to make a payment to CMS, and 9 Pioneers ultimately decided to leave the program. The mixed year-one results prompted two key questions. First, what are the factors (financial and clinical) that contribute to program success (e.g., Why did some Pioneers achieve savings when others did not)? And second, what is the potential return on investment (ROI) related to participation in the Pioneer ACO Program (e.g., Is it realistic for ACOs to generate enough shared savings vis-à-vis program investment to justify participation)? My work at the Innovation Center focused largely on beginning to evaluate and analyze these critical questions.

Throughout the course of the summer, I worked closely with a sample of Pioneer ACOs to analyze care management strategies, develop a cost-accounting system to track ACO program expenditures, identify correlations between prior risk-sharing experience and ACO performance, and provide additional clarity around Pioneer ACO program investment. Ultimately, I analyzed projected shared savings levels required to generate positive ROI in the Pioneer ACO program as it related to the long term sustainability of the current shared savings contract structures. The analysis results provided CMS with meaningful new data that can help inform future policy decisions, and offered the broader group of Pioneer ACOs a platform to

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## **AN EXPERIENCE AT THE CMS INNOVATION CENTER** *continued*

exchange ideas, provide meaningful feedback to CMS, and share best practices.

So, will ACOs serve as the primary arrangement for healthcare delivery in the future? Unfortunately, the answer is not as clear as I had hoped it would be when I joined the Innovation Center. Preliminary results show promise, but significant work still needs to be done before we can conclude that the current ACO structure is the right one. I am confident, however, that we have the right people in place at CMS working toward answering this question. The team at the Innovation Center is filled with some of the most motivated and intelligent people I have had the opportunity to work with. These individuals are tackling the problems facing our healthcare system head-on with tireless determination, and I feel very fortunate to have had the opportunity to work alongside them.

Taking an active role in helping to define our country's transition from a fee-for-service payment system to a value-based model was an incredible learning experience. My position allowed me to work closely with key constituents of the healthcare system and government, while also gaining significant exposure to healthcare policy design, model testing and program implementation, and learning how each of these elements relates to the federal government's broader healthcare decision-making process with regard to ACOs. My time at the Innovation Center will undoubtedly influence how I understand and approach the issues facing our healthcare system throughout my career, and I once again want to thank the Wharton Healthcare Alumni Association for allowing me to pursue this profoundly important opportunity.

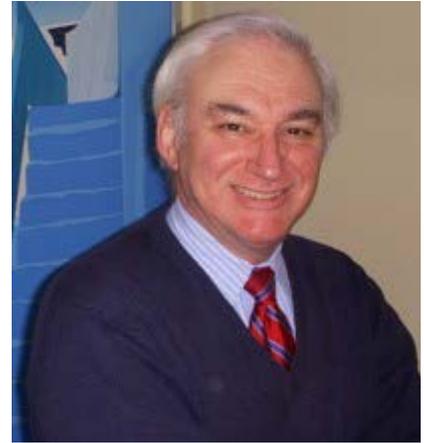
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## OPEN WIDE

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### Take Two Doses of Organization and Call Me in the Morning

Followers of this column have no doubt taken note of the importance I place on the organization of care as central to addressing issues of cost, access, quality, and improvement in health status in dental health, as opposed to a biomedical or pharmaceutical “breakthrough” (often rather inflated) we so often hear about with other diseases and conditions. My reasoning for this is twofold: (1) the pathological mechanisms of tooth decay and gum disease are understood (acid-producing bacteria in the oral flora acting upon carbohydrates to demineralize enamel in the former case; the accumulation and subsequent calcification of dental plaque around the tooth structure in the gums leading to an inflammatory response which weakens and destroys attaching ligaments and bone structure in the tooth socket in the latter case) and (2) these processes are entirely preventable. So, in the biological sense, the disease processes are rather simple and discrete; correspondingly, the treatment armamentarium is simple and discrete, involving community water fluoridation, topical fluoride, and sealants on the molar teeth with regard to decay combined with brushing, flossing, and periodic cleanings by a hygienist to keep the gums healthy. In both instances, good hygiene habits and proper diet are also integral. Note: none of this requires the skills of a fully-trained dentist, which are better applied to complex procedures to restore function and appearance after disease has taken its toll.



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With etiology well understood, and the treatments for early interception of disease onset and progression simple and proven, what then accounts for the prevalence and incidence of dental disease? I would argue along two lines: one is that when we move beyond the more discrete and scientific causes of disease to consider the social, socioeconomic, cultural, and behavioral realms – in other words, the more “human” aspects behind the presence of disease – matters become less tractable. We’re not dealing with just test tubes and Petri dishes. It can be very difficult trying to counter an attitude acquired from any number of perceptions and experiences that the teeth are disposable and are meant to be lost sooner or later, or that stories of root canal treatments are a topic of conversation at social gatherings, and that dentures are inevitable. All of which happens to be false, but if perceptions and (low) expectations stand in the way of practicing good oral hygiene, getting periodic cleanings, and eating a proper diet, well the mind can have its own way of defining reality...

But my other line of argument puts aside the “human foible” and rather unproductive “blame the victim” rationalizations to ask, “Why does the chasm exist between the simple and easily understood science and simple and easily implemented treatments on one side of the divide, and the very existence of disease in the population, disproportionately so in vulnerable segments?” The answer at which I have arrived is a persistent notion (which exists even among those in dental public health) that dental health is equated with “seeing the dentist,” essentially a “more inputs” response.

*Reductio ad absurdum*, a dentist’s office on every corner would solve the problem. Yes, as stated above, there is a place for “regular professional care” (although the generally accepted and unevaluated, six-month interval has come under question lately), but as also stated above, monitoring and early interception of the tooth decay and gum disease processes do not require the more involved technical and evaluative skills of a fully trained dentist. Yet this is the largely unquestioned, unexamined approach we employ in this country, with all the inherent and attendant economic inefficiencies that come about from the misallocation and misapplication of resources (workforce, equipment, capital, educational, and so on). Or, to reconceptualize the issue, the problem isn’t one of “getting to the dentist,” it is getting the simple and understandable knowledge about dental disease, and the simple and practicable techniques to intercept it early, “out to the population.”

## OPEN WIDE

*continued*

What does “out to the population” mean? In part, the answer involves epidemiology. Along with a good understanding of the disease process, what we also have in dental public health is a very good understanding of the existence of the disease in terms of person (e.g., gender, race), place (e.g., down to zip codes and census tracts), and time (e.g., age) (we are somewhat less refined in our “epidemiological picture” of dental health resources). Consequently, if we know how and why disease occurs, and we know the “who-where-and-when” of its occurrence, the next logical step would be to deploy (and where necessary, develop) the resources to address disease along those lines.

In the dental health instance, this would mean “reinforcing” the dental health “message” in venues far beyond just the dentist’s office, to include (1) medical providers (including nurse practitioners and physician assistants), beginning with the pediatrician, where medical practitioners are more knowledgeable and conversant about dental disease than they are now and work far more collaboratively with dental providers than at present; (2) basic evaluative and preventive dental services being offered by non-dentist mid-level providers in readily accessible retail clinics; (3) data linked to consultant support when necessary; (4) school-based health centers that offer appropriate monitoring and treatment of dental conditions, and, for certain health education, mobile dentistry to provide care to the home- or institution- bound; and (5) other “unconventional” means and locations for the provision of dental care.

Yes, in some regards this is an “inputs” response, but inputs of a different sort, in that they are better integrated to the overall delivery of healthcare, are more versatile in their ability to get “out to the population,” and are more effective in addressing the disease process early on. Essentially, this to me is the way dental care should be organized in this country, not only centering upon an understanding of the disease, but also of the population, and how best it can avail itself of the tools to keep its teeth for a lifetime.

One might think the familiar term “organized dentistry” would bear some relation to my abstract conceptualization, at least my perpetual naïveté leads me to think so. But that is not what “organized dentistry” means. How could it, when the profession (business? industry?) is mostly characterized by thousands of solo, private, fee-for-service practices, primarily geared toward economic well-being by rendering highly technical and lucrative restorative services such as dental implants (themselves indicating a failure of prevention), with awareness and concern over the epidemiology of dental disease not figuring into that “business model” at all? How can a “cottage industry” comprised of a multitude of individual, unconnected units be called organized?

Well, it can, except in a completely different sense of the term. Principally, “organized dentistry” (and “organized medicine,” for that matter) is organized not to address disease as I sketched out above, but rather to control and influence the political, regulatory, and public relations domains to its members’ economic advantage. In a way, displacing a focus on what the epidemiology of dental disease tells us about how to address it, there instead is considerable attention and investment at the national and state levels to lobby legislation that could have major impact on dental health in this country. I have seen this “up close and personal” in Massachusetts, where in 2008 a modest bill introduced by the state dental hygienists’ association to allow more latitude for the independent practice of dental hygienists, a benefit of which would be slightly improved access to care, was out-lobbied to virtual meaninglessness by the state dental society. Of course, in undermining the bill, the dental society made sure to inculcate its narrative (and campaign donations) to those legislators whose committees shaped the bill for final vote. Fundamentally, science (and logic) is trumped by politics.

## OPEN WIDE

*continued*

I doubt I will ever be able to shake my naïveté, and I sometimes feel embarrassed by it (“Hey, this is the way things really work, dummy up!”), and I wonder if my analysis is misplaced. But I recently started reading *The Truth About Healthcare: Why Reform Is Not Working In America* by David Mechanic, where on p. 1 of the introduction he says:

*“Above all, health and medicine are parts of a larger culture and shaped by many of the forces that motivate perceptions, beliefs, and behavior more generally. Perhaps not obvious, because we take it for granted, is how American values and culture, reliance on markets, and the decentralized character of healthcare markets and professional groups and their local cultures prevent steps to achieve a more rational system of health promotion, health care provision, and reasonable cost constraints [emphasis added]. Ideological differences and the needs and efforts of powerful interests are everywhere apparent.”*

At the time of his writing his book, David Mechanic was director of the Institute for Health, Health Policy, and Aging Research at Rutgers University and the national program director of the Robert Wood Johnson Foundation Investigator Awards in Health Policy Research. He has also been elected to the National Academy of Sciences and to the Institute of Medicine. He has me far, far outpaced in academic and professional achievements, but I think we’re essentially talking the same thing: we can do better, a lot better, but we don’t organize for better health in this society, because there are other impulses to serve.

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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 trusted my gut and voiced my opinions louder, pounding the table when needed. It was a deal-specific situation that gave me pause – the family office selling the asset was obscure, the company's product was functioning below expectations (for a Series C stage investment), and the target's CEO was going through a challenging personal family situation. Further, the champion of the deal from our business team was pushing hard on poor rationale, despite the lack of clear alignment of his incentives and the deal's ultimate performance.

Regardless of the financials, I knew the deal just shouldn't have been consummated. I expressed my skepticism to my superiors throughout the process, and I eventually entirely withdrew myself from the deal team after the business champion pushed to upwardly adjust the financials to build internal support for the deal.

However, even with those steps, my protest was too weak and late – the deal was presented, and approved without my participation, and the entire investment was written off two years later.

From my experience, the occurrence of this situation in various incarnations are more likely when incentives for the team are not well aligned with their personal economic outcomes, as in the case of many corporate deals. This is a critical lesson for me to remember when working with teams as the deals get bigger and more tightly linked to my own success and failure.

If I knew then what I know now, I would not have been as passive on directing the team's direction when leadership was absent. I've experienced situations in the workplace where a team of peers lacks a definitive authority to guide the group towards a common vision. In these situations, the opportunity to take charge and execute can be displaced by a natural interest (particularly in Asia) to maintain status quo and avoid creating negative team dynamics, especially if the team has not worked together before and the members are relatively peers. This was my situation when I moved to Singapore to join a new team that quickly suffered from a leadership vacuum due to a sudden CEO change and resulting corporate reorganization. I allowed a consensus-building dynamic to displace my preferred vision for the group, and subsequently lost out on great opportunities that the team could have enabled had I been a bit more aggressive. In retrospect, I've learned that it's ok to rock the boat a little if you can push the team forward towards a great destination.

### **Favorite Quotes:**

1. Stay Hungry, Stay Foolish. - Steve Jobs
2. Be the change you wish to see in the world. - Mohandas K. Gandhi
3. What got you here, won't get you there. - Marshall Goldsmith
4. I always tried to be correct, not politically correct. - Lee Kuan Yew



This month's philosopher  
Hareesh Nair, WG'08  
To learn more about Hareesh,  
[click here.](#)

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

## THE PHILOSOPHER'S CORNER

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*continued*

### ***Recommended Reading:***

- [Strong Vital Signs Draw Private Equity To Healthcare](#)
- *The Startup Game: Inside the Partnership between Venture Capitalists and Entrepreneurs* by William H. Draper & Eric Schmidt
- [www.Quora.com](http://www.Quora.com) (a question-and-answer website which caters to the investor and business entrepreneur communities)
- *Unaccustomed Earth* by Jhumpa Lahiri
- *Biodesign: The Process of Innovating Medical Technologies* by Stefanos Zenios, et.al.

Contact Hareesh at: [hareesh.nair@quadriacapital.com](mailto:hareesh.nair@quadriacapital.com)

## ALUMNI NEWS

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### **Jeff Voigt, WG'85, MPH'83**

Recent publication: Voigt J, Zappala SM, Vaughn ED, Wein AJ. The Kallikrein Panel for Prostate Cancer Screening: Its Economic Impact. *The Prostate*. 2013; Article first published online: 26 OCT 2013, DOI: 10.1002/pros.22746

Contact Jeff at: [meddevconsultant@aol.com](mailto:meddevconsultant@aol.com)

### **Jody A. Schuhart, Penn FAS '80, WG'84**

Jody Schuhart is currently co-chair of the Implementation Committee for the Wharton Health Care Management Alumni Association (WHCMAA) Alumni Scholarship Fund in honor of June Kinney. This scholarship is a wonderful way for us to honor someone who has meant so much to all of us in our careers and lives. June is a shining example of committed service and support for the good of the WHCM program, its students, and alumni.

Our goal is to raise \$500,000 by May 2014. These monies would be used in perpetuity to generate the income needed to fund the scholarship. The intention is to initiate this scholarship beginning with the class that will matriculate in 2015. We wish to thank everyone who contributed through the silent phase and since the announcement of the scholarship in November 2013. As of 1/13/14, we are 90% to goal and look forward to seeing how much we can exceed our goal!

Please honor June and help EXCEED our goal.

Go to <http://www.whartonhealthcare.org/index.html> and log into your account. Once you are logged in, select the Scholarships tab and select the Kinney sub-tab. This page provides additional information on the scholarship and the various methods to donate.

Contact Jody at: [jody@alambills.com](mailto:jody@alambills.com) or 847-405-9517 x3

### **Michael Rovinsky, WG'86**

After 27 years as a consultant and 15 years as President of Integrity Consulting Group, effective January 6, 2014, I am the new Executive Director of Strategic Planning for Kaiser Permanente, Mid-Atlantic States Region, based in Rockville, MD. I have relocated to the Washington, DC area and will be joined by my family at the end of the current school year.

Contact Michael at: [lmrovinsky@comcast.net](mailto:lmrovinsky@comcast.net)

### **Barbara Roehl, MD, WG'92**

Barbara has taken a consulting position with the Studer Group.

Contact Barbara at: [barbaraopp@aol.com](mailto:barbaraopp@aol.com) or 856-375-5353

## ALUMNI NEWS

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### **Peter Benton, WG'98**

#### **Public to Private Transaction - JLL Partners to Acquire BioClinica and CoreLab Partners**

Transaction to Create an Industry Leading Provider of Medical Imaging and eClinical Solutions for Clinical Trials

BioClinica®, Inc. (NASDAQ: BIOC), a leading global provider of clinical trial management solutions, today announced that it has entered into a definitive agreement to be acquired by a holding company controlled by JLL Partners, Inc., a leading private equity firm.

Simultaneously, JLL Partners announced that it has reached a definitive agreement to acquire CoreLab Partners, Inc., a provider of medical imaging solutions and cardiac safety services based in Princeton, N.J.

Following the proposed acquisitions, BioClinica and CoreLab Partners will be merged to create a leading provider of medical imaging services and best-in-class eClinical solutions for clinical trials. Ampersand Capital Partners, which is the majority owner of CoreLab Partners, will also be a significant investor in the combined company.

Following completion of its proposed acquisition, BioClinica will become a privately held company and its stock will no longer trade on the NASDAQ stock exchange. The proposed acquisition of CoreLab Partners is contingent on the closing of the BioClinica transaction. Both acquisitions are expected to close concurrently.

For more information about Peter, EVP and President - eClinical Solutions, BioClinica go to: <http://www.linkedin.com/in/peterbenton/>

Contact Peter at: [Peter.Benton@bioclinica.com](mailto:Peter.Benton@bioclinica.com)

### **Adam Kaufman, PhD, WG'00**

Adam was awarded a patent in October 2013, System and Method to Measure Continued Engagement with Software Application, and was selected to present the application to healthcare at the upcoming Predictive Analytics World Conference March 18th in San Francisco.

Contact Adam at: [akaufman@dpshealth.com](mailto:akaufman@dpshealth.com) or 310-444-0636 x 122

### **Lan Kang, WG'02**

In 2013, Lan Kang became the Non-Executive Board Director of Fosun Pharma, a leading healthcare company in China. Fosun Pharma was established in 1994, listed on the Shanghai Stock Exchange in August 1998 and on the Main Board of the Stock Exchange of Hong Kong Limited in 2012 (stock code: 600196-SH,02196-HK). Specializing in modern biopharmaceutical and healthcare industry, Fosun Pharma has captured opportunities within the rapidly developing Chinese healthcare industry as well as from the globalization of Chinese healthcare companies in general.

Follow [this link](#) for more information.

Contact Lan at: [kangl@fosun.com](mailto:kangl@fosun.com)

## ALUMNI NEWS

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### **Anne Sissel, CFA, WG'05**

Anne Sissel has joined Baxter Ventures as a Managing Director in Deerfield, IL. Baxter Ventures invests in companies with innovative technologies, products, and therapies with the ability to improve patient care globally and maximize value for investors and entrepreneurs. Our focus is on therapeutic areas complementary to those of Baxter's Medical Products and BioScience businesses, as well as cutting-edge technologies and therapies outside the current product portfolio with sustainable long-term growth potential.

[Follow this link for more information.](#)

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### **Gil Kerbs, WG'13, MA - Lauder'13**

Gil Kerbs co-authored an article with Ying Zhang and Christina Liu Augustine, "Can Lower-Tier Cities Fuel Multinational Med-Tech Companies' Takeoff in China?" [Read here](#). Gil joined Covidien after graduating from Wharton.

Contact Gil at: [gilkerbs@gmail.com](mailto:gilkerbs@gmail.com)

### **David Fajgenbaum, MD'13, MSC Public'13, WG'14**

David Fajgenbaum has received the Distinguished Service Award from the University of Colorado, Boulder for his exceptional contributions to the nation. David's research and advocacy efforts have brought national attention to the issue of college students dealing with grief. He founded Students of AMF, a peer-led support group and service program, in memory of his mother, Anne Marie Fajgenbaum. He also is a tireless advocate for brain cancer research, rare disease research, and college students' bereavement. [Continue reading](#). ([Read Full Citation](#)) Learn about AMF - Watch this [Video](#). To support grieving college students, [donate here](#).

## THE NEXT PHASE OF PERSONALIZED MEDICINE: PREDICTIVE ANALYTICS AND MEDICATION ADHERENCE

Effective healthcare delivery results from the confluence of quality providers, the use of appropriate health care technologies, and compliant and responsible behaviors by patients. Since no two patients are exactly the same, personalized medicine is now being utilized to tailor medical decisions and therapies for each individual patient.

Traditionally, personalized medicine has referred narrowly to the process of finding the optimal therapy for a patient through analysis of a patient's specific biology (e.g., DNA, metabolism). While new and innovative techniques can match a drug's profile to an individual patient's genetic or protein profile, no quantity of sophisticated molecules can improve patient health if they fail to enter the patient's body. No matter how targeted and effective a drug might be, the patient must fill – then, refill – a prescription to take the medicine as directed.

Medication non-adherence results in as much as \$290 billion in avoidable costs annually in the United States, which is more than the total spend on prescription drugs in the US.<sup>1,2</sup> The good news is that we can improve outcomes and bend the cost curve if we take an individualized approach to improve medication adherence.

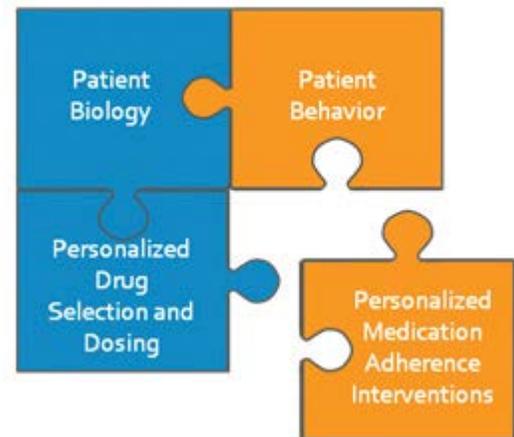
This article will help to elucidate the potential and importance of using predictive analytics to forecast patients' adherence to their medications and create personalized medication adherence programs. Just as medicine has become personalized, medication adherence interventions must also become personalized using the same data-driven approach. The article concludes with a four step process on how to become a leader in personalized medication adherence program.

### Predicting Human Behavior: Medication Adherence Gets Personal

A patient's adherence to medication depends on many elements. In fact, no single profile or factor separates an adherent patient from a non-adherent patient. This complexity exists because "adherence" is not a single trait but rather the result of a myriad of interactions between patient characteristics and extrinsic factors. Some predictive patient characteristics include: age, race, income level, education level, medical history, history of adherence, relationships with healthcare professionals, and responses to past medication adherence interventions. Many extrinsic factors are also predictive, including severity of disease, morbidities, drug side effects, regimen complexity, regimen financial burden, and health provider characteristics.

Medication adherence interventions ("interventions") are any form of communication intended to influence patients to become more adherent to their medication. An intervention message can be a simple reminder, an educational note, a motivational interview, or intensive counseling. Traditional interventions come through channels such as call centers, automated call systems, direct mail, or face-to-face conversations. Furthermore, the intervention landscape is changing with new entrants on all fronts, from smart-phone apps that generate reminders to pills and pill bottles that track adherence to incentive programs. The possibilities are endless, as are the behavioral outcomes, associated costs, and return on investment from the various types and combinations of interventions.

The Missing Piece of Personalized Medicine



Contributors:  
Clifford Jones, BSE'07, Lee Cooper,  
and Rebecca Elwork  
To learn more about  
Cliff, Lee, and Rebecca, [click here.](#)

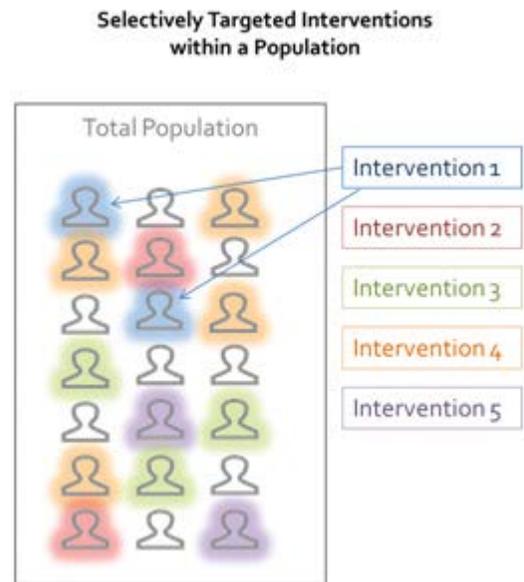
## THE NEXT PHASE OF PERSONALIZED MEDICINE: PREDICTIVE ANALYTICS AND MEDICATION ADHERENCE

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Most interventions today are assigned to patients using rules-based systems. That is, pre-defined rules trigger interventions based on specific demographic profiles and medical events (e.g., every patient over 35 who is five days late to refill an oral anti-diabetic prescription receives an automated reminder phone call). A rules-based system is suboptimal because it is a rigid, retrospective approach that cannot systematically learn from patient behavior and adapt to the complexities of real-world patient decisions (e.g., not all 35 year olds on an oral anti-diabetic prescription will respond to an automated reminder phone call). Rules-based systems simply cannot account for the unbounded variation in patient behavior. Consequently, these systems deliver unneeded interventions to some patients, miss opportunities to focus resources on patients that need the most attention, and do not deliver the most effective intervention for specific patients.

In contrast, personalized medication adherence programs trigger interventions in a patient-specific manner in order to maximally effect behavioral change. First, predictive behavioral modeling is used to forecast medication adherence for individual patients. After predicting which patients are at risk of being non-adherent, data-driven and personalized medication adherence interventions are applied to the high-risk population. The results of these interventions can then be used to continually improve the predictive model and hone in on the best intervention strategies for each patient.

Through predictive analytics one can predict behavior and interventions on an individual level. Personalized medication adherence programs provide the opportunity to proactively offer the right intervention to the right patient at the right time.



### Become a Leader in Personalized Medication Adherence Programs

Health organizations have realized the magnitude of the clinical and economic value lost to medication non-adherence. Effective, rigorously data-driven intervention programs using predictive analytics can offer improved clinical outcomes, reduced healthcare costs, and higher quality ratings (including Medicare Star Ratings and HEDIS scores). Organizations can position themselves as leaders in medication adherence by adopting the following plan:

- 1. Predict Medication Adherence at the Individual Patient Level.** Use predictive analytics to estimate the probability that each patient within the population will remain adherent to their medication. This allows providers and pharmacies to better understand their population, identify at-risk patients, and triage patients for adherence interventions. If used properly, this information can serve to optimize resource allocation across entire programs and lift adherence for patients.
- 2. Initiate Patient-Specific Adherence Interventions.** The challenge lies not in vetting which type of intervention is the best for an entire population. Rather, the opportunity is to leverage multiple interventions for a personalized, mix-and-match approach that optimizes return on investment. The information technology and management of such programs may be built in-house or outsourced, but adherence programs should have the capability to tailor to the needs of each individual patient.

## THE NEXT PHASE OF PERSONALIZED MEDICINE: PREDICTIVE ANALYTICS AND MEDICATION ADHERENCE

*continued*

**3. Create Medication Adherence Programs that Learn.** Advanced statistics and machine learning techniques can model the behaviors that contribute to medication adherence, and these models can continually learn from new and existing patients. There is no longer an excuse to use population-based solutions that ignore individual complexity. Complexity – the messiness in the data – is precisely the reason to embrace next-generation, predictive health analytics.

**4. Make Data Tracking a Priority.** The quantity and quality of data are the limiting factors for health modeling and learning. Claims data, demographics, and lab results are sufficiently rich to create personalized programs, but they are just the beginning. The best and most personalized and effective programs will be those that capture data from electronic health records, digital health applications and products, and other new sources of patient data. Data collection must become a habit for any organization dedicated to data-driven decision-making.

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Contact Rebecca at: [rebecca.elwork@allazohealth.com](mailto:rebecca.elwork@allazohealth.com)

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1. *Improving Patient Medication Adherence: A \$290 Billion Opportunity*, New England Healthcare Institute (NEHI), December 2011 ([http://www.nehi.net/bendthecurve/sup/documents/Medication\\_Adherence\\_Brief.pdf](http://www.nehi.net/bendthecurve/sup/documents/Medication_Adherence_Brief.pdf)).

2. *National Health Expenditures 2011 Highlights*, Centers for Medicare and Medicaid Services (<http://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/downloads/highlights.pdf>).

## WHARTON MBA GRAD FOUNDS ADHERETECH, BUILDING THE PILL BOTTLE OF THE FUTURE

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### The Problem

Low medication adherence is arguably the most costly problem in healthcare today, leading to about \$300B in increased costs, \$100B in lost revenues, and 125,000 deaths in the U.S. alone, every year. Average adherence rates are approximately 60%. With a problem of this magnitude, we knew there was an opportunity to do good and do well by solving this expensive marketplace dilemma.



### Our Solution

At AdhereTech, we make patented smart pill bottles to improve medication adherence and increase patient engagement. These bottles automatically measure how many pills a patient takes and when he/she takes them. If a dose is missed, AdhereTech reminds the patient via automated phone call or text message – as well as via on-bottle lights and chimes. The technology is currently being used in clinical trials, and the early results are extremely promising.

### Business Philosophy

We knew many had gone before us with a similar idea and had failed. So when we were designing our bottle, we were guided by two main philosophies: making it very easy to use and extremely versatile.

First, we put a wireless CDMA module inside of the bottle, which allows it to automatically send all data over the Verizon data network, just like a cell phone. This means patients don't have to sync it to Wi-Fi or Bluetooth – it simply works the moment they get it from the pharmacy. Patients use it just like a normal bottle, all data is collected & analyzed passively, and we only intervene if the patient misses a dose. Best yet, AdhereTech is easy for the non-tech savvy. Users don't need to download any apps, and they don't even need a cell phone. Our service works seamlessly for those with only landlines or those with cell phones.

Secondly, patients can receive reminders in the form of automated phone calls, text messages, or e-mails – whichever they prefer. And these alerts can also be sent to family members or caregivers too. Much thought was put into the design, including a flat front surface for easy application and reading of prescription labels, and a fabrication to the contours of the human hand for easy gripping and opening. Additionally, AdhereTech also solicits feedback from patients. For example, a cancer patient might consciously avoid taking oral chemo meds due to intense side effects. So when we send reminders, we have the optional feature of also asking patients why they might have missed a dose. If we discover the patient did not take the medication due to nausea, we can alert the appropriate party and perhaps recommend anti-nausea treatment. These feedback features will be tested in our Q2'14 pharma pilots.

### Business Model

Pharma is our customer, and patients are our users. Our focus is on the distribution of specialty drugs in our bottles. These are medications for complex and serious diseases such as cancer and HIV, and they are incredibly expensive, oftentimes hundreds of dollars per single pill.

For pharma, use of our technology will mean increased adherence, refills, and ultimately revenue. Patients will receive AdhereTech bottles from the specialty pharmacy, for free, with their medications in the bottle, ready to use.

Contributor:  
Josh Stein, WG'12

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

## WHARTON MBA GRAD FOUNDS ADHERETECH, BUILDING THE PILL BOTTLE OF THE FUTURE

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### Where We Are Now

We recently began randomized controlled trials with top-tier institutions, such as the Walter Reed National Military Medical Center and Weill Cornell Medical College. We are testing the degree to which we improve medication adherence over control groups, and early results are promising.

AdhereTech has secured two trials with top pharma companies, including Boehringer Ingelheim and another top 10-pharma company that we can't mention just yet. And the very exciting thing is that with even one partnership with one company for one drug, that would mean multi-million dollar revenues, and of course we'll grow from there.

There are other adherence tools in the space, but we believe what really sets us apart is that we are the easiest to set up and use. The data on medication non-adherence indicates such patients typically will not respond to very complicated solutions that require a new behavior and a lot of set up – so this is where AdhereTech truly shines. Additionally, we collect the most accurate and granular data of any company, determining when patients use the bottle, the amount of medication in the bottle, and the reasons for non-adherence.

Our founding team has a great deal of business, software, and hardware experience – and we've built a close board of advisors from top healthcare companies. We recently signed a multi-year partnership with GE, which will help us expand and scale in the coming years.

AdhereTech is always looking for strategic partners, investors, and smart people inspired by our technology.

Contact Josh at: [j.stein@adheretech.com](mailto:j.stein@adheretech.com)

## WHARTON AROUND THE GLOBE: WORKING TO ACCELERATE THE REALITY OF PERSONALIZED/PRECISION MEDICINE

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Personalized medicine is a combination of established clinical parameters and emerging molecular information to create preventive, diagnostic, and therapeutic solutions that are individually tailored to patients' requirements. Instead of basing a pharmacotherapeutic dose solely on characteristics like weight and age, doctors will be able to use a patient's genetic profile to determine the best drug and the optimal dose.<sup>1</sup> Precision medicine promises to deliver significant changes on the healthcare horizon: improving diagnosis, treatment, and patient prognosis. It will be the driver for deep structural change in healthcare delivery. In addition to improved patient outcomes, it can also bring significant efficiency savings, transforming health while saving lives and money. Amazingly, the cost of obtaining a single human-genome sequence has decreased from U.S. \$95 million in 2001 to almost U.S. \$21,000 in January 2011 and is projected to further decrease to U.S. \$1,000 in a few years.<sup>2</sup>



Recent biotechnological advances have led to an explosion of disease-relevant molecular information that has brought the promise of personalized medicine within reach. Evidence of fulfillment of the promise already exists around the world, for example in the area of oncology, where genetic biomarkers may guide therapeutic decision-making. This approach is expected to deliver significant healthcare benefits to patients but will also bring new challenges. Ensuring a smooth transition will depend on establishing frameworks for regulating, compiling, and interpreting the influx of information that can keep pace with rapid scientific developments.

The World Economic Forum (WEF) has hosted the Global Agenda Council on Personalized and Precision Medicine since 2011, whose membership includes CEOs, Nobel Prize-level scientists, and leaders of the foremost academic and government organizations. During the Dubai Summit in November 2012, the Council identified several issues that are slowing the impact of personalized approaches to medicine. These include poor data interoperability between entities working on personalized medicine approaches and non-harmonized regulatory and payer policies around the world. Accordingly, the Council has begun working on three specific work streams to increase collaboration across various sectors.

The first stream focuses on an evidence-based white paper that elucidates the economic, medical, and societal rationale for investing in personalized health. This effort, which is already underway and is supported by professional research and economic modeling, will be published in early 2014. The second group is working on removing roadblocks for implementation of personalized and precision health. The focus of this work will be a series of meetings and a policy document that will focus on regulatory and payer harmonization for personalized and precision health across different geographies. The third group is working on accelerating personalized health through data sharing. The strong belief is that the quality of the science underlying personalized medicine will improve only through collaboration between industry, academia, government and healthcare providers, as data sharing will allow detection of biomarkers that will better guide treatment.

There are over 50 data-sharing initiatives in personalized medicine around the world today. Most recently, a consortium of academic and government entities entitled the Global Alliance was announced, which has a similar goal. However, the barriers to data sharing are high and include: (1) few incentives to drive sharing, (2) concerns over personal privacy, and (3) lack of common data standards. In addition, the Global Alliance is largely devoid of

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## WHARTON AROUND THE GLOBE: WORKING TO ACCELERATE THE REALITY OF PERSONALIZED/PRECISION MEDICINE

*continued*

industry involvement. Therefore, the aims of efforts that will make sharing a reality include providing incentives for sharing (e.g., easier regulatory or reimbursement paths), protecting data privacy (as has been done in industries like financial services), and creating common data standards, which is more complicated than one might think but still possible. The WEF's Global Agenda Council on Personalized and Precision Medicine is intensely focused on making these efforts a reality. In so doing, the Council believes that it will fundamentally change healthcare around the world.

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## HEALTH DISPARITIES SERIES: PART 2: BREAST HEALTH DECISIONS OF AFRICAN AMERICAN WOMEN

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*Part 1 of this article discussed the optimism and hope the Affordable Care Act offers and asserted that, while expansion of health coverage to those previously uninsured is a monumental step forward, the role of culture is pivotal in the decisions some African American women may make in their breast health decisions. Part 2 focuses on my research findings and the important role physician/patient relationship plays, making cultural sensitivity training for physicians imperative. Further, by empowering family, friends, and clergy with appropriate health education in conjunction with balanced spirituality, many African American women will be better equipped to make optimal breast health decisions.*



The women in my research indicated they had faced some barriers to achieving optimal breast health, but theirs were different from the barriers discussed in similar studies. Their demographics, often including second and third generation college-educated family members, were suggestive of having a prior history of access to health care. This may have provided an explanation for the determination and agency often exhibited which moved the women to advocate for themselves to achieve optimal breast health. (Toomer, 2012)<sup>1</sup> However, based on the current statistics, in which African American women have a 40 percent greater chance of dying of breast cancer than their Caucasian counterparts, (SEER 2012)<sup>2</sup> many lack access to healthcare and the team support necessary to achieve optimal breast health.

Ideally, the physician-patient relationship with the family practitioner/internist will be developed over time and even inter-generationally. In such cases, there is trust and confidence in the treatment decisions that are made for the family member who is the patient. I have seen this work seamlessly at the Howard University Cancer Conference. The family practitioner, Robert Williams M.D., has served as a patient advocate for forty years. He attends the cancer conferences in which his patients are discussed. He provides the socio-cultural perspective he has observed over the years as the patient's primary physician. He and the hospital staff, which may include navigators, clergy, genetic counselors and others, work together to help patients navigate through a breast cancer diagnosis.

The 2010 U.S. Census reported 44 percent of African Americans used employer-sponsored health insurance, 28 percent relied on Medicaid or public assistance, and 21 percent were uninsured. (U.S. Census Bureau - Income, Poverty, and Health Insurance Coverage in the United States: 2010) (p. 84.)<sup>3</sup> The majority with employer-sponsored health insurance have primary physicians. However, those who rely on Medicaid or are uninsured make more visits to emergency departments, because they are often sicker, and because fewer physicians accept them as new patients due to lower Medicaid reimbursement schedules. Thus, they have the opportunity to experience a trusting relationship less often with the very physicians who could provide them with a much needed socio-cultural perspective.

Supporters of the PCMH (patient-centered medical home) model recognize that a team approach to managing health care decisions is important not only from a financial efficiency standpoint, but also in encouraging optimal health behaviors. My findings concur with the important role "family voices" can play. Unfortunately, some of these voices are in the form of recounted past health injustices and inaccurate "old wives' tales." Further, there is also silence: a fear of speaking or acknowledging the potential presence of disease. (Toomer, 2012)<sup>1</sup> However, there are also instances of monthly reminders to perform breast self-examination as well as testimonies of healing and achieving a cancer-free status after treatment. In most cultures, family understandably plays a role in decision-making. However, while African American women are not homogeneously religious, many are. According to 2009 Pew Research, "African Americans also stand out for their high level of religious commitment. More than eight in ten black women (84%) say religion is very important to them, and six in ten (59%) say they attend religious services at least once a week. No group of men or women from any other racial or ethnic background exhibits comparably high levels of

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## HEALTH DISPARITIES SERIES: PART 2: BREAST HEALTH DECISIONS OF AFRICAN AMERICAN WOMEN *continued*

religious observance.” (p. 3)<sup>4</sup> Thus, it is not surprising the church is noted as a respected institution, and the pastor may serve as an authority in breast health decisions.

The participants in my research reflected a high level of religiosity. 68 percent attended church four or more times each month. They were asked a number of specific questions regarding their religiosity and the role of their pastor/minister in their breast health decisions. Many of the participants were members of churches at which there were health ministries that were very active in community screening programs. These types of programs are generally encouraged, sanctioned, and supported by the pastor and church leadership. While misinformation, nihilism, and fatalism were noted in many similar studies, it was not found in my study, although many participants indicated they had difficulty balancing their “trust” in God (their powerful “other”) with their trust in their physician. Examples of this were evident when patients were given recommendations from the oncologists and yet believed God, their powerful other, was leading them not to take their oncologists’ direction. Additionally, there is also a concern that speaking of a disease gives it power; this belief leads to silence, intergenerational privacy of breast health, and fewer testimonies of healing. This can lead to the perpetuation of myths and misinformation. (Toomer, 2012)<sup>1</sup> Thus, ministers/pastors should continue to support health ministries; however, their role in providing balance and perspective in the context of both spirituality and medical counsel is invaluable.

The Affordable Care Act was signed into law on March 23, 2010. Its implementation is proceeding in spite of the challenges it faces. An entire team is needed to navigate prevention strategies, cancer screening, and treatment. The team includes healthcare professionals (family practitioner/internist or oncologists serving as the lead physician), family/friends, and pastors/ministers. While one’s cultural practices may influence medical decisions, ultimately the physician is responsible for providing sound medical advice to patients, while acknowledging and respecting socio-cultural influences. Sprandio (2012) suggests, “If improvement [of care delivery] is the plan, then we own the plan. Government can’t do it. Payers can’t do it. Regulators can’t do it. Only the people who give the care can improve the care...weaving a net of help and partnership with patients and families.” (p.49s)<sup>5</sup>

With the level of diversity of patients who are being served, current health care professionals should participate in continuing education to increase cultural competence and sensitivity. The patients must act with agency to find physicians and health care professionals with whom they can forge strong trusting relationships. Finally, ministers/pastors must recognize the important role they play in hosting health screenings, but also in teaching their congregations not to focus solely on physical and spiritual healing after a disease diagnosis, but to also emphasize disease prevention strategies and screening. With all of the team members working together to improve breast health, the goal of increased efficiency and cost savings will be achieved as well.

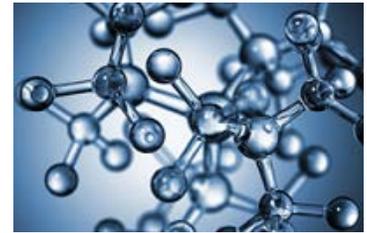
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## Immuno-Oncology: Attempting to Outsmart Cancer

In the Pulitzer-Prize winning biography of cancer, *Emperor of All Maladies*, Mukherjee calls cancer “a more perfect version of ourselves.”<sup>1</sup> This provocation, albeit an undue glorification when taken out of context, does well to summarize the complexity of the problem. Cancer is a collection of hundreds of diseases arising from an even greater number of genetic mutations which give cells the ability to grow faster and adapt better: a molecular evolution that merits an evolved treatment.



Despite the U.S. administration’s declaration of a “war on cancer” and the billions of dollars invested in research, patients still find it difficult to be hopeful when faced with a diagnosis. This was the case for Emma Whitehead, who, last year at the age of 6, was facing her third bout with acute lymphoblastic leukemia (ALL). In a last-ditch effort, the team at Children’s Hospital of Philadelphia (CHOP) attempted to use a disabled form of HIV to reprogram Emma’s immune system genetically to kill her cancer.<sup>2</sup> At the time, she was one of only 12 patients to ever receive this treatment, just one example of an emerging area of clinical practice called immuno-oncology. Unlike traditional therapies that target the tumor, immuno-oncology treatments are designed to harness the natural capabilities of the patient’s immune system to fight cancer by targeting the very same pathways tumor cells use to evade recognition and destruction.<sup>3,4</sup> Emma is still in remission (and at least 18 months cancer free), and research in the field of immuno-oncology is in full swing.

It turns out the immune system has the characteristics of a very effective treatment. It is a powerful and adaptable network of cells and pathways that protects the body from infection and has the capacity to remember a pathogen after a single exposure.<sup>5</sup> Engaging this system to target and destroy cancer cells, and limit recurrence, has been the subject of over a century’s worth of research. In the late 1800’s William Coley, the head of surgery at the hospital which is now Memorial Sloan-Kettering Cancer Center, documented that patients who had wound infections after cancer surgery had better clinical outcomes compared with those who were infection-free. Dr. Coley’s hypothesis that a heightened immune response to the infection could potentially help with the treatment of cancer ultimately led him to develop a vaccine that he called “Coley’s Toxins,” an intra-tumor injection of heat-inactivated bacteria.<sup>6</sup>

Interest in using immunotherapy to treat cancer waned in the 20th century because of the emergence of other novel effective therapies like radiation (1930’s) and chemotherapy (1950-60’s). The science needed to confirm the biologic mechanisms of the immune system had not yet arrived. That is, until the 1980’s, when we began to learn what substances turned the immune system on and off. Interleukin-2 (IL-2) was discovered to be a growth factor for T-cells, one of the key mechanisms of the immune system to control infectious disease. Immuno-oncology research was put back on the map when National Cancer Institute (NCI) trials in the mid 1980’s to 1990’s demonstrated clinical benefit of IL-2 in patients with metastatic melanoma and metastatic renal cell carcinoma.<sup>7</sup>

To date, the area of immuno-oncology where we have arguably seen the most promise is dismantling cancer immune escape mechanisms. Tumor cells can use escape mechanisms to avoid or suppress the natural immune response, ultimately resulting in tumor growth; in fact, avoiding immune destruction is one of the emerging hallmarks of cancer.<sup>8</sup> The use of immuno-oncology agents to thwart this tumor survival trait is currently being investigated in a number of cancers, including metastatic non-small cell lung cancer, metastatic melanoma, and metastatic renal cell carcinoma.<sup>9</sup>

With approved agents already on the market and a very healthy pipeline (as of last year there were 2,380 open immune therapy clinical trials in most common cancers<sup>10</sup>) to say that immuno-oncology drugs have potential may be an understatement. Some analysts are predicting this to be the biggest drug class in history, with an estimate of up to \$35 billion in sales per year over the next 10 years. Current leading players in cancer immunotherapy include Roche, Bristol-Myers Squibb, Glaxo-SmithKline, AstraZeneca, Novartis, Merck & Co. and Amgen.<sup>11</sup>

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## Immuno-Oncology: Attempting to Outsmart Cancer

*continued*

So is immuno-oncology our long awaited magic bullet for cancer? We'll see. Although, after everything we know about the cunning complexity of the disease, it seems naïve to assume that there would be a single treatment cure-all. The future of systemic cancer treatment will likely involve biomarker driven combinations of immunotherapy, such as vaccines or immune-modulators, with new targeted inhibitors of tumor signaling pathways and proven chemotherapy, an attack on all vulnerable targets to maximize the benefit-to-risk ratio for the patient.

It will take key stakeholder collaboration to make this future a reality. The pharmaceutical and biotech industry will not be able to deliver these innovative treatments to patients without the expertise in academia and input of access organizations and government regulators. Thankfully, a number of platforms for such collaborations have already been established. One example of key stakeholder organization by the NCI is the Cancer Immunotherapy Consortium, an international association of pharma, biotech, and academia, to address networking, clinical, and regulatory needs.<sup>12</sup>

Now that the networks have been set up, we need to exercise the channels to efficiently transfer the outcomes we see in clinical trials to patients in the real world. We owe it to the patients to realize the full potential of this important scientific advancement.

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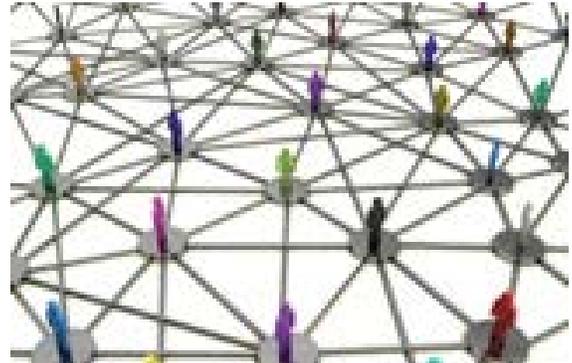
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## Part 3: From Patient to Partner — Making Room for the New Provider Role

*This is the third in a series of three articles about engaging patients in population health management.*

In the [first installment](#), we discussed the necessity of a shift *from patient to partner*, to help patients become full partners in their own health. In the [second article](#), we talked about using new behaviors and corresponding “supports,” to aid patients in behavior change. This final installment describes several of our observations about some consequences of the shift from patient to partner. We look at some of the challenges related to emerging care models and the technologies designed to support them, and explore some ideas about how to manage them.



The realization the U.S. harbors the costliest healthcare system in the world, but not necessarily the most effective one, has spurred a reformation movement in healthcare.<sup>1</sup> Innovations to improve patient care and overall health through greater efficiencies, more effective collaboration, and lower costs are emerging every day.

Today’s U.S. healthcare system can be seen as a mixture of pieces and parts (i.e., hospitals, offices, clinics, rehab, specialists, etc.) struggling to help sick people get better. Each of these parts has its own professional identities, training, regulatory constraints, and general rules of engagement. We’ve had the opportunity to work with many of the “parts” as they have struggled to make sense of the Accountable Care Act and move toward population health management and the new emphasis on wellness and patient-centeredness.

It is an exciting and anxiety-provoking time for many. Consider, for example, physicians’ historical role as the primary “leader” of all aspects of patient care, from diagnosis to treatment to follow-up. New team-based care models, like Patient-Centered Medical Homes (PCMHs), raise questions about who “owns” the patient, in terms of accountability and reimbursement. While many providers thrive in these arrangements and early pilots have demonstrated reduced cost and better outcomes, others feel threatened.<sup>2</sup> The same is true with protocols, which provide evidence-based care plans, but may also conflict with a physician’s own experience with how best to treat patients. In the end, we have observed some believe the movement to a more patient-centered system of care means pushing the physician to the side.

A contributing physician to [the blog](#), Kevin MD, observed, “Today’s healthcare providers were not trained to provide (p)atient (c)entered (c)are. They lack the requisite skills, and patient empowerment unsettles them.”<sup>3</sup> Many of today’s physicians lack training in effective interprofessional collaboration, incorporation of technology into practice, and ways to partner with their patients. So there is a significant skills gap facing the healthcare system today, but that is only one factor in a mounting crisis of identity for some providers. A recent study looked at providers’ openness to EMR implementation, which revealed the following tension:

There may be some fear among physicians that the introduction of a technology that can access patient data and match it with the latest treatment options available threatens the very foundation on which their identity is predicated - the exclusive ownership of valued knowledge and skills - and may render them obsolete. These changes may appear to compromise physician-patient relationships and challenge the control physicians have over patient treatment, thereby adversely impacting their care provider identity.<sup>4</sup>

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## Part 3: From Patient to Partner — Making Room for the New Provider Role *continued*

This is a critical issue not only for providers who are experiencing a threat to their professional identities, but also for the many players across the healthcare ecology, who must create the conditions for successful patient-centered, population health-focused systems of care. So, how can healthcare leaders ease the shift to engaging patients as partners in their own health, acknowledging the complicated and critical identity issues that it can stir up for many providers? Here are a few approaches we have found to work well:

- *Engage resistance to pick up speed* — Engage physicians, care teams, and patients in the earliest stages of creating new processes and technologies that enhance the patient-provider relationship. Listen carefully to what they have to say over time, especially about barriers. Slow adopters could be resistant to change in general (as most people are) or they could be resisting aspects of the change that aren't actually improvements for patients or for themselves. It pays to listen to resistance, as it is a source of information from which to build solutions that work.
- *Flip the frame* — E-Patient, Dave deBronkart nearly died of late-stage renal cancer until he became an empowered patient. He accessed information about his seemingly incurable disease through an early online patient community and found a physician with whom to partner on a little known intervention that ultimately saved his life. Dave now travels the world carrying this message, “The most underutilized resource in all of healthcare is the patient.”<sup>5</sup> We agree and encourage healthcare providers to fight the urge to view new ways of accessing information or delivering care as replacing experience or questioning clinical judgment. Instead, flip the frame to focus on how those people, apps, and care models might extend or complement the physician-patient relationship and improve outcomes.
- *Learn from “futureonauts”* — Every organization has futureonauts — people who understand what will be needed to thrive in the future and are ready to embrace associated behavioral changes, even as they successfully navigate the present. Futureonauts are incredible resources for new ideas and behaviors. They are not burdened with “the way things are around here.” Residents are an example. The AAMC recently published an article about new residents’ role in improving patient safety.<sup>6</sup> Residents can ask questions that others may not think to do or be afraid to ask, are used to using technology and apps, and are generally open to finding ways to use technologies to enhance (not substitute for) their own effectiveness as they learn to partner with patients.

In his 2011 TedX talk, E-Patient Dave reminded us all to, “Let patients help.” We can and should find ways to engage patients in their own health by maximizing consistent, effective physician-patient collaboration that promotes better outcomes and better value.

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>.

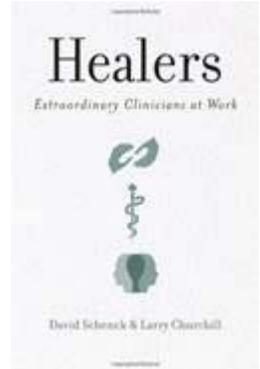
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## PART 2: HEALING RELATIONSHIPS AND THE NEW FACE OF MEDICINE

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In [Part One](#) of this article, I summarized research my colleagues at the Vanderbilt University Medical Center and I have done over the last five years examining what clinicians and patients have to say about healing relationships.<sup>1</sup> I explained what both patients and clinicians say are the most important factors in establishing healing relationships are things which are essentially free: cultivating safety and trust, listening and being compassionate, telling the truth, and going the extra mile. In this time of transformation of incentives and reimbursements in our healthcare system, this is a significant finding.



But there is an enormous problem this research brings to the fore. Increasingly, healthcare is delivered by teams, not individuals. Thus the question becomes: Can we develop teams that can establish healing relationships with patients? We know what kind of relationships further healing. The question now is how to deliver it as we enter the new environment of greater efficiency and higher accountability.

It seems to me we have two major strategic options close at hand:

1. design processes executed by teams, which are not focused on the physician as primary provider – and which are, *of themselves as processes*, healing
2. develop methods for training team members to have brief but powerful interactions that are, *of themselves as interactions*, healing

I highlight these, in part, because I believe we already know how to do both.

### Point #1:

Anthropologists for generations have been telling us important healing movements, across cultures and throughout history, typically take the following ritual form:

- transition from ordinary life into a non-ordinary or sacred “container”
- special activities and healing experiences within such a “container”
- structured exit from the healing “container” back into the ordinary world

This is a process we know, likely deep in cellular memory, to be healing.

With this framework in mind, think of the average visit to a healthcare practitioner. One enters the office, fills out forms, talks with the practitioner’s assistants, giving over one’s health history, and other normally private, personal information. This is the transition from the ordinary world into the non-ordinary world of the practitioner’s domain. Then follows a variety of activities not encountered, condoned, or allowed in the ordinary world:

- intimate conversation on major crises, wounds, illnesses, and suffering
- intimate physical contact of various kinds
- direct physical intervention in the body, including cutting skin, giving injections, inserting objects into a variety of orifices, probing deep tissue, adjusting spines, and sticking needles into sensitive areas all over the body.

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## PART 2: HEALING RELATIONSHIPS AND THE NEW FACE OF MEDICINE

*continued*

These activities are allowed in the privileged healthcare “container” because they induce certain experiences, either immediately or in the future, that are desired by the patient, by the practitioner, and by society. Such experiences may be described as ones of “healing,” of pain relieved, of return to important roles in society and the family, or of restoration of “wholeness” in a variety of physical, social, emotional, and spiritual senses. Finally, there are rituals of exit — putting clothes back on, having bandages placed on exposed places, getting a prescription, making a plan of care for the patient to follow after leaving the office, setting an appointment for a next visit, paying one’s money or offering insurance information, and walking out the door.

Next, let us suppose we shift our focus away from the healthcare professionals involved here as individuals, which is what most of our studies do, and give our attention to the kinds of teams and team behaviors that could make this ritual movement as healing as possible. We would be looking for actions and demeanor making the various transitions unthreatening, the sequences of spaces safe, and the procedures as purposeful as possible. We would be assessing factors like flow and timing, and the kind of trust appropriate pacing can generate. Could we have teams that capitalize much more effectively on the deeply wired ritual of the human healing process?

We know physical spaces heal. Our disciplines of architecture and interior design capitalize on this fact. What about “patient movement through an office” as healing? Who can teach us about this? We might look, for instance, to people who do workplace and industrial design. But maybe we ought to give priority to consulting patients.

What if we ask patients who have completed a “normal office visit,” or a normal testing procedure (e.g., ultrasound, MRI, blood draw), or an intensive therapy (e.g., chemotherapy, dialysis), or an outpatient surgery what could have been done to make these experiences, within the various clinical containers, more of a healing process? What part of process, for example, was irritating and upsetting? What gave a feeling of safety and what didn’t? What made you feel cared for and what didn’t? The instructions would explain these questions are not about customer satisfaction, but about factors and encounters conducive to healing and those that are not.

### **Point #2:**

We would of course achieve optimum effectiveness if the healthcare professionals who watch over each element of this ritual process have the ability to establish quickly and easily a connection of caring and presence. Training of team members might concentrate especially on the first four of the Eight Healing Skills discussed in [Part One](#) of this article:

1. *Do the Little Things:* Introduce yourself and everyone on the team. Greet everybody in the room. Make appropriate eye contact. Give your undivided attention.
2. *Take Time:* Be still. Be quiet. Be interested.
3. *Be Open and Listen:* Carefully ask the open-ended question and use “the third ear” as you listen to the answers.
4. *Find Something to Like, to Love:* Think of how you would want your family members to be treated.

To take one specific example, “Come in, sit down, and look me in the eye.” Dozens of patients gave us almost this exact formula. Why does this familiar injunction come up time and time again when talking with patients about their practitioners? Simple and routine behaviors play a decisive role in creating safe clinical space. Guiding the patient through the transition from ordinary, daily routines into the often anxiety-provoking and uncomfortably intimate encounters and back out again is a critical skill for medical teams.

## PART 2: HEALING RELATIONSHIPS AND THE NEW FACE OF MEDICINE

*continued*

And patients immediately recognize team members who are skilled at making powerful connections with very simple acts:

*...the physician showed, just by the way he looked at me, and a couple of phrases he used, he shared in the seriousness of my situation. The vitality of his support was as personal as it was professional.<sup>2</sup>*

Can we learn to think in terms of rituals not focused on individuals, but rituals as a group or team processes and efforts that can bring about healing? Can we find ways to train team members in every discipline—physicians, nurses, technicians, office staff—to be contributing members in such a healing flow? Much of the success of the medical system now evolving in *actually healing patients* hinges on the answers to these two questions.

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