

# Munich Re Healthcare Symposium 2017

## A Recap

The annual Munich Re Healthcare Symposium was held March 5 – 7, 2017 in Scottsdale, Arizona. Top clients and partners gathered at the Hyatt Regency Scottsdale Resort & Spa at Gainey Ranch to discuss the challenges of healthcare. The following pages feature highlights and insights from the event’s thought-provoking roster of speakers.

### Table of Contents

<b>Health and How We Think about Business</b>	<b>2</b>
In his opening remarks, Juan Serrano, President & CEO, Health of Munich Re, US sets the tone for the Munich Re 2017 Healthcare Symposium with a call to balance the conversation about the future of healthcare.	
<b>Keynote: Debating the Future of Health Reform</b>	<b>2-3</b>
Tom Coburn, former U.S. Senator from Oklahoma, and Henry Waxman, former U.S. Representative from California, discuss the future of the Affordable Care Act and the fate of healthcare in the current political climate.	
<b>Don’t Let What You Know Limit What You Can Imagine – A New Agenda for Healthcare Leaders</b>	<b>4</b>
William Taylor, founding editor of <i>Fast Company</i> , maintains that turbulence is a constant — and businesses can rise above and thrive with innovative thinking, attention to workplace culture, and an understanding of the role of failure in success.	
<b>The Future of the Healthcare Marketplace: What’s Next?</b>	<b>5-6</b>
Author, consultant, and futurist Ian Morrison assesses the present and future of the Affordable Care Act, the challenges facing Republican efforts to repeal and replace, and how employers and providers may influence the next generation of solutions.	
<b>Addressing the Triple Aim — Introducing Munich Re’s Health Advisory Board</b>	<b>7-8</b>
Presentations were offered by Health Advisory Board Members Dr. Jamo Rubin, CEO of TAV Health, and Dr. Diane E. Meier, Director of the Center to Advance Palliative Care. Drs. Rubin and Meier were joined by Eric Coleman, Professor of Medicine and head of the Division of Health Care Policy and Research at the University of Colorado.	
<b>Financing Healthcare – Ways to Positively Impact Both Health and Cost</b>	<b>9-10</b>
Amitabh Chandra, the Malcolm Weiner Professor of Social Policy and Director of Health Policy Research at the Harvard Kennedy School of Government, provides an economist’s perspective on the healthcare challenges of industrialized nations.	
<b>Healthcare, Remixed</b>	<b>11-12</b>
Dr. Zubin Damania, founder of Turntable Health, describes how his experiences as a medical student, doctor, and educator led to the creation of his alter ego, ZDogMD, whose parody raps illuminate the dysfunctions of the healthcare system.	

## Welcoming Remarks: Health and How We Think about Business

*"People who are very sick need advocacy for what's important to them. That's what we're here for."*

- Juan Serrano

Juan Serrano, President & CEO, Health of Munich Re, US, kicked off Day 1 with a call to balance the conversation about the future of healthcare — political, economic, and clinical. He acknowledged the recent restructuring of Munich Re and assured those in attendance that Munich Re in North America would become more synergistic and holistic, while remaining available to serve its collective clients.

Serrano announced that Munich Re is investing in technology, recognizing there is more value in regional rather than global solutions, and aiming to move past friction in the system so that all parties can come together in pursuit of innovation. He maintained that systems that can bring proper care into focus and deliver better care for less will win consumers over time. And he challenged us to "think about helping people get better care for less in a way that helps them achieve the outcomes they want," he said. "When you focus there, and bring resources and attention to helping people achieve better success in health, everything else cascades from there in a favorable way."



## Keynote: Debating the Future of Health Reform

David Ives, President and CEO of Northshore Insurance Services, moderated the keynote debate between Tom Coburn and Henry Waxman. In light of recent headlines about Paul Ryan's then-nascent challenge to the Affordable Care Act, much of the discussion centered on assessing the effects of the ACA and providing perspectives to gauge what may come next.

David Ives asked our panelists to assess the current level of trust in the government, after the first 45 days of the Trump administration. Both agreed it was a time of unprecedented uncertainty. "No one knows what to expect, including the president," said Coburn. "We're in uncharted territory," Waxman agreed. "Polarization is worse than it's ever been."

Next, Ives directed the conversation to the likely fate of the ACA. "You can't completely replace it and repeal it at the same time," said Coburn. "What is possible is to take the good parts of the Affordable Care Act and, over a period from now until 2020 or 2021, transition an economic and personal responsibility model that has economic incentives in it that causes people to make good decisions about their health care." He advocated allowing states to experiment by giving governors more power over Medicaid so they can create what's best for their citizens who are dependent on the safety net.

### Tom Coburn

Republican Tom Coburn is a physician who served as U.S. Senator from Oklahoma (2005 - 2015) and U.S. Representative for Oklahoma's 2nd District (1995 - 2001). The Washington Post described him as "the godfather of the modern conservative, austerity movement."



"The individual insurance market was not working," Waxman reminded the audience. The ACA was designed for people "who didn't have insurance through their employment, weren't on Medicare or Medicaid, they had to go to the individual market and buy an insurance policy." He emphasized that two groups were disadvantaged in that individual market: those with a preexisting condition and those who couldn't afford it. And he defended the ACA's mandate by pointing out that, without it, people won't buy in until they need it.

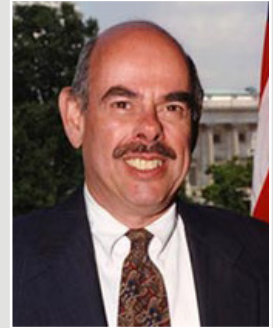
On the topic of prescription drug costs, Coburn pointed out that the US shoulders the high cost of getting drugs approved. "We actually subsidize everybody else's drugs in the world," he said. "We end up subsidizing the research."

Waxman noted that, "the pioneer pharmaceutical companies that spent their money on research thought of themselves as good corporate citizens.... Now it's being driven by getting the maximum share price." He went on to say that, while PBMs negotiate for lower prices, it's not transparent and prices remain artificially high. "It's a difficult nut to crack when you're talking about pharmaceutical prices unless you've got some leverage to negotiate with a monopolist," he added. "That leverage has to be a formulary."

Ives asked our panelists what their advice would be for incoming HHS Secretary Tom Price. Coburn observed that there simply isn't enough money to reform the FDA inside and out. He advised Price to work with the Obama administration's 21st Century Cures Act to streamline the agency. Waxman noted that the act will be beneficial because it will result in more money going to the NIH. He maintained that HHS should focus on regulation and funding public health.

### Henry Waxman

Democrat Henry Waxman, whom the *Wall Street Journal* called a "liberal lion," served as the U.S. Representative for California's 33rd District (1975 - 2015). He cosponsored the Hatch-Waxman Act, which promotes the manufacturing of generics and systemizes generic drug regulation in the U.S.



## Don't Let What You Know Limit What You Can Imagine – A New Agenda for Healthcare Leaders

*“Deep-seated change is the defining issue of our time.”*  
- William Taylor

William ‘Bill’ Taylor began his presentation by recalling that turbulence in markets and technology was the pressing issue 20 years ago, when Fast Company convened a symposium in Santa Fe to mark the publication of its first issue. He advocated for a definition of success that is “distinctive as well as competitive.”

Taylor cited the example of Umpqua Bank, a once-small community bank based in Portland Oregon. At a time when retail banking is in a state of steep decline, Umpqua has grown from six branches and \$120 million in deposits to 350 branches and \$22 billion in deposits. Umpqua’s success can be attributed, he said, to its willingness to re-imagine what the experience of banking could be.

Using the five senses as its framework for change, Umpqua created points of experiential difference including local music (sound), local chocolates (taste), and a rotary dial phone (touch) in the center of the branch that allows customers to reach the office of the CEO simply by dialing “8.” After branches close for business, they reopen in the evenings as community centers, offering their space to book clubs, group meetings, and even “Stitch & Bitch” needlework gatherings.

Umpqua, Taylor concluded, illustrates the value of asking: “What are the small number of ideas that define how we do business and distinguish us from everyone else? Rather than asking what keeps you up at night, ask what gets you up in the morning?”

Taylor maintains that organizations can’t be distinctive and compelling in the marketplace if they are not distinctive and compelling in the workplace. To illustrate, he offered the example of Denver-based Davita, which performs one-third of all dialysis treatments and services in the U.S. Fifteen years ago, Taylor recalled, the company was sinking fast. Now it’s generating \$15 to \$16 billion in revenues and \$1 billion in profits. CEO Kent Thiry — whom Taylor described as “the only Republican Zen Buddhist I know” — turned around the culture by turning around the company.

Thiry and his team realized that they needed to think of themselves as a community, rather than a company. They began by changing the language they used to communicate to one another. The company, formerly known as Total Renal Care, was renamed in a nationwide election-night event, complete with refreshments and balloons. The winning name, Davita, means “he or she who gives life,” in Italian. They wrote a fight song, “On Davita” to the tune of “On Wisconsin. Thiry was no longer the CEO — instead he assumed the title of Mayor. Company divisions became known as neighborhoods.

In addition to shifting the language, Thiry also spearheaded the establishment of rituals that facilitate the individual’s connection to the culture. Taylor described how, when low-earning Davita technicians complete their training, they graduate in a ceremony, complete with caps and gowns.

### William Taylor

William Taylor is the founding editor of *Fast Company* and the author of *Simply Brilliant: How Great Organizations Do Ordinary Things in Extraordinary Ways*. He created the “Under New Management” column for the *New York Times* and writes a management blog for the *Harvard Business Review*.



Each year, Davita serves 150,000 people, performs 20 million procedures, and loses 17% of their customers to end stage renal failure. “What gets them up in the morning?” Taylor asked. “Connection to each other.”

At a CEO lunch in Detroit, Taylor met Patrick Doyle of Domino’s, which achieved its recent growth by reinventing itself as a technology company. Customers can tweet a pizza emoji and Domino’s will deliver. A cutting-edge industrial design firm helped them to launch a fleet of ultimate delivery vehicles. Of the 800 employees at the company headquarters, 400 are in technology, Doyle told him. But the Domino’s turnaround wasn’t just about technology. Doyle also maintains that their successes are due to their willingness to fail.

Understanding the role of failures in success means contending with multiple roadblocks, Taylor acknowledged. “People are much more worried about trying something than they are about not trying something,” he said. “How do we encourage people to simply try more things knowing that much of what we try won’t work out?” He also cited the obstacle of loss aversion. “The emotional pain of losing... is at least twice as intense as the thrill of winning,” he said. “It makes us as individuals cautious, a little complacent, a little nervous.”

“You can’t learn and grow and change unless you develop a bigger and greater tolerance for doing things that aren’t going to work out,” Taylor concluded. “Are you learning as quickly as the world is changing?” Taylor asked in conclusion. “You can’t expect your company or your team to grow and learn and change unless you as individuals are equally committed to growing and learning and changing.”

## The Future of the Healthcare Marketplace: What's Next?

*"My advice is, unless you are very rich, or young and healthy, this is not going to work out well for you. So you have two years to prepare — either get very, very rich or very young and healthy. That's my talk in a nutshell."*

- Ian Morrison

Ian Morrison began by recounting the areas where progress is being made. Twenty million Americans received coverage as the result of the ACA. This was partly due to exchanges, and mostly through Medicaid expansion. Another sign of progress is the initiation of payment reform; he noted that MACRA passed the Senate 92 - 8. Morrison believes that volume-to-value shifts will continue, though at a slower rate.

He also expects consolidation to continue, especially at the delivery system level across the country. "Every market I go to, I see a lot of strategic plans where they have 30, 40, 50, 60 percent market share — and are using that market power to set prices in their market," he observed.

Turning to politics, Morrison cited a Harvard study identifying where people are getting their views on healthcare. It showed that positions were based not on evidence but on attitudes toward the role of government. Respondents who thought that government didn't belong in healthcare viewed the ACA unfavorably; those who believed that government should play a role thought the ACA was doing reasonably well. "Trump voters hate Obamacare — except for the things that are in Obamacare," he said. "They actually like all of them, apart from the individual mandate."

As recently as summer 2016, Morrison and his colleagues identified a number of likely changes to the ACA. These included ending the mandate, eliminating the "Cadillac insurance tax," establishing state pre-existing risk pools, cutting the subsidies, making states more responsible for determining Medicaid spending, and reducing insurance regulation. Given that the details of the Ryan bill were just beginning to appear in the press at the time of the Symposium, Morrison identified Republican reform themes such as making consumers more responsible, making states more responsible, making price and quality transparent, and making insurance cheaper and more market oriented.

How would Republican reform principles make insurance cheaper — and cheaper for whom? Morrison maintained that insurance must be cheaper for young, healthy people. For older, sick people, it's going to be considerably more expensive.

"The real thing that determines premium is which humans you're covering and where do they get their care," he said. "And none of this stuff, including Obamacare, does anything about the underlying cost of the care that's being delivered."

### Ian Morrison

Ian Morrison has been scrutinizing American healthcare for more than 30 years as an author, consultant and futurist. He is a founding partner in Strategic Health Perspective, a healthcare industry forecasting service, and President Emeritus of the Institute for the Future, an independent, nonprofit research organization that helps organizations create the future they want.



As for the state high-risk pools, Morrison saw a sizeable money gap between the \$1 billion to \$3 billion proposed for such pools and the \$50 billion needed to meaningfully reduce premiums. "All these things sound okay," he said. "But you've really got to do the math."

Morrison predicted that guaranteed issuance would likely go away, returning the market to its state before ACA protections. Catastrophic claims have gone up because lifetime caps have been removed. "I'm on the advisory committee of the Stanford Children's Hospital," he said. "The CEO carries with him at all times a five-page spreadsheet that's got the 35 kids who are running current bills in excess of \$1 million at Stanford. That is the financial lifeblood of that institution as it is for Yale, UCSF, all the academic medical centers. Those high-cost cases, in the past, they'd have to eat as bad debt before lifetime caps."

So how will we pay for all this? Morrison maintained this would be the challenge facing the repeal-and-replace plan once it reached the Congressional Budget Office. He correctly foresaw an "avalanche of criticism coming from all quarters." Yet he expected the Republicans to see it through.

Morrison predicted change for those with employer-sponsored coverage. Workers' contributions to premiums and overall premiums have gone up. Costs have shifted to employees in the form of high-deductible care. As a result, about half of low-income people forgo care.

Morrison noted that over 50% of people with employer-sponsored coverage are in groups of 1,000 employees or more, which tend to be self-insured. These large employers are not contending with the double-digit increases that their employees are contending with, due to cost shifting to employees and aggressive engagement with the delivery system. But even in this sector, the number of employees covered is decreasing, due to the progressive un-affordability of healthcare.

"I live in Menlo Park, California, home of Facebook and Google," he said. "A lot of people work at Google — not a lot of people work for Google. The people cleaning the floors don't have health insurance." On the subject of providers, Morrison showed data from a recent survey of 150 hospital leaders. One-third of hospitals had no plans to take risk beyond modest shared savings and pay-for-performance arrangements. At the other end of the spectrum, only 6% of hospitals were committed to moving the majority of revenues to fully at risk within five years. Nine or 10% said they were building an ACO model that would be capable of taking risk. And about a quarter in the middle were committed to a clinical integration organization strategy for contracting with payers.

As these health systems journey toward risk, they confront what population-level analytics reveal: in any insurance pool, 5% of patients account for 50% of costs, 1% of patients account for 20% of costs and the bottom 50% account for 2% of costs. Many of the solutions look like social work, not medical care.

"The real solution in my humble opinion is we've got to redesign the way we deliver care — fundamentally redesign it so that it is sustainable financially," he concluded. "We are a long way away from doing that... but you are about to hear from some of the best people in the country who have thought about this deeply and are actually doing things that will make a difference."

## Addressing the Triple Aim — Introducing Munich Re’s Health Advisory Board

### Healthcare Coordination and Social Determinants of Health Impact

“How to make healthcare cheaper may be asking the wrong question,” Dr. Rubin began. “Social determinants of health matter.”

According to Dr. Rubin, physicians aren’t taught public health, even though social and behavioral factors affect 60% of total health. Medical schools focus only on genetics and healthcare, which affect 20% each. Understanding the significance and interplay of factors such as economic stability, physical environment, education, access to food, and community connections can provide untapped value.

As an example, Dr. Rubin described an elderly woman who is discharged with three prescriptions she can’t afford and two appointments she can’t make. “That’s noncompliance,” Dr. Rubin said. “And she winds up in your system.”

In the world of value-based care, managing by what’s code-able and billable no longer works. “How much better can we be at knee replacement?” he asked. “If we send a patient home where she’s vulnerable, social determinants are three times bigger than what we’re working on in healthcare.”

#### Jamo Rubin

Jamo Rubin is CEO of TAV Health; Founder of Medical Present Value, a contract management and revenue cycle company (now Experian Healthcare) and PTRX, a consumer-oriented pharmacy benefit manager group (now UnitedHealth Group); Co-founder of Tenzing Health, a division of Vanguard Health Systems, Cardiac Anesthesiologist; and Chairman of the Texas Biomedical Research Institute.



### Care Transitions - A Key to Improvement

Healthcare handovers are characterized by heightened vulnerability, explained Dr. Coleman. As seen through the lens of care transitions, the Triple Aim means better care for populations (with self-care as the central tenet), better care for individuals (as determined by quality and patient experience measures tied to value-based purchasing), and lower costs through improvement (as supported by readmission penalties, STAR ratings, bundled payments, ACOs, and MSPB).

“What are doctors doing for patients to prepare them for when we are not there?” Dr. Coleman asked. “How are we giving them the skills and the confidence and the tools that they’re going to be able to be successful in their own self care?”

Dr. Coleman advocates for the use of transition coaches who can create simulation experiences in the patient’s home, anticipate common problems, and encourage patient goal setting to foster motivation. Transition coaches allow patients to practice, rehearse, and role-play behaviors for upcoming situations and events.

#### Eric Coleman

Eric Coleman is Professor of Medicine and head of the Division of Health Care Policy and Research at the University of Colorado Anschutz Medical Campus; Director of the Care Transitions Program, aimed at improving quality and safety during times of care “handoffs;” and Executive Director of the Practice Change Leaders, a national program to develop, support, and expand the influence of organizational leaders who are committed to achieving transformative improvements in care for older adults.



CTI (Care Transitions Intervention), which focuses on skill transfer to promote self-care, has achieved demonstrable success with transition coaching. The CTI approach, which has been adopted by more than 1,000 health care organizations, has significantly reduced hospital readmits at milestones of 30, 90, and 180 days. CTI can serve diverse populations, including urban, rural, and even homeless. It can be used with diverse racial and ethnic backgrounds — and used by diverse faith-based organizations.

### Palliative Care Futurist: Matching Care to Our Patient's Needs

To illustrate how palliative care can benefit both the quality and the cost of care, Dr. Meier shared the story of Mr. and Mrs. B. At the time she met them, Mr. B was 88, with dementia and low back pain, and taking enough Extra Strength Tylenol to destroy his liver, without any impact on his pain. His back went out again when he was trying to stand up from the toilet, as it had on every prior occasion. Although Mrs. B called the doctor when this happened, it was after 5:00pm so all she got was a recorded message saying “If this is a medical emergency, hang up now and call 911.” It was Mr. B's fourth ER visit in two months, each prior time due to back pain and spasms upon trying to stand up from the couch or the toilet, and once accompanied by a fall, and constipation. And both Mr. and Mrs. B were visibly overwhelmed. In each of the prior 3 ER visits, MR. B was admitted to the hospital because no-one was comfortable sending him home in so much pain and discomfort and no-one was comfortable trying a low dose of morphine on such a frail elderly person with cognitive impairment. Each of these hospital stays only made matters worse- he developed a hospital-acquired infection from a bladder catheter; he became more confused; and he developed incontinence from being confined to a bed.

Unlike any of the multiple doctors Mr. B had seen on these prior ER and hospital stays, Dr. Meier was willing to try a low dose of morphine for the pain. Twenty minutes after his second dose, he was relaxed and flirting with his nurses. Dr. Meier spent an hour in the nurses' lunchroom with Mrs. B, to ensure that she was able to safely and accurately administer the correct dose of the liquid morphine; that she knew who to call if the pain did not improve; and that she understood the necessity of a daily laxative while using opioids. Then she sent the couple home by taxi and instructed the visiting doctors House Calls program to follow up with them in the morning.

The next day, the visiting doctor's team found loose throw rugs, no grab bars or elevated toilet seat in the bathroom, and a fridge full of old Chinese takeout. After intervention, Mr. and Mrs. B were reconnected with their church, which had a friendly visitor program for shut-ins and started sending high school students and congregation members to the house 3 afternoons a week to give Mrs. B a break. Meals on Wheels were arranged. Their out-of-state daughter started ordering groceries online for delivery. Grab bars were installed and Mr. B got a new armchair that made it easier for him to stand up.

In the three years since intervention, Mr. B has had no 911 calls, ER visits, or hospitalizations. “How do we make this the standard of care?” Dr. Meier asked.

#### Diane E. Meier

Diane E. Meier is a geriatrician and palliative care specialist. She is Director of the Center to Advance Palliative Care (CAPC.org); Vice-Chair for Public Policy, Professor of Geriatrics and Palliative Medicine, and Catherine Gaisman Professor of Medical Ethics, and Founder of the Hertzberg Palliative Care Institute, all at the Icahn School of Medicine at Mount Sinai Hospital.



Of the costliest 5% of patients, half of them are over 65 with dementia, functional impairment and an overwhelmed caregiver, Dr. Meier explained. Dementia and cognitive impairments are huge predictors of risk due to caregiver stress. Preventing crises through palliative care, as in the case of Mr. B., can improve quality of life and quality of care so that reliance on after hours emergency care is no longer necessary.

Effective palliative care is not cheap, Dr. Meier stressed. However, by targeting the highest-risk patients, ensuring proactive symptom and medical management, and supporting patients' families, palliative care delivers results that have increasingly led payors to invest in new benefit designs, provider training, and assurance that high need members have reliable access to high quality palliative care services. See [https://media.capc.org/filer\\_public/Of/2f/Of2f8662-15cf-4680-baa8-215dd97fbde6/payer-provider toolkit-2015.pdf](https://media.capc.org/filer_public/Of/2f/Of2f8662-15cf-4680-baa8-215dd97fbde6/payer-provider toolkit-2015.pdf) and <https://www.capc.org/payers/payer-provider-partnerships/> for more information.



## Financing Healthcare – Ways to Positively Impact Both Health and Cost

*“When we insure people, especially people who can’t pay for these drugs, we’re sending a very clear signal — to drug manufacturers, device manufacturers, and hospitals — that, if you build it, someone will pay for it.”*

- Amitabh Chandra

Professor Chandra gave us an economist’s perspective on the three healthcare challenges that all industrialized nations struggle with: innovation, insurance, and payment. He maintains that innovation is a challenge because exciting medical advances — and the cost of these treatments — drive demand for health insurance. He cited the examples of Atripla, which dramatically simplifies the regimen for HIV+ patients to one pill per day; robotic surgery, which yields mixed results; and Sovaldi, an expensive 12-week pill regimen that kills hepatitis C in genotype 1. The reasons premiums increase, according to Chandra, is not because we’re getting sicker but because healthcare can do more things for people.

Biopharma innovation represents \$150 billion in 2017 R&D spending, not counting an additional 30% from the NIH and other government spending. There are currently 6,234 active molecules in different stages of development. More than one in four of these are oncology drugs. In the next few years, insurance will be asked to pay for them. This year, seven new regimens will be launched. By 2021, 34 new regimens are expected.

The launch price of a new oncology drug is about \$100,000. Most come down over time but, from a risk management point of view, demand for insurance will rise and so will premiums. The financial risk of being exposed to one of these therapies will need to be managed.

Another major category of pharmaceutical innovation is cognition enhancers for Alzheimer’s. For Alzheimer’s drugs in preclinical discovery, the failure rate is close to 99.5%. “Alzheimer’s is referred to as the graveyard of biopharma companies because most Alzheimer’s drugs fail,” he said. “If there is a company that actually delivers the drug, we know that drug will be colossally priced... simply because of the failure rates that these companies were up against.”

The wide prevalence of Alzheimer’s means that there will be strong demand, which will mean very high utilization as well as very high prices.

Pharmaceutical innovation is also focused on rare and orphan diseases. Professor Chandra summarized the unintended effects of the Orphan Drug Act, which was created in 1983 to encourage the development of drugs for small populations. In 2015, 41 orphan drugs were approved, in contrast to two approved in 1984. This is partially due to better science and the advent of precision medicine. Populations with non-orphan diseases, like cystic fibrosis, can be divided by biomarkers, which allow

### Amitabh Chandra, PhD

Amitabh Chandra is the Malcolm Weiner Professor of Social Policy and Director of Health Policy Research at the Harvard Kennedy School of Government. He is a member of the Congressional Budget Office’s Panel of Health Advisors. He serves as a Research Associate at the IZA Institute in Bonn, Germany and at the National Bureau of Economic Research.



manufacturers to qualify for orphan designation. Today, orphan drugs represent 15% of pharmaceutical sales — and their prices are high because companies are legally protected from generic competition. For those who are underwriting premiums, the rise in orphan designation means that premiums will rise as well.

The CRISPR/CAS9 technique of removing and replacing disease-causing segments of DNA also illustrates how innovation is driving cost. Editas is working on this as a solution for patients suffering from Usher syndrome, which affects only about 25 patients per year. Usher syndrome usually reveals itself at age 5 and claims the lives of patients by or before age 10. If Editas succeeds in developing this cure, patients can live as long as the rest of us. What should Editas charge for that drug? Does the value of creating 80 years of life justify a cost of \$5 million?

No single employer will be able to shoulder the insurance risk of such therapies. “Looking forward, I think that the employer pools are going to have to be much bigger or the business of reinsurance much stronger to allow access,” Chandra said. “This class of therapies is only a few years away from arriving. And when they do arrive, the price will be colossal, not because anything bad has happened but because these drugs could actually be truly valuable drugs. So we should be thinking ahead about the insurance products that we’re going bring to market or the insurance reforms that we might need.”

Chandra's second challenge, insurance, is tied to the passage of the ACA. The promise of the ACA was that it would save money — the newly insured would have access to primary care and drugs, and they would be less likely to use the emergency room. However Chandra cited a randomized controlled trial conducted by Harvard and MIT that found otherwise. Giving people health insurance decreased medical debt. But it also meant they used 30% more healthcare services and 15% more drugs. Although there was an increase in preventive care, spending went up by about \$1,200 per person per year and emergency room use increased by 40%.

The health insurance expansion also created exchanges where, for the first time, insurers were competing with each other. Although recent national headlines have focused on the 46% of large insurers that were leaving the exchanges, there were also quiet successes. "They're not like United, like Aetna," he said. "They're companies like Centene and Molina, that actually figured out how to do behavioral health."

High-deductible health plans were supposed to give consumers some skin in the game. Comparing consumers in high-deductible plans to those who are not makes it seem as though HDHPs are successful. However individuals who choose these plans tend to be young and healthy. Chandra cited a study where a large employer moved employees from a generous PPO plan to a HDHP. The study found that HDHPs saved about 12%-15% on spending — but for undesirable reasons. Patients were cutting back indiscriminately on care. Half of the savings came from the sickest patients. And, even though employees had access to a price transparency tool, only one percent took advantage of it. "I think [HDHPs] do reduce healthcare spending," he said. "But not in a way that is oriented with increasing value. People are cutting back out of fear. They don't know where they are in this very complicated plan. They don't know the difference between copay, coinsurance, out of pocket, and deductible."

On the subject of payment, Chandra's third challenge, he assessed the success of payment reform. The advent of ACOs (Accountable Care Organizations), as a step toward capitation, was intended to create large provider entities that would be exposed to two-sided risk. One in 10 Americans is now in an ACO. Are they saving us money? Chandra cited a study by doctors and economists at the Harvard Medical School published in the *New England Journal of Medicine*. The studies show that ACOs save only about 1.2% relative to the non-ACO population.

These modest savings show that ACOs alone won't deliver the savings we need. Chandra sees more promise in bundled payments, aka physician expert systems. When United tried bundled payments for oncology, they drove spending down by 30% compared to fee-for-service, even though doctors used more drugs. The reduction was the result of eliminating unnecessary surgeries.

Bundled payments provide a quick way to introduce providers to two-sided risk. But their success depends on providers who know their costs, rich data on long-term outcomes, patients who stay in place year round, the scientific credibility to walk away from drugs that do not work, and the ability of providers to manage risk.

"We don't know how to do this. Let's be honest," he said. "We're going to need a lot of humility and a lot of courage."

## Healthcare, Remixed

*"This is a calling, where every day, you get to be with people when they are at their most vulnerable. And in that room, in that sacred space, you make yourself vulnerable in return."*

-Zubin Damania

Dr. Damania opened his presentation by performing "Readmission," his parody of R. Kelly's "Ignition." The video of this song garnered more than 8 million views.

His story illustrated how his upbringing molded him into an idealistic young doctor — and how disillusionment with the system transformed him into someone who was "clicking boxes in the Electronic Health Records (EHR) to please the bean counters." He recounted how his childhood strengths, empathy and a sense of humor, helped him to survive the pitfalls of adolescent nerdiness. He confessed that the hero of his adolescence was *Weird Al*. And he recalled visiting his father's clinic and watching him treat Medicaid patients.

"I fell in love with this," he said. "It was Health 1.0. It was this beautiful expression of a human relationship unfettered by evidence, cost controls, anything beyond his experience."

His father didn't want him to go into primary care. He wanted his son to pursue the money and prestige of a specialist. But Dr. Damania wanted to use his empathy and humor to "change the world." So he went to medical school at UCSF, where his ideals clashed with the Socratic teaching style of the institution. His first two years consisted of accepting without criticism the wisdom of the teaching physicians. The second two years were about "instilling this fealty to authority," he said. "You had to kiss the ring of the authority figure so that one day you will be the ring that is kissed. That's the bargain that you make."

This was hardly an incubator for innovative thinking, or team-based care, or managing risks across populations in an ACO environment. Once he emerged from medical school, his hopes of practicing medicine as his father had were hampered by Health 2.0. The cottage industry style of his father's practice was now eclipsed by the principles of business.

"What happens when you take a distinctly human enterprise and you try to replace the human element with algorithms and technology?" he asked. "You treat both physician and patient as commodities. And you put an electronic health record on a system that now, kind of like the self-checkout at the grocery store, creates more work for the same outcome."

How can Health 2.0 be fixed? Dr. Damania's own turnaround began when his four-year-old daughter told him she wanted to be a doctor so she could help people just like he did. But he couldn't encourage her — he was burned out and miserable. This early midlife crisis led him to realize his true purpose: to "create *Weird Al*-style parody videos that educate and entertain and allow me to express the frustration that both providers and patients feel in Health 2.0."

### Zubin Damania

Zubin Damania, aka ZDoggMD, is an internist and founder of Turntable Health, an innovative healthcare startup. During his decade-long career at Stanford, he won clinical teaching awards and maintained a shadow career performing stand-up comedy for medical audiences. His videos, which educate providers and patients while satirizing the dysfunctions of the healthcare system, have gone viral with more than 130 million views on Facebook and YouTube.



The movement he began when his alter ego, ZDoggMD, grew into a phenomenon bigger than he could have imagined. With his new platform, he saw an opportunity to leverage a preventive message. This gave rise to his Eminem-and-Rihanna-style rap parody about end-of-life care called "Ain't the Way to Die."

ZDoggMD developed a following on Facebook. He received invitations to potlucks in nursing wards because medical professionals wanted to talk with him about changing the system. Then Zappos CEO Tony Hsieh recruited him for an ambitious urban revitalization initiative in downtown Las Vegas.

The result was Turntable Health, which focused on preventive care, patient satisfaction, and provider satisfaction. Dr. Damania gathered a team of health coaches, doctors and licensed clinical social workers. Together they designed a clinic from the ground up. Patients (or their health systems or union plans) paid an out-of-pocket PMPM of \$80 for unlimited, all-you-can-treat, no-copay access to a buffet of preventive medicine. They offered meditation groups where patients could form connections with each other and lean on each other for support. Health coaches spent a minimum of 30 minutes per visit with patients, doing motivational interviewing and translating the doctor's instructions into attainable tasks.

Every Turntable exam room featured an LED screen so patients could view their health record as it was being created. Healthy patients were seen four times per year. More seriously ill patients were seen as frequently as every day. Within one year, Turntable decreased Emergency Room utilization in its population by 50%, compared to matched controls.

“With an \$80 PMPM and a relatively sick, Medicaid-type population, we found a 12% year-over-year savings. And most of that savings came from ER/Urgent Care admission savings” he said. “We might have inadvertently built Health 3.0 — at least a version of it.”

Unfortunately, the clinic closed because their partner, Nevada Health Coop, went bankrupt. But they know the model works.

“We make this an interpretive, shared decision-making model, which means you hold the patient accountable,” he said. “They need to release the victimhood of illness. They need to be an active participant in their care. And if they don’t, you know what we do? We fire them from the clinic.”

“In 3.0, we take the best aspects of 2.0: technology that actually leverages the human relationship, evidence-based medicine guidelines where we’re evidence-empowered but not evidence-enslaved,” he continued. “If we build Health 3.0 now, we can control the costs and make it humane for both providers and patients.”

He concluded his presentation with a heartfelt performance of “Seven Years,” a parody inspired by his dad, his daughters, and his calling.