HEARTLAND SUMMIT

2018 Recap

PiperJaffray®

To our valued clients, partners and friends:

For each of the past six years, Piper Jaffray has been pleased to assemble and host the leading voices in healthcare for the Heartland Summit. In this short period, the Heartland Summit has become the premier event for CEOs and healthcare leaders to gather, connect and discuss the biggest opportunities and most significant issues impacting the industry.

The continuity of the Heartland Summit and the consistent participation of an exceptional group of CEOs has allowed us to mark progress and change along many dimensions. These themes – progress and change – served as the inspiration for the 2018 Heartland Summit. We have seen mega-mergers change the competitive landscape; innovations in biotechnology change treatment paradigms; cutting-edge technologies change data collection and analytics; risk-sharing and regulatory interventions change incentives; and managerial transitions change the names on the desks in C-suites.

We would like to thank all of the 43 leaders that contributed their voices to the discussions and debates. In particular, we feel very fortunate to have the support of four of the most respected names in healthcare, who collaborate with Piper Jaffray towards our shared vision: Bob Bradway of Amgen, Omar Ishrak of Medtronic, John Noseworthy of Mayo Clinic and Dave Wichmann of UnitedHealth. We are grateful for the relationships that we continue to develop with these outstanding leaders, and the many other participants at the Heartland Summit. We have also watched significant partnerships emerge among the attendees of the Heartland Summit, and we hope our role and ability to help foster these important connections will be one of the most impactful legacies of the event.

The issues impacting healthcare continue to evolve, as does the need for constructive dialogue and partnership. To that end, we at Piper Jaffray will continue to play our role by hosting the seventh Heartland Summit on June 20, 2019 in Minneapolis.

To all who attended and participated in the 2018 Heartland Summit – we thank you for your contribution and efforts. We look forward to seeing you all next year.

Regards,

J.P. Peltier
Global Group Head
Healthcare Investment Banking

Jon Salveson
Vice Chairman
Investment Banking

Matt Hemsley
Managing Director
Chairman, Heartland Summit

Piper Jaffray Sixth Annual Heartland Summit

We are told that nothing in this world is certain, except death and taxes. In the healthcare landscape, “change” could rightfully be added to that list of certainties. Mega-mergers are changing the competitive landscape; innovations in biotechnology are changing treatment paradigms; cutting-edge technologies are changing data collection and analytics; risk-sharing and regulatory interventions are changing incentives and consumer engagement; and managerial transitions are changing the line-up of players leading the industry, to name a few. The 2018 Heartland Summit will explore some of the areas where the instruments of change are having the most profound impact on healthcare – both good and bad.

2018 Heartland Summit Panels

- Two CEOs Sat Down for a Cup of Coffee…
- The Intel Inside Us
- Is Silicon Valley Moving to the Healthcare Alley?
- How Med-Tech is Moving to Value-Based Medicine
- Changing and Diversifying Business Models for Sustained Success
- Lowering the Cost of Drugs by Lowering the Cost of Development
- Taking Back the Lead in Advancing access and Affordability in Pharma
- Consumer Experience Outside the Care Setting
- A Shifting Line of Sight on the Site of Service
- Scaling for Relevance in the Amazon Age
- The Institutional Investor Perspective on Innovation
- The Ripple Effects of Healthcare Consolidation
- Navigating Change from the Outside-In
- Transition from the C-Suite

Opening Remarks

Omar Ishrak, Ph.D., Chairman & CEO, Medtronic plc

The Piper Jaffray Heartland Summit kicked off with an address by **Medtronic plc chairman & CEO, Omar Ishrak, Ph.D.** Ishrak commenced by welcoming the attendees to Minneapolis as it is, in many ways, the 'heartland' for medical technology and healthcare.

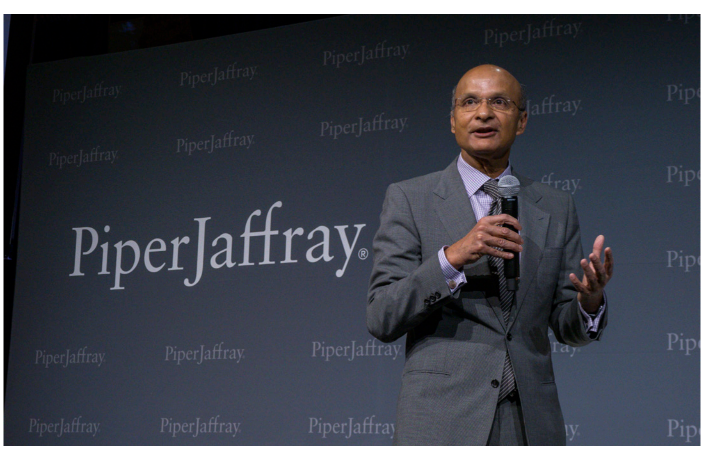
Ishrak, who is a co-sponsor of the Heartland Summit and has participated for several years, spoke on value-based healthcare. He defined 'value' in the context of value-based healthcare as being outcomes over cost or "what cost does it take to reach a certain outcome." He noted that the very definition isn't just a payment model, but a methodology with which one can make trade-offs and a proposition that beckons collaboration from the broader market to improve the healthcare experience. He acknowledged some of the challenges and issues that the current fee-for-service payment model brings to the market and implored attendees to use collaboration to drive change. "We have to shift from a payment model, eventually over time, to one that makes us all accountable to create value, rather than accountable to provide a service," he contended. "That's easier said than done. It requires a change across the board, it requires a change in attitude, and it requires all of us to work together."

Ishrak also gave attendees a rare glimpse into a key element of Medtronic's mission – one that was instilled in the company's culture since its inception, one that is little known outside the company, and one that is beyond the publicly shared statement to "use technology to alleviate pain, restore health and extend life" – which is, "We as a company must make a fair profit, and use that profit to fund research and development." Ishrak emphasized the word 'fair,' which he defined as getting the appropriate value for what you sell. He continued by stating that, "and that's the concept of value-based healthcare."

"We have to shift from a payment model [...] to one that makes us all accountable to create value – rather than accountable to provide a service."

– OMAR ISHRAK, PH.D., CHAIRMAN & CEO, MEDTRONIC PLC

Ishrak's remarks set an important tone for the day as various leaders, innovators and investors discussed not only the various challenges and opportunities that faces the industry, but also how they can collaborate to drive change, lower cost and improve the healthcare experience.



Omar Ishrak, Ph.D., Medtronic plc

Omar Ishrak, Ph.D., Medtronic plc

Two CEOs Sat Down for a Cup of Coffee…

One leads the largest healthcare company in the world, the other the largest network provider in the world. While seemingly disparate, these CEOs are increasingly seeing their worlds converge as consumerism makes healthcare more personal and technology makes the world smaller. We eavesdrop as Chuck and Dave catch up over coffee.

Panelists: Chuck Robbins, Chairman & CEO, Cisco Systems, Inc.
David Wichmann, CEO, UnitedHealth Group, Inc.

In the age of information overload, collaboration between technology and healthcare is more important than ever to drive improved outcomes and reduce costs. The rise of technology has driven consumerism to new frontiers. In this discussion, attendees were given a rare glimpse of a conversation between two CEOs from two different industries whose companies have worked together for decades, and experienced first-hand how strategic collaboration can drive positive change in the healthcare setting.

Picking up where Ishrak's opening remarks left off, **Dave Wichmann, CEO of UnitedHealth Group, Inc.**, furthered the topic of value–based healthcare by discussing the ways in which they can apply information and technology to enable the healthcare system to work substantially better than it currently does with a focus on lowering cost and improving patient experience. During the conversation Wichmann stated, "A lot of people think about technology as loud and front and center […] and that it is the solution, but the reality is that information and technology properly applied in healthcare enables – it enables the physician, it enables the consumer, it enables the health[care] system more broadly to perform at a higher level."

To supplement the conversation, **Chuck Robbins, chairman & CEO of Cisco Systems, Inc.**, discussed Cisco's new cloud partnership with Google and how it relates to healthcare. Robbins discussed how the advent of information and cloud computing has ironically made it more difficult for customers to navigate through ever-changing IT infrastructures. Robbins noted that customers now want to "develop modern, next-generation applications, but they want the flexibility to then run those applications wherever they would like to run them." Previously, this was greatly limited by the location and way the application was written. The partnership with Google will grant companies this flexibility and give them all the efficiencies and capabilities of the cloud, while simultaneously maintaining the data under their control. This is especially applicable to the healthcare setting as there is a heightened need to run the most effective and modern technology while maintaining data privacy.

Compared to most industries, healthcare has traditionally been slower to adopt new technologies and ideas. Robbins provided Heartland Summit attendees with the perspective of a healthcare outsider who serves customers in a broad array of industries. He discussed how the healthcare industry compares to others in terms of adopting new technologies, stating that, "in general, we've seen a significant move in the healthcare industry relative to how you think about technology." Robbins noted that Cisco has seen a significant shift in healthcare companies being more aggressive in their use and adoption of technology.

Chuck Robbins, Cisco Systems, Inc.

Chuck Robbins, Cisco Systems, Inc.; David Wichmann, UnitedHealth Group, Inc.

Bringing the conversation back to value-based healthcare, Wichmann discussed UnitedHealth Group's culture of technology adoption – one that was established long ago with its three core competencies: strategy of information, application of technology and bringing clinical insights to the marketplace. This strategy has been an enabler in UnitedHealth Group's deployment and advancement of healthcare. Wichmann then discussed how this enabling element is important to the execution of value–based designs, which he described as "neat in concept, but in practice are actually quite difficult […] Two of the keys to success in a value–based design are proper information and also applying technology in a practical way to enable consumers, as well as healthcare providers, to be able to achieve a certain level of objectives."

From Wichmann's perspective as the leader of UnitedHealth Group, the benefits of technology in the healthcare setting are noteworthy. By properly organizing and utilizing data, he believes that health system performance can be improved. This can be done by developing individual health records for patients and caregivers to optimize the services provided and improve outcomes. Beyond this, the information can be used for value-based incentive alignments, for machine learning purposes and possibly aid in research. After outlining the benefits of technology in the healthcare setting, Wichmann said to expect to see UnitedHealth Group to continue to move out digitally around consumer engagement in order to support value-based design.

Wichmann and Robbins then discussed the concept of their organizations both being enablers. Robbins stated that Cisco is always behind the scenes and that "if we didn't do what we do, nobody else could do what they do, because we build the foundation for all of this [referring to…]." Wichmann then discussed how UnitedHealth Group is similar in that, "we are trying to bring technologies that really sit inside the practice flow of the physician's office, as opposed to something that was built for us. It's essential that whatever it is that we develop that we're not building it for UnitedHealth Group, but we're building it for the physician so that they can serve the patients better; or we're building it for the consumer so that they can more intuitively select their doctor from those that have highest quality and lowest cost."

"Two of the keys to success in a value-based design are proper information and also applying technology in a practical way to enable consumers, as well as healthcare providers to be able to achieve a certain level of objectives."

– DAVID WICHMANN, CEO, UNITEDHEALTH GROUP, INC.

Wichmann then asked what Robbins believes is the next big thing, and Robbins described how Cisco is fundamentally on a journey to connect everything. His vision of the future is that once everything is connected and generating data, technology will be able to synthesize all the data at a specific moment where a combination of the data has value. Robbins stated that the healthcare industry is nearly at this point: "With all the equipment and capabilities and technologies and the patient data coming together – when it's all connected – you're going to have a level of visibility and a level of understanding based on various data sources that we haven't had in the past. And I think that is the big win if we can make that happen."

In closing, Wichmann shared a brief video about a new UnitedHealth Group cancer center underway in Las Vegas that uses technology created in collaboration with Cisco. The video highlighted how the use of technology will dramatically change the consumer experience, how valuable partnership is in healthcare, and how technology will play a role in improving the patient experience, improving outcomes and lowering costs.

Chuck Robbins, Cisco Systems, Inc.; David Wichmann, UnitedHealth Group, Inc.

David Wichmann, UnitedHealth Group, Inc.

The Intel Inside Us

Wearable, implantable and digestible devices are transforming the consumer experience and helping to deliver “smarter” healthcare, but also introducing the possibility for welcome (and unwelcome) monitoring, and even intervention of our personal data and activities. Where is the right balance between these conflicting dynamics, and what will the future look like as humans become increasingly physically integrated with hardware?

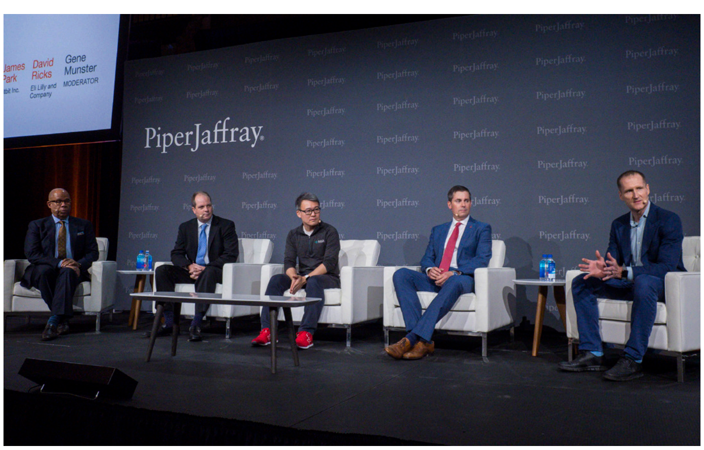
Panelists: William Carson, M.D., President & CEO, Otsuka Pharmaceutical Development & Commercialization, Inc.
Michael (Mick) Farrell, CEO, ResMed Inc.
James Park, Chairman, CEO, President & Co-Founder, Fitbit Inc.
David Ricks, Chairman & CEO, Eli Lilly and Company

Moderator: Gene Munster, Founder & Partner, Loup Ventures; Former Senior Research Analyst, Piper Jaffray

Connected health technology is poised to disrupt the healthcare industry as we are increasingly able to share health information through an accessible ‘cloud.’ With a central repository of data contributed by devices like wearables, the remote monitoring of patients and access to health records has never been easier and aids in providing quicker diagnosis and treatment of conditions. However, as the usage of smartphones, smartwatches and apps continue to accelerate, the need to protect privacy needs to be at the forefront.

The integration of technology into the healthcare field is revolutionizing the standard of care today and is positioned to do so in the future. When asked about a wearable/digestible that he is excited about today, **William Carson, M.D., president & CEO of Otsuka Pharmaceutical Development & Commercialization, Inc.**, highlighted Otsuka and Proteus’s ABILIFY MYCITE®, a digital medicine system. A sensor the size of a grain of sand activates when in contact with stomach fluid and communicates to a wearable sensor, called the MYCITE Patch. The MYCITE Patch detects and records the date and time of the ingestion of the tablet, as well as certain physiological data such as activity level, and communicates this and the tablet ingestion data to the MYCITE APP on a mobile device. The app allows individuals to track medication injection, daily activity, rest, mood and other objectives. Carson then elaborated on what would disrupt the digestible space in the future, stating, “Five years from now, we will have some sort of device which uses gamification as well as AI.”

Michael (Mick) Farrell, CEO of ResMed Inc. shared his enthusiasm about a non-wearable device? his consumer division launched that tracks breathing patterns and sleep architecture using a smartphone’s microphone and speakers. “We see this as the next generation of helping people understand that one-third of your life where in REM sleep is where you regenerate your mind and in slow wave sleep you regenerate your body, yet not enough people get the right sleep or deep sleep.” When discussing his outlook for the future, he states, “In five years, the future is 5 billion 100% cloud-connected medical devices on people’s bedside tables treating their sleep apnea and sleep



William Carson, M.D., Otsuka Pharmaceutical Development & Commercialization, Inc.; Michael (Mick) Farrell, ResMed Inc.; James Park, Fitbit Inc.; David Ricks, Eli Lilly and Company; Gene Munster, Loup Ventures

William Carson, M.D., Otsuka Pharmaceutical Development & Commercialization, Inc.; Michael (Mick) Farrell, ResMed Inc.; James Park, Fitbit Inc.

suffocation." Farrell believes that this is the start of the digital health ecosystem.

James Park, chairman, CEO, president & co-founder of Fitbit Inc. believes that people do not realize how substantial consumer wearables are today. Since its inception, Fitbit has shipped more than 80 million devices, amounting to roughly 15 million annually. Park believes that the evolution of sensor technology and the rise of pervasive mobile devices is causing the paradigm shift. Last year, Fitbit launched a relative SPO2 sensor for estimating blood oxygen levels, which opens the potential for tracking important new indicators about wearer's health, such as sleep apnea. Park believes that in the future, electrical signal acquisition could help detect sleep apnea and atrial fibrillation (AFib) in which the company has already completed two clinical studies. "At some point, I believe wearables will be considered a must-have […] Consumer patients would be crazy to leave their house without some type of wearable that is constantly monitoring them and intervening at the right time," remarked Park on his perspective of the future.

David Ricks, chairman & CEO of Eli Lilly and Company stated that his company was currently not in the wearables market, but that would change next year. Eli Lilly has been developing a wearable, automated insulin-delivery device designed to reduce the decision-making and guesswork of conventional insulin injections. They are also developing a "smart pen" injection device that can wirelessly transmit dosing information to a patient's phone to ensure proper dosing. Ricks believes the end goal is to deliver a completely integrated system that allows patients to see their doctor less frequently and maintain an improved health status. "We ship 250 million devices a year right now and none of them have sensor technology or automation. We have an automatic entry point to start including these things within products we are already shipping," said Ricks.

"At some point, I believe wearables will be considered a must-have […] Consumer patients would be crazy to leave their house without some type of wearable that is constantly monitoring them and intervening at the right time."

– JAMES PARK, CHAIRMAN, CEO, PRESIDENT & CO-FOUNDER, FITBIT INC.

Despite widespread innovation in the industry, driving consumer adoption remains a challenge. Carson believes that a close connection between the patient and doctor may help reduce the challenge. As wearables become more integrated with treatment, healthcare professionals will look to the data collected on a daily basis, rather than an annual basis, ultimately shifting the healthcare model from an encounter-based system to one of continuous care. Doctors will be more involved in a patient's recovery and overall well-being. ResMed made a decision to have 100% cloud connectivity in every single device they sell. "You make it frictionless, you make it so the consumer/patient has to do nothing to get their data," says Farrell. Such connected devices allow patients to better monitor their health, which along with smartphone apps like ResMed's MyAir™, has helped to improve adherence to treatment schedules from 50% to 87%.

Park believes tech companies can drive adoption through direct advertising, retail channel partners, employers and governments. "I can definitely predict that within the next 12–24 months, a lot of these large retail partners are going to have a very focused healthcare strategy," Park stated. "Retailers want to be perceived – especially in the age of Amazon – that they are providing a higher level of value than just displaying products on the shelf. They want to integrate together a lot of different pieces into a cohesive solution." Employers are increasingly looking for ways to lower their healthcare costs and promoting these technologies to their employee base can help. Furthermore, governments may play a role in driving adoption by enforcing the use of wearables. Ricks believes that payer push can help drive adoption through economic differences for the patient and by making the product easier or better than the non-automated systems.

The panel's last topic of discussion revolved around data and who owns it. Alongside the ever-increasing news about government-backed surveillance programs and data breaches, consumers are becoming increasingly concerned about who has access to their personal data. Carson says the patient has to consent in order to have the data shared. However, payers would only have access to anonymized aggregate data and not at the patient level. Patients should also have the opportunity to opt out. Farrell reiterated that patients own the data and that this feature needs to be emphasized. When asked about how Fitbit shares data, Parks said, "The consumer chooses to select who to share data with [third partners or health plans or another consumer company, etc.], but it's pretty clear what data is being shared." Ricks believes that data when given consent should not be sold or advertised, but used to improve the lives and health of the public.

From a medical standpoint, wearable, implantable and digestible devices offer promising transformation for the healthcare industry, particularly as patient care devices. However, the evolving product segment must mitigate the challenges of adoption and data privacy to ensure widespread proliferation.

Is Silicon Valley Moving to the Healthcare Alley?

It accounts for nearly 20% of the economy, is growing at double the rate of GDP, has little exposure to discretionary spending, is highly fragmented and is susceptible to disruptive innovations. And yet, the perception of Silicon Valley as the greatest source of VC investment prevails. What has prevented the healthcare sector from being the biggest draw for VC investment, and will recent successes bode well for a future generation of VC-backed public companies across biotech, devices and HCIT?

Panelists: Kirk Nielsen, Managing Director, Versant Venture Management, LLC
Sami Inkinen, Founder & CEO, Virta Health, Inc.
Drew Oetting, Founding Partner, 8VC

Moderator: Jim Douglas, Managing Director, Healthcare Investment Banking, Piper Jaffray

"There is such a difference in the amount of capital available to tech companies than life sciences companies, but I think that does change, and one of the ways it does change is you get some very successful companies, and success begets success"

– KIRK NIELSEN, MANAGING DIRECTOR, VERSANT VENTURE MANAGEMENT, LLC

Total capital raised by private technology companies is nearly 6x the total capital raised by private healthcare companies. As a result, technology companies make up nearly two-thirds of the current "unicorn" company landscape, while healthcare companies represent only 10%. These numbers make it undeniably clear that tech is still king in Silicon Valley. However, our panel believes that healthcare is gaining momentum and as venture capitalists gain industry knowledge, business model expertise and comfort with return timelines and expectations, unicorn success stories will begin to unfold. These success stories will catalyze further healthcare funds flow and open the floodgates for private capital in the healthcare sector in the Valley and beyond.

The panel began with a discussion assessing why the disparity between tech and healthcare funding exists. **Sami Inkinen, founder and CEO of Virta Health, Inc.** (and co-founder of real estate website Trulia, acquired by Zillow) noted that the funding gap is partially attributable to venture capitalist hesitancy to invest in healthcare due to the human capital intensive cost structure and high level of regulation. "The messiness of having people involved as opposed to lines of code and the regulation, the fact that as a start-up you may need to deal with very large corporations, whether that's top-line health insurers or others," Inkinen elaborated.

From an investor perspective, **Kirk Nielsen, managing director at Versant Venture Management, LLC**, added that venture

Kirk Nielsen, Versant Venture Management, LLC

Sami Inkinen, Virta Health, Inc.; Kirk Nielsen, Versant Venture Management, LLC; Drew Oetting, 8VC; Jim Douglas, Piper Jaffray capitalists are also cautious of the longer return timelines in healthcare as opposed to technology. In general, healthcare business models lead to longer investment horizons, pushing exits and returns further down the road. "You can get to a great outcome in healthcare, it just takes a long time," Nielsen remarked. "It is quite important to align management around, 'what is the objective here?' and try to drive to a finish line that is a reasonable point in the future." Timeline alignment between venture capital firms and management, however, is only one part of the equation, **Drew Oetting, founding partner of 8VC**, explained. "We swept for investors in our funds that we believe are interested in indefinite interest in companies," Oetting stated, referring to setting exit timeline expectations for limited partners as well.

Despite the barriers our panel mentioned, venture capitalists are still eager to gain exposure to the healthcare sector. In fact, our panel believes that the unicorns seen in technology will become more commonplace in healthcare. Nielsen expounded, "There is such a difference in the amount of capital available to tech companies than to life sciences companies, but I think that does change, and one of the ways it does change is you get some very successful companies, and success begets success."

One of the ways Versant has fostered successful investments is by finding other pools of capital, such as large pharmaceutical and biotechnology companies, to partner with on early-stage investments. Not only do these partners provide capital, but they provide validation for the science behind a healthcare company's programs, which in turn, generates further investor confidence in a successful and timely exit.

Still, the "build to buy" model Nielsen describes, requires a lot of trust in the knowledge held not only at the corporate partner level, but at the investor level as well. Oetting commented, "We really pursue an investor base in our fund that can give us the corporate or industry perspective on things, and we try to teach our companies to engage with companies early." Adding to Oetting's remarks from a founder's perspective, Inkinen added, "I was conscious that my early investors are the individuals who can teach me and teach our team and surround ourselves with advisors and team members who understand healthcare."

As healthcare venture capital funding finds early successes through expanded knowledge, partnership, and trust, more success and, consequently, more capital will follow. But the success stories will not be limited to just Silicon Valley or Cambridge. In fact, Nielsen mentioned that "there is data showing that the further a company is away from a venture capitalist the better off it is, [and as a result] we have a business model, especially in biotechnology, of going to these underserved places where there is great science and very little in the way of company creation capability – it has been like a kid in a candy store in terms of picking out great scientists and building companies around them." Oetting echoed Nielsen's excitement around the development of opportunities outside of the hubs, stating, "I have visited 25 places outside of the Bay Area this year and I plan on visiting 25 more – that is the biggest opportunity."

Sami Inkinen, Virta Health, Inc.

Drew Oetting, 8VC

How Med-Tech is Moving to Value-Based Medicine

While the pharma sector has been engaged in a highly public effort to demonstrate the value and cost effectiveness of new therapeutics, the medical device sector has quietly been advancing its own initiatives around value-based medicine. At the core of this is 'innovation'. Yet, without simple and transparent approval and reimbursement practices, the corporate and venture capital communities are even more weary to invest in potentially game-changing innovations – the kind that have improved millions of lives and flattened the cost-curve in chronic care. How can the med-tech industry partner with the government and the private sector to promote and implement reforms that will help control costs through innovation, adoption and utilization?

Panelists: Vincent Forlenza, Chairman & CEO, Becton, Dickson and Company
Omar Ishrak, Ph.D., Chairman & CEO, Medtronic plc
Nadim Yared, President & CEO, CVRx Inc.; Chairman of the Board, AdvaMed

Moderator: Scott Whitaker, President & CEO, Advanced Medical Technology Association

As society continues to grapple with the ballooning costs of healthcare, increasing importance is being placed on a value-based system. While the core idea of a value-based healthcare system is simple, the challenge of implementing this type of system is multi-faceted and complex. The panel, moderated by **Scott Whitaker, president & CEO of the Advanced Medical Technology Association**, sought to address these challenges and examine how the medical technology industry, in collaboration with the government and the private sector, might one day solve them.

Nadim Yared, president & CEO of CVRx, Inc. set the historical landscape for the transition to value-based medicine in medical technology. He explained that four decades ago, the medical technology industry innovated for the sake of innovating and created technology for the sake of creating. Two decades ago, the industry shifted, realizing that it needed to take a step further and demonstrate its value to consumers, physicians and patients. The past decade has been specifically focused on demonstrating the safety and effectiveness of its products. Today, Yared explained that the industry is concentrated on creating an all-encompassing value-based ecosystem.

The discussion shifted to the government's role in facilitating the industry's transition. One thought is that the government needs to eliminate problematic anti-kickback statutes. Another idea is that the Centers for Medicare and Medicaid (CMS) need to do a better job of working with medical device companies, particularly startup companies, in providing predictability and speed in the reimbursement process. Yared brought up the "valley of death" scenario that medical device startups often encounter in which the the FDA process is consistent and predictable, but the reimbursement process is confusing and drawn out. Yared said that because of this, startups might be able to obtain FDA approval, but fail to receive a reimbursement code quickly enough, leading to the demise of what may have been an otherwise innovative and valuable technology. **Vincent Forlenza, chairman & CEO of Becton, Dickinson and Company** noted

Scott Whitaker, Advanced Medical Technology Association

Nadim Yared, CVRx Inc.

that not only does the slow CMS cycle kill companies, but it also wards off venture capital money, which compounds the problem.

While the CMS system may hinder innovation, it may unintentionally be creating an even greater problem: increasing overall system costs by accounting for device companies' value creation in the wrong way. "We still have one foot in fee-for-service and one foot in value-based healthcare," Forlenza explained. The fee-for-service system hinders the ability to see past near-term fees. Yared added, "If we have a therapy that adds cost to the procedure, but saves societal costs [no one will pay for it]." Eventually, the medical device industry needs to look past single acute events. Yared explained that the CMS should be reimbursing based on the real value that medical technology companies bring – not only in the medical act itself, but in the long-term follow-up of those patients. Determining value based on a fee-for-service model short-changes society. This is a cornerstone of the value-based system and will need to be addressed if we want to manage downstream patient costs.

The first actionable step towards transitioning to a value-based system from an individual med-tech company's perspective is to begin defining the true value creation of devices. **Omar Ishrak, Ph.D., chairman & CEO of Medtronic plc** and a longstanding proponent of value-based care, explained that companies need to make things more actionable: "It starts by asking yourself, 'can you define the outcome? Then, can you measure it?'" It may not be feasible for individual med-tech companies to reform the industry, but by beginning to define and measure outcomes, device companies can start bridging the gap between a device company's customers and its payers.

While the panel focused on obstacles facing the industry, a recurring theme wove the conversation together: eventually, through the combined effort of device companies, the government and the private sector, the healthcare system will inevitably transition into a value-based model. The transformation towards value-based medicine will not happen all at once, but the panelists seem to believe that it will happen. It will begin with small steps from each of the players – device companies will need to define and measure outcomes more effectively; the CMS needs to offer a more streamlined system for obtaining reimbursement; and hospitals and physicians need to have a longer-term outlook on care, focusing less on short-term economic incentives and more on downstream savings.

Vincent Forlenza, Becton, Dickson and Company

Omar Ishrak, Ph.D., Medtronic plc

Changing and Diversifying Business Models for Sustained Success

One of the hallmarks of the "Blues" plans has been the regional orientation – deep legacies with deep relationships to members. Some of these plans are going "Beyond Blue", diversifying their business models and building cross-regional collaborations and partnerships with companies that have traditionally been viewed as competitors. These companies are now playing on a national stage, built through collaboration, partnership and new ventures.

Panelists: Patrick Conway, M.D., President & CEO, Blue Cross and Blue Shield of North Carolina
Mark Ganz, President & CEO, Cambia Health Solutions, Inc.

Moderator: Keith Anderson, Managing Director, Healthcare Investment Banking, Piper Jaffray

In the face of rising costs and inconsistent outcomes, health plans are uniquely positioned at the intersection between consumers and providers. Through innovation and collaboration, plans are working to achieve the triple aim—improve care, improve health and reduce spending. The most visionary plans are originating diverse business models to help stakeholders achieve these goals and transform healthcare over the next 10 years.

Mark Ganz, president & CEO of Cambia Health Solutions, Inc., started by analogizing health plans to Kodak, in that health plans are at peril if they try to cling to their legacy business model the way that Kodak tried to cling to the notion that cameras would always use film. Ganz discussed how Cambia is capitalizing on its opportunity to pivot beyond the traditional economic model and service model and play directly to the consumer by collaborating with various healthcare platforms.

One example of this collaboration was Cambia's joint venture with BlueCross BlueShield of Tennessee when it invested in TriZetto nearly 10 years ago. Ganz explained that the thesis for investing in TriZetto was premised on replicating the interoperability of banks within the healthcare system. However, individual health plans' desire to maintain their legacy claims management systems overrode any sense of urgency for collaboration.

Patrick Conway, M.D., president & CEO of Blue Cross and Blue Shield (BCBS) of North Carolina took this opportunity to discuss the immense opportunity BCBS organizations can take advantage of by working together. Conway discussed BCBS North Carolina's investment platform joint venture with Cambia – Echo Ventures. Echo looks to invest in companies whose solutions the health plan parents intend to deploy across their member base. The objective of these investments is to support BCBS North Carolina's aim of capping annual premium increases at 5% across all lines of business forever. Conway expressed that the only way to achieve this objective is through partnerships and other innovative technologies.

According to Ganz, while the deeply rooted local nature of Blues plans is one of their greatest strengths, the imperative for a more significant degree of collaboration has never been greater. "That's what has led us to take a larger view and have a really strong sense of urgency about change," Ganz said. Part of his thesis

Mark Ganz, Cambia Health Solutions, Inc.

Patrick Conway, M.D., Blue Cross and Blue Shield of North Carolina behind Echo is that health plans can learn from others about the best way to serve customers.

From Ganz's view, "One of the flaws of our current healthcare system and our culture is that we medicalize everything." He went on to cite a specific example of Cambia's partnership with a company taking an innovative approach to healthcare. "One of the things that I love about Livongo is that Glen Tullman and his team see diabetes as a life event," Ganz said. "It is not about managing a disease – it is about lifting up people and their families to live better with that disease."

Conway then highlighted what he viewed as the three biggest opportunities in healthcare technology:

1. Consumers navigation tools: Technology that helps consumers make informed choices by leveraging transparent information while helping them understand the likely outcomes
2. Telehealth: Specifically, within mental and behavioral health categories, and solutions that are powered by artificial intelligence
3. Interoperability: The new administration has taken up the mantle in continuing to push the interoperability agenda, and now health plans, providers and technology companies must be responsible for advancing that progress

Ganz went on to discuss the Blues' opportunities for improving interoperability while still preserving a sense of locality and the benefits his organization realized as a result of becoming a multi-state entity. While he believes there will be continued collaboration, he envisions multiple forms – whether that be smaller collaborations, straight affiliations or continued consolidation.

From there, the conversation pivoted to the merits and faults of consolidation within healthcare. "Consolidation is not a strategy – it is a tactic," noted Ganz. Both panelists agreed that commonality around the sense of strategy was crucial to any successful consolidation, and both noted that consolidation in the nonprofit world presents additional challenges given governance structures.

As the conversation shifted to non-profit consolidation, Ganz referenced the recent flurry of hospital merger activity. "Oftentimes, I cannot figure out how the individual and their family is getting better because a merger occurred," Ganz noted. Conway concurred, stating, "I am not aware of any two large hospital systems in the history of the U.S. that have merged and costs went down for consumers." He pointed out that large integrated systems have recently realized significant profits with the patients that they insure within their system, while charging "a ridiculously exorbitant fee for service rates to everybody not in their system." Conway went on to discuss BCBS North Carolina's strategy to shift the entire system in terms of outcomes, experience and cost for the consumers they insure, plus everyone else in the state. One way in which BCBS North Carolina is approaching this strategy is by attempting to move half of the health plan's payments into deep partnerships with providers who are accountable for quality and total cost of care for populations.

Patrick Conway, M.D., Blue Cross and Blue Shield of North Carolina; Mark Ganz, Cambia Health Solutions, Inc.; Keith Anderson, Piper Jaffray

Keith Anderson, Piper Jaffray

Lowering the Cost of Drugs by Lowering the Cost of Development

The pharma industry has long cited the time, cost and risk of drug development as the foundation for a rational pricing approach. Are there breakthrough technologies – whether through scientific discovery, artificial intelligence or machine learning – that will help dramatically lower development costs, or does the issue still reside in regulatory burdens and barriers?

Panelists: Sujay Jadhav, CEO, goBalto, Inc.
David King, Chairman, President & CEO, Laboratory Corporation of America® Holdings (LabCorp®)
Alex Turkeltaub, Co-Founder & CEO, ROAM Analytics, Inc.

Moderator: Sean Wieland, Senior Research Analyst, Piper Jaffray

Although regulatory reforms such as the Prescription Drug User Fee Act (PDUFA) and the 21st Century Cures Act have improved the regulatory environment, the pharma industry still faces significant challenges. **David King, chairman, president & CEO of Laboratory Corporation of America® Holdings (LabCorp®)** explained, "Fundamentally, we still have the same obstacles. Trials take too long. They cost too much… We have to come up with a better model."

The panel began with a discussion on clinical trial recruitment, which accounts for 30% of the costs of conducting trials, even though 80% of trials fail to meet recruitment goals. **Alex Turkeltaub, co-founder & CEO of ROAM Analytics, Inc.** described four key factors that lead to problems in recruiting patients into trials. First, we do a poor job collecting data about patients during regular doctor visits, e.g., comorbidities, progression with current conditions that would give us a better sense of who is available for a particular clinical trial. Second, unstructured data is basically thrown away or mined in a very inefficient way, so anything nuanced between patients is lost. Third, privacy reasons prevent us from using socioeconomic data, which is important in determining who will get a disease and how that person will progress through that disease. And fourth, we do a poor job collecting data during clinical trials, which generally come in the form of highly structured data from detailed questionnaires.

King added, although we have a tremendous amount of data about patients, "it lives in little cemeteries. There is data over here in the EHR. There is data in the doctor's practice management system. There's data in the patient's phone. There's data in our lab data. So much of the data is existent, but doesn't live in a way that we can aggregate it and look at it, […] which would allow us to expedite […] trial improvement and delivery of high-quality healthcare across the spectrum."

In response, **Sean Wieland, senior research analyst at Piper Jaffray** posed the question, "IQVIA has a massive, global data set. Is that the right data set to be using for clinical trial recruitment in an era where we have a lot more orphan studies?" Turkeltaub responded, "The problem is that even de-identified data when it's good is very hard to use because if there are three patients with a particular disease in one state, the risk of re-identification is so high you can't even use the de-identified

David King, Laboratory Corporation of America® Holdings (LabCorp®)

Alex Turkeltaub, ROAM Analytics, Inc.

data effectively to find patients." Despite these limitations, **Sujay Jadhay, CEO of goBalto, Inc.** argued that we can still make directional improvements today with how recruitment is performed through a pragmatic, step-by-step approach of mining de-identified data and marrying it with basic data sets.

The panelists then turned to the topic of site selection and how to make the process more intelligent. Sujay described a current trend: "What we are starting to see is actually a lot of companies out there developing preferred relationships with site networks, [which] helps improve overall cycle time and the overall setup of the clinical trial [and] over time, it will definitely reduce costs." Turkeltaub postulated another trend: "Especially as drugs become more specialized, the site selection game has to become far more global […] to the extent you can do a trial globally, you can lower the cost of finding patients."

An exciting innovation in drug development is the use of platform trials, which are clinical trials with a single master protocol in which multiple treatments are evaluated simultaneously. Although King acknowledged that platform trials are "aspirationally a great thing," he listed a number of obstacles that make implementation difficult: technology is not ready to support remote monitoring; our customers, the pharma sponsors, are conservative and reluctant to adopt new approaches; the FDA approval process can be uncertain; and global regulations of clinical trials are un-harmonized. Despite these obstacles, Turkeltaub explained that virtual platform trials have the advantage of increasing the percentage of our population that can participate in trials. Citing the increased usage of WebEx versus in-person meetings, Turkeltaub added, "I don't see any situation 10 years from now that trials are not done in a platform way simply because it's clearly where technology is going."

The success of platform trials depends on collaboration from sponsors. Asked whether sponsors would ever choose to collaborate, Jadhay responded, "There is a realization that drug development is definitely a team sport […] At times I feel that the participants in the overall development process feel that it's very much an independent kind of sport, [but in reality] we all need to collaborate together." Sujay explained that close to 40% of inefficiencies are based on collaboration between sites, CROs and sponsor: "If you can address that, you can actually dramatically reduce the cost of the overall trial." Jadhay concluded, "It's recognizing this is an industry that requires a lot of change management concepts […] Let's do this in step function overall, then I think over time, we can drive a lot of those concepts that are a little more revolutionary."

Sean Wieland, Piper Jaffray


Sujay Jadhav, goBalto, Inc.

Taking Back the Lead in Advancing access and Affordability in Pharma

The election is over, Repeal and Replace didn't pass, Shkreli is behind bars, and major players within the healthcare system are undergoing transformations. While the world's attention has been focused on news headlines, the pharma industry has been focused on coming to the table with real reforms that will improve affordability for patients. What is the industry doing to take the lead in advancing this important topic – both for the benefit of patients and the benefit of shareholders?

Panelists: Jack Bailey, President of US Pharmaceuticals, GlaxoSmithKline plc (GSK)
Joaquin Duato, Executive Vice President & Worldwide Chairman, Pharmaceuticals, Johnson & Johnson

Moderator: Stephen Ubl, President & CEO, Pharmaceutical Research and Manufacturers of America (PhRMA)

As drug pricing continues to attract significant media attention, we followed up on the *Innovation and Access in Therapeutics* panel from the 2017 Heartland Summit.

Early on, the panelists opined on the government initiatives with the greatest ability to improve drug affordability. **Jack Bailey, president of US Pharmaceuticals of GlaxoSmithKline plc (GSK)** stated that HHS secretary Azar's push to pass payer rebates through to patients in order to lower out-of-pocket cost is "something we (GSK) endorse fully." **Joaquin Duato, executive vice president & worldwide chairman of pharmaceuticals at Johnson & Johnson** also supports Azar's 'net price' push. However, he fears rebate pass-through isn't enough. Duato shared another evolving idea: the industry could develop "an out-of-pocket cost cap in Medicare Part D." While drug spending is moderating and rebates exceeded $150 billion in 2017, out-of-pocket costs are up nearly 400% since 2006.

Novel, value-based care models are showing promise across healthcare. Moderator **Stephen Ubl, president & CEO of Pharmaceutical Research and Manufacturers of America (PhRMA)** asked panelists to provide examples of specific ways healthcare companies are moving toward value-base care. Bailey began by crediting UnitedHealth Group with leading the way in sharing rebates with patients. Duato commented on the trend more broadly, offering two benefits of value-based contracts: first, they drive higher quality care and second, they expand access to medicine. As a result, expanded access enables providers to avoid the complicated healthcare reimbursement infrastructure, thus, reducing waste. Bailey wrapped up the dialogue, calling value-based care "one of those rare areas in healthcare policy where everyone agrees: there is alignment across payers, manufacturers and providers."

The Trump administration has suggested changes to Medicare Part B in recent months. Duato defended Part B as a system that works well as it is market-based and it avoids the patient access issues created by Part D. In addition, it is cost-effective as patients receive medications in community clinics. That said, Duato believes government and industry can work together to devise alternatives that address unintended consequences of Part B, such as the way physicians are paid. One idea is to introduce

Jack Bailey, GlaxoSmithKline plc (GSK); Joaquin Duato, Johnson & Johnson; Stephen Ubl, Pharmaceutical Research and Manufacturers of America (PhRMA)

Jack Bailey, GlaxoSmithKline plc (GSK)

a third-party vendor responsible for purchasing drugs on behalf of physicians. Such an approach would save money and address physician payment criticisms.

Another topic gaining traction in the pharmaceutical community is transparency. With widespread clinical trial disclosure and annual transparency reports, big pharma is taking significant steps to share more information with the general public. Bailey said, “Now we are in the phase of price transparency, which is a little trickier.” Specifically, it can be unclear which price companies should disclose, and whether disclosure advances the system in a value-based direction. Duato asserted that pharma is held to a higher standard (than other industries) as companies must publish metrics such as net prices, rebates and discounts. However, these disclosures can play to the industry’s benefit. For instance, Johnson & Johnson’s net prices in the U.S. dropped 4.5% in 2017. Additionally, rebates and discounts have skyrocketed in recent years. Duato credits these developments to the industry’s high levels of competition both from competing pharma companies and substitutable treatments.

In closing, Ubl asked Bailey and Duato to comment on innovative payment models for next-generation, high-cost treatments such as CAR-T, gene and cell therapies. Bailey stated that GSK’s recent product launches demonstrate a thoughtful pricing process that considers the “clinical, economic and humanistic elements that [the product] will bring to the marketplace.” Bailey added that amortized payment methods are a viable option for complex therapies addressing small populations. While new treatment modalities can be shockingly expensive today, Duato reminded the audience that pharma’s fiercely competitive dynamics will drive list prices down as substitute therapies come to market. As an example, prices of hepatitis C therapies – which shocked the public when they came to market – have fallen about 75%.

Pharma companies have been marketing their own value-based initiatives for some time. To present a unified, industry-wide value message, Ubl’s PhRMA, the industry’s largest trade group, launched the GOBOLDLY campaign last year. GOBOLDLY has two aims: first, to give researchers and patients a platform to talk about innovation and second, to convene stakeholders in a nationwide conversation about where the system needs to evolve. Ultimately, the campaign hopes to address the operational and public policy barriers impeding a swift transition to value-based pharma.

Nonetheless, the industry faces an uphill battle. **Ron Cohen, CEO of Acorda Therapeutics** attended the panel. During Q&A, he shared that more than 75% of the American public has a negative view of the drug industry. Cohen fears such high levels of popular mistrust will end in political action. Bailey agrees, but confides in the leadership of HHS secretary Azar and FDA commissioner Gottlieb who are giving pharma “a window to drive forward more market-based reforms.” To capitalize on this opportunity, Bailey argues, will require different relationships and more partnership.

Joaquin Duato, Johnson & Johnson

Stephen Ubl, Pharmaceutical Research and Manufacturers of America (PhRMA)

Consumer Experience Outside the Care Setting

Consumer engagement is a priority at nearly every healthcare company. While a significant amount of attention (rightfully) has focused on the consumer experience at the point-of-care or in diagnostics, less attention has focused on the administrative aspects of the consumer experience. From reimbursement and scheduling, to paperwork and call centers, this is where some of the most aggravating experiences reside with the lowest customer satisfaction scores for the industry. What is the industry doing to change this experience for healthcare consumers?

Panelists: Steve Nelson, CEO, UnitedHealthcare and Office of the Chief Executive, UnitedHealth Group, Inc.
Florian Otto, Co-Founder & CEO, Cedar Inc.
Andrea Walsh, President & CEO, HealthPartners, Inc.

Moderator: Ron Williams, Chairman & CEO of RW2 Enterprises, LLC; Former Chairman & CEO, Aetna, Inc.; Operator Advisor, Clayton Dublier & Rice; Member of Board of directors, Johnson & Johnson

While the biggest technology companies are entrenching themselves deeper and deeper into consumers' everyday lives, healthcare has fallen behind. Facebook, Amazon and Google seem to know consumer preferences better than the consumers. **Ron Williams, chairman & CEO of RW2 Enterprises, LLC and former chairman & CEO of Aetna, Inc.**, opened the panel by discussing the disparity between healthcare and other industries. Since healthcare seems to be trailing other industries in terms of consumer experience and engagement, what is the industry doing to catch up? While a significant amount of attention (rightfully) has focused on the consumer experience at the point-of-care, less attention has focused on outside the care setting. "As leading healthcare executives," Williams asked, "What are your organizations doing to change this experience?"

Florian Otto, co-founder & CEO of Cedar Inc., a leading patient billing company, pointed out that we need to start by "treating patients as consumers rather than as sick patients". Otto shared that Cedar's mission is to simplify the billing process so consumers can view, understand and pay their bill, and if they need help, they can use a chat function to get their questions answered. He pointed out that consumers are used to this type of experience with their cable provider, such as Comcast, though it is much less common in healthcare.

Along the same lines, **Andrea Walsh, president & CEO of HealthPartners, Inc.**, opened by saying "I think part of the challenge is that healthcare has been designed around healthcare resources and not around the consumer, and if you think about virtually every other industry that's been transformed, we've really redesigned the experience around the consumer. In healthcare and healthcare insurance, we're not quite there yet." Walsh stressed the need for the healthcare industry to meet consumer demand for simplicity and affordability. **Steve Nelson, CEO of UnitedHealthcare and Office of the Chief Executive of UnitedHealth Group, Inc.**, added that "consumer expectations are clearly changing and for a while, healthcare got a pass because it is more about the clinical experience than the health

Ron Williams, RW2 Enterprises, LLC

Florian Otto, Cedar Inc.

plan experience, but those days are over and there is an urgency to catch up."

Williams pointed out that the "language of healthcare" can be alienating for consumers, and shared their views on how to change it. Walsh described HealthPartners' initiatives to revamp its call centers and re-train agents in the language of the consumer to give customers the best experience and provide them the appropriate care rather than focusing on filling doctors' schedules. This approach results in fewer and more efficient doctor's visits, lower cost of care and ultimately, happier customers. Walsh and Otto agreed that the consumer experience could greatly benefit from technological innovation, citing an example of a more user-friendly chat function driven by artificial intelligence.

The conversation inevitably shifted to price transparency – another big topic in the wave of healthcare consumerism and an important consideration in consumer engagement. Walsh admitted the healthcare industry is behind, stating, "Cost transparency is an absolute expectation of healthcare consumers and is one that we're not meeting very well." She cited a specific example of HealthPartners' introduction of a pharmacy transparency tool that has been widely adopted thus far by their consumers. In one example, the transparency tool helped a member identify a price difference of $700 for the same medication between two pharmacies that were merely one block apart.

Taking a step back, Nelson reflected on the fact that the consumer experience cannot be completely separated from the clinical experience in the healthcare industry, and the reason transparency is difficult is that these two ideas blend together in so many ways that trying to separate the two has actually contributed to the problem. He further emphasized that healthcare needs to learn from other industries to make progress. In particular, since consumers are practically numb to the idea that Facebook and Google have access to such vast quantities of personal data, Nelson asked his fellow panelists to consider the possibilities of healthcare leveraging big data in a similar fashion. Though all panelists recognized the sensitivity around healthcare data in particular compared to other industries, the idea of harnessing all of this data to reinvent the consumer experience from end-to-end throughout the healthcare ecosystem brought a hopeful closing note to a thoughtful discussion.

Andrea Walsh, HealthPartners, Inc.

Steve Nelson, UnitedHealthcare

A Shifting Line of Sight on the Site of Service

Competitive pressure from emerging independent ambulatory platforms is challenging and changing the traditional health system business model. Outpatient is outpacing inpatient, resulting in greater stress on health system margins. Everyone can agree that each site of service has its unique strengths and vital contributions. Is this a fight to zero-margin on all sides, or is the health system better if everyone can figure out how to partner?

Panelists: Michael Dowling, President & CEO, Northwell Health, Inc.
Austin Pittman, CEO, OptumCare
Penny Wheeler, M.D., President & CEO, Allina Health Systems, Inc.

Moderator: Adam Gunther, Managing Director, Healthcare Investment Banking, Piper Jaffray

While many healthcare industry professional are aware that outpatient care is gradually eroding inpatient market share, what impact does this have on different care providers within the industry? Is competition becoming fiercer as a result? Or are providers instead looking to partner and cooperate to take on these new changes? The panelists engaged in an unscripted discussion about these topics, as well as the effects that more robust data and social determinants have on healthcare, while attempting to come up with an answer.

Penny Wheeler, M.D., president & CEO of Allina Health Systems, Inc. kicked off the panel by emphasizing the importance of never forgetting who and what you're serving. In this light, as the health system changes, Wheeler stressed that adjusting your care delivery through partnerships is key.

Michael Dowling, president & CEO of Northwell Health, Inc. began by explaining the tremendous shift he's observed during his time at Northwell. "If you look at our system, we're the largest health system in New York. About 90% of all of our revenue was hospital based revenue. Today, it's 50% with a 50/50 split between inpatient and outpatient. While I have 23 hospitals – and that's what everybody talks about – I have 665 ambulatory locations, and by the end of the year, I'll probably have 700."

Dowling explained that while the industry is aware of this gradual shift, it is indirectly causing other issues within the system. Growing the ambulatory side of the business attracts new customers. While these new customers may be primarily utilizing outpatient services, a portion of them will need inpatient care as well. "If I see 100 new people and gain new market share, I'm going to find five or six people that need hospital care. I have four hospitals right now that on any single day are 115% or 116% occupied." Dowling pointed out that this adds pressure on the system and is a natural effect of increasing the funnel.

When the panel moderator **Adam Gunther, managing director in healthcare investment banking at Piper Jaffray**, asked if this large ambulatory footprint better positions Northwell from a value-based care perspective, Dowling responded how important it is

Penny Wheeler, M.D., Allina Health Systems, Inc.

Michael Dowling, Northwell Health, Inc.

to note that value-based care covers a wide spectrum of services beyond physical health including mental health, behavioral health, substance abuse and many additional services.

Austin Pittman, CEO of OptumCare, interjected that the ambulatory care shift is a largely driven by a goal of increasing quality as well. “As much as can be done at a less evasive, less hospital-like setting, where infection rates can be lower and consumer satisfaction is measured with NPS […] that’s what we ought to be doing.” Dowling added on to the topic of customer satisfaction by mentioning e-health and telemedicine briefly. While he’s uncertain whether these resources will reduce costs in the long run, he believes they will go a long way to increasing access for customers, which will in turn increase satisfaction.

Gunther then asked panelists how best to handle the industry’s existing fragmentation and ensure that it doesn’t negatively impact patient care. Pittman explained that the industry fragmentation makes the patient’s primary care physician a very important resource. Ideally, these physicians will play the role of quarterback, navigating and leading their patients care. They need considerable resources behind them to be able to do this successfully including technology, data analytics and a full support team. Wheeler agreed on the importance of empowering patient’s primary care physicians and enabling them to take the quality of care to the next level.

Throughout the panel discussion, social determinants and the influence they have on the health of individuals was brought up numerous times. Dowling made the point that your zip code has a larger impact on your health than your DNA. Wheeler mentioned that her organization now screens individuals for housing instability, food insecurity and similar social factors. This data and enhanced patient knowledge can play a monumental role in improving patient care, as it allows providers to connect their patients with organizations in the community before these social needs develop into medical needs. Collecting the right data sources and utilizing them properly is necessary before this enhanced level of care can be provided.

As the conversation shifted back to the topic of partnerships the panelists were all aligned is their support of these arrangements, but for differing reasons. Dowling stressed that partnerships are key to avoiding eventual government-sponsored healthcare. “If we don’t figure it out we will have a result that none of us will want, and the person that will suffer the most will be the customer, the patient,” he said. “So, I think it’s incumbent on us to put aside some of the disagreements we might have or different perspectives […] to find the common ground where we can actually do things together”.

Pittman also voiced his support for partnerships, but his reasoning is that they can be an effective means of eliminating much of the current waste created by the system. He explained that like-minded groups working to provide patients with the right kind of care will go a long way toward eliminating much of this waste. Wheeler believes the most successful partnerships are aligned on three key levels: “You need to be aligned in what purpose you’re trying to create, you know the activities you’re doing collectively in your partnership, and the economics. All those things have to align, and we have to think of things more broadly.”

In the end, the group unanimously emphasized the importance of putting differences aside and coming together to find the common ground. The analytics, tools and resources available to companies are more advanced than they ever have been. Pittman’s closing comments may have stated it best, “In my almost 30-year career in healthcare, I’ve never seen us at this point. Now, we just have to get out of our own way and make it happen.”

Adam Gunther, Piper Jaffray


Austin Pittman, OptumCare

Scaling for Relevance in the Amazon Age

The changing demands of consumers – and the changing way in which we purchase products – are having a profound impact on the companies that produce a variety of healthcare products. Traditional approaches combatted market disruption through increased scale, where companies simply sought to get bigger to win. As technology has made the world smaller, bigger seems less relevant if it is not better. What does it mean to have "relevant scale"? In the quest for relevant scale, how do leading companies drive standardization and avoid stifling the innovation that makes them better?

Panelists: Jeff George, CEO, Performance Health, LLC (former CEO, Sandoz and Alcon divisions of Novartis)
Clark Otley, M.D., Ex-Officio, Board of Governors, Mayo Clinic, and Medical Director of the Department of Business Development
Steve Rusckowski, Chairman, President & CEO, Quest Diagnostics Incorporated
Michael Vale, Ph.D., Executive Vice President, Healthcare Business Group, 3M Company

Moderators: Bill Quirk, Senior Research Analyst, Piper Jaffray
Matt O'Brien, Senior Research Analyst, Piper Jaffray

With Amazon plotting its entrance into the multi-trillion dollar healthcare industry, executives representing some of the industry's most influential organizations grappled with the idea of its disruption potential. While it's unclear exactly what Amazon has up its sleeve, the company is already selling medical supplies and equipment to clinics and hospitals and building relationships with some of the sector's biggest players. Despite the sheer scale of Amazon's logistics platform and its distribution expertise, the panel agreed there are plenty of differentiating elements that make their patient solutions difficult to emulate, as well as other ways in which they can leverage Amazon's business model to drive their own growth.

Given the parallels between its business model and the evolving healthcare industry, the panel speculated Amazon's ability to disrupt the market. "It really is about convenience. It is about cost. It is about ability to have access where you want to have that access," asserted **Steve Rusckowski, chairman president & CEO of Quest Diagnostics Incorporated**. The leaders established that Amazon's entrance hinges on evolving consumer preferences, and persuaded Heartland Summit attendees that the survival of their businesses is no different. **Clark Otley, M.D., ex-officio, board of governors and medical director of the department of business development of Mayo Clinic**, summed up the resemblances in strategies, stating, "In the book *The Everything Store*, [the author] highlighted that Amazon has three principle tenets: first, they are extremely customer centric; second, they take a long-term view; and third, they are constantly innovating. And I have to say, we've been doing that for 154 years."

While it may seem like it's just getting started, Amazon has already had a profound impact on the healthcare industry. First, the panelists discussed the ways in which their organizations

Steve Rusckowski, Quest Diagnostics Incorporated

Clark Otley, M.D., Mayo Clinic

are leveraging the digitalized marketplace to their own benefit. **Jeff George, CEO of Performance Health, LLC**, proposed that while most people think of Amazon as a significant threat to large wholesalers and distributors, it's also a significant growth channel for his business, citing that 20-30% growth month-over-month in its business with the commerce giant. George described, "We're constantly living in this fear of Amazon, but also, excitement of our growth with Amazon." The influence of the Amazon business model is indirectly affecting the ways in which healthcare leaders are constantly driving innovation in their solution offerings to tailor to consumer preferences. Reaffirming innovation as Mayo Clinic's lifeblood, Otley suggested cutting-edge technologies, such as the Cologuard® colon cancer-screening test, which ships to the patient's home, are also helping scale innovation and deliver convenient and personalized solutions.

The panel frequently returned to the idea of "relevant scale" and outlined numerous strategies they are deploying on the business-to-consumer side of their organizations to avoid disintermediation. While physical scale is becoming less significant with digitalization, the group stressed the growing importance of a total solution bundle for patients in addition to clinically differentiated product performance. George suggested the importance coupling vertical scale with horizontal scale, or relationship scale, developed amongst providers over many years, which is harder for Amazon to emulate. Particularly, he underlined the significance of the customer touch point, which enables tailored service-as-product solutions. "We have 150 reps out in the field, which are critical to building customer relationships with a lot of stickiness," George added. "The service we provide allows us to create a bulwark against the disintermediation that is happening on the more commoditized part of our business."

Michael Vale, Ph.D., executive vice president of the healthcare business group at 3M Company, also touched on his business's increasing focus on partnership with providers in order to deliver a total care pathway. "For us, it's a component of relevant innovation at the point of impact of our customers' problems, but also, understanding that we have to have a broader solution approach, which many times involves partnership with other entities," Vale stated.

While the group discounted the importance of pure scale in today's market, they emphasized a sub-segment of physical scale. They argued healthcare companies must emphasize the point of impact to maintain relevance. In particular, the leaders acknowledged the tremendous value localized healthcare offers and agreed personalized and convenient solutions will continue be a key differentiating factor amongst winners in the industry. Vale stressed the importance of being close to the customer's pain point in order to provide speed to scale. He claimed, "The ability to take innovation and constantly be moving the market protects you from having others come in and disrupt you."

Rusckowski urged the audience to consider geographic organization, rather than pure scale. Resonating with earlier panels, he reminded the audience, "Healthcare is very local, and at the end of the day, healthcare is typically a caregiver working with a patient, so it is very personal. The reason why a physician and a patient are going to choose Quest is because of the relationship with the phlebotomist." Further echoing this notion, Otley discussed the ways in which Mayo Clinic is leveraging digitalization to drive relevant scale from the perspective of a not-for-profit organization. In Amazon fashion, Mayo is bridging the delivery gap through the Mayo Clinic Care Network, which brings the Mayo expertise closer to patients all over the world.

Jeff George, Performance Health, LLC

Michael Vale, Ph.D., 3M Company

The Institutional Investor Perspective on Innovation

The cost, price and value of innovation has been hotly debated in academic, political and business circles for several years. The recent release of the president's drug pricing plan has brought the debate back into the spotlight. How do investors look at innovation – and the companies at the forefront of innovation – in light of the changes proposed by the administration?

Panelists: Craig Gordon, Investment Analyst, The Capital Group Companies, Inc.
Steve Hamill, Managing Director & Analyst, Winslow Capital Management, LLC

Moderator: Arvind Sood, Vice President, Investor Relations, Amgen, Inc.

All parties in the healthcare ecosystem have different views on how much value and innovation a drug brings to a population and its patients. On the topic of the dramatic rise in drug prices over the past 10 years, **Craig Gordon, investment analyst at The Capital Group Companies, Inc.** and **Steve Hamill, managing director and analyst at Winslow Capital Management, LLC** kicked off the panel by discussing the relationship between innovation and pricing from the investor perspective.

According to Hamill, the controversy of drug pricing is rooted in a discrepancy between drugs that are perceived to be less innovative, yet accompanied by a high price tag. He believes that this perception is "what draws the fury of the public and politicians." To add to the uproar, insurance companies are no longer providing as much coverage for drugs. Although, **Arvind Sood, vice president, investor relations of Amgen, Inc.**, pointed out that, while a coronary bypass surgery costs around $75,000, "We don't hear people screaming about the high price of their hospitalizations or surgeries because by and large insurance is picking up the tab."

As controversial as high drug prices have been in recent discourse, this pricing trend has allowed for greater innovation. For example, the development of orphan drugs, which may only treat only a few thousand people in the U.S., is only possible when the enormous cost of development is spread over a large population. However, in order to compete, companies have opted to increase their drug prices as a means to protect their revenue earning streams. Clearly there are both pros and cons to the higher drug prices, making it increasingly challenging to accurately reward innovation.

Gordon added to the issue by remarking, "[While] I think innovation should be rewarded, there's a fundamental question [that needs to be answered]: how innovative is a drug? And what is that bar?" According to Gordon, it's not just the insurance companies that want the standards for measuring the "innovativeness" of a drug to be raised. Doctors and patients also want these drugs to be scrutinized, not just on statistical findings, but on "real, clinical impact."

The issue of rewarding innovation, especially from the investor perspective, is intimately tied to addressing the issue of drug pricing. The remainder of the conversation focused on this topic, as Hamill and Gordon transitioned the conversation about possible solutions to mitigating the pricing controversy. The points

Craig Gordon, The Capital Group Companies, Inc.

Steve Hamill, Winslow Capital Management, LLC that they agreed on were greater transparency on two levels: first, transparency to the public about how drugs are paid for, and second, the process of drug trials and success rates in clinical trials. Gordon sums this up succinctly: “I think there needs to be a more honest, open dialogue between the stakeholders about how to balance drug pricing, patient access and prevent perverse incentives.”

Honest conversations about drug pricing among stakeholders have been elusive thus far for several reasons. When each entity in the healthcare ecosystem determines a price that maximizes their own benefit, it creates resistance between parties. Hamill pointed out that despite popular perceptions, investors are not necessarily out to obtain the highest price possible. Investors and biopharmaceutical companies are interested in maximizing their profit, which is dependent on factors such as achieving high patient access, according to Hamill, “Money has been left on the table for various new innovative drugs because they were priced too high and therefore were denied access.” Each company has its own methods of maximizing profits based on statistics that don’t align, which creates situations in which trade between parties is unbalanced and often results in patients deciding between unfair pricing options.

In order for biopharmaceutical companies to price drugs appropriately, a level of price transparency needs to be established that enables each party in the healthcare system to understand the variables that are being used to calculate value. Although each party might not agree on methodologies used to calculate the ultimate level of impact and innovation that a drug creates for a patient, by having open, transparent discussions, the system can find ways to converge to a more equal pricing structure over time.

But what would an open, transparent discussion about drug pricing actually look like? Currently, there are numerous bodies that determine the price for a drug, which introduces bias in the pricing system by “skewing” the numbers in favor of each player. Gordon noted that while there inevitably won’t be unanimous agreement on establishing a common body to enforce the parameters for pricing drugs it may require some government regulations in addition to a shift in government dialogues for these conversations to happen. Speaking from experience, Hamill noted that when he talks to management companies about pricing for a drug and asks about the evidence they have developed in terms of the value behind that price, he is often told that it exists, but he doesn’t actually see the evidence. He pointed out that he does see more transparency with medical device companies, and believes that in similar ways, it is important for pharmaceutical companies to be “fluent in the language of quality dollars and to be able to make the case for the value that their drug brings” before another entity puts a price on the drug for them. Although their approaches differ, Gordon and Hamill both emphasized the importance of honest conversations and transparency in drug pricing.

Arvind Sood, Amgen, Inc.

Craig Gordon, The Capital Group Companies, Inc.; Steve Hamill, Winslow Capital Management, LLC

The Ripple Effects of Healthcare Consolidation

Much has already been written on the mega-mergers between CVS-Aetna and Cigna-Express Scripps, as well as of the rumors of Walmart-Humana and, of course, the new entry of Amazon-Berkshire-JP Morgan. While these mergers and new entrants aim to change the sectors in which they compete, they also stand to change tangential parts of the healthcare industry. From pharma and device, to delivery and distribution, what are the ripple effects of these combinations for other parts of the healthcare industry?

Panelists: Robert Bradway, Chairman & CEO, Amgen Inc.
John Hammergren, Chairman, President & CEO, McKesson Corporation
David Wichmann, CEO, UnitedHealth Group

Moderator: J.P. Peltier, Global Group Head, Healthcare Investment Banking, Piper Jaffray

Recent mega-mergers between CVS-Aetna and Cigna Express Scripps, as well as the rumors of Walmart-Humana and, of course, the new entry of Amazon-Berkshire-JP Morgan, have aimed to change tangential parts of the industry for patients, providers and payers alike. The panelists first addressed the timing of the recent consolidation in the industry; if these mergers have the potential to bring such significant benefits to patients, why are they *just* happening now?

David Wichmann, CEO of UnitedHealth Group, believes we are in the middle of a very restless healthcare environment where companies are re-evaluating their business models and looking for new opportunities in a growing market. At the same time, there are assets that operate inside of these companies that work better together, yielding significant value to consumers. Subsequently, valuations of these companies are high and capital availability supports larger transactions.

John Hammergren, chairman, president & CEO of McKesson Corporation added that we now realize it is difficult to manage care as an employer, health plan, or a pharmacy benefits manager (PBM) without a holistic view of the patient. The expansion of community-based care will also bring rise to alternative, lower-cost care delivery methods for patients, in more a connected, intimate and local way that the patient sees fit. All these variables coming together in a favorable capital market, in addition to consumers who are becoming more educated to build transparency around low-cost, high-quality care, are adding important forces that drive industry consolidation.

From a pharma perspective, **Robert Bradway, chairman & CEO of Amgen Inc.** agreed with the idea of bringing companies closer to the patients, but also acknowledged an element of "defense vs. offense," as many of these transactions happen in an attempt to chase a formidable competitor. Bradway was the first of the panelists to mention the value of new data that supports these mergers, as pooled information better enables combined companies to make better decisions on how to deliver care in a more differentiated way.

The panel then addressed the next key element of this consolidation wave – the combination of payers and PBMs.

John Hammergren, McKesson Corporation

Robert Bradway, Amgen Inc.

Referring to the combination of OptumRx (UnitedHealth Group's pharmacy care services business) with Catamaran (a provider of PBM services), Wichmann acknowledged that the increasingly dynamic role of the payer has been powerful as there is now a much more complete view of the patient. The key variable in the acquisition was the amount of value that could be delivered to the patients, health systems and employers that the company serves. Specifically, by utilizing data and deploying technology in pharmaceutical transactions, the most prevalent in healthcare, there is now the ability to shift behavior patterns of the patient through coaching to achieve a $200 per member per year incremental benefit beyond what they would typically see in pharmacy benefit services.

The only way to synchronize technology with the pharmacy benefit is to have both operating under the same house. In large-cap pharma, Bradway observed that this consolidation has largely played out in the PBM sector itself. "Clearly, the pharmacy benefit manager is playing an increasing role in determining who gets access to what medicine," Bradway said. "It is troubling that innovative new medicines that doctors need are getting rejected as frequently as they are […] it's a fact of the business now, and it is incumbent on us as innovators to work closely with all stakeholders to try to find a better way to make sure that the innovation we are advancing is in the hands of the patients who need it most."

Beyond the shareholders of the target companies, the panelists opined on the biggest "winners" in these mega-mergers. The general view was that the long-term success of any of these combinations is contingent on the amount of value delivered to the patient. Hammergren noted that if any companies are combining with a focus on profitability over better outcomes or clinical or financial results for the patient, failure will ensue. He further acknowledged that "the risk and the architecture [of these deals] is being weighed […] If we create very large players that lose focus on innovation and the value delivered to the patient, the patients themselves will disintermediate those players quick with competitors, or the government will get more involved due to the lack of access to care."

There is concern among health systems that these combinations (specifically CVS-Aetna, which services 10,000 clinics) could grab the healthier patients, leaving hospitals and health systems with more complex, costly and less profitable patients. In the absence of a health system representative on the panel, Bradway said that moving from the 'break-it-fix-it' healthcare system of today to a 'predict-and-prevent' setting where we can try to deliver care before it is necessary, is something that will help us to solve the challenges we face in this healthcare system. Hammergren's view was that reimbursement has been fashioned over 50-60 years in this country to create artificial winners and losers. This distortion and dislocation will continue to magnify as people try to solve this problem from the outside. He predicted that we will see the industry revitalize and re-invent itself as more empowered, knowledgeable consumers have a view of their care options with transparency in terms of cost and quality amidst various new avenues of alternative care.

Amidst talks around the partnership of Amazon-Berkshire-JP Morgan, the panel shared their opinions on the underlying motives. Hammergren acknowledged that Amazon historically enters a partnership like this when they observe consumer inefficiencies in the marketplace. In this case, it is the lack of transparency for patients in finding the best care at the lowest cost. While there is general consensus among most that heath care in the U.S. costs too much, Wichmann also made the point that the country needs to think more broadly on social determinant issues that underlie the healthcare issues that we attempt to resolve.

The panel transitioned to the topic of President Trump's drug pricing plan, and whether or not any of the recent large transactions have been in response to it. Bradway acknowledged that Trump started a conversation that needs to be had. "We currently spend $600 billion a year on cardiovascular disease," he said. "Clearly, we need more innovation to try to keep that number from continuing to grow the way it is growing. However, with an aging population, that number is going to continue to grow." The question becomes, how can we balance the need for innovation, while curbing the means to pay for it, and ensuring that the innovation gets to the right people at the right time.

The panel concluded by answering the question of whether they anticipate more horizontal or vertical mergers in the near future. Wichmann does not expect to see much vertical integration. Hammergren noted that most horizontal integration is done domestically – the primary focus will remain on how to get the right drugs to the right places. Bradway expects more diversification in the pharma space, as the word 'vertical' is largely misunderstood: "Many companies are developing platforms as standalone businesses so they can make a difference." With that, pharma companies will continue to navigate as they see fit.

Navigating Change from the Outside-In

"Outsider CEOs" represent nearly a quarter of the spots at the 2,500 largest public companies. What used to be thought of as a last resort in a turnaround or crisis situation, has increasingly become an intentional leadership choice to simply find the best talent. Regardless of the reasons, incoming CEOs have unique challenges and opportunities as they navigate existing cultures and implement their own brand and changes in their organizations.

Panelists: Joe Almeida, Chairman, President & CEO, Baxter International Inc.
Donald Casey Jr., CEO & Director, Denstply Sirona Inc.

Moderator: Chad Abraham, CEO, Piper Jaffray Companies

Although not new to leading companies or the medical device space, 'outsider CEOs' need to create a strong start. "You need to rediscover what made that company great," said **Donald Casey Jr., CEO & director of Dentsply Sirona Inc.**, a healthcare leader known for a track record of identifying and commercializing medical innovations. In addition, **Joe Almeida, chairman, president & CEO of Baxter International Inc.**, noted that "strategy is only 10% of the job, but sometimes comes first."

Both Casey and Almeida agreed that listening and understanding the culture in the first 3–4 months is critical to the success of the company and the CEO. Casey advocated for going straight to customers, describing his route to "establish an independent view of what 'true north' might look like by virtue of talking to your customers." Soon after assuming the role of CEO, Casey met with and heard from more than 100 dentists – key customers of Dentsply Sirona. Almeida commented on the importance of understanding the culture of the firm and getting to meet as many people as possible during the first several months. "You have got to get the culture right," he repeated.

Challenges facing an outsider CEO range from company distress to poor culture or lack of organizational cohesiveness. Almeida pointed to the speed at which a CEO begins implementing a strategy as another significant danger. When coming in from the outside, "you want to do everything right," he said. The hasty adoption of a plan and its implementation can be a bottleneck, like "a lot of water through a small filter," Almeida continued. Where a CEO could go wrong is coming in with a pre-packaged plan, where they are prepared to implement it on day one and don't take the time to listen to what problems the company faces. On the same subject, Casey noted that although there may be some gaps in subject matter expertise, the larger issue is that you don't have familiar information sources that you can trust immediately. Therefore, it is a critical step to quickly determine the reliability of the management team.

Before bringing in more people from the outside, a new CEO needs to assess the talent of his or her management team. Both CEOs agreed it only takes a short time to determine the effectiveness of a team member. Almeida suggested that there is a "gut feel [about] who can complete the job" and Casey added

Donald Casey Jr., Denstply Sirona Inc.

Joe Almeida, Baxter International Inc.

he too spends about 5–10 minutes before he can tell if he will trust a manager. “Is there a vision?” Casey asks himself when meeting the team member, emphasizing the importance of not only technical aptitude, but also the ability to see the big picture. The people surrounding the CEO quickly fall into two buckets according to Almeida – those who are good performers and those who are misplaced. Learning who falls in which bucket within the first several months enables a CEO to listen to the right voices to form a strategy and call upon the right team to execute it.

Establishing a reputation and relationship with the investor community is critical to any CEO’s success. It is only part of the test to communicate a clear strategy and path to stakeholders in the company; the other portion is effectively conveying that message to investors. Each CEO outlined the need to create credibility in the first six months, as well as a sense of consistent expectations. Casey left no doubt that “[total stockholder return] is the only big metric to look at” – the acid test for articulating their message is the first investor day.

When the conversation turned to each CEO’s inheritance of a list of in-process acquisitions (some years in the making), they differed slightly. In his mind, Almeida explained the conversation around an acquisition needs to focus on matching strategies, accretion to growth and internal rate of return. Once a company has strong cash flow it can also become complacent, he warned, and needs to turn down any bad deals. Casey’s argument was that you need to ask yourself, “Why are you an advantaged owner of the asset?” and “Are you capable of management of that integration?” before every acquisition. Both had a laugh at the terminology ‘strategic investment,’ which Casey remarked is akin to admitting that such an investment would lose money for years before creating value. With leadership at the CEO level, the challenges and rewards are great. Coming from outside of the company can intensify the challenges, but both CEOs suggested that it was well worth it to see the impact their leadership has on improving lives.

Joe Almeida, Baxter International Inc.; Donald Casey Jr., Denstply Sirona Inc.; Chad Abraham, Piper Jaffray Companies


Chad Abraham, Piper Jaffray Companies

Transition from the C-Suite

Every CEO faces it, but rarely do they talk about it. Succession planning is not just among the most important things a CEO *must do*, it's also one of the hardest things for a CEO to do. For healthcare companies, the stakes are not simply about cultural stability and shareholder value, the effectiveness (or ineffectiveness) of transition can ultimately impact quality, service and delivery – all of which can impact customers and patients.

Panelists: Richard Anderson, President & CEO, AMTRAK; Member of Board of Directors, Medtronic, Former CEO of Delta Airlines; and Former EVP of UnitedHealthcare
George Barrett, Executive Chairman, Cardinal Health, Inc.
Stephen Hemsley, Executive Chairman, UnitedHealth Group Incorporated
Greg Page, Former Chairman & CEO, Cargill, Inc.

Moderator: Jon Salveson, Vice Chairman, Investment Banking, Piper Jaffray

"You're refashioning the muscle memory of the organization."

– STEPHEN HEMSLEY, EXECUTIVE CHAIRMAN, UNITEDHEALTH GROUP INCORPORATED

The final panel continued in the tone of navigating from the lead role. Changing of the guard at the lead executive role is as much an art as it is a pragmatic process. The best CEOs take pride in succession planning from fostering the next candidate to formulating the right supporting ensemble of executives and directors to relinquishing responsibility. **George Barrett, executive chairman of Cardinal Health, Inc.**, believes a CEO's tenure should last eight to 10 years stating that "at a point, we felt we were at risk of our greatest talent being drawn away." In the hyper-competitive healthcare industry, CEOs must view the transition process as a primary responsibility.

Greg Page, former chairman & CEO of Cargill, Inc. shared that mapping out talent and providing opportunities in a variety of roles to promising individuals was key to maintaining a culture of promoting from within at the top level. To ensure stability through the transition, panelists approached their boards up to four years prior to retirement. Each agreed that the transition should align with the cadence of the organization's business cycle.

"Leaving in a good way," articulated by **Stephen Hemsley, executive chairman of UnitedHealth Group Incorporated**, "means first, visibility with respect to the outlook of the business; second, no major work is left unfinished; and last, proactively transferring the whole spectrum of relationships between the CEO and board members."

Richard Anderson, president & CEO of AMTRAK; member of the board of directors of Medronic; former CEO of Delta Airlines; and former EVP of UnitedHealthcare, noted the importance of equipping the successor to take responsibility for

George Barrett, Cardinal Health, Inc.

Greg Page, Cargill, Inc.

the entirety of the P&L and the pieces of the business that they did not have experience managing, placing the right people in supporting roles to the CEO and finding the right fit with the lead director. Anderson stated that preferably the predecessor should leave without major issues unresolved and several years of strong free cash flow on the horizon.

Reflecting on the candidate selection process, the panelists grappled with ways the incumbent CEO must work with the board. Panelists agreed that a “horse-race” approach whereby top executives are pitted against one another creates division and paralyzes the organization from making critical decisions for an extended period. Page used the word “optionality,” a word used commonly at Cargill, to describe an organization’s ability to delay choices while processing new information. In the context of choosing a new CEO, Page stated, “Boards often hold too close and for too long their choice at the expense of denying the organization optionality.”

A leadership change at an organization disturbs an intimate relationship with the board both professionally and personally. An incumbent CEO must be the liaison helping to create bonds between the candidate and board while assuaging doubts on either side. In concluding remarks, Hemsley provided the guidance that “accomplishing your own demise is part of your success in the role, and you must really embrace it.”


Stephen Hemsley, UnitedHealth Group Incorporated


Richard Anderson, AMTRAK

Panel Participants

- Chad Abraham, CEO, Piper Jaffray Companies
- Joe Almeida, Chairman, President & CEO, Baxter International Inc.
- Keith Anderson, Managing Director, Healthcare Investment Banking, Piper Jaffray
- Richard Anderson, President & CEO, AMTRAK; Member of Board of Directors, Medtronic, Former CEO of Delta Airlines; and Former EVP of UnitedHealthcare
- Jack Bailey, President of US Pharmaceuticals, GlaxoSmithKline plc (GSK)
- Sam Baker, Editor, Healthcare, Axios
- George Barrett, Executive Chairman, Cardinal Health, Inc.
- Robert Bradway, Chairman & CEO, Amgen Inc.
- William Carson, M.D., President & CEO, Otsuka Pharmaceutical Development & Commercialization, Inc.
- Donald Casey Jr., CEO & Director, Denstply Sirona Inc.
- Patrick Conway, M.D., President & CEO, Blue Cross and Blue Shield of North Carolina
- Jim Douglas, Managing Director, Healthcare Investment Banking, Piper Jaffray
- Michael Dowling, President & CEO, Northwell Health, Inc.
- Joaquin Duato, Executive Vice President & Worldwide Chairman, Pharmaceuticals, Johnson & Johnson
- Michael (Mick) Farrell, CEO, ResMed Inc.
- Vincent Forlenza, Chairman & CEO, Becton, Dickson and Company
- Mark Ganz, President & CEO, Cambia Health Solutions, Inc.
- Jeff George, CEO, Performance Health, LLC (former CEO, Sandoz and Alcon divisions of Novartis)
- Craig Gordon, Investment Analyst, The Capital Group Companies, Inc.
- Adam Gunther, Managing Director, Healthcare Investment Banking, Piper Jaffray
- Steve Hamill, Managing Director & Analyst, Winslow Capital Management, LLC
- John Hammergren, Chairman, President & CEO, McKesson Corporation
- Stephen Hemsley, Executive Chairman, UnitedHealth Group Incorporated
- Sami Inkinen, Founder & CEO, Virta Health, Inc.
- Omar Ishrak, Ph.D., Chairman & CEO, Medtronic plc
- Sujay Jadhav, CEO, goBalto, Inc.
- David King, Chairman, President & CEO, Laboratory Corporation of America® Holdings (LabCorp®)
- Anna Mathews, Reporter, The Wall Street Journal
- Gene Munster, Founder & Partner, Loup Ventures; Former Senior Research Analyst, Piper Jaffray
- Steve Nelson, CEO, UnitedHealthcare and Office of the Chief Executive, UnitedHealth Group, Inc.
- Kirk Nielsen, Managing Director, Versant Venture Management, LLC
- Matt O'Brien, Senior Research Analyst, Piper Jaffray
- Drew Oetting, Founding Partner, 8VC
- Clark Otley, M.D., Ex-Officio, Board of Governors, Mayo Clinic, and Medical Director of the Department of Business Development
- Florian Otto, Co-Founder & CEO, Cedar Inc.
- Greg Page, Former Chairman & CEO, Cargill, Inc.

- James Park, Chairman, CEO, President & Co-Founder, Fitbit Inc.
- J.P. Peltier, Global Group Head, Healthcare Investment Banking, Piper Jaffray
- Austin Pittman, CEO, OptumCare
- Bill Quirk, Senior Research Analyst, Piper Jaffray
- David Ricks, Chairman & CEO, Eli Lilly and Company
- Chuck Robbins, Chairman & CEO, Cisco Systems, Inc.
- Steve Rusckowski, Chairman, President & CEO, Quest Diagnostics Incorporated
- Jon Salveson, Vice Chairman, Investment Banking, Piper Jaffray
- Arvind Sood, Vice President, Investor Relations, Amgen, Inc.
- Matt Stearns, Vice President, External Communications, Optum, Inc.
- Meg Tirrell, Reporter, CNBC
- Alex Turkeltaub, Co-Founder & CEO, ROAM Analytics, Inc.
- Stephen Ubl, President & CEO, Pharmaceutical Research and Manufacturers of America (PhRMA)
- Michael Vale, Ph.D., Executive Vice President, Healthcare Business Group, 3M Company
- Andrea Walsh, President & CEO, HealthPartners, Inc.
- Penny Wheeler, M.D., President & CEO, Allina Health Systems, Inc.
- Scott Whitaker, President & CEO, Advanced Medical Technology Association
- David Wichmann, CEO, UnitedHealth Group, Inc.
- Sean Wieland, Senior Research Analyst, Piper Jaffray
- Ron Williams, Chairman & CEO of RW2 Enterprises, LLC; Former Chairman & CEO, Aetna, Inc.; Operator Advisor, Clayton Dublier & Rice; Member of Board of directors, Johnson & Johnson
- Nadim Yared, President & CEO, CVRx Inc.; Chairman of the Board, AdvaMed

Notes

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