WHARTON HEALTH CARE CLUB

Wharton University of Pennsylvania STUDENT INITIATIVE

THE PULSE interviews inside

A Fair Shot at Health

February 10–11, 2022

whcbc.org
#WHCBC2022

Table of Contents

4 2022 Conference Agenda

7 Welcome from the Co-Chairs

8 Thank You to Our Sponsors!

9 Keynote 1: Jason Gorevic (C'93) - CEO, Teladoc Health

11 Keynote 2: J. Nwando Olayiwola, MD, MPH, FAAFP - SVP, Chief Health Equity Officer, Humana

13 Keynote 3: Aida Habtezion, MD, MSc, FRCPC - Chief Medical Officer and Head of Worldwide Medical & Safety, Pfizer

15 Keynote 4: Andy Slavitt (C'88, W'88) - Former Senior Advisor, White House Covid-19 Response

16 Health Care Equity Panel: Decreasing Disparities Through Data

37 Panel 1: From Volume to Value to Equity: How Value-Based Care Can Create a More Inclusive Health Care System

57 Panel 2: Balancing Innovation and Access

69 Panel 3: Consumers in the Spotlight: The Transformation of Digital Health

83 Panel 4: Behavioral Health Care for All: Equitable and Culturally Competent Behavioral Health

87 Panel 5: Investing in Health Equity: Driving Better Investment Returns and Health Care Access

93 Panel 6: The Path to Price Transparency

97 Health Care at Wharton

99 Who We Are

whcbc.org
#WHCBC**2022**

THE PULSE

The Pulse is Wharton's student-run health care journal. For over 15 years, this annual publication has been distributed to attendees of the annual Wharton Health Care Business Conference. *The Pulse Blog* is our online version, featuring exclusive interviews with health care business leaders. We hope you enjoy *The Pulse* articles included in this program.

19
Equity in Maternity
A Conversation with Olan Soremekun, Co-Founder and CEO of Cayaba Care

23
A Bold Goal to Improve Community Health
A Conversation with Humana's Tray Cockerell

28
Personalizing Modern Maternity Care
A Conversation with Adrianne Nickerson and Elaine Purcell, Co-Founders of Oula Health

32
Expanding Access to Care Through Public Service
A Discussion with a Medicaid Director

41
Democratizing Access to Value in Health Care
A Conversation with Pearl Health's Chief Product Officer Jennifer Rabiner

47
Democratizing Access to Specialist Insights
A Conversation with Gil Addo, Co-Founder & CEO of RubiconMD

52
Health Care in the Home
A Conversation with David Baiada, CEO of BAYADA

60
Targeted Cell Therapy for Autoimmune Diseases
A Conversation with Steven Nichtberger, CEO of Cabaletta Bio

65
Developing Gene Therapies for Cystic Fibrosis
A Conversation with Joan Lau, CEO of Spirovant Sciences

73
Reimagining Freedom at Any Age
A Conversation with DUOS Co-Founder & Chief Product Officer Kristen Lynch

78
Reimagining Data's Role in Identifying Burden of Disease
A Conversation with Arif Nathoo, Co-Founder and CEO of Komodo Health

90
Investing in Women's Health
A Conversation with Maneesha Ghiya, Founder and Managing Partner at FemHealth Ventures

The Pulse aims to engage health care leaders in dialogue about their career paths as well as their organizations' goals and initiatives. Through its interviews, *The Pulse* connects the health care business community to notable leaders and developments across the industry.

The Pulse's online blog includes exclusive online interviews and publications.

whcbc.org/pulse/

The Pulse Team

Editor
Tara Sullivan

Writers
Niki Bakhru, Lauren Gardanier, Jeremy Rubel, Emily Wang, Alex Yoo

2022 Conference Agenda

Welcome to the 28th annual conference! This past year has propelled health care innovation to unprecedented levels. We are better equipped than ever before to apply science, technology, and data to solutions in health care. But, our pace of innovation has not been matched by improvements in health equity. Ensuring equitable access to care is a responsibility shared by all parts of the industry. How can we work together to deliver high quality care and give everyone a fair shot at health? Join us at this year's conference to exchange experiences across sectors and understand how key leaders are working to bring together innovation and equity.

Thursday, February 10, 2022

Thursday activities will be virtual only.

6:30 PM–6:45 PM ET	Co-Chair Welcome & Conference Kickoff
6:45 PM–7:35 PM ET	Health Care Equity Panel: **Decreasing Disparities Through Data** Sponsored by MERCK
7:35 PM–8:30 PM ET	Virtual networking with Sponsors

Friday, February 11, 2022

All content will be delivered virtually. We hope you can join in Philadelphia to watch the livestream together.

7:30 AM–8:30 AM ET	Breakfast for livestream attendees	
8:30 AM–9:20 AM ET	Keynote 1: **Jason Gorevic (C'93) - CEO, Teladoc Health** Interviewed by **Bradley Fluegel** Sponsored by Teladoc HEALTH | Better health made possible	
9:35 AM–10:25 AM ET	Panel 1: **From Volume to Value to Equity: How Value-Based Care Can Create a More Inclusive Health Care System** **Payor/Provider** Sponsored by CVS kidney care	Panel 2: **Balancing Innovation and Access** **Pharma/Biotech** Sponsored by abbvie

10:40 AM–11:30 AM ET	Keynote 2: **J. Nwando Olayiwola, MD, MPH, FAAFP - SVP, Chief Health Equity Officer, Humana** Interviewed by **Rachel M. Werner, MD, PhD (M'98, GRW'04)**	
11:45 AM–12:35 PM ET	Panel 3: **Consumers in the Spotlight: The Transformation of Digital Health** **Digital Health** Sponsored by HEALTH ADVANCES	Panel 4: **Behavioral Health Care for All: Equitable and Culturally Competent Behavioral Health** **Behavioral Health** Sponsored by VISTRIA
12:35 PM–1:30 PM ET	Lunch & In-Person Networking	
1:30 PM–2:20 PM ET	Keynote 3: **Aida Habtezion, MD, MSc, FRCPC - Chief Medical Officer and Head of Worldwide Medical & Safety, Pfizer** Interviewed by **Tania Dimitrova (WG'11)**	
2:35 PM–3:25 PM ET	Panel 5: **Investing in Health Equity: Driving Better Investment Returns and Health Care Access** **Investing**	Panel 6: **The Path to Price Transparency** **Price Transparancy**
3:40 PM–4:30 PM ET	Keynote 4: **Andy Slavitt (C'88, W'88) - Former Senior Advisor, White House Covid-19 Response** Interviewed by **Dan Gorenstein**	
4:30 PM–4:45 PM ET	Closing remarks	
4:45 PM–6:00 PM ET	Closing reception for livestream attendees	

Note: Time may be subject to change.

Welcome from the Co-Chairs

Dear WHCBC Community,

Welcome to the 2022 Wharton Health Care Business Conference!

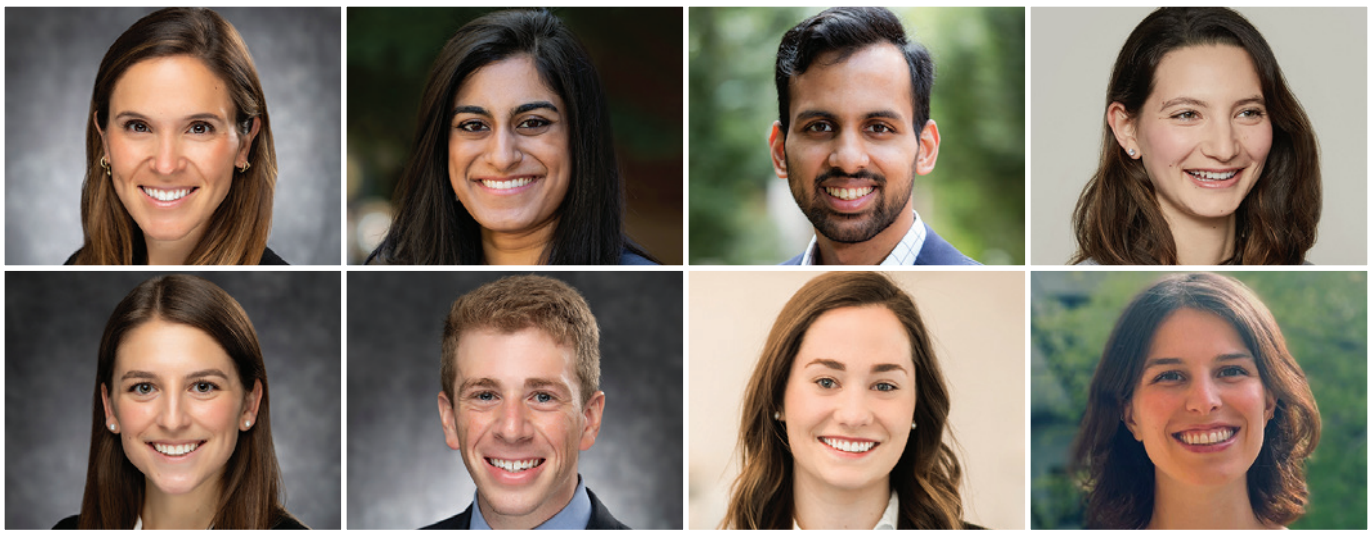
Whether you are joining us in person or virtually, we are so glad to have this opportunity to connect with each of you. This year's conference theme, "A Fair Shot at Health," was inspired by the tremendous changes across health care during the pandemic: the explosion of telehealth, mRNA vaccines, and unprecedented investment in digital health. We have expanded the frontier of what's possible. But bright innovations also illuminated the dark corners across our health care system. The last two years put a spotlight on health inequities in our country, and the need for organizations large and small to invest in new solutions that will drive lasting change.

As Co-Chairs, we are grateful for the opportunity to host this conference and play a role in strengthening the Wharton health care community. We hope this conference provides a platform for open discussions, challenging questions, and the bridging of opportunities. You each bring unique experiences and tools that together can build a system that offers everyone a fair shot at health. Our keynote speakers lead organizations that strive to be pillars of change, push the status quo and reimagine what's possible. Our panels will foster discussion on how to provide culturally competent behavioral health, what the path to actionable price transparency looks like, and how we can leverage data to create a more equitable and inclusive health care system.

Thank you for being part of this community.

Kind regards,

2022 Conference Co-Chairs
Emily Albert, Kristina Mani, Rachit Mohan, Hannah Plon, Anna Purk, Jeremy Rubel,
Tara Sullivan, Abigail Wank



Thank You to Our Sponsors!

Gold Sponsors

CVS kidney care®

MERCK

Silver Sponsors

abbvie

HEALTH ADVANCES

Teladoc HEALTH | Better health made possible

VISTRIA

Bronze Sponsors

AMGEN®

Humana

L.E.K.

OPTUM®

Pfizer

Putnam
An Ashfield Advisory Company

REGENERON
science to medicine®

Wharton
University of Pennsylvania
The MBA Program's
VICE DEAN'S DIVERSITY
AND INCLUSION FUND

ZS

Keynote 1

Friday, February 11, 2022 - 8:30 AM–9:20 AM ET

This event is brought to you by Teladoc HEALTH | Better health made possible

Jason Gorevic (C'93)

CEO

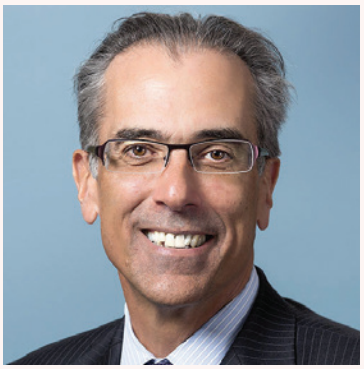
Teladoc Health

Jason Gorevic is chief executive officer and a member of Teladoc Health's board of directors. Since taking the reins in 2009, he has led Teladoc Health to its position today as the world leader in virtual care, achieving significant growth in revenue, membership, and telehealth utilization. Under his leadership the company has established a proven track record of successfully shaping the market and driving health care transformation by executing on the strategic vision, delivering award-winning innovation, and effectively integrating each corporate acquisition.

Nationally recognized as a thought leader and trailblazer in the virtual delivery of health care, Mr. Gorevic is fueled by a passion for improving health care outcomes and providing universal access to care. His extensive career in health care began at Oxford Health, and he has also held executive leadership roles at WellPoint, Inc. (now Anthem, Inc.) and Empire BlueCross BlueShield.

He holds a Bachelor of Arts in International Relations from the University of Pennsylvania.

Jason Gorevic (C'93) will be interviewed by Bradley Fluegel



Bradley Fluegel

Principal, **BMF Advisors**
Lecturer, **The Wharton School**

Brad Fluegel currently advises health care organizations, entrepreneurs, and other participants in health care. He was most recently the senior vice president - chief health care commercial market development officer for Walgreens. Brad was responsible for all commercial health care activities, including sales and contracting, biopharma relationships, retail clinics, clinical affairs, new service development and market planning. Previously, he was Chief Strategy and Business Development officer for Walgreens, responsible for corporate strategy and business development.

Brad joined Walgreens in October 2012 after previously serving as executive in residence at Health Evolution Partners. Before that he was chief strategy and external affairs officer of Anthem, where he was responsible for long-term strategic planning, government affairs, corporate communications including public relations, corporate marketing, corporate development, international expansion, innovation and new business ventures.

Prior to Anthem, Brad was senior vice president of national accounts and vice president, enterprise strategy at Aetna. Earlier, Brad was CEO for Reden & Anders (Optum Consulting) and Tillinghast-Towers Perrin, a clinical, actuarial and management consulting practice that served all sectors of the health care industry. While there, he negotiated the sale of Tillinghast Health to Optum. He also held several roles in strategy, planning and product development and management at Harvard Community Health Plan and organized and led audits, feasibility studies and related projects for health care clients at Arthur Andersen & Co.

Brad currently serves on the Board of Directors of Metropolitan Jewish Health System in New York City, Performant Financial Corporation, Fitbit (until its recent sale to Google), Premera Blue Cross, Alight Solutions and AdhereHealth. He also advises several health care companies and private equity firms.

Brad earned a master's degree in public policy from Harvard University's Kennedy School of Government and a bachelor of arts in business administration from the University of Washington. He also serves as a lecturer at the University of Pennsylvania's Wharton School of Business.

Keynote 2

Friday, February 11, 2022 - 10:40 AM–11:30 AM ET

J. Nwando Olayiwola, MD, MPH, FAAFP

SVP, Chief Health Equity Officer

Humana

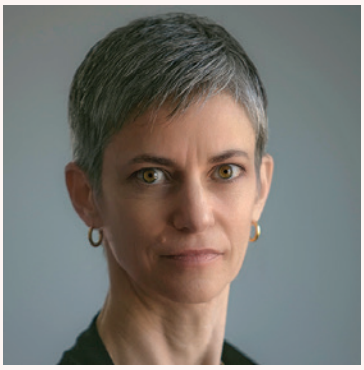
Dr. J. Nwando Olayiwola is the Chief Health Equity Officer & Senior Vice President for Humana. She is responsible for creating and implementing a strategy to achieve health across all lines of business, including care delivery, giving all communities and groups of people a fair and just opportunity to be as healthy as possible. Dr. Olayiwola leads cross-functional efforts for the organization's journey toward more equitable care.

A longtime advocate for underserved communities, Dr. Olayiwola brings more than 20 years of experience in clinical, community and academic medicine, health technology leadership, public health and domestic and international health systems redesign. Her October 2020 Tedx Talk is a clarion call for health equity.

Prior to joining Humana, Dr. Olayiwola was the Chair & Professor in the Department of Family and Community Medicine at The Ohio State University College of Medicine, where she was also the Founding Director of the Center for Primary Care Innovation and Transformation and Co-Chair of the OSU Wexner Medical Center's Anti-Racism Action Plan. She previously served as Chief Clinical Transformation Officer for RubiconMD, Director of the UCSF Center for Excellence in Primary Care, and Chief Medical Officer of Community Health Center, Inc., Connecticut's largest Federally Qualified Health Center system. She continues to practice as a Board-certified family serving a largely medically underserved patient population.

Dr. Olayiwola was a Commonwealth Fund/Harvard University Fellow in Minority Health Policy at Harvard Medical School from 2004 to 2005. During this fellowship and leadership training, she received her master's degree in public health with a concentration in health policy from the Harvard School of Public Health. She obtained her undergraduate degree in Human Nutrition/Pre-Medicine at the Ohio State University and her medical degree from the Ohio State University/ Cleveland Clinic Foundation. She completed her residency training in family medicine at Columbia University/New York Presbyterian Hospital, where she was a Chief Resident. She is the recipient of numerous awards, including *Family Physicians who Are Changing our World* by FMEC and the Woman of the Year by the American Telemedicine Association. Dr. Olayiwola was named one of 8 Black Women to Watch in Corporate America in Sept./Oct. 2021. Dr. Olayiwola is married and has two school-aged children.

J. Nwando Olayiwola, MD, MPH, FAAFP will be interviewed by Rachel M. Werner, MD, PhD (M'98, GRW'04)



Rachel M. Werner, MD, PhD (M'98, GRW'04)

Executive Director

Leonard Davis Institute of Health Economics

Rachel M. Werner, MD, PhD is the Executive Director of the Leonard Davis Institute of Health Economics. She is Professor of Medicine at the University of Pennsylvania Perelman School of Medicine as well as the Robert D. Eilers Professor of Health Care Management and Economics at the Wharton School and a physician at the Philadelphia VA. Her research examines the effects of health care policies on health care financing and delivery, focusing on the effects of payment and financial incentives. Werner received her medical degree and doctoral degree in Health Economics from the University of Pennsylvania. She completed her residency in internal medicine at the University of Pennsylvania. She is an elected member of the National Academy of Medicine.

Keynote 3

Friday, February 11, 2022 - 1:30 PM–2:20 PM ET

Aida Habtezion, MD, MSc, FRCPC

Chief Medical Officer and Head of Worldwide Medical & Safety

Pfizer

As Chief Medical Officer of Pfizer, Aida Habtezion leads Pfizer's Worldwide Medical & Safety organization responsible for ensuring that patients, physicians, and regulatory agencies are provided with information on the safe and appropriate use of Pfizer medications. Prior to joining Pfizer, Dr. Habtezion was a practicing physician and scientist at Stanford University's School of Medicine, Division of Gastroenterology and Hepatology. She is board certified in Gastroenterology in both Canada and the United States. She led a large translation research lab funded by multiple NIH, DOD, and foundation grants focused on understanding disease mechanisms and identifying potential immune-based therapeutic targets for pancreatic and intestinal inflammatory diseases and their long term complications such as cancer. Her research also included understanding the effect of environmental factors such as cigarette smoke and interaction of immune-enteric nervous system in GI motility disorders. She also served as an Associate Dean for Academic Affairs, a faculty member in Stanford's Immunology Ph.D. program, Neuroscience Institute, Cancer Institute, Maternal & Child Health Research Institute, interdisciplinary biosciences institute Bio-X, and faculty fellow at Stanford's ChEM-H (Chemistry, Engineering & Medicine for Human Health). Dr. Habtezion served in several national and international study sections, including six years in NIH study section, American Gastroenterological Association (AGA) Institue Research Awards and AGA Research Policy Committee. Dr. Habtezion is the recipient of the Robert Wood Johnson Harold Amos Medical Faculty Development Award, Gastroenterology & Hepatology Teaching Award, the Immunology Faculty Mentor of the Year, and the Kenneth Rainin Foundation Synergy Award. She is an elected member of the American Society for Clinical Investigation (ASCI), the Association of American Physicians (AAP) and named the 2020 Allen Distinguished Investigator. She currently serves in The New York Academy of Sciences Board of Governors and is the American Pancreas Association (APA) President-elect.

Dr. Habtezion is a tenured and endowed Professor of Medicine, currently on a leave of absence from Stanford University. Dr. Habtezion obtained her Bachelor of Science in Chemistry from the University of Alberta and Master of Science in Nutritional Sciences from the University of Guelph. She completed her medical degree from McMaster University. Dr. Habtezion completed her Internal Medicine residency from the University of Western Ontario and Gastroenterology & Hepatology clinical fellowship from the University of Toronto in Canada. Following her clinical fellowship training, she obtained postdoctoral research training in Immunology at Stanford University.

Aida Habtezion, MD, MSc, FRCPC will be interviewed by Tania Dimitrova (WG'11)

Tania Dimitrova (WG'11)

Chief Business Officer

Artios

Tania Dimitrova is the Chief Business Officer at Artios, a leading DNA Damage Response biotechnology company developing a broad pipeline of innovative treatments for cancer. Tania is responsible for leading the company's global partnering and business development strategy and execution, as the company advances its clinical and discovery programs, including its Polymerase theta program, towards the market. She has been with Artios for three years and brings 18 years of bio-pharma business and corporate development, capital markets and investing experience. She joined Artios after 5 years at Pfizer Inc. where she was a Director in Worldwide Business Development, leading partnership, licensing and M&A transactions in vaccines and oncology. Prior to Pfizer, Tania was a member of Bristol-Myers Squibb's Corporate M&A group, where she managed all stages of the origination, due diligence, and execution of M&A and divestiture activities, including multiple buy-side commercial assessments.

Prior to entering industry, Tania spent 8 years on Wall Street researching and investing in health care companies. She began her career with Credit Suisse Investment Banking as an equity research analyst, where she conducted analyses of private life science companies as they pursued the public markets. Tania holds an MBA degree with focus in Health Care Management from the Wharton School at the University of Pennsylvania and a BA degree in Economics & Mathematics from Mount Holyoke College, Massachusetts.

Keynote 4

Friday, February 11, 2022 - 3:40 PM–4:30 PM ET

Andy Slavitt (C'88, W'88)

Former Senior Advisor

White House Covid-19 Response

Andy Slavitt was President Biden's White House Senior Advisor for the Covid response. He has led many of the nation's most important health care initiatives, serving as President Obama's head of Medicare and Medicaid and overseeing the turnaround, implementation and defense of the Affordable Care Act. Slavitt is the "outsider's insider", serving in leading private and non-profit roles in addition to his government services. He is founder and Board Chair Emeritus of United States of Care, a national non-profit health advocacy organization as well as a founding partner of Town Hall Ventures, a health care firm that invests in underrepresented communities. He co-chaired a national initiative on the future of health care at the Bipartisan Policy Center. He chronicles what goes on inside the government and across the nation at town halls, in USA Today, on his award-winning podcast In the Bubble, and on Twitter. He is the author of Preventable, a best-selling account of the US's Coronavirus response released in 2021. A graduate of the University of Pennsylvania and Harvard Business School, he and his wife have two grown sons.

Andy Slavitt (C'88, W'88) will be interviewed by Dan Gorenstein

Dan Gorenstein

Editor-in-Chief

Tradeoffs

Dan Gorenstein is the Founder and Editor-in-Chief of **Tradeoffs**, a podcast exploring the complicated, costly and often counterintuitive world of health care. Before launching Tradeoffs, Dan was the senior reporter for Marketplace's Health Desk, covering the business of health care, and before that, he spent more than 11 years at New Hampshire Public Radio. He got his start in journalism at the Chicago Reporter, an investigative journal that examines race and class disparities in the Chicago area. He's won numerous national and local awards, including the Society of Professional Journalist Sigma Delta Chi investigative reporting award.

Health Care Equity Panel: Decreasing Disparities Through Data

Thursday, February 10, 2022 - 6:45 PM–7:35 PM ET

This event is brought to you by MERCK

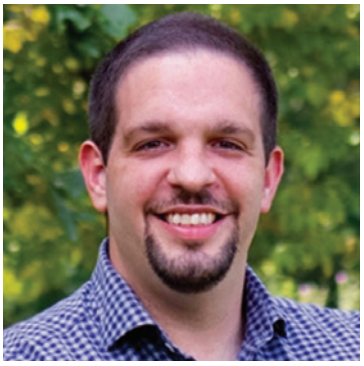
Disparities in access and outcomes for underserved populations have been a long-standing challenge that have put minority groups at higher risk for illness while also preventing them from accessing quality care. Recently, health care leaders have pushed to define metrics, collect data, and develop data driven strategies to tackle the health care system's inequities. This panel will showcase a discussion by leaders that are leveraging data to create a more equitable and inclusive health care system.

Vik Bakhru, MD (WG'09)

Founding Chief Medical Officer

Circulo Health

Vik Bakhru is a practicing physician and Chief Medical Officer/Head of Mosaic (Care Model/Partnerships/Strategy) for Circulo Health, Inc., a digital-first, technology-focused venture dedicated to serving Medicaid members. He is Founder and Chairman of the Board of Directors of the Foundation for International Medical Relief of Children. Vik holds a B.A. in Economics and a B.S. in Biology from The Columbian College of Arts & Sciences of The George Washington University, an M.D. from The George Washington University School of Medicine & Health Sciences, and an M.B.A. from The Wharton School of the University of Pennsylvania.

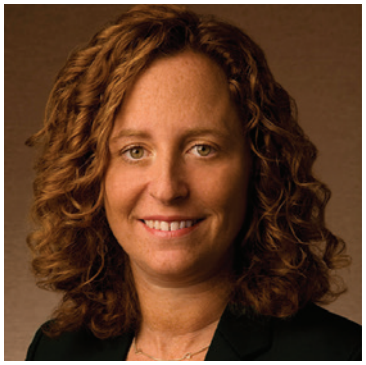


Robby Knight

Co-Founder and CEO

Soda Health

Robby Knight is the Co-Founder and CEO of Soda Health, a health care technology company that helps people to identify and access the services they need to live healthier lives – with a vision to reinvent social care. Before launching Soda Health, Robby was an executive at Walmart responsible for creating and scaling new health care businesses and helping to define Walmart's health care strategy. Prior to his time at Walmart, he spent several years as a social worker in behavioral health, substance abuse, and community-based services. Robby holds an MS in Social Work from Columbia University and an MBA, MS in Management Information Systems, and a BSW (Social Work) from the University of Alabama.



Rebecca Madsen (WG'94)

Chief Consumer Officer
UnitedHealth Care

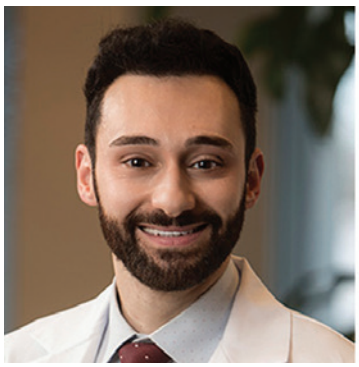
Rebecca Madsen is the Chief Consumer Officer of UnitedHealth Care. She is responsible for analyzing, designing and implementing enhancements to the consumer experience, for creating a consumer-centric approach across the organization, and for working to make care more accessible and affordable.

During her nearly 20 years at UnitedHealth Care, Ms. Madsen has held a variety of leadership positions spanning strategy, data and analytics, product development, marketing and operations, including Chief Operating Officer for the Northeast Region and National Chief of Staff for the Employer & Individual business. Prior to joining UnitedHealth Care, she worked in the health care and pharmaceutical practices at Accenture. In all of these roles, she has had a passionate commitment to serving people throughout their health care journeys and making sure every consumer has a voice.

She has been featured in dozens of national media outlets and is a frequent speaker at industry conferences and events, including the Consumer Electronics Show (CES). She won the Stevie Award for Women in Business – Female Executive of the Year (Consumer Services) and was named one of the "Women to Watch" by Modern Health Care.

Ms. Madsen holds an MBA in Health Care Management from The Wharton School, University of Pennsylvania, where she was also a Teaching Assistant, and a Bachelor of Arts degree in History of Science and Mathematics from Princeton University.

Ms. Madsen lives in New York City and has three children. She serves as the Chair of the Princeton Alumni Schools Committee in Manhattan & Staten Island, as a Team Manager at the Manhattan Soccer Club, and previously as a Coordinator at Downtown United Soccer Club. She also served on the Board of Directors at Boston Heart Diagnostics until the company was acquired in 2015.



Baligh Yehia, MD, MPP, FACP (GR'12)

Senior Vice President, **Ascension**
President, **Ascension Medical Group**

Baligh Yehia, MD, MPP, FACP, is Senior Vice President, Ascension, and President, Ascension Medical Group (AMG). In this role, Dr. Yehia is focused on clinician engagement, well-being, and development and advancing AMG's care model portfolio and virtual care strategy. Previously, Dr. Yehia led enterprise-wide initiatives to improve community health and clinical integration at Johns Hopkins Medicine and served as the first Deputy Under Secretary for Health for Community Care at the U.S. Department of Veterans Affairs (VA).

A nationally recognized expert in health disparities and HIV medicine, Dr. Yehia has published over 150 articles, abstracts and chapters in leading journals. Dr. Yehia received his bachelor and medical degrees from the University of Florida, completed internal medicine residency at Johns Hopkins Hospital, and infectious diseases fellowship at the Hospital of the University of Pennsylvania. He also holds a Masters in Public Policy from Princeton University and Masters of Science in Health Policy Research from the University of Pennsylvania.

Olan Soremekun, MD, MBA

CEO and Co-Founder

Cayaba Care

(Moderator)

Dr. Olan Soremekun, MD, MBA is the CEO and co-founder of Cayaba Care. The startup was founded in 2020 and provides maternity support services that improve outcomes for Medicaid and underserved populations. His background includes clinical experience as a former emergency room physician, health care executive leadership at Cigna, and an assistant professorship at the Department of Emergency Medicine at the University of Pennsylvania.

His work has supported physician groups' adoption of value-based payment models as well as innovations in clinical operations and service-line expansion. Olan earned his undergraduate degree at Montclair State University and his MD-MBA degree from Columbia University. He completed his residency in Emergency Medicine at the Harvard Affiliated Emergency Medicine Program.

EQUITY IN MATERNITY

A CONVERSATION WITH OLAN SOREMEKUN, CO-FOUNDER AND CEO OF CAYABA CARE

Launched in 2021, Cayaba Care is on a mission to improve maternity for underserved populations. The company's home-based care model combines routine in-person care with tech-enabled multidisciplinary teams to support patients in all aspects of their pregnancy journeys. Cayaba focuses on providing holistic care for its patients, bridging gaps for women who face substantial social and health inequities. Pulse writer Niki Bakhru connected with Co-Founder and CEO Dr. Olan Soremekun to learn more about his experience building and growing Cayaba Care.

Dr. Olan Soremekun

Co-Founder and CEO

Cayaba Care

***The Pulse*: Looking back on your career journey, what are some experiences that led you to where you are today as co-founder and CEO of Cayaba Care?**

Dr. Olan Soremekun:I started with both medical school and business school in New York at Columbia University, while also spending some time doing M&A work at Bristol Myers. Through it all, I always knew I wanted to get closer to the delivery side of health care. I completed my residency in emergency medicine in Boston, then moved back here to Philly. Working in the emergency departments in New York, Boston, and Philadelphia, I started to recognize significant gaps within the health system, particularly for patients affected by social determinants of clinical and behavioral health. And so I took a hiatus from working at health systems to spend more time on population health work at Cigna to help providers figure out how they could be successful in a value-based program.

While I really enjoyed that work, I knew that deep down in my DNA I was an operations service line person – I wanted to build innovative solutions now using my population health mindset. I ended up in maternity partly because of this and partly because of lived experiences. At that same time, my wife and I were expecting our first baby. I saw around me how broken the system was, how patients were not getting what they needed. It translated to terrible outcomes, and we've done worse as a country over the last 15 years in maternity than in any other specialty. Unfortunately, if you're black or brown, the numbers are even worse. So, I began trying to build a solution that was different and that could impact those outcomes.

***The Pulse*: And so Cayaba was born – can you describe the solution you built with Cayaba and how it addresses the unmet needs you mentioned?**

OS: Sure. At Cayaba, we focus on serving low income families and mothers, mainly on Medicaid but also commercially insured. Our belief is that the future of maternity care has to be three-fold – not just in office, but also leveraging telemedicine and in-home care, personalized to the needs of the patient. It really comes back to population health and understanding the risk level of the population you serve. And, it has to be holistic, thinking about clinical, social, and behavioral factors. What Cayaba is providing is a home-based extension of the practice to address these three areas and needs, journeying with the women through her entire pregnancy to drive improved outcomes.

***The Pulse*: Focusing on this idea of being "home-based", how do you leverage technology or partnerships with practices to support Cayaba's hybrid model of care??**

OS: Technology is really a key component of what we do. As most folks know, there's a huge staff shortage in U.S. health care from a provider perspective. Critical to our model is hiring women from the communities that we serve and enabling them with technology to deliver care in a better way. In addition to bringing this team and technology to the table, we think about how to use data to understand the individual needs of our patients and to risk stratify the patient. We run that data through algorithms to match the patient with the right level of service they need for better outcomes.

***The Pulse*: Something crucial to this conversation, as you mentioned earlier, is that outcomes in pregnancy aren't where we want them to be and that's especially difficult for black and brown women. Even right here in Philadelphia, black women accounted for 43% of all births, but 73% of all deaths. What are a few examples of challenges you see facing these patient populations and how does Cayaba address these?**

OS: Yes the numbers are staggering and driven by many factors, including inherent bias in the system. At Cayaba,

we recognize that race is a risk factor. Regardless of income level, black women are at a significantly higher risk for morbidity and mortality during childbirth. To combat bias, our care model focuses on making sure we provide equity and increased access to the patient. By hiring team members from the communities we serve, we're able to engage in a very different way. Our team can connect with patients and truly understand the needs we're trying to address. Clinical is an important but small subset of these needs. We're thinking about social, behavioral factors – for example, relationships and employment status. Our role is to provide support at such a critical life event and, with all the stresses that our society brings, alleviate burdens to the best of our ability.

***The Pulse*: Also to the benefit of your members, Cayaba's free membership is covered by most insurance, including Medicaid. How does Cayaba find a way to provide care at low cost given historically lower reimbursement rates, especially for Medicaid?**

OS: That's a great question because Medicaid is difficult. We're a home-based, hyperlocal provider group, but scalable. Our model works really well in a fee-for-value environment, but we recognize that if we're going to work with payers, we probably have to start from a fee-for-service structure and, over time, evolve to fee-for-value. To be successful, we need to demonstrate that shift to value – being incentivized for outcomes that drive on total medical costs, patient experience, etc. We recognize we're not building a total solution for Medicaid; we're focusing on zip codes and neighborhoods.

***The Pulse*: Within the zip codes you're focused on today, can you share examples of Cayaba's early results?**

OS: Drug development is a discipline. It requires incredible intellect, experience, and difficult tradeoffs. Individuals who make those decisions or lead groups who generate information for those decisions have a level of patience, wisdom, experience, and judiciousness both in leadership and in making decisions. These qualities are not easy to see on a resume. Those skills and talents can only be observed working in drug development together. Bringing together people who have an insatiable curiosity for new learnings and new ways of thinking is often a harbinger

"I immigrated to the U.S. as a kid but I'm Yoruba and in our language 'Ayaba' means 'Queen.' We intentionally chose to end the company title with Care instead of Health because we felt 'care' better aligned with our vision – holistic care for queens."

of future success – I thrive off that. Early results are really encouraging and exciting in terms of patients that are engaged with the Cayaba model. Our patients are over 40% less likely to utilize the emergency department during pregnancy. They're also three times less likely to miss appointments. Both of these are really encouraging observations. In the future, we'd also like to measure impact on things like NICU stays, transitioning from caring for the mom to the baby in terms of factors like vaccinations, etc.

***The Pulse*: Those results are great to hear. With these in mind, what are some strategic moves you see for Cayaba in the year ahead?**

OS: We're continuing our hard work in continuing to engage patients and grow. Within Philadelphia, we're trying to engage members of our network, such as the health systems. We've already seen significant month-over-month growth and as we think about what we've built in Philadelphia, we're starting to consider other similar cities. We have a really great playbook to expand to cities that look like Philadelphia in terms of their needs and market dynamics, so we envision transitioning from one market to many in 2022. We hope our solution continues to engage patients in a different way and continues to drive outcomes that encourage a shift from fee for services to fee for value.

***The Pulse*: Looking forward to seeing what's in store for Cayaba this year and ahead. As our time comes to a close, I'd love to ask just one more question – where does the name Cayaba come from?**

OS: I immigrated to the U.S. as a kid but I'm Yoruba and in our language, "Ayaba" means "Queen." We intentionally chose to end the company title with Care instead of Health because we felt "care" aligned better with our vision – holistic care for queens. Finally, thinking about branding and alliteration, our team landed on "Cayaba Care." We love what this name stands for and how it connects to our overall mission.

Interviewed by Niki Bakhru, December 2021

A BOLD GOAL TO IMPROVE COMMUNITY HEALTH

A CONVERSATION WITH HUMANA'S TRAY COCKERELL

Humana's Bold Goal represents an initiative by one of the largest insurance providers in the US to address the health needs of its members and communities, focusing on social determinants of health and health disparities within these populations. The initiative's primary focus areas include food insecurity, social isolation, and housing instability. Pulse writer Emily Wang connected with Tray Cockerell, an early leader of Humana's Bold Goal initiative, to learn how Humana seeks to address health inequity in their members' communities in an effective and sustainable way.

Tray Cockerell

Director of Strategic Relationships in Health Equity and Community Engagement

Humana

***The Pulse*: Thanks so much for agreeing to speak with us. Let's start this conversation high-level – can you share your background and tell us how you arrived at your current role at Humana?**

Tray Cockerell: I joined Humana 20 years ago. At that time I didn't think I'd be here for 20 years, however, I've been fortunate to be part of a company that has grown and transformed in so many ways over that time, and created so many opportunities for me and the people we serve. I started out in employee relations and quickly moved into a business leader role in the human resources department, leading HR for our corporate groups, such as finance, strategy, law, innovation, etc. In my 20 years, I have been able to touch many parts of the Humana ecosystem, including internal communications, benefits design and development, and innovation and marketing. I also worked for our Chief Operating Officer to integrate a care delivery company we acquired. This is where we began talking about a way to begin helping communities, and how I got the chance to help start the Bold Goal. I was at the very front end of the Bold Goal team, and managed all the resources for the strategy startup team in partnership with one of my co-leaders on the operations side of the business. I spent a lot of time in San Antonio to start up this Bold Goal journey, and now it's live in almost 20 communities across the country, so I'm really proud of how this startup initiative within Humana has grown.

About a year and a half ago, I began focusing more directly on social determinants of health in the health equity space, and worked on a project for a 'community of opportunity' identified by Humana. In this type of project, we partner with a local community that has tremendous disparities in health equity and serve as a partner to address complex chronic health issues in these underserved, underrepresented neighborhoods. Even where I sit in Dallas today, there are communities two or three miles apart that have an 18 year difference in life expectancy, and this is the case in many other cities across the nation. So this is where my work with Humana's Bold Goal has been focused for the past seven years: understanding the hurdles to healthy living in these communities, and what is stopping people from achieving their best health. What are the key barriers that we can help address through partnerships?

***The Pulse*: It sounds like you've touched many parts of Humana's business and you have worked with different health equity initiatives. Could you speak to some of the areas of excitement and specific challenges you've faced along this journey?**

TC: The most exciting part was being on the front line in determining ways to address social determinants of health. At the start, we weren't calling it "social determinants" or "health equity", we were just trying to help convene the right set of community stakeholders and partner with them to address the key barriers to health in their communities. When we started Bold Goal seven years ago, this was the objective – to listen and understand the key challenges in San Antonio. And when we did, we heard about multi-generational households, and how they feel pre-destined to inherit specific health conditions; for instance, something like diabetes was treated as a hereditary disease. We were in a position to help people understand that this isn't necessarily the case – you can change your behavior, and there are organizations you can engage with that can help address these important community health issues. Identifying the Bold Goal initiative's ability to act as a community partner and make a significant impact was the most exciting part.

The most daunting part was finding ways to create change in long-running challenges that seemed to be systemic or had been around forever. When we find issues have persisted for decades, we know they're not going to be

easy to fix. Bold Goal's work starts by really understanding what a community's challenges are – for example, we held clinical town halls in San Antonio in Year 1, and there were about 250 different community-based organizations represented and several hundred people in the audience. Our goal was to get people to come to the table with what they've already done and what they want to do, and create a shared vision. Let's take the example of diabetes in San Antonio: we found out there were five different groups in San Antonio (and probably more we didn't discover), that shared a specific mission, but they never talked to one another. They'd never been in the same room to say what they were doing, and how they might collaborate to address diabetes in the community. We sparked a collaboration to attack the diabetes issue in San Antonio. We also found other community-based organizations that were talking to each other, but weren't really interacting or talking with doctors. They didn't have an avenue to get doctors to advise or help them. Missing that connection didn't enable them to collaborate to improve health inside and outside the doctor's office. These organizations might have an impact in the community, but effective health intervention should start with establishing a trusting relationship with a provider, so they can give community members guidance on where to go – if they have food insecurity, or challenges with diabetes for example, what are the resources you can take advantage of, or medications and counseling you need? There are so many resources out there, but raising awareness and getting community members to understand how they can use resources was a huge challenge.

For Humana, our number one priority is to help individuals and communities improve broad health outcomes. This is easier of course at the individual Humana member level, because there are more levers we can pull with programming, direct counseling and coaching, and other resources we can give them access to. But we want to focus on how that extends to the rest of the community on a broader level, so we created metrics to understand the value Bold Goal adds on every scale. For example, of course there is value in terms of membership retention, but there is also improvement of health outcomes measured through a "healthy days" metric that identifies a person's self-reported physical and mental health. We've been able to see an improvement across this metric spanning different communities throughout the years, and that's how we have

"There are communities two or three miles apart that have an 18 year difference in life expectancy, and this is the case in many other cities across the nation. So this is where my work with Humana's Bold Goal has been focused for the past seven years: understanding the hurdles to healthy living in these communities, and what is stopping people from achieving their best health. What are the key barriers that we can help address through partnerships?"

measured the impact of this Bold Goal initiative. leader role in the human resources department, leading HR for our corporate groups, such as finance, strategy, law, innovation, etc. In my 20 years, I have been able to touch many parts of the Humana ecosystem, including internal communications, benefits design and development, and innovation and marketing. I also worked for our Chief Operating Officer to integrate a care delivery company we acquired. This is where we began talking about a way to begin helping communities, and how I got the chance

***The Pulse*: One of the challenges facing population health programs is determining and measuring success metrics. Do you feel like people are beginning to understand the value of these programs in the long-term due to Bold Goal's success metrics?**

TC: 100%. Humana is focused on the whole person's health and putting patients at the center of care, and the goal is to make it easy. We do that in a couple ways, like providing care at home, or resources to make it easy for people to achieve their best health, which was the original Bold

"This mission is about getting rid of unjust and avoidable differences in health, and there is no reason we should not be part of the solution. It's incumbent upon companies like Humana to lead the way, and I also think it's incumbent upon other companies to step up and provide support, because this is not just a health care problem but a societal problem."

Goal. The goal was to have something that is continuously pushing the boundaries of improving health outcomes, so "healthy days" became a core metric for us to look at how we are having an impact on communities. We also looked at the number of people we serve who are in value-based care arrangements and see a value-based care provider – and they're focused on understanding and addressing the whole person's health, including aspects that have historically created health equity challenges for people. That's the difference in this integrated model now, where we bring in clinically integrated pharmacists with social workers, nurses, physicians, and other clinicians to help treat people holistically. Historically, you may have gone to the doctor and they give you medication and say, "take this with food". But if you're food insecure, you may not be able to take that medication. And you might get sicker, or have a side effect from taking your medication without food. And it becomes a vicious spiral and your health gets more complicated and out of control simply because you didn't have access to food to take medication. So providers knowing to screen for food insecurity and referring patients to the right resources is the type of change you'll see in a value-based care environment. And that's how programs can make a big difference – it's not just a health program, it's an intervention for systemic improvements.

***The Pulse*: You've mentioned a number of Humana's different business units and initiatives. Could you speak to where Bold Goal sits within the existing Humana programs, including value-based agreements Humana has within its network of providers?**

TC: So our Bold Goal model was built early on as an integrated one. We established an internal Board of Directors in each of our markets chaired with relevant leaders as well as the representatives of all parts of our business who really understand the disparate parts of our company. This is all led by a population health leader in each community, who actually formulates the local strategy with those local leaders. It's been an evolution to integrate with the health plan and how we deliver benefits. We offer features now like a healthy food garden, and Papa, which is a program targeted at loneliness and social isolation among elderly members. Our pilots with Papa and other companies are now being incorporated into our health plan benefits through value-based insurance design or VBID, and through special supplemental benefits for the chronically ill, also known as SSBCI.

***The Pulse*: I'm sure you've been asked this before, but how has COVID-19 changed the priorities of Bold Goal?**

TC: During COVID-19, when the world pivoted to virtual, we did the same thing and took our programming virtual. With partners like Papa, we were able to address what became a much more heightened loneliness and social isolation problem in our senior population. We also virtually brought care into homes, and our in-home personnel virtually kept in touch to provide the care they need. In addition, during the pandemic there were also people who had chronically complex conditions that were medically distancing, but they still needed treatment or they would become incredibly ill. So we've been strong advocates for getting people to see their doctors again in a safe manner and focus on their broader health. Lastly, around vaccination education and efforts, we provide opportunities for communities to be vaccinated by partnering with organizations such as Walgreens to get them out to the community partners as soon as possible. And we've seen great responses to these actions.

***The Pulse*: I'm sure you've been asked this before, but how has COVID-19 changed the priorities of Bold Goal?**

Tray: During COVID-19, when the world pivoted to virtual, we did the same thing and took our programming virtual. With partners like Papa, we were able to address what became a much more heightened loneliness and social isolation problem in our senior population. We also virtually brought care into homes, and our in-home personnel virtually kept in touch to provide the care they need. In addition, during the pandemic there were also people who had chronically complex conditions that were medically distancing, but they still needed treatment or they would become incredibly ill. So we've been strong advocates for getting people to see their doctors again in a safe manner and focus on their broader health. Lastly, around vaccination education and efforts, we provide opportunities for communities to be vaccinated by partnering with organizations such as Walgreens to get them out to the community partners as soon as possible. And we've seen great responses to these actions.

***The Pulse*: Going a bit broader – what do you see as the role of Humana, or any large health plan for that matter, in improving health equity? What is the ideal way for a health plan to have the most impact?**

TC: I think Humana really put a line in the sand when we hired a Chief Health Equity Officer, Dr. Nwando Olayiwola. Bringing her on board to establish a strategy has really focused us on how to have more valuable conversations and interventions focused on health equity. This mission is about getting rid of unjust and avoidable differences in health, and there is no reason we should not be part of the solution. It's incumbent upon companies like Humana to lead the way, and I also think it's incumbent upon other companies to step up and provide support, because this is not just a health care problem but a societal problem. Ultimately, if you break down most of the challenges we see today, most disparities associated with health equity issues come back to poverty and the root of poverty is how society has dealt with marginalized populations. So for example, we support a company in the west end of Louisville called AMPED, and they have an incubator where they provide wraparound services for black and brown small businesses to start up. This is just one example of how Humana and large companies can support otherwise marginalized and underserved communities that haven't had access to capital to start impactful companies, and can make a difference in workforce development efforts. We've also evolved requirements for some of our employment roles from a four year degree to other experience and credentials. You don't have to have a four-year degree in analytics to come do a job in data analytics. We can easily get someone credentialed, train them in relevant skills and techniques, and they can come in and perform well at the job.

***The Pulse*: Thanks so much for your time today. My last question for you – based on your career experiences, what advice do you have for students who are looking to start or advance careers within health care?**

TC: The cool thing about our industry is that there are so many opportunities. And you can come from very different backgrounds – so when I talked earlier about my career and not coming from a clinical background, I've had the opportunity to move from multiple different business avenues and work on incredible projects. So when you're looking for a job in health care, just realize that career paths are unlimited; the key is to figure out what your passion, or "North Star" is, and there will be an opportunity to help flourish that passion and idea. At Humana, we've built an engaged population of employees. Bold Goal is an initiative that has been a real motivator and engagement factor for our employees because it's about being part of something that is focused on how we help people achieve their best health outcomes in a way that enables them to live their best life.

Interviewed by Emily Wang, December 2021

PERSONALIZING MODERN MATERNITY CARE

A CONVERSATION WITH ADRIANNE NICKERSON AND ELAINE PURCELL, CO-FOUNDERS OF OULA HEALTH

Oula Health is reimagining modern maternity care for women, from pre-pregnancy to postpartum. Oula's care delivery model spans from a remote care platform to their first in-person clinic located in Brooklyn, NY. Oula's mission is to set a new standard for patients by providing personalized maternity care that bridges the gap between modern medicine and human intuition. Pulse writer Niki Bakhru connected with Co-founders Adrianne Nickerson and Elaine Purcell to learn more about their experiences creating and leading Oula Health.

Adrianne Nickerson and Elaine Purcell

Co-Founders

Oula Health

***The Pulse*: Let's start with how you got here – can you share your career path and what along the way inspired you to build Oula Health into what it is today?**

Adrianne Nickerson: I feel like I'm a health care junkie at this point. I've worked on the business side of health care my whole career, focusing more and more on tech-enabled services. I have an MPH by background and did all of my research on sexual and reproductive health and women's autonomy in their health care decision-making. So now it's really coming full circle from how I started my career to where I am today at Oula.

Before Oula, I co-founded a cancer care management company called Robin Care, which brought together a holistic care model of patient advocates, nurses, social workers, etc. At Robin Care, we used technology to scale the impact of our model and work through self-insured employers and health plans so that patients didn't need to bear the cost burden. Prior to Robin Care, I was at a corporate venture arm of a huge health system and worked with a lot of early-stage digital health companies to bring innovation into how we deliver care. Today, after spending time learning the ins and outs of the business side of health care, I can take these lessons and use to be a force for good to create a new care model and experience for women in an area I'm really passionate about.

Elaine Purcell: I started my career in the health policy space during the passage of the Affordable Care Act. I've been passionate about value-based care since I realized that much of health care appears to be transactional, despite being one of the most personal things we go through. Before Oula, I spent the last six years in the world of primary care, thinking through how to take mind, body, and soul and create a sustainable clinical and business model – first at a company that recently IPO'ed called Privia Health, focused on driving primary care clinics to move from fee-for-service to risk bearing models, then more recently on a senior leadership team at Caremore, now a wholly owned subsidiary of Anthem. My work at Caremore taught me how to approach a really complex patient population. There, I focused more on end-of-life care whereas today I'm happy to focusing on beginning-of-life care. Still, the same principles apply – building a care delivery approach that treats someone as whole person going through a life-changing event.

> "When we began building Oula's care model, we thought hard about how to treat the whole person, acknowledging that this is a significant life event, not just a clinical condition."

Family planning is a unique part of health care because it's not a disease, it's a natural physiological event. Yet, many hospitals and systems still treat it as if it's a service line like cardiovascular care, for example. When Adrianne and I were starting our own family planning processes, we came across a prolific study called the Strong Start study, which compared three different maternal care modalities and found that the midwifery and collaborative model led to better outcomes for women. That's when a light bulb lit in our heads – we realized that maternity care should be less of an intervention and more of a comprehensive model that focuses on personalized care to drive better outcomes.

***The Pulse*: Diving more into this personalized care plan, can you talk about what a typical journey looks like for an Oula patient?**

AN: When we began building Oula's care model, we thought hard about how to treat the whole person, acknowledging that this is a significant life event, not just a clinical condition. This led us to bring together a multidisciplinary care team including midwifery and OB. We also wanted to address the reality that the majority of a pregnancy happens between scheduled appointments; we wanted to use technology to build a fully-stacked care model that stitches together these moments through our automated messaging and content platform. Through it all, we're building a two-sided relationship with our patients, helping them understand what's happening to their bodies before it happens and helping them make the right evidence-based decisions for themselves.

EP: At the same time, h We also think a lot about the power of peer groups in comprehensive care delivery; Oula brings together individuals who are navigating similar health experiences and we are uniquely positioned to create spaces for them to engage with one another. For example, we have an "open house," which is an introduction to the Oula community for people trying to conceive or newly pregnant. We're also starting to roll out postpartum drop-in hours for individuals who delivered babies within the last two to six weeks, supported by a doula. Doulas are sometimes a cost prohibitive resource in maternity care, so we offer a free doula service and drop-in hours for women breastfeeding to talk about challenges and be part of our larger community.

***The Pulse*: One of the traits that distinguishes Oula from others in the space is a fully-stacked virtual and in-person hybrid care model. How do you strike the right balance between telehealth and in-person offerings?**

EP: When we were raising our initial round of capital, we pitched a brick-and-mortar clinic during the first week of COVID. There were investors who asked us why we couldn't start virtually, but the simple answer is you can't give birth over Zoom. We do have ways of remote monitoring – for instance, we've shipped blood pressure cuffs and we offer our patients the option of doing their visits at home when they need to. At the same time, we're explicit about which visits it's important they come in for, based on their health profile and care needs. We're not just shifting site of care; we're creating continuity that makes the end-to-end experience more personalized and drives positive outcomes.

***The Pulse*: Speaking of site of care, Oula recently launched its first maternity clinic in Brooklyn and established a new partnership with Mt. Sinai. Can you talk about how you're working with other players in the health care ecosystem?**

AN: When we built Oula, we were very intentional about making sure that our model was a win for the system. It's a win for health systems, seen in our partnership with Mt. Sinai, and a win for payers, seen in our care model that focuses on evidence-based outcomes with a triple aim of improving patient experience, improving outcomes, and reducing cost. Our first clinic reached full capacity months after opening, and we feel a huge sense of responsibility and urgency to build more clinics because women everywhere deserve a better care experience. Much of our focus in the next twelve to eighteen months will be growing our presence in the New York market and entering new markets.

***The Pulse*: Though women make up over half of the population, the women's health sector is a relatively new category. In recent years, we've seen much more traction in confronting previously unaddressed needs. How does Oula address existing inequities within maternity care today?**

EP: There's a history of paternalism in maternity care underpinned by the idea that the doctor knows what is best – a challenging dynamic when the woman carrying the child likely knows her body better. We're trying to make sure our patients feel like they've got an even playing field and can engage openly and directly with their care team. All Oula's midwives and doctors go by their first names and they aren't wearing white coats for a reason. We make sure everything is a conversation and never didactic instructions. Our team talks every day about how to reach a diverse patient population. Black women and indigenous women die three times more often in childbirth than white women – and, in New York City, it's actually twelve times more often. It's critical that we focus on these disparities. We're proud of the team we've built – we want to make sure our patients have people they relate to; patients should have access

to clinicians who look like them, who can deliver cultural, confident, competent care. In regular team meetings, we talk about our high-risk patients and how women of color face implicit biases; it's our job to ensure there's a trusted relationship between patient and provider that delivers the best possible outcomes.

***The Pulse*: How have you seen Oula evolve since its beginning and where do you see the company heading in the years to come?**

EP: Adrianne and I were two of Oula's first patients and deliveries. We raised our initial capital in June of last year. A couple months later, we figured out that we were both pregnant and just two weeks apart. Five weeks later, we found out that our third hire was also pregnant. So together, with our own experiences, we built Oula. Commiserating and asking questions ourselves inspired much of what we've built today.

AN: We want to grow and expand to reach more women across the US. We also really want to expand the services we're offering, like mental health for example, so our patients don't need to be referred outside of the care continuum we're building to get the additional support they need. We're also intent on continuing to build out our tech platform to drive a better patient experience and support women in those moments outside of our clinics.

Interviewed by Niki Bakhru, December 2021

"We're not just shifting site of care; we're creating continuity that makes the end-to-end experience more personalized and drives positive outcomes... Adrianne and I were two of Oula's first patients and deliveries. Together, with our own experiences, we built Oula."

EXPANDING ACCESS TO CARE THROUGH PUBLIC SERVICE

A DISCUSSION WITH A MEDICAID DIRECTOR

Rhode Island Medicaid provides access to health care for nearly 350,000 members. The program covers one-third of Rhode Island residents and over 50% of the state's children with a budget of nearly $3B. Medicaid provides an essential social safety net from cradle to grave, covering an outsized share of births, pediatric care, behavioral health, and long-term care for the elderly. Pulse writer Jeremy Rubel sat down with former Medicaid Director Ben Shaffer (WG '14).

Ben Shaffer (WG'14)

Former Medicaid Director

Rhode Island

***The Pulse*: Can you give us an overview of your career and what inspired you to join the state government of Rhode Island?**

Ben Shaffer: I joined the state government in March 2016 as Director of Performance Management in the Office of Management and Budget. I was and still am very motivated by helping to make the government work better. Prior to Rhode Island, I completed a joint degree at Wharton and the Harvard Kennedy School. I am interested in learning about how business and government can work together and learn from each other. Immediately after graduate school, I worked at BCG for 6 months. A colleague at BCG was leaving to join Governor Gina Raimondo's administration and she recruited me to join.

I stayed for five and a half years because I kept saying yes to new challenges. I continued to see the chance to make a big impact in state government. The project that put me on a health and human services trajectory was the turnaround of a failing IT project that integrated eligibility for Medicaid, SNAP, childcare and Temporary Assistance for Needy Families (TANF). Fixing this IT system meant low-income people could access health care and food. From there, I joined the Executive Office of Health and Human Services and became Medicaid Director in February 2020.

***The Pulse*: Why are you leaving your role as Medicaid Director and what are you planning to do next?**

BS: I enjoyed my time in RI. State cabinet-level jobs are intense, and Covid made it even more intense. We accomplished a lot, but I found that it was time to think about next steps. In February, I am headed back to BCG, joining their health care and public sector practices.

***The Pulse*: What is your proudest accomplishment as Medicaid Director?**

BS: Starting in Fall 2020, we began a year-long redesign and re-procurement process for our managed care organization (MCO) contracts. These are very large contracts of over $1B caring for over 80% of members. The contracts are critical to the agency's success, but we hadn't updated some core components of the contract since the late 1990s. Today, Medicaid is trying to accomplish so much more and covers many more people. We now have value-based payments, investments in social determinants of health (SDOH), and accountable care organizations (ACOs). We conducted an extensive stakeholder engagement process and formally released the RFP in November 2021. I think the document significantly advances the agency's strategic goals and I am excited for the team to carry on this work.

***The Pulse*: Why do most state Medicaid agencies contract with managed care organizations (MCOs) rather than directly paying for members' health care? What value do MCOs provide to Rhode Island Medicaid and its members?**

BS: There are immediate practical considerations and complex, fundamental considerations. Practically, managed care increases access and improves provider networks, especially specialty provider networks. For their managed Medicaid members, private payers may mirror the networks they have built for commercial or other lines of business. Also, MCOs can more efficiently administer the program because of their scale. When contracted, the MCO is responsible for billing, provider enrollment, and member engagement. If the state didn't contract with managed care, we would need to build and pay for these functions directly.

The more fundamental answer is that MCOs are meant to provide care management services that are essential to members with complex or behavioral health needs. The state could have a fee-for-service (FFS) system and separately contract with care management organizations. But this would be more complex and create a more disjointed experience for members. States also see savings

from MCOs because good care management leads to better health outcomes which lead to less health care spending. That's the virtuous cycle we aim for.

***The Pulse*: Because Medicaid agencies rely so heavily on MCOs, it's essential to hold them to a high standard. How do you hold vendors accountable?**

BS: We invest in a contract management process that looks like a monthly business review. Over time, starting before I was Director, we developed an organizational muscle memory. We set goals and review data with our partners regularly. It is not terribly innovative – these are simple actions – but you need to invest in relationships to make the partnerships with vendors effective. And they work.

Successful contract management requires investment in high quality state staff. I regularly had meetings with the governor's office and legislative branch to make the case for competitive salaries for contract manager jobs. You need to pay a fair rate to recruit and retain the talent required to manage billion-dollar contracts.

A lot of government service is about finding the right levers to pull. Folks sometimes wait around for a new law or more money; these are long term fixes you can certainly try to influence but are ultimately outside your control. Alternatively, effective contract management of the MCO is a powerful lever. If you read the contract, the state already has a lot of power in contracts with MCOs, but just because the rights are on paper doesn't mean the state is able to execute. I try to get my teams excited about contract management because you can make a big difference if you're dedicated and persistent.

I think following the stresses of COVID-19 on the health system, the value delivered by MCOs and the state's ability to manage those contracts will continue to receive critical attention. Certainly it was a topic discussed by the Rhode Island State Legislature.

***The Pulse*: Rhode Island Medicaid has an accountable care organization (ACO) program, first implemented in 2017. ACOs align with MCOs to take responsibility for the total cost of care for a patient and have greater flexibility to invest in a member's social needs, like food or housing. Reflecting on the first four years of the program, what impact are ACOs making? Where is the program headed next?**

BS: Our thesis is that to deliver high quality care, care needs to be as close as possible to the patient and address members' social determinants of health (SDOH). For example, treating chronic conditions requires primary care, case management and attending to social needs. ACOs have greater flexibility to invest in SDOH than traditional fee-for-service medicine. ACOs receive monthly payments for each member in their attributed population and are held responsible for the population's outcomes. This incentivizes ACOs to invest in the population's health, treating members' SDOH needs directly, rather than waiting for patients to visit the doctor's office as they would under a FFS model. And in the early data we see that ACOs have been able to reduce total cost of care without sacrificing quality.

The ACO program includes additional tools that amplify our focus on SDOH. After an RFP process, the State of RI awarded a contract to a community resource platform, Unite Us, to help ACOs connect with community-based organizations. Just like a primary care provider can make a referral to a specialist, an ACO can make a referral to a food bank or housing support organization.

Going forward, our policy encourages ACOs to develop more specialized care management models. We are creating a playbook in our managed care procurement that distinguishes simple care coordination and complex case management for someone with multiple chronic conditions. In particular, I expect more specialized care models for behavioral health patients. This is an area of real challenge across the country and one in which we need to foster innovation.

***The Pulse*: You became Medicaid Director February 2020 just as the pandemic was surging in the US. Can you walk us through those first few months? What did RI Medicaid do to keep its members safe and support the state's health care system?**

BS: We focused on access to health care for our members, first and foremost. And that meant paying close attention to provider solvency. That was our role as the Medicaid

agency in the whole-of-government response managed by the RI Department of Health and the Governor's office.

In the first months of the pandemic, we saw 30-50% drops in health care utilization by members in our state. This was the policy intention – we wanted people to stay at home. But this had a major impact on member health and provider revenue. We had a responsibility to make sure providers stayed in business, so they would be able to continue to care for our members in the long term. We also had the responsibility to make sure funding was going to the workforce and to ultimately improve patient care, particularly in the long-term care sector that was hit so hard by the early waves of COVID-19.

All told, we implemented more than 16 provider relief programs. We used the utilization data and our understanding of providers' finances to target the flow of resources. We also implemented work force supports. For example, we made sure that anyone going to work in a congregate care setting was making at least $15/hour. To do this, we created a new program to grant money to providers but imposed stringent requirements to make sure the money was passed on to these workers. And we did all this very quickly, by May of 2020, to respond to the initial phase of the public health emergency.

As the pandemic continued, we worked to ensure that our members were getting the care they needed. For example, we worked closely with a group of pediatricians to promote vaccinations. Medicaid is a very children-focused program, covering 55% of kids in Rhode Island. One of our goals [during the pandemic] was to avoid a reduction in immunization rates. Vaccinations are critical because they prevent illness but also because an immunization implies that a kid had a visit with their pediatrician. At a well visit appointment, the pediatrician can monitor the child for developmental delays and other issues. We created a pay-for-performance program that incentivized pediatricians to conduct well-child visits and provide immunizations to their patient panel. Remarkably, we saw a higher well-child visit rate for participating practices in 2020 than in 2019. Value based payments are powerful; they can even work in the middle of a pandemic.

"One of our goals [during the pandemic] was to avoid a reduction in children's immunization rates... We created a pay-for-performance program that incentivized pediatricians to conduct well-child visits... Remarkably, we saw a higher well-child visit rate for participating practices in 2020 than in 2019."

***The Pulse*: The theme of our conference is "A Fair Shot at Health." Medicaid programs play an essential role in advancing health equity given its mission to serve low-income members. What metrics do you use to measure the agency's progress on health equity?**

BS: There is no perfect set of real-time data to measure health equity. Medicaid programs often don't know the race, ethnicity, or language of all their members because they are not required to provide that information when they enroll, especially if they are dually-eligible for programs like SNAP. And the traditional HEDIS measures are reported with a 12-18-month lag that makes it difficult to use those metrics for the kind of MCO active contract management I talked about. So, our job while we work on getting better race, ethnicity, and language (REL) data is not to wait, but to find proxy data measures that are leading indicators.

We often look to measures we know that if we impact, then we will have a disproportionately positive return on health equity. For example, for core medical quality measures like breast cancer screening, post-partum outcomes and diabetes management, we put extra emphasis on improvement because we know that if we improve in these areas, we will make progress on health equity.

"Value based payments are powerful; they can even work in the middle of a pandemic."

We want to make sure health equity is a core part of our overall quality strategy. We don't want health equity to be sitting off to one side. In our managed care contracting, we made sure meaningful health equity measures were part of our value-based payment strategy and quality-withholds for MCOs.

***The Pulse*: During the pandemic, Rhode Island hired management consulting firms like BCG and McKinsey to support the state's Covid response. What value do management consultants provide when working for state governments?**

BS: During Covid, the management consultants rapidly provided extra talent and labor. I guess I should speak for myself, but I can't emphasize enough how much our incredibly lean and underinvested in public health infrastructure was overwhelmed. For decades, our public health infrastructure has not received sufficient investment. Consulting firms were able to provide immediate human capital to help us develop a strategy to solve novel problems, assemble data against that strategy, and execute on practical operational challenges. For example, consultants helped us launch the provider relief programs I mentioned. It is hard to launch 16 programs within 3-6 months and to do that you need extra help.

On a more ongoing basis, consulting firms provide a perspective on the market. Organizations do a better job when they broaden their horizons. Rhode Island is a small state. We don't have the staff to track what's going with every Medicaid trend. I've seen consulting firms be able to bring in real expertise.

As an ex-consultant, a government official who has hired consultants, and someone who plans to return to consulting, I know that there is both good consulting work and bad consulting work. It was my job as the client to tell the difference, manage appropriately, and contract appropriately. I recognize that it is possible for organizations to become too dependent on consultants. State governments are successful with consultants when the problem is well defined, and you are asking for the answer. A project should be we need a strategy for X, we need a policy for Y, or we need to implement programs for Z. Or to build capacity within the organization to do that itself.

Doing new things is hard for any organization, and especially for short-staffed state governments. All our program administrators are focused on managing their programs. So, if you want to develop something new, you need to invest in human capital. Often, for a short-term project, it makes more sense to hire a consulting firm than a new FTE.

***The Pulse*: What advice do you have to students or early career professionals who are considering a career in public service?**

BS: I found my time to be incredibly rewarding. But I am direct with students that the public sector pays less than the private sector; if the public sector is something you are interested in, you need to be mindful about your personal and family situation. If public service is something you want to do with your career, it's important to plan for how to avoid feeling locked into a certain salary level. The pay scale is a barrier for many MBA students, and that's why I am upfront with people I talk to about that.

Those who choose a job in government will make a big impact and learn fast. Rhode Island Medicaid covers nearly 350,000 members with a $3B budget. We have an extremely lean staff. My recruiting pitch was that we give talented people big opportunities earlier in their career. If you want to manage people, to develop a policy, or implement a program, we say 'go for it'. We try to not be a staid bureaucracy. MBAs are in the minority and you will get to learn from and work with social workers, data scientists, and PhDs. For those who choose this path, you can do a lot of good in state government and feel that every single day.

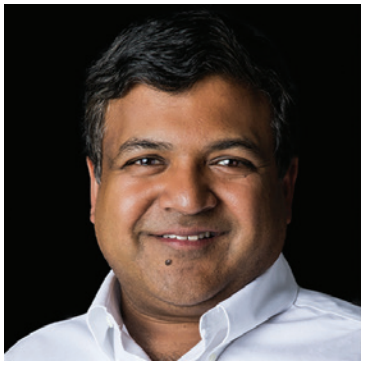
Interviewed by Jeremy Rubel, December 2021

Panel 1: From Volume to Value to Equity: How Value-Based Care Can Create a More Inclusive Health Care System

Friday, February 11, 2022 - 9:35 AM–10:25 AM ET **Payor/Provider**

This event is brought to you by CVS kidney care

Disparities in health care access have been a long-standing problem and have only been further exacerbated by the COVID-19 pandemic. Through the use of big data, proactive screenings, hybrid care models, and other innovative solutions, value-based care is uniquely positioned to reduce these disparities. This panel will feature a discussion with health care leaders who are taking steps to create a more equitable and inclusive value-based care system.

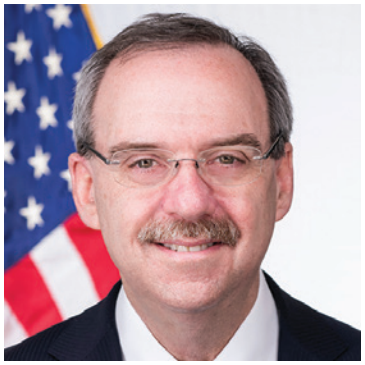


Rushika Fernandopulle, MD, MPP

Chief Innovation Officer

One Medical

Rushika Fernandopulle is a practicing physician and Chief Innovation Officer of One Medical, a leading Advanced Primary Care company based in San Francisco, CA. Before this, he was co-founder and CEO of Iora Health, was the first Executive Director of the Harvard Interfaculty Program for Health Systems Improvement, and Managing Director of the Clinical Initiatives Center at the Advisory Board Company. He is a member of the Albert Schweitzer, Ashoka, Aspen, and Salzburg Global Fellowships, and is co-author or editor of several publications. He serves on the staff at the Massachusetts General Hospital, on the faculty of Harvard Medical School. He earned his A.B., M.D., and M.P.P. from Harvard University, and completed his clinical training at the University of Pennsylvania and the Massachusetts General Hospital.



Lee A. Fleisher, MD

Chief Medical Officer and Director of the Center for Clinical Standards and Quality, **Centers for Medicare and Medicaid Services**

Professor of Anesthesiology & Critical Care, Professor of Medicine, **Perelman School of Medicine**

Senior Fellow, Leonard Davis Institute of Health Economics, **University of Pennsylvania**

Lee A. Fleisher, MD, was named the Chief Medical Officer and Director of the Center for Clinical Standards and Quality for the Centers for Medicare and Medicaid Services in July 2020. In this capacity, he is responsible for executing all national clinical, quality, and safety standards for health care facilities and providers, as well as establishing coverage determinations for items and services that improve health outcomes for Medicare beneficiaries. He is also Professor of Anesthesiology and Critical Care and Professor of Medicine at the University of Pennsylvania Perelman School of Medicine.

From 2004 through July 2020, he was the Robert D. Dripps Professor and Chair of Anesthesiology and Critical Care and Professor of Medicine at the University of Pennsylvania.

Lee received his medical degree from the State University of New York at Stony Brook, from which he received the Distinguished Alumni Award in 2011. His research focuses on perioperative cardiovascular risk assessment and reduction, measurement of quality of care, decision making, implementation of cultural change and health policy. He has received numerous federal, industry and foundation grants related to these subjects and has published 175+ original articles, over 200 editorials, reviews and book chapters, and 9 books and collaborates with anthropologists, sociologists, as well as faculty from law, business and nursing.

He was Treasurer of the Board of Directors and Chair of the Finance Committee of the National Quality Forum. He was a member of the Care Transformation Forum (CTF) of the Health Care Payment Learning and Action Network (LAN) He is currently an Affiliated Faculty of the Quattrone Center for the Fair Administration of Justice and pursuing a Master in Law at the University of Pennsylvania Carey Law School. His is a Senior Fellow of the Leonard Davis Institute of Health Economics. In 2007, he was elected to membership of the National Academy of Medicine (formerly Institute of Medicine) of the National Academy of Sciences and served on Committees of the NAM.

Sally Poblete (WG'00)

VP, Health Services

Circulo Health

Sally Poblete has been a leader, innovator and entrepreneur in health insurance and health services for over 25 years in both start-up and corporate settings.

Sally is currently VP, Health Services at Circulo Health, a venture-backed start-up building Medicaid for the future. Circulo Health is building the full stack of transformative capabilities in health services, technology, and risk. Sally is responsible for launching new primary health locations focused on supporting a member's full health. At Circulo, Sally has led a team to build AI technologies to unburden providers in their administrative, revenue cycle and clinical workflows.

She was the Founder and CEO of Wellthie Inc, a venture-backed start-up, out of her passion for making health insurance simpler and more approachable for consumers and small businesses. Their insurance shopping platform helped over a million consumers find insurance through carrier clients like EmblemHealth, Fidelis Care (now Centene), and Aflac. Wellthie has received numerous recognitions including Forbes 10 Health Care Tech Disruptors to Watch, 30 Health Tech Startups with the Potential to Change the World, and Top 40 HealthCare Transformers.

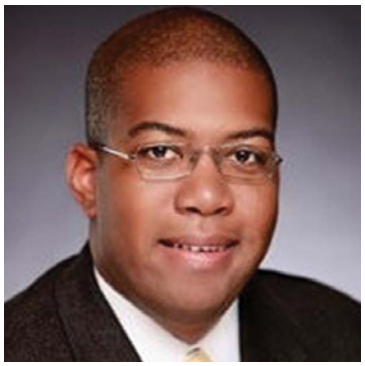
Prior to Wellthie, Sally had a successful career at Anthem Blue Cross Blue Shield, one of the nation's largest health insurance companies. Sally spent close to a decade leading product development across the employer group segment. With a builder's DNA, Sally spent the first decade of her career wearing business development, marketing and product hats at successful health care start-ups.

She started her career at a home and community-based provider, offering much-needed home health services to Medicaid-Medicare dual-eligibles and people with developmental disabilities in New Jersey.

Sally was recognized as one of Crain's New York Top Women in Technology and New York Business Journal's Women of Influence. Sally is a frequent speaker at industry events and writes on the topics of health insurance and female entrepreneurship for publications like Forbes, Inc., The Huffington Post, and BuzzFeed.

Sally received her MBA from the Wharton School's Health Care Management program where is an active alumna and mentor. She received her B.S. in Management magna cum laude from the Stern School of Business of New York University.

Sally lives in New York City, is married and the proud mother of two daughters from whom she derives endless inspiration. Lately, Sally and her family love traveling the USA in an Airstream.



Jesse Roach, MD

Senior Medical Director for Health Equity

CVS Kidney Care

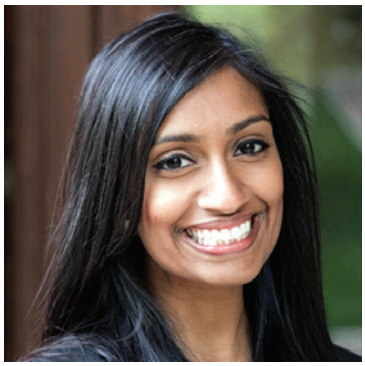
Dr. Jesse Roach is a strategist and clinician whose work focuses on improving access to kidney health by removing barriers to care through policy, partnerships, and research. He currently serves as Senior Medical Director for Health Equity at CVS Kidney Care where he leads a multifaceted approach to removing barriers to kidney health among historically disenfranchised populations. Before joining CVS Kidney Care, he spent five years at the Centers for Medicare and Medicaid Services (CMS), in the Center for Clinical Standards and Quality where he led quality measurement and value-based care development. He also served at the Department of Health and Human Services and the U.S. Food and Drug Administration. Before joining the federal government, Dr. Roach was an assistant professor in the Departments of Internal Medicine and Pediatrics at the University of Wisconsin School of Medicine and Public Health. Dr. Roach received his medical degree and completed a residency in Internal Medicine and Pediatrics at the Medical University of South Carolina. He completed a combined fellowship in pediatric and adult nephrology at the University of Michigan Medical School. He resides in Washington, DC.

Dan Trigub

CEO and Co-Founder

MedArrive

Dan Trigub is the CEO and co-founder of MedArrive. Previously, Dan led Uber Health, which provides Non-Emergency Medical Transportation (NEMT) across Medicare, Medicaid, and Commercial populations. Before Uber, Dan spent 2.5 years at Lyft as Regional VP of Strategic Partnerships helping to found their health care vertical. He previously spent time working in Business Development at eBay. Dan founded several companies, including OpenPlacement (acquired by the EHR Ensocare), a care coordination platform allowing hospital professionals to connect with post-acute care providers for their patients at the moment of discharge. Before becoming an entrepreneur, Dan worked in consulting and was an Associate at GCA Savvian Advisors, an M&A and Capital Advisory Investment Bank in San Francisco, where he represented emerging technology, digital health, and health care providers. Dan holds a degree in economics from Vassar College.



Sandy Varatharajah (WG'21)

Director of Population Health

Oak Street Health

(Moderator)

Sandy Varatharajah is Director of Population Health at Oak Street Health, a leader in value-based care for Medicare and dual-eligible beneficiaries. Previously, she built patient risk stratification and medication management programs at Cityblock Health. She also led new product commercialization at Zocdoc. There, she focused on the company's new business model, go-to-market strategy for enterprise products, and government relations. She started her career consulting at The Advisory Board Company. Sandy is an angel investor in early stage health tech ventures, and co-hosted The Pulse Podcast by Wharton Digital Health. She is very passionate about building products for underserved populations and leveraging tech to advance health equity. Sandy holds her BS in Biology and Science, Technology, and International Affairs from Georgetown University. She also received her MBA from The Wharton School, where Sandy was awarded the Robert D. Eilers Award, Kissick Scholarship, and Kaiser Fellowship for exceptional achievement and commitment to health care innovation.

DEMOCRATIZING ACCESS TO VALUE IN HEALTH CARE

A CONVERSATION WITH PEARL HEALTH'S CHIEF PRODUCT OFFICER JENNIFER RABINER

Pearl Health is a start-up on a mission to democratize access to value in healthcare. Pearl empowers primary care physicians to deliver better quality care for their patients at a lower cost via a physician enablement technology platform and a value-based payment model. In September 2021, Pearl Health announced a $18M Series A funding led by Andreessen Horowitz, with follow-on funding from AlleyCorp, who invested in its seed round. Pulse Writer Lauren Gardanier sat down with Chief Product Officer, Jennifer Rabiner, to discuss CMS' new Direct Contracting model and Pearl's vision for better primary care under this new payment model.

Jennifer Rabiner

Chief Product Officer

Pearl Health

***The Pulse*: In your career, you've worked in a variety of health care settings – consulting, pharma, health care technology. What insights have you gained from those experiences and how do you draw on those experiences in your current role at Pearl Health?**

Jennifer Rabiner: The common threads across my career have been reimbursement and access to health care. For the first 10 years at Triage Consulting and Deloitte Consulting, I focused on the health care revenue cycle — how providers charge, bill and collect for services provided — and how to apply technology to optimize these processes. In my role at Millennium Pharmaceuticals, I again focused on reimbursement, working to remove provider, patient, or payer barriers to ensure reimbursement for the oncology drug we sold. These first chapters in my career were excellent lessons in the complexity and challenges inherent in how we pay for health care.

athenahealth was a very pivotal time in my career, during which I focused on building population health and value-based care technology in some of the earlier years of the shift from volume-based to value-based reimbursement. It was during this time that I started to see how important it is to change the underlying payment models for health care if we want to see a true transformation. More specifically, I realized that we can't continue to do small improvements and iterations and see the kind of progress we know we need to make in order to reach the end-goal of better quality care at a lower cost with greater patient and provider satisfaction.

My next role at Hint Health supported doctors in the Direct Primary Care (DPC) model, under which doctors don't do traditional billing. They earn revenue in the form of stable monthly payments for each of their patients, almost like a subscription, paid directly from a patient or employer. It's truly a different model of care that is unencumbered by the predominant (and problematic) payment model in health care, known as fee-for-service (FFS). The FFS model is problematic because it incentivizes delivering a high volume of care rather than high value care, is administratively cumbersome, and indirectly creates a narrow care model since most activities that are reimbursable have to happen during a visit. In DPC, doctors have so much more flexibility in terms of how they care for their patients so that it can be tailored to the patient and the need. I learned a lot about what is possible in health care from the DPC community, and was really inspired by that world.

In many ways, Pearl Health is a natural culmination of these last two chapters. We support primary care providers in taking on value-based risk, which involves many of the same components as my focus at athenahealth with one big difference – we are also evolving the underlying payment model for primary care doctors and shifting a portion of their revenue to a per-member-per-month payment. This type of revenue model opens up so many doors for how providers can care for their patients, which means that we can start employing some of the same strategies that DPC doctors have already been successful in implementing.

***The Pulse*: What is CMS' new Direct Contracting model? How will it impact the way care is provided to patients?**

JR: Large scale VBC programs, like Direct Contracting, seek to shift physician incentives to deliver high value care instead of high volumes of care. The government is trying to bend the cost curve, while ensuring high levels of clinical quality and patient satisfaction.

One key component of the program is the opportunity for a Direct Contracting Entity (DCE) to earn shared savings. In this model, a financial benchmark is calculated for each patient panel. If providers spend less than the benchmark, Medicare will share the savings with the Direct Contracting Entities (DCEs), which in turn share the savings with their providers. If the total cost of care exceeds the benchmark,

Medicare will share these losses with DCEs, which may also share in these losses with their providers (if the provider has agreed to this type of arrangement). For many providers, this is exciting because it's an opportunity for them to capture the full dollar value generated from effectively managing care for their Medicare patients, and they can use these funds to reinvest in their staff, their practices, and their patients.

Quality management is another component of Direct Contracting. In the standard Direct Contracting model, there are three clinical quality measures and a set of patient satisfaction measures that are tracked and factor into the final amount of shared savings a DCE can achieve.

One of the key differences in Direct Contracting over prior CMS models is the move to a capitation model for primary care reimbursement, the fixed per-member-per-month fee that I mentioned earlier. This fee gets paid in lieu of traditional fee-for-service reimbursement for the majority of primary care services. Under capitation, reimbursement is no longer tied to billable visits completed by billable providers. Instead, physician practices have more flexibility to deliver care in the way that is right for the patient, whether that's an office visit longer than the standard 15 minutes, a virtual visit with a Medical Assistant, asynchronous communication with the office, or even a home visit.

In terms of how Direct Contracting will impact patient care, our goal is that patients whose physicians are enrolled in the model will actually start getting more tailored care specific to their needs due to the additional flexibility their physicians have in a capitation model. Direct Contracting applies to the Traditional Medicare population, and these patients retain all the same rights and benefits they have in Medicare; there is no limiting of choice or extra fees. Doctors make the choice to participate in the Direct Contracting model, and their patients experience the benefits of value-based primary care.

***The Pulse*: What is Pearl's mission and how are you enabling Direct Contracting participation to help achieve it?**

JR: Pearl's mission is to democratize access to value in health care. Primary care plays a pivotal role in directing care for patients. We are empowering doctors to find opportunities for themselves, starting with Direct Contracting, and succeed in those opportunities. With the capitation model, we have real opportunity to build new workflows and care models to create a more continuous and longitudinal approach to patient care. But this isn't about becoming an EMR; this is about expanding the definition of caring for and managing a patient. Pearl is focusing on physician practice enablement to create new opportunities that aren't anchored on a billable visit.

***The Pulse*: Could you share more about what Pearl's engagement with providers for new workflows and care models might look like?**

JR: The initial workflows that we are rolling out are focused on two key areas: first, identifying and engaging with high-needs patients who have not been seen by the practice for an extended period of time. This patient engagement could be a visit, or it could be a call, email, or text – we want to redefine patient engagement to expand beyond a traditional visit. The underlying goal here is to help providers start taking a panel management approach, providing visibility into what's happening with all of their patients, not just the ones who are coming in.

Second, we are building workflows related to patient admissions and discharges, from either ED or an inpatient setting. The three standard [Direct Contracting] quality

"Primary care plays a pivotal role in directing care for patients. We are empowering doctors to find opportunities for themselves, starting with Direct Contracting, and succeed in those opportunities."

"Whether it's product, operations, engineering, customer success – success is really about the ability to take a concept or idea that is great / inspiring and learn how to make it come to life."

measures are related to admissions, readmissions, and following up after hospital discharges. With this type of workflow, we want to be able to not only inform a practice that a patient is in the hospital, but once the patient is discharged, ensure the right interactions or visits happen so patients follow discharge plans and avoid being readmitted.

We are also really prioritizing the user experience as we build out these workflows. We want the people using our product to feel productive and encouraged by their progress. So much of the existing health care tech out there is so focused on doing a job, and doesn't really consider how the human using the product is interacting with it.

***The Pulse*: Pearl Health is currently working with the Medicare population – as you look ahead, do you expect to expand beyond Medicare? What do you think are the challenges or opportunities of expanding to broader patient populations?**

JR: Direct Contracting is our initial go-to-market focus. We want to build this technology-enabled care model to manage patients, and Direct Contracting gives us a great path to accelerate this work. Once we have the technology and workflows, our next opportunity will be to sync up with other payers that want to support this world, similar to what CMS is doing right now. The best thing I could hear in a year is 'I want to use Pearl for all my patients'. CMS and Direct Contracting will be our launching ground to learn how to do all of this, but certainly don't want to end there, because we would like to be able to expand this new model to a broader set of patients as well.

***The Pulse*: It continues to be a challenge for primary care physicians to remain independent due to market consolidation trends, COVID-19 dynamics, etc. How do you support primary care physicians to remain independent and do you see these trends as risks for Pearl Health?**

JR: I read this year that the share of primary care doctors who remain independent has dipped below 50% in this past year. Covid-19 exacerbated trends that were already challenging for primary care. We all heard the stories in early 2020 of physicians going bankrupt, closing practices, or laying off staff because their revenue stream was interrupted by not being able to see patients. In a capitation model, those physicians would have been paid a stable amount each month for each beneficiary aligned to them. They wouldn't have been waiting for a rule to change to see patients via telehealth and bill for it. Stabilizing the core revenue stream for a primary care practice can really help them, in light of Covid-19 for example, stay independent.

Another perspective is that independent primary care practices often don't have the resources to easily adapt to evolving business models and regulatory landscapes like a large organization might. We want to serve as an advisor and partner to navigate and be successful in the world of risk-shared and value-based care. It's a complicated evolution, and Pearl can be a trusted partner and help them remain independent and operate well in this new world.

***The Pulse*: How do you see technology playing a role in Pearl's mission?**

JR: Tying back to our mission to democratize access to value in health care, if we really want to democratize access and open up this world to more providers, we need to make it easier for providers to assess these programs and succeed in taking on the amount of risk that's right for them. Technology is the key to making these programs more accessible in each stage – the assessment of which program is right for them, and the different insights, actions, and tools they need to be successful once they've decided to participate.

Our technology can take on the complexity inherent in these programs, and distill this complexity into streamlined,

low friction, delightful experiences for our providers and their patients. Instead of thinking about the providers as a secondary audience for success, we are putting them front and center as we build out our product.

***The Pulse*: Pearl Health talks about building an "efficient marketplace" – can you share what you mean by this and what success looks like?**

JR: There are two different ways we're thinking about the marketplace. First, we've simplified how we talk about reimbursement, but when you dig into how things are calculated in Medicare and how to use the data, it's really complicated. When we go to PCPs who are contemplating different options — for example, stay in an Accountable Care Organization (ACO), shift to a Direct Contracting Entity (DCE), which DCE, what about this commercial payer — we want to help identify the best option for them. We want to help both physicians and payers find the right matches based on practice patterns, parameters of the program, risk tolerance of the physicians, etc.

Second, there are a number of specialty service companies and start-ups emerging that manage very specific conditions, like renal disease. This is another form of marketplace we envision facilitating. Putting myself in the shoes of an independent primary care physician, I don't have a data analyst or someone assessing every commercial program, Medicare program, or every great partner who could help my patients. Pearl will have the data to identify which patients have certain conditions, which patients are well managed, and which patients need specialized care. The right intervention might be something a PCP can do on their own, or decide to refer to a partner. We can build a marketplace of condition-specific partners to which our PCPs can refer their patients if that is the right call.

***The Pulse*: Can you share more about your role as CPO and the team at Pearl Health?**

JR: My job as CPO is to create a technology platform to enable everything we've talked about today, staying focused on the challenges physician practices are facing and solving those problems through our product. In my role, I work with other company leaders to define how we're moving forward as a company, and participate in developing our strategy and execution plan. In product management, we translate our company strategy into a product roadmap that drives client value and, ultimately, business value to the company.

I lead four verticals right now. First, the Product Management team that drives our overall product roadmap. Next, the User Experience (UX) team – we want our platform to be delightful to use, so we've set a high bar for our UX. Third, we have a Product Partnerships function, which focuses on data acquisition and other partnerships we need to build out the product. Finally, Market Success is our customer-facing group who is out there working every day with our clients. Our team is lean and growing – we just recently reached about 30 people across the company.

***The Pulse*: As you think about your experience building at early stage companies, what advice would you offer students who are looking to deliver value in health care?**

JR: Whether it's product, operations, engineering, customer success – success is really about the ability to take a concept or idea that is great / inspiring and learn how to make it come to life. At athenahealth, I was assigned to a product that had been acquired right before I started, so it was almost like working at a little startup. That was my first role in product management. I'm so grateful that I had that experience – rolling up my sleeves and learning how to really get things done.

In product, you need to be good at both creating strategic vision, and also putting those ideas into action. When you're great at strategy, you'll be better at execution because you'll make different choices if you understand where you're going and why you're going there. If you understand what it takes to deliver great execution, you'll create a better strategy because it will be grounded in what it actually takes to make something come to life.

I would also recommend shadowing health care providers or administrators if you haven't had the opportunity to do that. In the beginning of my career, I worked in billing offices alongside people operating these processes every day. If you can really understand what the day-to-day of your clients or users is like, you'll take that experience and build it into what you're doing. Any time I've shadowed a provider, talked with a provider, or even met with an unhappy client,

I've come away really inspired and brought that to bear in my work. It also keeps you humble. You can talk about everything that is broken in health care and how it should work in a classroom or a board room, but it's humbling to go see how it does work and understand that the delta is pretty big. You need to understand how to meet providers where they are and help them move forward.

The last thing I'll say is that Pearl is always hiring if you are really passionate about improving health care!

Interviewed by Lauren Gardanier, December 2021

DEMOCRATIZING ACCESS TO SPECIALIST INSIGHTS

A CONVERSATION WITH GIL ADDO, CO-FOUNDER & CEO OF RUBICONMD

RubiconMD democratizes access to specialist expertise by providing primary care clinicians with a broad national panel of virtual specialists. Its innovative business model empowers value-based care in communities that have been traditionally underserved through less costly, more comprehensive, and more collaborative patient care. Pulse writer Emily Wang connected with RubiconMD Co-founder and CEO Gil Addo to learn more about the company and their commitment to reducing disparities in access to care.

Gil Addo

Co-founder and CEO
RubiconMD

***The Pulse*: Can you start us off by sharing your background, and how you came to start RubiconMD?**

Gil Addo: Sure. I have a father from Ghana and a mother from Barbados, and I grew up in Connecticut. I did my undergrad at Yale studying biomedical engineering, but I realized I was working too far from commercialization in a lab and wanted to understand the business side of health care. I ended up adding an economics major in college then going to business school after working two years at Xerox in investor relations. I then knew I wanted to get back into health care, so I spent some time working at a health tech startup, an internship at Cubist Pharmaceuticals, and for a drug delivery startup. When I left business school, I already had an idea for something I wanted to start, but didn't have the financial flexibility at the time. So I did what a lot of MBAs do and took a job in life sciences consulting with Putnam Associates. There, I did a number of projects for large pharma clients, primarily pricing and market access work, then left in 2013 to start RubiconMD.

The vision for RubiconMD came out of personal experience - earlier in my life my grandmother had a brain tumor and she traveled from Barbados to Boston for surgery, and then spent the next 5+ years flying back and forth for the management of that tumor. We wanted to address this type of challenge: how can we take the health care expertise that sits at centers of excellence in places like Boston and get it out to larger communities where it is so necessary and valuable? While I worked in consulting, it was very early in the ACA days and there were many discussions around empowering primary care and making that the foundation of the health care system going forward. So, we built the RubiconMD vision around bringing specialty care expertise into primary care and enabling this better access for patients.

Ultimately, RubiconMD is a digital health platform on a mission to democratize access to specialist expertise. We connect primary care clinicians to a network of specialists for virtual support. Our core business is focused on eConsults, and we aspire to be the virtual front door to specialty expertise. We've built collaborative management tools to allow primary care and specialists to dialogue and support patients, and eventually allow for a virtual-first experience into all aspects of specialty care. And now after eight years since our founding, we were recently acquired by Oak Street Health, an incredible organization that has been a RubiconMD partner for several years. As we started discussing partnerships and collaborations that would help us build towards our broader vision and goals for virtual specialty care, our discussions with Oak Street naturally evolved, and now they are our parent company. RubiconMD is a wholly-owned subsidiary, and we now have the support of a transformative value-based primary care organization to help us scale and continue to improve primary care.

***The Pulse*: Congratulations, that's very exciting news. Looking ahead, you've spoken extensively about how digital health and telehealth can exacerbate existing inequities. Can you speak to how RubiconMD has prioritized health equity through its company initiatives?**

GA: Thank you. And yes, there are a few tenets to the way we think about this. Some of the big issues [in health care inequity] are ones people don't even think about as directly connected to health care. There's lots of talk about the digital divide, since people can't access telehealth services unless they have access to the internet. But there are even more foundational aspects of social determinants of telehealth. For example, you likely can't access telehealth if you face housing insecurity. If you have three generations living in a one-bedroom apartment, you can't sit and have a private conversation with a psychiatrist. To make sure we deliver telehealth well, we have to address these social determinants as well.

The other piece is around the safety net that has never been armed appropriately to provide telehealth services.

When we shifted virtual during this pandemic, we saw high performing value-based organizations go from 0-10% virtual to 90% virtual. However, what you didn't see was the same increase in the safety net, or health system that supports communities in underserved areas which are historically predominantly black and brown. When these organizations went virtual, there were a lot of places left behind where clinicians didn't have the infrastructure to deliver telehealth. We've seen chronic underinvestment to support these communities, even though infrastructure on the clinician side is what you need to be able to execute telehealth well.

The third component is just not being able to educate people on how to access the right services. There is an assumption that if you build it, they will come. And that's not true with a lot of health care - it has to be culturally appropriate, culturally competent, with the right connections. And it isn't always the case, especially when tools or products aren't designed for some communities.

At RubiconMD, we explicitly arm the primary care clinician with resources, because what data and the COVID-19 experience has taught us is that people don't trust information given from the high-ranking clinician on TV, but they do trust the clinician in their community. It's cultural and local, so we try to arm the person in the community that has a direct relationship with that patient - understands the context and situation, and can speak directly to them in a way that they'll listen and trust. Our goal at RubiconMD is to provide that person with the right access and expertise. There are services out there that are very well-intentioned, but have just decided to go outside of the system. And they might provide a fully virtual service offering, but the person on the other side doesn't understand the context for a patient, and isn't set up to provide ongoing, longitudinal care and support.

We've seen our efforts be really successful. Some notable examples: we support state prisons, so in 10 states we have on-site clinics since in this situation you really need to understand context; there are things you can't prescribe to somebody who is an inmate. There are treatments or care that are dangerous, and you need to understand what people mean even when they're not clear about their needs. We also work with Medicaid populations, dual-eligible patients, underserved communities, and there are always important local dynamics and circumstances to consider; situations where you need to really understand the community. So many people of color have been left behind, and this is why we need to be very cognizant that the way we design our products and services is culturally competent and enables access for every major disease, especially those that disproportionately impact black and brown people and drive significant costs.

"There is an assumption that if you build it, they will come. And that's not true with a lot of health care - it has to be culturally appropriate, culturally competent, with the right connections. And it isn't always the case, especially when tools or products aren't designed for some communities."

***The Pulse*: This is incredibly interesting. I'm wondering, how does this work on a broader level? There are many different communities that are so different - how do you find a way to scale your operations to try to locate the best clinicians in these communities?**

GA: We have built our specialist panels to understand value-based care for specific groups for certain regions, and specific panels of specialists that support different primary care organizations or health systems. But we do rely most heavily on primary care clinicians to understand patient context and translate it. On the question of scalability, that's also part of our answer - our network of specialists is extremely scalable since they're located across the country, and they're the best at providing clinical guidance for their specific area. So we make this a collaborative interaction and discussion, where they can work with the primary care clinician who should know the patient's circumstance really

"Fortunately, we're moving from a world of fee-for-service – where we can't move forward fast because innovation has to keep pace with reimbursement codes – to a world of value-based care that is far more scalable and allows us to take advantage of technology that already exists in every other sector. We're hoping RubiconMD can enable value-based care proliferation, and we'll do so by providing the front door to specialty care that enables primary care organizations across the country."

well. And if that primary care clinician does their job well, they've built a longitudinal relationship and understand the social considerations to help increase patient adherence to a care plan. And they get input from whoever is the specialty care expert in the area. So it creates this kind of multidisciplinary collaborative approach. And we've found that, because the network is virtual, we can get the right expertise really quickly. And because it is a clinician-to-clinician interaction, we can do it in a scalable way where we're essentially delivering a virtual specialty network or hospital to every single primary care organization across the country.

***The Pulse*: This is incredibly interesting. I'm wondering, how does this work on a broader level? There are many different communities that are so different - how do you find a way to scale your operations to try to locate the best clinicians in these communities?**

GA: We have built our specialist panels to understand value-based care for specific groups for certain regions, and specific panels of specialists that support different primary care organizations or health systems. But we do rely most heavily on primary care clinicians to understand patient context and translat

***The Pulse*: When you're looking at different innovations focused on health inequities, where do you see some of the most exciting innovations? Which do you feel will be here to stay and improve health access?**

GA: People may think about RubiconMD as a technology innovation, but we're actually just a business model innovation. We've figured out how to enable access to specialist expertise without necessarily going through traditional fee-for-service payment mechanisms. And we've stripped out the layers of reimbursement code, facility fees, etc. and dramatically reduced costs to get the expertise of the person you need. So what is most innovative is not our technology, and while our network is incredible, we're not the first group to build a high-performing network... it's the fact that we can connect clinicians this way and dramatically reduce the price of access. This means we're democratizing health care and getting it into the hands of more people across the country.

I think of exciting innovations in health care as those that are powerful enough to bring down costs, and where you can create a connection to care or expertise that didn't exist before. The problems I'm seeing people solve right now I think are the problems for the next century - maternal mortality, chronic conditions, and their disparities - I think there are some companies that are doing it really well. But I think the fundamental thing here is that companies that are really innovating are not necessarily building really novel technology - and I know there is a lot of interesting movement around machine learning and AI - but most companies that are innovating are finding ways to create connections, strip out layers of the system, and bring down total costs.

***The Pulse*: Let's talk about your vision for RubiconMD long-term; what is RubiconMD's ideal position in the health care ecosystem?**

GA: If we've done our job really well, we've enabled value-based care. I think the existing fee-for-service

infrastructure will only hold up for so long. And like most health care challenges, it can be traced back to the fact that we've created a code for everything, and you have to pay for it in that way. Fortunately, we're moving from a world of fee-for-service – where we can't move forward fast because innovation has to keep pace with reimbursement codes – to a world of value-based care that is far more scalable and allows us to take advantage of technology that already exists in every other sector. We're hoping RubiconMD can enable value-based care proliferation, and we'll do so by providing the front door to specialty care that enables primary care organizations across the country. Making this virtual-first makes it scalable. If we build a brand and space synonymous with specialist consults, my hope is that it will become part of a default way medicine is delivered.

***The Pulse*: What's an exciting initiative or opportunity that you and your team have been working on recently?**

GA: We recently launched a behavioral health offering that leverages collaborative care management. This essentially means that you can virtually bring a psychiatrist onto the care team, and they can dialogue with the PCP and rest of the team through a care manager and create a collaborative plan for the patient. It's very scalable because the specialist can work alongside a care manager and support a very large panel of patients.

This isn't something completely novel, but we were well situated to do something like this in a multidisciplinary way across every specialty. Imagine a world where you have a patient with several comorbidities - because most patients aren't just siloed into one disease – and you can address all the challenges of the patient in a truly patient-centered way. You can bring in the cardiologist, psychiatrist, endocrinologist, and hear all their expertise in a collaborative discussion to be able to provide the right care for a patient. And you can do this all virtually, near real-time. That's the power of what we're building now and what we're trying to unlock in our future stage. Our goal is to take some of the things that have proven valuable in behavioral health and scale it across any and every specialty in a multidisciplinary, patient-centered way.

***The Pulse*: I look forward to hearing more about RubiconMD's work in the future. One final question – what is your advice for students searching for health care opportunities like your own, whether starting a company or finding a role within an organization that contributes to health care improvement?**

GA: If you want to start a company, one piece of valuable advice I've received is to find places that have built something well, or that are scaling, and learn there because that gives you the best view into how you really build a business that can succeed and last as a brand. Finding those places to gain experience is really valuable because that's what you'll need to build something yourself as a leader of your own company.

Ultimately, though, the first thing you should focus on should be solving real and meaningful problems you're passionate about. As MBA students, time is scarce, and you can work on things that generate the most money for you, or you can work on things that have the most impact. I would always over index impact because I think the financial part can follow if you solve a real problem. But again, as long as you are working on something you believe in that addresses a challenge in health care, any other piece of advice I give you is just tactical under that.

Interviewed by Emily Wang, December 2021

HEALTH CARE IN THE HOME

A CONVERSATION WITH DAVID BAIADA, CEO OF BAYADA

BAYADA Home Health Care provides nursing, rehabilitative, therapeutic, hospice, and assistive care services for over 150,000 clients each year in 22 states and 8 countries. The organization's 30,000 employees are guided by The BAYADA Way, a philosophy and values system that unifies the culture around a commitment to help people have a safe home life with comfort, independence, and dignity. Pulse writer Alex Yoo connected with CEO David Baiada to learn more about his experience working at and eventually leading the company.

David Baiada (WG'06)

CEO

BAYADA

***The Pulse*: Could you give us an overview of your career path and your personal and professional journey with BAYADA?**

David Baiada: I went to Cornell University to study economics and then went to work in Chicago for a management consulting firm primarily focused on technology and strategy. After about three years, I decided to join BAYADA, a company founded by my father, who was the CEO for the first 45 years. So I was sort of coming back to join the family business with a little bit of nerves. I wasn't sure if it was something I wanted to do or if it was a good fit for me, but I moved to New York and started out in an entry level job as a coordinator in a home care office. Little by little, I ended up taking on responsibility as a branch director on Long Island, New York. I went to Wharton in 2004, and afterwards I returned to BAYADA, and from there I just continued to get involved in different opportunities and areas of responsibility to learn, grow, and support the business' success. In 2017, I stepped into the CEO job and my father stepped became Chairman.

***The Pulse*: Was there anything in particular that spurred your decision to join the family business?**

DB: Yes, definitely. Most importantly, what I saw in BAYADA at the time, and what I continue to see and what energizes me every day, was a really unique opportunity to be part of an organization that is growing and has an entrepreneurial spirit that is focused on getting good results in the form of great patient outcomes, great service, growth, and financial performance. But it's also done in a way that is deeply committed to making real impact and creating a sense of common purpose, so that intersection of purpose and performance was what really attracted me at the outset and continues to be an important part of who I am and what the organization is all about.

***The Pulse*: The COVID-19 pandemic has shifted more care to virtual and home settings and we're seeing more companies entering and building new offerings in the space. How do you see the home health care industry evolving in the next few years in response to these dynamics?**

DB: There's no question that because of both population statistics and demographics that the need for BAYADA services is and always has been expected to grow. The trends you described, some of which are COVID-induced around virtual care and preferences for home-based care, have been accelerated depending on the segment of home-based services. I think it's safe to assume that over the next couple of years, and couple of decades, the need for home-based care is going to continue to grow in a meaningful way.

Clearly COVID created a catalyst for immediate innovation and behavioral change. As people's lives return to some relative sense of normalcy, those behaviors may shift back a little bit, but in the long run I think it's hard to imagine that people won't continue to accelerate their use of technology and other ways of simplifying, accentuating, and complementing in-person care delivery.

***The Pulse*: Given BAYADA's storied history within home health, how well is BAYADA positioned to stand out versus the new entrants in the home care industry?**

DB: I think the places where we really think about standing out are being anchored to a sense of long-term commitment to the community, along with a culture that unifies both purpose and performance. I do think that leading change and innovation in health care services requires a long-term view.

Another place to stand out would be, ultimately, the ability to think around leveraging that long-term thinking to help drive innovation in a talent-centric way. We see a lot of

"When you're delivering an in-home service with a mobile workforce at scale, we think that the real leaders in the long run will be those that are people-centered and are thinking about how to build a movement and inspire a community of connected team members that are really trying to make a difference in the homes of our clients and their families."

people think of innovation in terms like virtual care and technology-enabled care. All those are super powerful and important, but when you're delivering an in-home service with a mobile workforce at scale, we think that the real leaders in the long run will be those that are people-centered and are thinking about how to build a movement and inspire a community of connected team members that are really trying to make a difference in the homes of our clients and their families. I think a lot of people don't adequately spend time thinking about the talent implications of the growth of services in the home and the culture implications, so we see a really important opportunity to standout as it relates to talent and culture.

***The Pulse*: To pull on this thread even more, does talent innovation play an even bigger role in light of the shortages of primary care providers and nurses we're seeing in the US?**

DB: It's definitely our number one challenge and it's not going to get any easier. We're in an era where demand for our services is expected to grow for the rest of our lifetimes at a pace that outstrips the supply of available leaders to provide the services. Differentiation and competition on the labor market is really our number one business focus. We feel that a combination of our attributes that make us a little different – long-term thinking, entrepreneurial, talent/culture centric, values-based with a common purpose – are the ways that we're going to set ourselves apart and do our best to capture market share on the labor market.

***The Pulse*: BAYADA recently announced a joint venture with Jefferson Health in Philadelphia to form a new home health initiative. Can you tell us more about the goals for the joint venture?**

DB: We have eight joint ventures with large health systems around the country, with Jefferson being our most recently announced. We see that as a growing opportunity to innovate in collaboration with similarly aligned values and long-term oriented, sophisticated, innovation-centric health systems. Places like Jefferson, based on all the things we've already talked about, are thinking strategically about how to deliver great services outside the four walls in the hospital. But they also realize that managing a mobile workforce and delivering a service in the home is very different from building and managing a hospital, so they look to us to collaboratively elevate the stature of home-based and community-based care delivery inside the system in a jointly-owned structure where we can bring all of our expertise in delivering those capabilities in partnership with a health system that is increasingly focused on and in need of those services.

***The Pulse*: This year's Wharton Health Care Business Conference theme is "A Fair Shot at Health." How important is providing equitable access to home care and what are some initiatives that BAYADA has done to address access?**

DB: One population that's clearly at the center of this access and health equity conversation is the Medicaid and dual-eligible population. BAYADA has been providing services in the Medicaid program since 1976 and is one of the largest providers of home-based and community-based care delivery to Medicaid recipients in the country. And so we see that population as probably our primary channel for expanding access and ensuring underserved patients

get the care that they need and deserve. This is an area of particular complexity because of the way it's funded, in addition to trends like wage inflation and labor market complexity

***The Pulse*: With BAYADA's presence in multiple countries, how do you think about the idea of "serving the underserved" from both an international and domestic perspective?**

DB: The desire to be cared for at home and to stay safe and independent in the comfort of your own home is not unique to the United States. It's a global, human preference, and the need for high-quality, reliable, home-based care is really something that exists everywhere. While there's a cultural framework or a reimbursement / regulatory framework to support it in some places more than others, over time that will happen everywhere. We do feel that as a long-term oriented, value-centric growth company, one of the most important things we can do related to access and our core purpose is to take care of more people in more places. So our global growth is really a part of our broader philosophy that if we're doing a good job and we feel like we're delivering a high-quality service to help people stay safe and independent at home, then we feel a sense of responsibility to do more of it in more places and expand access to those great services.

***The Pulse*: What were some of the biggest challenges you have faced while scaling BAYADA's business during your career?**

DB: I think growth puts culture to the test. Our growth geographically, both domestically and internationally, has put real emphasis on us creating a common value system and a common culture system that binds us all together. It's a key part of how we think about running our business and organizing our BAYADA community. But our growth has also forced us to constantly re-evaluate and reinvent. How do we keep people connected to a common purpose and a common set of values that anchor the way we set strategy? The way we make decisions? And the way we treat each other and work together to deliver on our purpose?

***The Pulse*: One of the biggest changes in BAYADA's 45+ year history was in 2017 when BAYADA announced that it would become a not-for-profit organization. What factors informed this decision to transition from a private, family-owned company to a not-for-profit? What was the thought process and what were some of the key considerations?**

"The desire to be cared for at home and to stay safe and independent in the comfort of your own home is not unique to the United States. It's a global, human preference, and the need for high-quality, reliable, home-based care is really something that exists everywhere."

DB: If you read our values document called "The BAYADA Way", there are some important phrases in the vision statement that describe our long-term intent to build and maintain a lasting legacy and to serve millions of people worldwide with the most compassionate and trusted team of home health professionals. We wrote those words almost twenty years ago and when you break them down and pause and reflect on what they mean, it really sets the table for us to figure out how do you build a multi-generational, sustainable, 100-year company that continues to grow and adapt and innovate to ensure that we take care of more people in more places with great teams. So as a family and as a leadership team, we started to think about how you do that. How do you build a company that lasts one hundred years that continues to adapt, grow, and succeed? When you look around, there aren't a lot of 100-year-old companies, so it took us over a decade to really think about all the different alternatives, whether it was family ownership, public ownership, partnership models like large banks and law firms, not-for-profit structure, or some hybrid of the above. In the end we decided, while not perfect, that converting to not-for-profit was the structure of ownership and governance that would maximize the likelihood of our organization lasting 100 years or more and making "The

BAYADA Way" come true. And that was really the heart of the decision.

***The Pulse*: As you reflect on your own career, what advice do you have to others who want to make an impact on the health care industry?**

DB: Have patience. Health care moves slowly. I also feel strongly about the importance of the intersection between both purpose and performance. Some people may lose their way focusing too much on one or the other which is a natural tension we have to manage. I believe the most impact and success comes when you find an equilibrium between a sense of purpose and getting great results, in whatever way you define results. This equilibrium characterizes the people who I see as most successful in finding their paths in a health care career.

Interviewed by Alex Yoo, December 2021

Panel 2: Balancing Innovation and Access

Friday, February 11, 2022 - 9:35 AM–10:25 AM ET **Pharma/Biotech**

This event is brought to you by abbvie

Innovative therapies are only valuable if people have access to treatment. As the pharma and biotech industry make changes to better meet the needs of different patient populations, how will these changes have an effect on the rate of innovation? Our panelists will discuss how the pharma and biotech industry can contribute to equitable access to novel therapies, what role access plays in their organizations, and how innovation is or is not at odds with improving access.

Abul Basar

Vice President, Global Value and Access

Gilead

Abul Basar leads Gilead's Global Value and Access program, an organization within the company that prioritizes increasing access to life-saving medicines for people in low and middle-income countries, specifically for HIV/AIDS, viral hepatitis, and visceral leishmaniasis. Prior to Gilead, Abul led access strategy for pharmaceutical organizations at Novartis and GlaxoSmithKline, as well as managed strategic funding and capacity for Roche Pharmaceuticals. Abul holds a BPharm in Pharmacy from King's College in London.

Josette Gbemudu

Executive Director of Health Equity and Social Determinants of Health

Merck

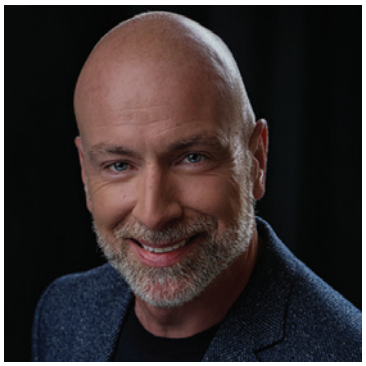
Josette Gbemudu is the Executive Director of Health Equity and Social Determinants of Health at Merck. Josette collaborates across all business functions at Merck to develop and lead execution of a unified Health Equity strategy that is supportive of improving equitable health outcomes for patients.

Over Josette's seven years at Merck, she has led Private Sector Contracting in the U.S. Vaccines organization, led Scientific Strategy for the Anesthesia and Surgery Marketing franchise, and played an instrumental role in building Merck's U.S. commercial strategy.

Prior to joining Merck, Josette was a Senior Policy Analyst at the National Governors Association. She worked with a cross-section of highly ranked state and federal policy officials to develop innovative solutions to state-specific challenges related to implementing health system reform. Josette was also a Health Policy Fellow at The Dartmouth Institute for Health Policy and Clinical Practice where she focused on the implementation of accountable care organizations (ACOs). She worked very closely with leading integrated delivery systems and national commercial payers to help them

construct ACO partnerships and agreements. She has published extensively on the topic of ACOs.

Josette holds a Master's degree in International Health Policy from the London School of Economics and Political Science and received her undergraduate degree in Health Policy and Management from the University of North Carolina at Chapel Hill.



David MacMurchy

CEO

Lightship

David MacMurchy is the CEO of Lightship which prioritises patient choice to make clinical trials accessible to every patient in need. David's passion for providing access to clinical studies for underserved groups led to him joining Lightship and establishing its patient-first approach and commitment to operational excellence.

David is a leader in the health care sector with over two and a half decades experience working for leading organisations, including Pfizer and IMS Health (IQVIA) where he collaborated with life science companies in the United States, Europe, and China. David also led the Life Sciences practice as a Partner for EY (Ernst & Young) in Europe supporting pharmaceutical and biotechnology companies, focusing on growth, planning and technology capabilities. Prior to joining Lightship, David was EVP at PRA Health Sciences where he was responsible for leading a more than 9,000-strong team operating clinical trials across Europe, Asia, and Africa.

Jean Qiu, PhD

Founder and Chief Technology Officer

Nexcelom Bioscience LLC

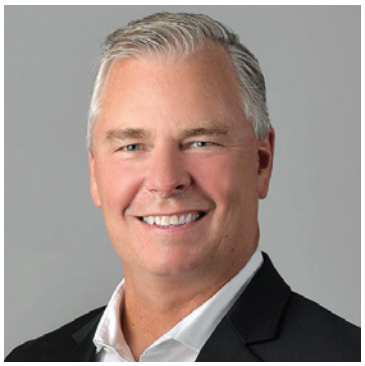
Dr. Jean Qiu is the founder and Chief Technology Officer of Nexcelom Bioscience LLC.

From the basement of her home, she started the company in 2003, with the goal of automating manual cell counting on the biologist's lab bench. Today, the Cellometer-branded cell counting systems, including instrument, software , consumable and reagents, are distributed globally and used in laboratories of pharmaceutical companies, government institutions, universities for cancer research, vaccine development, drug discovery, and cellular therapy manufacturing. Nexcelom Bioscience was acquired by PerkinElmer in June 2021.

Prior to founding Nexcelom Bioscience, Dr. Qiu worked for 3M Company for more than a decade, as a product commercialization team leader in Health Care Group, Research Specialist in the Material Application Laboratory, and Senior Research Engineer in the Corporate Research Laboratory, where she was a co-inventor of the first blue-green semiconductor laser. She also worked for a biotech start-up, as its Director of Process

Development and Manufacturing, where she developed plastic optical sensors and established its manufacturing process.

Dr. Qiu earned her PhD in Electrical Engineering from Purdue University. She is an inventor with 34 patents and over 58 publications in peer-reviewed academic journals.



Matt Widman

Vice President

AbbVie Patient Services

Matt Widman leads AbbVie Patient Services, an organization within the company's U.S. area that is focused on supporting patients during their prescribed treatment journey. From access to disease education, Matt's team truly works with the patient serving as their north star. Prior to working in Patient Services, Matt held various positions in commercial and program development. Matt started his career at AbbVie in 1998 as a research chemist. Matt's professional career began as an analytical chemist. He earned a B.S. in Chemistry from Florida Atlantic University, and an MBA from Lake Forest Graduate School of Management. Matt is also the President and co-founder of the Super Jake Foundation which funds research to find a cure for neuroblastoma, and to provide assistance to families with children with cancer.

Abby Alpert

Assistant Professor of Health Care Management, **The Wharton School**

Faculty Reserach Fellow, **National Bureau of Economic Research**

(Moderator)

Abby Alpert is an Assistant Professor of Health Care Management at the Wharton School at the University of Pennsylvania. She is also a faculty research fellow at the National Bureau of Economic Research. Her research interests are in health economics and public finance. Her recent work has focused on the economics of the pharmaceutical sector. In this area of research, she has studied Medicaid reimbursement policies, Medicaid managed care, Medicare Part D, direct-to-consumer advertising, opioid abuse, and drug shortages. Her research has been funded by the National Institutes of Health and Agency for Health Care Research and Quality and has been featured in media outlets including the New York Times, Washington Post, Los Angeles Times, and Vox. Prior to joining Wharton, she was an Assistant Professor of Economics and Public Policy at The Paul Merage School of Business at the University of California in Irvine, and she was an Associate Economist at the RAND Corporation. She received her PhD in Economics from the University of Maryland and BS in Mathematics and Economics from the University of Chicago. operating clinical trials across Europe, Asia, and Africa.

TARGETED CELL THERAPY FOR AUTOIMMUNE DISEASES

A CONVERSATION WITH STEVEN NICHTBERGER, CEO OF CABALETTA BIO

Cabaletta Bio is a clinical-stage biotechnology company focused on the discovery and development of engineered T cell therapies for B cell-mediated autoimmune diseases. The company hopes to harness the immune system through innovative cell and gene therapies to deliver accessible cures for patients. Pulse writer Alex Yoo connected with CEO Steven Nichtberger to learn about his experience as an operator, investor, and founder in the biotech space as well as take a closer look at the CAAR technology.

Steven Nichtberger, MD (C'83, W'83)

CEO

Cabaletta Bio

***The Pulse*: Could you share an overview of your career path and the twists and turns that led to your current role as CEO of Cabaletta Bio?**

Steven Nichtberger (SN): That's a long story. So my career path got its initiation when I was only 12-years-old and my older brother had passed away. His death was unexpected because he suffered from a chronic illness and we didn't think it would kill him so young. It was because of his death that I decided to devote my professional life to improve the lives of others through health care. I chose to go to the University of Pennsylvania for its great natural science program and strong business school. I came to college believing that I would go to medical school, but not stay a doctor long-term, which back in 1979 when I started at Penn nobody did.

I went through medical training, finished my internship, residency, and fellowship in New York, and then joined Merck in the commercial marketing function, new product planning function. I ultimately came to some US operational roles for a variety of brands, managing about $4 billion worth of business across a number of brands and then became the head of marketing for the company. In that role, I developed a great understanding of commercialization, the planning that goes into it, and the execution and innovation for our clients.

I left Merck in 2003 and started my first biotech company called Tengion which worked in cell therapy to replace and regenerate bladder tissue among other kidney tissues as well. In 2010, I left Tengion and I started teaching at Penn for the Vagelos Life Sciences and Management Program. The work that I did with the Vagelos Program and ultimately teaching the senior capstone course allowed me to become familiar with a lot of early-stage technologies because students form teams and develop companies around these technologies.

During this time, I also started investing in companies, traveling, and spending a lot of time with my kids. One of the most important career choices I made was to invest time with my kids when they were in middle school and high school, before they went off to college. I was really enjoying life when I came across this technology published in Science in 2016. I brought it into the senior capstone class for the 2016-2017 academic year, and by 2018 the scientists behind the technology, which ultimately became the basis for Cabaletta Bio, were interested in having me launch a company with them. We raised $25 million from public equity investors who were interested in an early-stage opportunity that could transform autoimmune disease. This was a CAAR (chimeric auto-antibody receptor) technology when applied more specifically to only the B cells causing the autoimmune disease of certain types, we could potentially cure those diseases. It was an attractive opportunity and I wanted to see it go forward. I liked the scientific cofounders very much and we worked really well together and so we launched the company.

***The Pulse*: At this point in your career story, you're involved with a very early venture with an exciting scientific idea, a great founding team, some data, and access to capital. Is this the point at which you decide to go all-in?**

SN: After long discussions with my wife, my kids, and my own introspections on what I want to do with my life over the next decade, I came to the conclusion that I was jumping into this full-time. We still didn't have any employees and I hardly had a license to the technology but there was a lot of trust, a lot of deep agreement among the investors, myself, and the scientific cofounders of what we were going to do. And so we funded the company in August 2018 and by early 2019 we raised over $75 million, hired about 20-25 people, got the first Investigational New Drug Application up and running, filed, accepted by the FDA. A month later, we took the company public, raised another $75-80 million, and with

"Unlike cancer where if you save a life, it costs the health care system money, this is a place where in autoimmune disease if you can treat the patient and cure the disease, you might actually save the current payer significant dollars over the next few years."

enough money in the bank, started along the path to execute very efficiently the first human study with novel CAAR-T that would either prove or demonstrate the challenges of CAAR-specific platform to address certain autoimmune disease and potentially cure them.

***The Pulse*: If successful in trials, can you describe the impact your novel therapy could have on standard of care for patients?**

SN: Today's standard of care is very expensive therapy given to these patients on an annual or recurring basis with modest treatment effects. So the opportunity to cure with CAAR T therapy has not only clinical benefit which is paramount, but also financial benefit of the sort you see with vaccines: a one-time cost cuts off an ongoing cost that could last for decades. Many of the patients suffering from these diseases are 20-30 years old who have decades in front of them. So unlike cancer where if you save a life, it costs the health care system money, this is a place where in autoimmune disease if you can treat the patient and cure the disease, you might actually save the current payer significant dollars over the next few years.

So the basic biologic opportunity was elegant, the clinical opportunity was compelling, and the financial opportunity was as full as it could be. For those reasons, I jumped in full-time. We built the business and decided to partner with Penn on our manufacturing to diminish our fixed costs, and we benefited from using the original technology that Penn developed for KYMRIAH as the basis of our manufacturing. Manufacturing by a highly-competent, highly-capable partner at the University of Pennsylvania was a very capital efficient way to go about prosecuting the first product. While doing so, our strategy included developing many other products just behind it because once we demonstrate that the platform works, everybody in cell therapy and autoimmune disease would want to be in this field so we needed to have the intellectual property filed well before we had that evidence.

***The Pulse*: Can you tell us more about the CAAR technology and how it differs from CAR-T therapy? What is the additional benefit of CAAR vs CAR?**

SN: The CART19 technology that is currently approved for certain cancers and hematologic malignancies and our CAAR technology both use T-cells taken from the patient, they both use a genetic modification of that T-cell done ex vivo which adds in a signaling chain and a targeting domain. In CART19, that targeting domain is an antibody that will identify the CD19 antigen on all B cells. Our scientific founders found that they could use this same killing mechanism, the same signaling chain, but change the targeting domain such that it doesn't bind to all B cells via the CD19 antigen and instead bind to the B cell receptor on the pathogenic, autoreactive B cells only. That pathogenic B cell has a specific auto-antibody on the surface of the cell that connects with our CAAR T cell's targeting domain. So our CAAR-T cell, that is the drug, binds to the auto-antibody on the surface of only the 1% of B cells that are causing the disease. And that binding allows the T-cell to destroy the B cell.

So the difference is that we have a personalized, highly-specific therapy that can allow patients to maintain normal immunity, which is particularly important in a COVID world. Maintaining normal immunity, having the ability to be vaccinated, and being able to respond to infection while eliminating the disease, perhaps permanently given demonstrated 5-year response rates with CAR T technology in oncology.

***The Pulse*: During your time at Merck when you were first transitioning to the business side from the clinical side, what were some of the challenges you faced?**

SN: My approach at Merck was to never talk. In the 1990s, there was still a sort of reverence for doctors and an attitude that "they know it all" and doctors thought they knew it all. My idea was to never be that guy so my rule of thumb for the first three months at Merck was to never talk unless somebody asks for my opinion and then we'd talk. And so I got more integrated and people became more comfortable with me.

Around that time, I became familiar with emotional intelligence literature. There was some emerging data suggesting that the qualities of self-awareness, self-control, team awareness, and team influence were meaningfully associated with success. And so I tried to model my behaviors at Merck around those disciplines and it seemed to work out pretty well in terms of my career. I took this approach into the biotech companies I've started. Culture is central to how I've performed my jobs at various companies I've been involved with. People not only get passionate when times are great, but they also stay committed when times are less great.

***The Pulse*: You've been both an operator and an investor in the pharma / biotech industry. What skills are most important when transitioning between the two roles?**

SN: In biotechnology, particularly early-stage biotechnology, you need to be able to figure out not only where there is great science that has high promise, but whether the valuation is appropriate. So the skills required as an investor and as an operator are obviously different. One deals with strategic thought and the other is how you implement and operate, so in a sense they're very different. But, the skillsets you need to do either are pretty similar in the sense that you need to understand the science, and if you don't understand it you need to find people you trust who do understand it.

Once you understand the science, you need to figure out what it's worth, what the value-creating milestones that would allow investors to pay more tomorrow than they did yesterday. As an operator, you develop a plan that allows you to achieve each milestone and then get by to live long enough to raise new money. As an investor, you need to decide whether an investment today is going to get a company beyond that milestone and raise money at a higher price tomorrow. And if you don't believe they're not raising enough money, you shouldn't invest.

The discipline required for investing is similar to the discipline required for operating in that motivating people, attracting talent, and retaining them are most important. I have a strong belief that it matters less what the technology is and more what people you're surrounded by. A great team can make a modest technology a big success, but a terrible team can destroy a great technology. So I'm very invested in the team.

***The Pulse*: This year's Wharton Health Care Business Conference theme is "A Fair Shot at Health." When researching and commercializing exciting therapeutic advancements, how important is it to prioritize equitable access to new therapies? What steps should the pharma / biotech industry consistently take to prioritize access and health equity?**

"The discipline required for investing is similar to the discipline required for operating in that motivating people, attracting talent, and retaining them are most important. I have a strong belief that it matters less what the technology is and more what people you're surrounded by. A great team can make a modest technology a big success, but a terrible team can destroy a great technology."

SN: Access is critically important because it goes hand-in-hand with the value-proposition and pricing choices that companies will make. Without access, pricing discussions can't proceed, and you can't limit access due to price.

To your question on equity, inclusion, and diversity – it starts with who you hire to make the choices you're going to make as a company. Do you have a mindset as a company that values equity, inclusion, and diversity? With that as a starting point, when you make choices about allocating resources, choosing a CRO, partnering with institutions, decisions about equity start there because if you only go to neighborhoods where the patient population is homogenous, then that's what you're going to get in your trial. Unless you make diversity of trial participation a priority from the outset, you're not going to achieve it. Company builders need to think about equity and access from the inception of a company. It needs to be in a company's DNA and stay a priority.

The history of health care inequity for Black Americans has been so profound and a reaction to not trust health care providers or the health care system is, in my view, justified. Encouraging black patients to enroll in clinical trials can be challenging and it's important to do so in a way that engenders trust. For the COVID vaccines, Moderna waited an extra couple of months to file to be sure they had enough diversity of representation in their trial. It was a great decision because if they couldn't enroll a diverse population in their vaccine trial, then they likely can't build confidence across all populations. For vaccines, this means we also likely can't achieve herd immunity. It's in the best interest of society to have a diverse and inclusive approach to access and to the choices we make as developers of therapeutics.

***The Pulse*: Do you have any advice for students who want to pursue a career in pharma / biotech?**

I'm a big advocate for pursuing your own path based on what you're interested in. None of us know how long we're on this earth. You need to enjoy the journey as well as the outcome. Being happy is of differential importance to different people. My approach has always been to pursue your passion and pursue what you're good at, because you'll be great at it. If you love what you do, you're going to immerse yourself in it and be great. Don't copy someone else's path. Look and learn from everybody else's but then pursue your own path based on your interests. Whatever it is, do what you love and do it with people who you trust, who you can empathize with, and who allow you opportunities to thrive, grow, and be authentic.

Interviewed by Alex Yoo, December 2021

DEVELOPING GENE THERAPIES FOR CYSTIC FIBROSIS

A CONVERSATION WITH JOAN LAU, CEO OF SPIROVANT SCIENCES

Spirovant Sciences is a biotechnology company focused on the development of treatments and cures for inherited respiratory diseases. The company has developed several innovations with viral vectors that have the potential to overcome previous challenges of the clinical viability of gene therapy for cystic fibrosis. Pulse writer Alex Yoo spoke with CEO Joan Lau to learn more about her experiences with and motivations for leading companies in the biotech industry.

Joan Lau, PhD (ENG'92, WG'08)

CEO

Spirovant Sciences

***The Pulse*: Could you share an overview of your career path and the decisions or events that led you to become the CEO of Spirovant?**

Joan Lau: I started my career at Zimmer after receiving a bioengineering degree from the University of Pennsylvania. I caught the bug of wanting to develop products for patients. The people I was most impressed with – people who asked the most relevant questions or made the most compelling arguments – had graduate training in science: MDs and PhDs. So I went to graduate school. I received several offers after finishing my PhD. Though my desire was to accept the role at a small newly public biotech, others advocated Merck: "go there and learn how drug development is done well." The Merck job was what I call, now jokingly, a 10-year training program. I became adept at drug development, advancing drug candidates from the lab bench through early clinical proof of concept studies. I was fortunate that Merck agreed to sponsor my MBA; I worked at Merck full time while attending the Wharton MBA for Executives program.

After a number of years, I followed a colleague and joined Locus Pharmaceuticals, a venture backed computational chemistry discovery company, as the Chief Operating Officer. A story for another time – unexpectedly became the president, then CEO a few weeks later. Running a company has its challenges, especially one that had been around for a while and lived out many versions of itself. We got a little bit of investment and did some internal discovery and development, and then looked for partnerships that made sense for our stage, where we could put the assets in better hands. We decided that the most prudent decision was to partner or sell all our assets then close operations. It actually worked out nicely for investors – those drug candidates became drugs and our shareholders benefited significantly. Some of those investors liked how Locus worked out so I was asked to run another legacy company; this one ended up with safety findings in the clinical study so we ended it without a good exit.

***The Pulse*: At this point in your career story, you led and exited two early-stage biotech companies. What did you learn and enjoy about managing these two companies, and how did you determine your next step?**

JL: I learned that it's all about the team. Merck had very capable, experienced leaders who made tough drug development decisions and tradeoffs, and I wanted to surround myself with that caliber of decision-making. A few serendipitous conversations with investors and peers resulted in co-founding Militia Hill Ventures which would build life sciences companies from scratch with the right management team and the right assets. We invested ourselves and operated an ongoing company, Immunome, shepherding it through its seed and Series A rounds. We then helped form Tmunity Therapeutics with technology out of Penn. The third was Talee Bio which we formed in 2016 rubbing two nickels together. Talee was sold – twice! – in 2019 and continues today as Spirovant. I took on the role of CEO for Spirovant, and I stay connected to Militia Hill.

***The Pulse*: Outside of your work in the biotech industry, are you involved in any other organizations?**

JL: I started by giving money to the Human Rights Campaign, the country's largest LGBT advocacy organization, and eventually ended up serving on the board and "retiring" as board chair. I'm now on the Board of Advisors for the School of Social Policy and Practice and on the board for the Philadelphia Orchestra. One of my favorite things to do outside of work is to co-direct the capstone class for seniors in the Vagelos Life Sciences and Management Program and watch students develop their own learnings.

***The Pulse*: Can you delve deeper into how you made the decision to form a company around gene therapy for cystic fibrosis?**

JL: Emily Kramer-Golinkoff, a Penn '07 grad and founder of Emily's Entourage, has two alleles with the same nonsense mutation of CFTR on both genes. At this point she is 37 years old and has advanced stage cystic fibrosis. Cystic fibrosis is a progressive, monogenic lung disease and it's fatal. There are companies who have products that can upregulate or modulate the function of the CFTR gene or its associated ion channel proteins. However, for those people like Emily who don't have the CFTR gene present due to nonsense mutations in the gene itself, and therefore produce no proteins, no small molecule can upregulate a gene that doesn't exist. And for those people, some sort of gene addition is required to help them.

As a team at Militia Hill Ventures, we thought there was an opportunity. In gene therapy, Spark Therapeutics had progressed along but not received approval at that point. The understanding of gene therapy in the FDA regulatory environment suggested that gene therapies were mature enough to invest in. We embarked on a one-and-a-half-year exploratory exercise with Emily's Entourage, the Cystic Fibrosis Foundation, and a few investors to identify approaches to affect gene addition of CFTR. We traversed academic, government, and industry research and held symposia to find a program that had the most potential. When we identified a family of technologies that had the most promise, we engaged in conversations with those academic investigators and their home institution and found that we had some shared interests and skillsets. Talee Bio was founded on that basis.

***The Pulse*: You've been both an operator and an investor in the pharma / biotech industry. What do you look for in a company when you decide to invest in or join it?**

JL: I look at the team and I look at the goals of the company. What is their strategic intent? Do they have individuals who have had success with that strategic intent, and collectively does the group shepherding the company have a shared but diverse understanding of that strategic intent and how to approach the problem? I look at everything through the lens of an operator. I am much less an investor. I don't think about the ideal. The ideal is always to be more efficient, to get more approvals, to have the studies achieve statistical significance. But what does an organization do when it doesn't achieve FDA approval or achieve statistical significance in its studies? How does the management team think through the risks and the ways to continue to prosecute the program without being able to go linearly? Organizations that think through these are those that I enjoy joining as either a board member or as part of the operating team. Those are the types of companies that we think about when we invest.

"The ideal is always to be more efficient, to get more approvals, to have the studies achieve statistical significance. But what does an organization do when it doesn't achieve FDA approval or achieve statistical significance in its studies? How does the management team think through the risks and the ways to continue to prosecute the program without being able to go linearly?"

***The Pulse*: You spent 10 years working at Merck before moving into smaller biotech companies. What were some learnings you took from your time at Merck that you apply to Spirovant today?**

JL: Drug development is a discipline. It requires incredible intellect, experience, and difficult tradeoffs. Individuals who make those decisions or lead groups who generate information for those decisions have a level of patience, wisdom, experience, and judiciousness both in leadership and in making decisions. These qualities are not easy to see on a resume. Those skills and talents can only be observed working in drug development together. Bringing together people who have an insatiable curiosity for new learnings and new ways of thinking is often a harbinger of future success – I thrive off that.

***The Pulse*: This year's Wharton Health Care Business Conference theme is "A Fair Shot at Health." How**

“Innovation and access are aligned because if we don’t innovate, we’re going to make the same kind of drugs for the same kind of people that we did in the last decade and that is not innovation. Innovation is new patients, new diseases, new modalities, new technologies, and new ways to help patients. ”

important is providing equitable access to life saving therapies and what steps should the pharma / biotech industry take to address the access issue?

JL: By the very nature of saying we need to “address the access issue” says that systemically there have been biases. There’s been biases towards race, towards gender, towards background, and I’m thrilled that the conference and the organizers are thinking about it. The trick is to find a way to listen and be willing to be uncomfortable.

If you want fairer clinical trials, one needs to have more diversity of the individuals recruiting for clinical trials. That means you need to have more diversity at the employee level. If you want that, you need to have more diversity at the leadership level, individuals who are making the decisions. You need more diversity at the investor level who accept and understand the need for diversity. These things are hard because the moment you or I think about who would be a good person to fill a role, our network by its very nature is biased. We all need to learn to be comfortable with people who are different than oneself, by their thinking, their background, their experiences, and putting the time to build relationships. Put in the time to be uncomfortable. I can’t guarantee you will get to a fair trial doing all these things, but at least you’ve got a better chance at it.

Innovation and access are aligned because if we don’t innovate, we’re going to make the same kind of drugs for the same kind of people that we did in the last decade and that is not innovation. Innovation is new patients, new diseases, new modalities, new technologies, and new ways to help patients. That’s innovation. And each of these parameters pose problems but we want to tackle each one to get some movement on all fronts. It’s like social justice. I did social justice for decades and we need a lot of people pushing together and things will slowly move and gain momentum as others join.

***The Pulse*: Do you have any advice to Wharton MBA students who want to pursue a career in pharma / biotech?**

JL: I don’t have any specific advice other than to learn. Learn from everyone. Learn from those in leadership roles. Learn from the people who report to you. Learn from your peers and colleagues. Learn from people who don’t have much of a voice because that’s when the “aha” moments come. That’s when the innovation comes because they’re not stuck in the traditional ways of thinking.

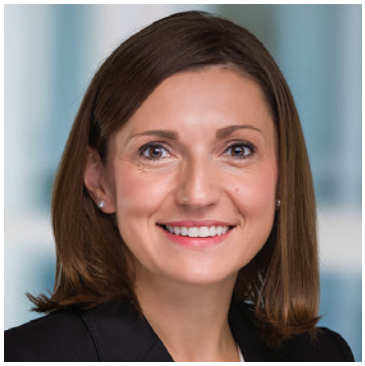
Interviewed by Alex Yoo, January 2022

Panel 3: Consumers in the Spotlight: The Transformation of Digital Health

Friday, February 11, 2022 - 11:45 AM–12:35 PM ET **Digital Health**

This event brought to you by HEALTH ADVANCES

Consumerization in health care has been accelerated by COVID-19. As consumers take control of their health care, there is a need for more cost-effective, high-quality care with the patient at the center. Can a notoriously slow-moving industry keep up with ever-changing patient expectations? How will the incumbents adjust to compete in the dynamic health care ecosystem? This panel will explore how companies across the digital health landscape are putting patients at the center of their products and the implications this shift has for the broader system.



Snezana Mahon, PharmD

Chief Operating Officer

Transcarent

Snezana Mahon is Chief Operating Officer of Transcarent, leading the company's operational functions, and product development. She brings over 15 years of progressive experience in the health care industry including pharmacy benefit management, product development & management, Government Programs, vertical & horizontal enterprise integrations, clinical innovation and operational excellence.

At Express Scripts, Snezana held various leadership and management positions within the Clinical Product and Government Programs organization. Most recently as Vice President and General Manager Evernorth Care Solutions, she was responsible for all clinical initiatives and utilization management programs that help make the use of prescription medications safer, more affordable and more accessible for patients and payers. Previously, Snezana was Senior Director of Medicare strategy, where she guided Medicare Advantage and Part D plans on CMS guidelines, regulations and Star Ratings requirements.

Snezana is a registered pharmacist and holds a doctorate in pharmacy from the St. Louis College of Pharmacy. Her earlier retail pharmacy career included positions with Walgreen Company.

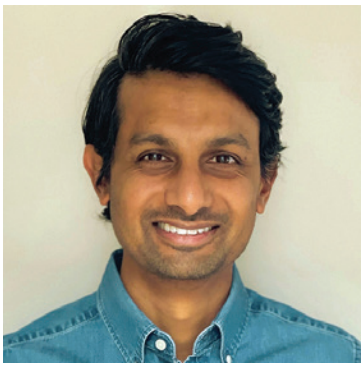
Snezana speaks at a wide array of health care forums and has been published in journals including Managed Health Care Executive and Fierce Health Care.

Shika Pappoe, MD (WG'16)

Chief Medical Officer

Strive Health

Dr. Shika Pappoe completed her undergraduate and medical degrees at Yale University, followed by her internal medicine residency and nephrology fellowship at Brigham and Women's Hospital. During her fellowship, she also completed a Master of Public Health degree from Harvard University. She subsequently joined a private practice group, Royalty Nephrology Medical Group, in California. While she loved practicing community nephrology, she was eager to return to an academic setting where she could teach, participate in research and work in an innovative care setting. She therefore moved to the nephrology division of the Keck School of Medicine and worked at Los Angeles County Hospital, one of the country's largest safety-net hospitals. After working in a variety of health care settings and seeing both the broken parts of the system and opportunities for innovation, she decided that it was time to be part of the solution. In her pursuit to become a physician leader, she earned an MBA from Wharton. With her experience in kidney care, her mounting experience in medicine, public health, and business management, and most importantly, her passion around improving the patient experience, Dr. Pappoe reentered the workforce at CareMore, a leader in value-based care. She served as the Director of Nephrology and Kidney Disease Prevention. Dr. Pappoe's unique collection of education and experience has proved invaluable in her current role as Chief Medical Officer at Strive Health.



Neil Parikh, MD (WG'10)

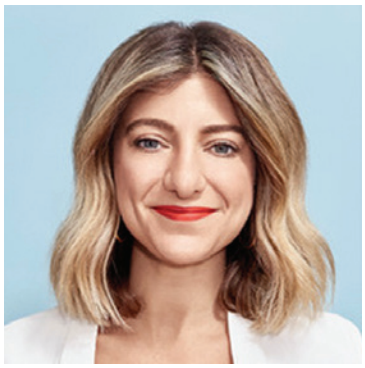
Chief Medical Officer

Thirty Madison

Dr. Neil Parikh is the Chief Medical Officer of Thirty Madison, focused on implementing technology to deliver care at scale. He's driven by his belief that technology allows providers to overcome the "iron triangle" of tradeoffs between access, quality, and cost that characterizes the traditional health care system.

Prior to Thirty Madison, Neil was President of Oscar Medical Group and Senior Medical Director at Oscar Health leading Care Delivery, where he oversaw Oscar's clinic and telemedicine operations, complex case management, and clinical concierge services. Neil is also an Assistant Clinical Professor at the University of California Los Angeles, where he has been teaching and practicing since 2014. Neil completed his Internal Medicine residency at Cedars Sinai, his MBA at the Wharton School of the University of Pennsylvania, and his MD at the Keck School of Medicine at the University of Southern California.

Neil is involved in philanthropy, including as a member of the Health Care Advisory Council to the Ronald McDonald House NY. He splits his time between New York and Los Angeles with his wife and son.



Carolyn Witte

CEO and Co-Founder

Tia

Carolyn Witte, CEO and Co-Founder of Tia, views it as her mission in life to fight health care inequalities women face. After experiencing her own set of health struggles and seeing how the health care system is not built for women, Carolyn started Tia to reimagine women's health care from the ground up. Together with her co-founder Felicity Yost, Carolyn built Tia, the modern medical home for women. The company is trailblazing a new paradigm for women's health care, treating women holistically as opposed to by body part or life stage. Tia's "Whole Woman, Whole Life" care model fuses gynecology, primary care, mental health and evidence-based wellness services to treat women comprehensively. Since launching in 2017, Tia has grown to serve thousands of women aged 18-80 with blended in-person and virtual care in New York City, Los Angeles, Phoenix and soon San Francisco. By making women's health higher quality and lower cost, Tia makes women healthier, providers happier, and the business of care delivery stronger — setting a new standard of care for women everywhere.

Carolyn has received many high-profile awards, including Entrepreneur Female Founder 100, Forbes 30 under 30, Inc. Female Founder 100 and Business Insider's Health Care 30 under 40. Tia recently announced a $100 million Series B fundraise in September 2021, representing one of the largest investments ever for a health care company focused on women.

Julian Harris MD, MBA (WG '08)

Chairman & CEO, **ConcertoCare**

Partner, Health Care Services & Technology Investment Team, **Deerfield Management**

Adjunct Professor of Medical Ethics & Health Policy, **Perelman School of Medicine**

(Moderator)

Dr. Julian Harris is Chairman and Chief Executive Officer of ConcertoCare, a leading tech-enabled, value-based care provider of at-home comprehensive care for seniors and other adults with unmet health and social needs.

Julian is also a partner on the Health Care Services & Technology investment team at Deerfield Management, where he built a portfolio of value-based care, population health, diagnostics, and digital health companies. GrowthCap ranked Julian in the top 10 health care investors of 2021. Before Deerfield, he was the founding President of CareAllies, Cigna's family of multi-payer provider services and home-based care businesses. Previously, he led US Strategic Operations for Cigna and managed a $500M internal investment portfolio focused on technology and innovation. Julian was also an Adviser to Google Ventures (GV) focused on health care services.

Before GV, Julian led the health care team in the White House Office of Management and Budget (OMB). As the federal government's chief health care finance official, he oversaw a $1 trillion budget and provided management and policy oversight for a range of programs, including Medicare, Medicaid, FDA, NIH and CDC. He also served as the chief executive of the $11 billion Massachusetts Medicaid program.

Julian trained in internal medicine and primary care at Harvard Medical School's Brigham & Women's Hospital and practiced as a hospitalist at Cambridge Health Alliance and as a clinical consultant for the virtual second opinion consult company, BestDoctors. He graduated summa cum laude with a B.A. in Health Policy & Medical Ethics from Duke University and holds an M.Sc. from Oxford University, where he studied as a Rhodes Scholar. He is also a graduate of the Wharton School of Business and the University of Pennsylvania's School of Medicine, where he currently serves as an Adjunct Associate Professor. Julian is a trustee of the New York Academy of Medicine and a member of the advisory board for the Leonard Davis Institute for Health Economics at Penn.

REIMAGINING FREEDOM AT ANY AGE

A CONVERSATION WITH DUOS CO-FOUNDER & CHIEF PRODUCT OFFICER KRISTEN LYNCH

DUOS is a digital health start-up with the mission to reimagine freedom at any age. DUOS forms trusted relationships with older adults by pairing them with personal assistants. Through a combination of technology and community, DUOS offers holistic, personalized support to allow older adults to age independently in their homes. In June, DUOS raised $6M in seed funding from Redesign Health and Forerunner Ventures. Pulse Writer Lauren Gardanier sat down with co-founder and Chief Product Officer, Kristen Lynch, to learn more about how DUOS is building their business to fulfill the needs of the expanding older adult population.

Kristen Lynch

Co-Founder & Chief Product Officer

DUOS

***The Pulse*: Can you give an overview of your career path, and what led you to where you are today as co-founder and Chief Product Officer at DUOS?**

Kristen Lynch: In mid-2020, living through a global pandemic and observing the chaos and impact it had on people's lives, I asked myself whether I was living my values to the best of my ability. For me that meant two things: 1) my experience as a caregiver for my mom, navigating the health care system and the lack of connectedness between episodes of care and 2) the engagement that I get being at the early stages of building a product and launching it to market. I am a builder. I love to build things and test them out. I wanted to find a space where I could connect my passion for caregiving with early stage product building.

I was incredibly lucky to connect with one of my co-founders Anne Marie Aponte, our COO. She led a duct tape test of our product in the market; she launched with almost no tech whatsoever and had completed early validation of product-market fit. I was impressed both with the caliber of Anne Marie as a person as well as with the results of this test, which suggested we could put caregiving at the center of our product and make it a viable business.

Prior to DUOS, I led product development at the chronic disease management company Onduo, which is now a part of Alphabet's Verily Life Sciences. I was there from inception through post-acquisition, so I experienced the exciting changes and challenges at each phase of growth. Prior to Onduo, I worked in interoperability product development at athenahealth. We were solving for the fact that when we go to the doctor we fill out the same paperwork each time. Yet, we can go to any ATM in the world and somehow get money. Clearly there are secure ways to exchange information, and it should not be harder for us to access health care than it is to get dollars out of the bank. Before athenahealth, I spent time on the provider side as well as in the community health center space.

***The Pulse*: Can you tell us more about what products and services DUOS offers today, and how you are serving your members?**

KL: At DUOS, it's our mission to reimagine freedom at any age. By this, we mean both supporting the older adults we serve but also reimagining what caregiving as a career path means for people. We are truly reimagining freedom in a two-sided marketplace. We pair older adults, or in some cases their caregivers, with personal assistants who support them on their journey to aging independently. We learn from experiences of members we serve and build that learning into the platform. Each of us are individually going through life just once, but across a population we are able to understand which things are most meaningful for helping people to live fulfilling and independent lives.

***The Pulse*: Are you connecting members with different services they need at different times? Is it just health care or also other areas of members' lives? Transportation, groceries, etc.**

KL: We think of our product as offering 'guided independence'. At every phase, we are proactive in supporting an individual. We ask people clinically validated questions or questions we've tested and refined to help uncover their needs. Then we prioritize those needs in a set of personalized recommendations, work with an individual to identify what to work on first. Finally, we actually close the loop to get them the support and services they need. Transportation is the most common need we support members with. It's crucial to get around or get to medical appointments, and products and services that exist in the world haven't always been built with an older adult in mind. Another significant activity we enable is groceries. When we learn that someone may be struggling with food or nutrition, whether it be transportation to the grocery store, carrying groceries, or preparing meals, we will support them in addressing that need.

***The Pulse*: As you've been thinking about go-to-market strategy and the target person being older in age, how do you think about customer acquisition?**

KL: Our primary go to market channel is Medicare Advantage. We sell to Medicare Advantage plans who are eager and excited to support their members with social determinants of aging. Additionally, we have a small but mighty consumer channel. I have a deep belief in the importance of having a product that people pay us for because they value what we are offering. This helps us validate which things are most valuable not just to an enterprise health plan but to an end user. It forces us to stay really close to our users and becomes a virtuous cycle with our enterprise product because we are able to share that data and information on what is most important to the older adults and their caregivers.

***The Pulse*: Can you share a bit about the diversity of people DUOS is serving, and how you think about those different personas?**

KL: There is a wide variety of tech savviness in the older adult population and it's changing rapidly. We are doing a ton of user research to understand this deeply because of how quickly this demographic is evolving their engagement with technology. We've split our end users into 3 groups: 1) There is the group that prefers telephony and is not interested in engaging with technology. The operations arm of our business is prepared to deliver our full support journey with these folks over the phone 2) On the opposite end of the spectrum, the group that is even more excited about technology than our generation. It's really interesting to watch that demographic because younger generations are starting to become more skeptical of technology, and there is a profile of older adults that are just so excited about the benefits of technology and what it can do. 3) In the middle, we see a group that views keeping up with technology as important to stay young, yet is frustrated that technology products have not been built for them. These folks often have a younger friend to whom they go for tech support, are familiar with other ways of getting tech support, and are eager and looking for education around engaging with technology. DUOS is invested in supporting each of these customer groups.

"At DUOS, it's our mission to reimagine freedom at any age. By this, we mean both supporting the older adults we serve but also reimagining what caregiving as a career path means for people."

***The Pulse*: How is this sector that's focused on older adults evolving and shifting over time? How do you think about other businesses in this space?**

KL: It's no surprise that the older adult space is growing rapidly. We are seeing a dramatic shift not only in the number of older adults in our population but the relative percentage of people who are older adults relative to younger adults. We are going to need to change the way we think about supporting this population. What is really exciting is that the space is absolutely enormous. When I think about other businesses launching in this space, I get really excited about all of them. I think we can all partner with each other and be successful together. I don't really see other businesses as "competitors". I just think we haven't figured out how to partner well yet.

***The Pulse*: As you think about future growth, how do you view challenges around caregiver churn or labor shortages? What is your strategy for how you retain caregivers and ensure satisfaction?**

KL: This is so important and we've very intentionally invested in the human side of our business with our personal assistants. One of the parallel global forces that has been happening is massive departure from the workforce, largely for women. Quite frankly, our business has benefited from this. Folks leaving full-time employment are often still very eager and excited to be involved in the workforce in a part-time and flexible way. We've been successful at acquiring and retaining very talented, incredibly passionate and wonderful people because we are able to offer primarily remote, flexible, crisply defined work

that is meaningful. We also employ our personal assistants, which may be a different model than other folks out there. We have centered that role at the core of our business, which seems to resonate with people. It is not to suggest that we'll be immune to some of the trends and challenges. We've taken a number of steps that position us to be really successful, and I believe we'll continue to be for some time.

***The Pulse*: As we think about health equity, and you think ahead, how do you ensure DUOS is able to enable access to a broader group of members and communities that are underserved and what needs to happen to achieve that?**

Lynch: We are eager to expand our offering beyond Medicare Advantage, starting with dual eligibles and then expanding to Medicaid. I expect those challenges will need to go through payer channels rather than direct to consumer. It's something we are very excited about. We've started with Medicare Advantage rather than Medicaid because of regulatory requirements once you go into the Medicaid space. As an early stage startup, it made more sense to start with Medicare Advantage.

***The Pulse*: Can you share about the backgrounds of DUOS' founding team and how your strengths complement one another?**

KL: Team is the most important thing at an early stage startup for a couple of reasons. 1) You're spending most of your waking hours with them, so it better be a really strong set of people. 2) As an entrepreneur, one of the most important things that you're doing early is pitching both to clients to sell your solution as well as to investors. The track record of the early team is crucial for establishing that baseline. You're using a combination of what you've established in the market as well as the backgrounds of the early team.

My co-founders include Karl Ulfers, our CEO, formerly of Rally Health which was acquired by United Health. Karl has a deep background in building engaging products that can be sold to health plans. Our COO, Anne Marie Aponte, formerly of Accolade, a care management company that has been wildly successful. Her leadership has been a key part of how we've centered caregiving and why we've been so intentional in building that workforce into our mission. Our co-founding team is rounded out by Jacques Anderson, our Chief of Staff. A former Skadden lawyer, she has worn many hats in the evolution of our organization. Whatever needs to be done, she makes sure it gets done.

***The Pulse*: As co-founder and CPO at DUOS, what strategic priorities are top of mind for you right now? What is keeping you up at night and what are you excited to tackle in the future?**

KL: I think they are the same thing: how do we activate people who are disengaged with their health. We have some early evidence and tricks up our sleeve that we've been using to target and engage people who have fallen through the cracks of the health care system, sometimes for decades. We're now at a place where we're starting to figure out if this will scale. I'm really excited because once we get people engaged with DUOS we tend to keep them engaged and see great outcomes. The hard thing — and not just for us but frankly for every digital health company out there — is finding and activating those hard to reach people. It is both very exciting and certainly the thing that keeps me up at night – figuring out how we continue to do this in a scalable way.

***The Pulse*: Reflecting on your career experiences, what is one skill you would encourage more junior folks in the health care industry to focus on developing?**

KL: When I reflect on the thing that education and many jobs don't do well is asking people to reflect on your strengths. I feel passionately that the one thing I would change about education is to help people better understand what they are best at. I spend a ton of time with my team helping them figure out what they are best at and how they can maximize their time doing things that they are great at. I think this is how you build really strong teams – find people with a diversity of strengths and bring them together. A fundamental understanding of your strengths, where your pointiness is and how that pairs with other people's pointiness – that's what builds great companies.

***The Pulse*: Other closing thoughts?**

KL: The other thing I would offer as you think about companies in the health care space is the importance of

a virtuous cycle between product and services. There are companies along the spectrum from primarily tech products to primarily service products. I have a deep and abiding belief that the best products are actually both – they have a tech component and a service component. The key is making sure the feedback loop between those pieces of the business is really strong and focused. It's really easy to get pulled too much in one direction or the other. When I think about how I look at my role as CPO and how we're building out DUOS to be successful, it's really at the intersection of products and services. We are automating those things that are repeatable and don't make sense for humans to be doing, whereas humans are really building relationships and making sure that we have a super sticky longitudinal relationship with our members.

"I spend a ton of time with my team helping them figure out what they are best at and how they can maximize their time doing things that they are great at. I think this is how you build really strong teams - find people with a diversity of strengths and bring them together."

Interviewed by Lauren Gardanier, December 2021

REIMAGINING DATA'S ROLE IN IDENTIFYING BURDEN OF DISEASE

A CONVERSATION WITH ARIF NATHOO, CO-FOUNDER AND CEO OF KOMODO HEALTH

Komodo Health is devoted to using its innovative technology platform to help reduce the global burden of disease. Komodo's Health Care Map is one of the largest, most comprehensive datasets of de-identified, realworld patient health information, and can be used by all key health care stakeholders to identify patient outcomes, gaps in care, and health disparities. Pulse writer Emily Wang connected with Co-Founder and CEO Arif Nathoo, MD, to learn more about his experience building Komodo Health, and where he sees the company heading.

Arif Nathoo, MD

Co-Founder and CEO

Komodo Health

***The Pulse*: Let's jump right in – can you bring us up to speed on your career path and how you came to build Komodo Health?**

Arif Nathoo: So by way of background, I'm an MD and spent years working with enterprise health care companies on a variety of problems. One of the things that I observed in 2014 was that patient-level data was being transformed and made available in many formats, but systems to collect and link it weren't there. There was so much focus on interoperability and getting systems to talk to each other, but there was less focus on how to transform the disparate data and gather insights on a larger scale. If you really want to impact population health, you need to think on a scale that spans the entire U.S. population – and so we got really fascinated by this opportunity. Even with the rise of data analytics and the cloud, nobody was really doing this yet; we built Komodo around the thesis that robust data-driven insights will allow us to reduce disease burden at scale.

Komodo Health is a full-stack technology company. So it goes all the way from data through to analytics, AI, and finally into software. This "full-stack" thesis is what we really invested in building – it started with one very niche use case in life sciences, helping medical teams find and improve non-promotional scientific exchange. Now, Komodo addresses hundreds of use cases across payers, providers, and life sciences that are all centered on this notion that if we can really understand and study populations at scale, we can make better decisions on how to address their unmet needs. And this touches on the idea of health care disparities and the way we think about where the disease burden is higher or lower – and all of this informs the way we actually engage the market to drive solutions. There is a whole loop that goes from analysis of those unmet needs to what actions you can take against them to the measurement of these outcomes.

***The Pulse*: I know your Health Care Map has recently added more demographic characteristics in an effort to better support health equity. Could you speak a bit more about some of Komodo's initiatives focused on health equity?**

AN: So one of the biggest challenges with de-identified data is that you can only contain a certain number of markers so that it continues to be de-identified, and we believe in the power of de-identified data. One of the really big challenges in doing health equity research is being able to link information derived from what we call "social determinant data" to health care data from a patient, and to do it in a way that is consistent with de-identification principles under HIPAA and allows you to continue studying the population on a large scale. It's difficult to get that data enriched in a way that allows you to perform really high quality health equity research. So we started working through a data certification process that allowed us to understand care disparities at a de-identified patient level, and then made a big effort to expand our schema to include characteristics like race and ethnicity and other social demographic characteristics of a patient and their environment. We also ensure it still meets the standards for de-identification.

I think a big challenge right now is that everyone is waiting for some magical analysis or data set, but it takes time to cobble together a meaningful understanding of patient outcomes. And it requires the ability to do it in a compliant and de-identified way so that you can make great policy decisions without revealing patients. We've spent a lot of time curating our process, and reconciling, for example, race and ethnicity data across hundreds of different sources so we can understand a patient's demographic traits. Through this process, we've built up what I think is a very powerful data set that allows people to study disparities on a different scale.

What we're doing first and foremost at Komodo Health is focusing on building data structures that allow us to perform research at the population level. Second, we're then using this data to actually identify massive unmet needs of populations. For instance, we have published a couple of research briefs that look at issues in care disparities. And we started to see patterns emerge during COVID in the way patients are handled. So, for example, we did a big study around hospital admissions for heart attack and stroke, and you start to see how these disparities grow during the pandemic. And these are really important findings for folks that are operating a health care system or payer level to understand the needs of their populations to provide better care.

I should also say – while powerful analytics like this are important to better pinpoint gaps in care and direct strategies to close those gaps – there's also a false belief that because we have technology, we can reduce disparities in care, but that's not true. Those with access to the data must make a deliberate effort to act on these insights and reach out to communities that are underserved. And where data is powerful is in identifying those communities. Then you are responsible for really thinking about how you go and address them, build trust, or establish programs – and that's what we at Komodo do with our clients. We're bringing a lot of this into software, so we can start searching for environments and look at quality differences within care, and can do it flexibly across conditions and diseases.

"While powerful analytics like this are important to better pinpoint gaps in care and direct strategies to close those gaps – there's also a false belief that because we have technology, we can reduce disparities in care, but that's not true. Those with access to the data must make a deliberate effort to act on these insights and reach out to communities that are underserved."

***The Pulse*: When analyzing patient data, there are issues I've come across in my own experiences, including lack of data transparency within a health care system and general subjectivity by physicians when they fill in data freehand in some cases. How does Komodo think about the limitations of data in understanding exactly what is going on with a patient's health?**

AN: What's fascinating is that each health care stakeholder sees one piece of the story in the journey of a patient.

Komodo Health stitches data sources together, from across many different places to build a more comprehensive understanding of the encounters, costs and outcomes a patient experiences. We then surface insights from this data at a patient and provider level. From this data we can learn a lot about how a system works or doesn't work. We find clues from anywhere, whether it be a software system, payer, provider, and they'll all suppress different kinds of information, but that's why you need a multidimensional view of the entire patient journey that minimizes bias. Our job is to reconstruct the entire journey of the patient. As a result, we can start to see, on a quantitative basis, what is happening from a lot of unstructured data that captures different positions and perceptions.

I also believe systems are going to start to disintermediate and remove the EHR as the center of information. We're starting to look at a lot of nontraditional ways of collecting data that are actually highly structured and allow us to study populations at scale. So for example, if we're talking about health equity research, there are so many kinds of community-driven programs capturing information about participants on food security, transportation, family structures, social environments, and it's a community program manager that can link this structured data on a patient level, which allows you to study populations. And

then you add wearables, with daily insights on health measures for millions of individuals – it's clear that rich data is coming from everywhere. So I think that's where it's changing – five years ago, we thought data was going to be collected from the EHR and that it was going to be structured and interoperate, and everyone was going to have the insights they needed – but that's not the way the world is working. The world is working through a proliferation of incredible apps, labs, tests, distribution systems that are totally novel and different. And they're all collecting data on the patient, meaning it's possible to skip EHRs entirely. EHR vendors think they have ownership of data that isn't really theirs, and in my mind, if you're trying to drive population level benefits, you need to link across all data sources; everyone's got a piece of the puzzle, and it requires cobbling this data together to tell the most valuable and comprehensive story.

***The Pulse*: I know there's been a lot of talk recently on data privacy and health care reform policies. Have these policies and discussions changed the way Komodo Health is approaching its business?**

AN: Absolutely. If we think about what it means from a population level for first-party data collection, and how many patients are consenting to share data for research, we realize that people often don't even think about their health care until they're sick. The incentive for people to collect data when they're healthy is low, but when they get sick they care, so unfortunately it leads to an incredible bias where the groups of people that participate in data aggregation are specific, and it's difficult to derive population-level insights. This is why the third-party system exists. I think these two systems [first and third-party data] have to eventually converge, and so in terms of affecting our business, we're thinking a lot about the next-generation companies partnered with Komodo that collect this data. For example, Picnic Health and AllStripes, they're collecting first-party data under consent. They're thinking about how to perform de-identified analytics at scale, and we're trying to partner with them to help bring together these sets of first-party data with consent alongside third-party analytics that are de-identified but can trace costs and outcomes at scale.

Another area we're seeing a really interesting shift in is what I would describe as a digital native or cloud native system that goes end-to-end with the patient, fully digitally – this includes full-stack providers that offer both virtual and physical care, as well as fully virtualized care companies with digital therapeutics that don't even have reps going to knock on offices, but have the entire patient acquisition through to care delivery as a digital experience. This shift to end-to-end patient interactions is much more personal for a patient, but is able to use data that enables engagement in a private and compliant way. We're spending time thinking through the architecture of that world and what it means from a data and technology standpoint; getting that structure right is super interesting.

> "I believe our future is in democratizing access to deep insights on populations that allow anyone to address disease burden. And with this thesis, we want to see Komodo as a platform for studying health care costs and outcomes to improve population health. We want to identify areas of inequity and address them with a massive number of partners."

***The Pulse*: I know we're almost out of time, and I just have one more question. Where do you envision Komodo Health going in terms of fitting in within the health care ecosystem long-term, in particular with addressing health inequities?**

AN: That's a great question. So number one, we started as a classic application company, and we've built enterprise applications for large life sciences companies, payers,

and providers. And we realized through the Health Care Map that creating instrumentation on that map can make it possible for anyone to study any cohort of patients at any time. And that's really where the power is for the market. I believe our future is in democratizing access to deep insights on populations that allow anyone to address disease burden. And with this thesis, we want to see Komodo as a platform for studying health care costs and outcomes to improve population health. We want to identify areas of inequity and address them with a massive number of partners. As more businesses and more research are built on Komodo, we start to see ourselves less as a technology provider that controls access to our own applications, but one that is really open for the entire ecosystem to engage and work with us to drive their innovations. And we're really excited because we haven't really seen access to a health care map of our size be made available to as many people as possible, and we want a world where data is easy for people to work with. Komodo is a very mission-centric company; reducing disease burden and health inequities is exactly where we want to go because it's the reason behind everything we do – every patient deserves the best quality health and health care possible. Today, there are still so many gaps, and we can do something about it with data, so this is very core to our thesis as a business.

Interviewed by Emily Wang, December 2021

Panel 4: Behavioral Health Care for All: Equitable and Culturally Competent Behavioral Health

Friday, February 11, 2022 - 11:45 AM–12:35 PM ET **Behavioral Health**

This event brought to you by VISTRIA

One in five US adults live with a mental illness, yet our behavioral health system consistently fails patients. Provider shortages, poor insurance coverage, low reimbursement rates, and a pervasive stigma about mental disorders all prevent adequate treatment. These barriers are even more severe for racial, ethnic, gender, and sexual minorities. These groups navigate a system not designed for them and are less likely to receive high-quality mental health care. However, a better system is possible. In fact, it's necessary. What will it take to scale culturally competent care models? How can we more effectively engage populations hesitant to receive treatment? Our expert panelists will share insights on the approaches that will make behavioral health care more equitable, culturally aware, and affordable.

Vittoria Bergeron

Founder, CEO

Sesh

Vittoria found the power that exists in community-based treatment through the group support that saved her life after struggling with an eating disorder. She combined her passion for community-based support with her passion for technology when she founded Sesh to bring group support to the masses. Sesh is an accessible mental health platform offering peer support sessions led by licensed therapists.

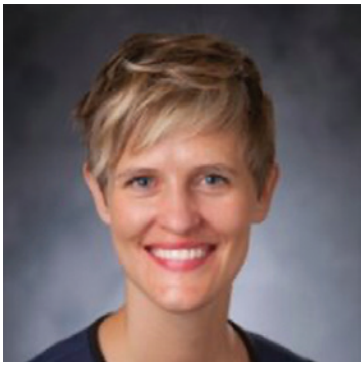
Prior to founding Sesh, Vittoria worked on the investment banking team at Barclays where she specialized in consumer technology companies. Vittoria then joined Blockchain.com as an early employee. She rose to become the Chief of Staff, helping to scale the platform to hundreds of millions of users worldwide.

Nora Dennis, MD

Lead Medical Director, Behavioral Health and Health Equity

Blue Cross and Blue Shield of North Carolina

Dr. Nora Dennis is the lead medical director for Behavioral Health and Health Equity at Blue Cross and Blue Shield of North Carolina. She oversees the behavioral health team's pursuit of strategic and operational excellence, with a focus on value-based care and alternative payment models. In addition, she drives health equity strategy for the Health Care division. Dr. Dennis is a board-certified psychiatrist and addiction medicine specialist. She attended medical school and completed her residency at Duke University and received her MSPH from UNC-Chapel Hill's Gillings School of Public Health. Dr. Dennis continues to serve as an adjunct assistant professor in the Duke University Department of Psychiatry and Behavioral Sciences.



Katherine Hobbs Knutson, MD, MPH

SVP United Health Group, CEO Optum Behavioral Care

Optum

As CEO of Optum Behavioral Care, Katherine is leading a new company to transform the health care system for people with mental health and substance use disorders. Optum Behavioral Care delivers in-person and virtual behavioral health care and aims to manage total cost of care (TCOC) risk across Medicaid, Medicare and Commercial payers. Prior to Optum, she was the Chief of Behavioral Health at Blue Cross Blue Shield of North Carolina (Blue Cross NC), leading the transition of the benefits business to managing TCOC risk for behavioral health; developing alternative payment models incentivizing access and quality of care; and advancing care delivery through clinical and technological innovations. Before Blue Cross NC, she was the Chief Medical Officer for Alliance Health, a North Carolina Medicaid managed care entity serving approximately 400,000 covered lives. At Alliance, she was responsible for all benefits aspects of the organization, including medical expense management, medical policy, utilization/case management, quality, and population health. Katherine is an adjunct Assistant Professor at the Duke University School of Medicine, and she conducts pragmatic research through her work with health systems and payers. She also serves on the Board of Directors and clinical advisory committees for early-stage health care companies.

From 2015-17 at Duke Health, Katherine practiced in integrated care settings and helped develop and lead predictive modeling and other population-based approaches for improving health. From 2013-14 as the Associate Medical Director of Psychiatry for the Massachusetts Medicaid program, she helped lead state and local initiatives for value-based reimbursement for integrated care and quality for behavioral health managed care organizations. Finally, from 2012-14 as a fellow with the Kraft Center for Community Health through Massachusetts General Hospital and Partners Health Care, Katherine completed a Master's Degree at the Harvard School of Public Health and conducted a pilot evaluation of behavioral health integration with pediatric primary care. Katherine is dedicated to improving access and quality of health care, especially for people who are underserved by the current system.

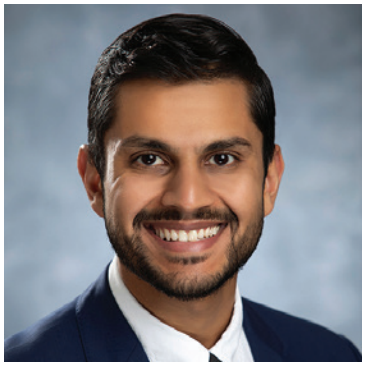
Sabina Lim, MD, MPH

System Vice President, Behavioral Health Safety and Quality; System Medical Director, Regulatory and Government Affairs; Professor of Psychiatry

Mount Sinai Health System

Sabina Lim, MD, MPH, is the Mount Sinai Health System (MSHS) Vice President, Behavioral Health Safety and Quality; System Medical Director, Regulatory and Government Affairs; and Professor of Psychiatry at the Icahn School of Medicine at Mount Sinai. Dr. Lim graduated from the University of Michigan with a BS in Biology, received her MD from SUNY at Buffalo School of Medicine, and her MPH from Columbia University Mailman School of Public Health. She completed her psychiatry residency

training at Yale University Department of Psychiatry, and held various clinical and administrative positions at Yale, including Executive Director of Yale-New Haven Psychiatric Hospital. She joined Mount Sinai Hospital in 2013 as Vice Chair of Clinical Affairs for the Department of Psychiatry, and then served as Vice President and Chief of Strategy of the MSHS Behavioral Health services from 2015 to 2020. Dr. Lim serves on multiple policy and advisory groups, including the New York State Public Health and Health Planning Council and the New York State Behavioral Health Services Advisory Council. Her expertise is in behavioral health services delivery innovation and re-design; VBP care models within the behavioral health population; behavioral health policy; and quality improvement in behavioral health care.



Arpan Parikh MD, MBA, FAPA (WG'20)

Senior Director of Clinical Experience

Ro Mind

Arpan Parikh MD, MBA, FAPA is a psychiatrist and the Senior Director of Clinical Experience for Ro Mind, the digital mental health service for anxiety and depression from Ro. Dr. Parikh leads Ro Mind's clinical strategy and iterations, ensuring the build of a clinically sound and rigorous mental health offering for patients.

Dr. Parikh joined Ro in the summer of 2021. Prior to Ro, he was the National Director of Behavioral Health at CareMore, a subsidiary of Anthem, where he led a team of clinicians treating psychiatric and substance use disorders. He also served as a psychiatrist for both John Jay College and Fordham University. Previously, he spent several years at Mount Sinai as Medical Director of the Addiction Institute and was also appointed as an Assistant Professor of Psychiatry.

Dr. Parikh earned both his undergraduate degree and medical degree from The Ohio State University, and completed his psychiatry residency training within New York City's Mount Sinai Health System. He also earned an MBA from Wharton, where he developed an interest in digital health and alternative payment models in behavioral health.

His clinical expertise has been featured in HuffPost, Consumer Reports, U.S. News & World Report and on Cheddar News.

Patrice Harris, MD, MA

Co-Founder and Chief Executive Officer

eMed

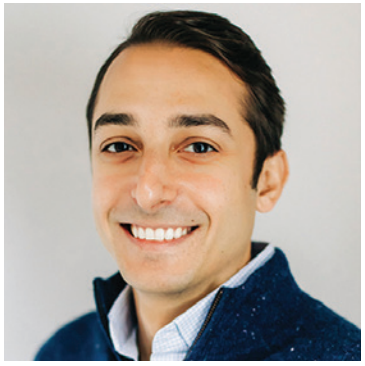
(Moderator)

Dr. Patrice Harris is board-certified in psychiatry and has diverse experience as a private practicing physician, public health director and patient advocate. In 2019, Dr. Harris was elected as the 174th President of the American Medical Association, the first African-American woman to ever hold the position. Dr. Harris' life is marked by her passion to improve the lives of children and communities around her, especially communities of color. She is a recognized expert in children's mental health and childhood trauma, leading both local and national efforts to integrate public health, behavioral health and primary care services. She has received numerous awards in recognition of her service and leadership. Upon completing her term as President of the AMA, Dr. Harris has continued in private practice. She regularly consults with public and private organizations on health service delivery and emerging trends in health policy. She is a Visiting Professor at Columbia University, an Adjunct Professor of Psychiatry and Behavioral Sciences at Emory University School of Medicine and an Adjunct Clinical Assistant Professor in Psychiatry and Behavioral Sciences at Morehouse School of Medicine. Dr. Harris is a Fellow of the American Psychiatric Association.

Panel 5: Investing in Health Equity: Driving Better Investment Returns and Health Care Access

Friday, February 11, 2022 - 2:35 PM–3:25 PM ET **Investing**

Invested capital and deal-making drives innovation within the health care ecosystem. How have health care investors adapted to the industry and pursued shifts towards value-based care, innovative therapeutics and devices, or targeted attractive businesses in the space in order to drive better returns and health care access? The investors on our panel will share their experiences working within health care investing, and their perspectives on how the investing process will improve the overall health care ecosystem.



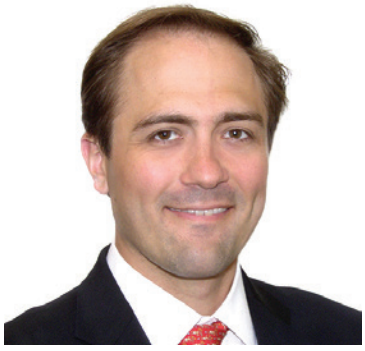
Brenton Fargnoli, MD (C'07, M'11, WG'12)

Partner

AlleyCorp

Brenton leads AlleyCorp's health care investments and incubations. Prior to AlleyCorp, Brenton was an executive at Flatiron Health. He worked previously at J.P. Morgan and Blue Cross & Blue Shield. He is a practicing physician, board certified in Internal Medicine.

Brenton completed his residency at Harvard's Brigham and Women's Hospital. He graduated summa cum laude from the University of Pennsylvania, earning his MD from the University of Pennsylvania School of Medicine and an MBA in Health Care Management from the Wharton School.



Mark Kavulich

Partner

Athyrium Capital Management, LP

Mr. Kavulich serves as a Partner at Athyrium Capital Management, LP, a specialized asset management company formed in 2008 to focus on investment opportunities in the global health care sector. Mr. Kavulich is actively involved with numerous investments, including growth equity and private equity style investments, fixed income and special situations. He participates in all major investment functions including origination, transaction execution, portfolio company development, and monetization events.

Mr. Kavulich has experience in both private and public market investing across the U.S. and Europe. His sub-sector experience includes specialty and OTC pharmaceuticals, pharma services, medical devices, health care services, and health care IT. Prior to joining Athyrium, Mr. Kavulich was a Vice President at Avista Capital Partners, a middle market private equity firm, where he primarily focused on investments in the Health Care industry, including leveraged buyouts, mergers, acquisitions, and growth equity investments. Mr. Kavulich began his career at Morgan Stanley.

Mr. Kavulich received a B.S. in Foreign Service with a concentration in International Economics, Finance and Commerce and proficiency in Chinese from Georgetown University.

Lynne Chou O'Keefe

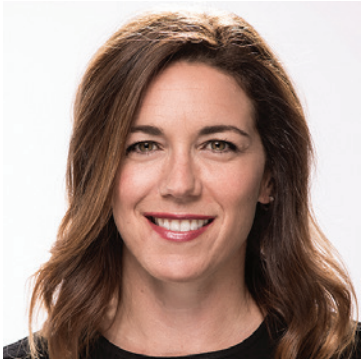
Founder and Managing Partner

Define Ventures

Lynne Chou O'Keefe is the Founder and Managing Partner of Define Ventures, an early stage venture capital firm focused on investing in digital health companies redefining health care. Define Ventures focuses on incubation, seed, Series A, and Series B stage digital health startups (www.definevc.com). Lynne has partnered with entrepreneurs to help them build category defining digital health companies, such as Livongo (NASDAQ:LVGO), HIMS (NASDAQ:HIMS), Unite Us etc.

Before Define Ventures, Lynne's experience includes both health care operating, investing, and finance roles. Previously, she was a Senior Partner at Kleiner Perkins focused on digital health and connected devices early stage investing. Before joining Kleiner Perkins, Lynne worked at Abbott Vascular and Guidant in multiple roles launching over ten product families in the US and internationally. Lynne was responsible for building the global commercial strategy and therapy development as well as playing a key role in the clinical, reimbursement, and operational strategy for these therapies. Earlier in her career, Lynne worked at Apax Partners with a focus on software venture capital investing. In addition, Lynne worked at Goldman Sachs in the Mergers and Acquisitions group and worked on multiple multi-billion dollar acquisitions and sell side transactions in various industries. Lynne has been named WSJ's Women in Venture Capital to Watch in 2020.

Lynne earned a Bachelor of Science degree in Industrial Engineering from Stanford University and an M.B.A. from Harvard Business School.



Kristin Baker Spohn

General Partner

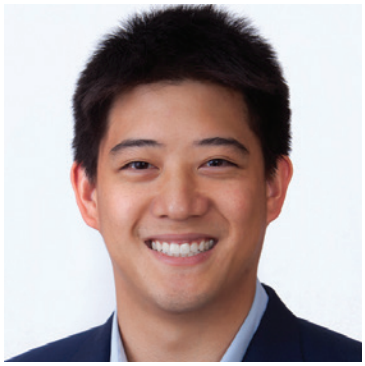
CRV

Kristin is the General Partner leading early stage health care technology investments at CRV. She led the investments in and serves on the boards of Wheel, Viz.ai and Little Otter (among others). Kristin has spent her career at the intersection of health care and technology as an entrepreneur, investor, and executive.

Prior to joining CRV, Kristin was a Partner at Social Capital where she led the health care portfolio and invested in early stage companies including Viz.ai, Modern Health and others, and served on the boards of Propeller Health (acquired in 2019), Glooko and Simplee.

As an operator, Kristin led the go to market for Collective Health as the Chief Commercial Officer, as well Castlight Health leading functions across BD and finance from seed through IPO. Kristin began her career in investment banking at Goldman Sachs, where she worked with health care clients on M&A and financing transactions.

Kristin holds an MBA from Stanford Graduate School of Business and BA from Middlebury College.



Blake Wu (W'10)

Partner

New Enterprise Associates

Blake joined NEA in 2014 and focuses on investments in digital health, health care services, and biopharmaceuticals. At NEA, Blake co-manages the firm's digital health and health care services practice, across both venture and growth investing verticals. Additionally, Blake also co-manages the firm's public biopharma investing practice and is also a member of the Asia investing team and is involved with the firm's health care investments in the region.

Prior to NEA, Blake was a member of the private equity group at Ares Management, focused on investments in health care. Blake's prior work experience also includes investment banking at Moelis & Company, where he was focused on transactions in health care, as well as equity research at Barclays Capital. Blake graduated from The Wharton School at the University of Pennsylvania, with a B.S in Economics with concentrations in finance, real estate and management.

Tina Reed

Health Care Editor and Author, Vitals

Axios

(Moderator)

Tina Reed is the health care editor and author of the Vitals newsletter at Axios. In this role, Reed oversees coverage of health care policy and business, including the impact of the COVID-19 pandemic, drug pricing and surprise billing legislation and emerging business models in health care.

Reed has over ten years of experience covering health care news. She has previously written for Fierce Healthcare and the Washington Business Journal. Reed is also a member of the Association of Health Care Journalists, serving as co-chair of the D.C. chapter.

INVESTING IN WOMEN'S HEALTH

A CONVERSATION WITH MANEESHA GHIYA, FOUNDER AND MANAGING PARTNER AT FEMHEALTH VENTURES

FemHealth Ventures invests in drug, medical-technology, and digital health start-ups advancing women's health. Part of FemHealth's mission is expanding the definition of women's health beyond conventional standards to include all health conditions that impact women, ranging from breast cancer to cardiovascular disease. Pulse writer Niki Bakhru connected with Founder and Managing Partner Maneesha Ghiya to learn about her experience launching and leading FemHealth Ventures.

Maneesha Ghiya

Founder and Managing Partner

FemHealth Ventures

***The Pulse*: Your firm FemHealth Ventures' mission is to invest in innovations that will improve women's health across the care continuum. When did you first discover your passion for this mission?**

Maneesha Ghiya: I received my undergraduate degrees from the University of Pennsylvania's Jerome Fisher Program in Management & Technology, so I graduated with degrees from Wharton and Penn Engineering. After I graduated, I went straight into an investment role at JP Morgan Partners, which at the time was one of the biggest venture capital and private equity firms in the world. While there, I first identified my passion – investing in women's health. From then on, over the last 20+ years, I've been investing on the private side as a health care venture capitalist and, following my MBA from Harvard, on the public side at hedge funds specifically focused on health care investments.

Most recently, I launched FemHealth Ventures, which was inspired by my passion for women's health investments – much due to my own personal experience. Today, I have a healthy 12-year-old daughter but, unfortunately, when I gave birth to her, I had major complications. I had an emergency C-section, after which I was bleeding internally to the point where my clinicians had to re-operate to identify the source of bleeding. They couldn't find it. I went through multiple transfusions before my obstetrician told my husband that she did not know if I would make it until the next morning. She brought my newborn to me in the ICU – not standard procedure – because she didn't know if I'd have the chance to see her otherwise. I remember bits and pieces of the entire experience, including being handed my baby for those few moments.

Fortunately, my body caught up with the bleed and after a almost two weeks in the hospital, I was released. The entire experience brought to light for me both the need and opportunity in women's health. I gave birth at one of the country's top academic hospitals with a highly experienced care team.

> "We're finally seeing increasing momentum, excitement, and interest in this space, which made it the perfect time for a vehicle like FemHealth."

Still, there was much that could have been improved. After this experience, it has been a calling for me to put together an investment vehicle focused on improving health care experiences for all women.

***The Pulse*: First off, thank you for sharing that story – your experience is such a personal and powerful example of why the work you do today is important. Taking a closer look at FemHealth Ventures' mission, can you describe your fund's investment framework and how it has evolved since launch?**

MG: Sure, I think a great place to start is with an overview of the women's health landscape today. We're finally seeing increasing momentum, excitement, and interest in this space, which made it the perfect time for a vehicle like FemHealth Ventures. For example, five years ago, I'd attend early-stage health care conferences and there would be at most five women's health companies on my schedule. This year, I attended the same conference and there were twenty-five. This highlights the increasing opportunity in women's health.

When looking at potential investments, our fund defines women's health more broadly than just what an OBGYN treats; instead, our investment framework spans three categories: conditions that affect only women (e.g. what OBGYNs typically treat), conditions that affect mostly women (e.g. lupus, rheumatoid arthritis, MS), and conditions that present differently in women (e.g. cardiovascular disease).

"When looking at potential investments, our fund defines women's health more broadly than just what an OBGYN treats... we consider the whole woman and the opportunity to improve care for her."

With this perspective, we consider the whole woman and the opportunity to improve care for her. If you take a skin cell from a man versus a woman, each has different chromosomal makeups and that can translate into the same disease presenting differently or even the same treatment can have different impacts in men versus women. We see an opportunity for the companies we invest in to take this into account in their innovations for women, keeping these important differences and a mission for better care in mind.

***The Pulse*: Can you share a few examples of companies you've invested in that meet this criteria?**

MG: One example is BioAesthetics – a company providing a solution for breast cancer patients who have undergone a mastectomy followed by reconstruction. Unfortunately, a majority of these women don't have a nipple following reconstruction, partially depending on the proximity of cancer to the nipple area. BioAesthetics' founder developed a way to provide a decellularized, biologically-derived nipple graft for these patients. This type of biologically-derived graft has been around and used for many surgical applications over the years, but nipple reconstruction is a new and impactful application in women's health.

Another example is our investment in Raydiant Oximetry – a company developing a device to measure fetal oxygen saturation during labor. Raydiant Oximetry's device is designed to be placed on the mother's belly and shine a light through the mother's skin to the fetus's skin to determine the fetus's oxygen saturation. This is an exciting opportunity to make labor safer for mothers and their babies in a space that has not seen much innovation in decades.

***The Pulse*: These two investment examples are innovative solutions at very different points in the women's health spectrum – supporting your earlier point about how this space is much broader than what our industry previously imagined. Beyond these examples, are there other areas of unmet need where you hope to see more investment activity and innovation?**

MG: Absolutely. A few broad categories that we're excited about include solutions related to pregnancy, fertility, postpartum, menopause, cancers that affect mostly women, PCOS, and endometriosis. I'm hoping, as we look forward ten years from now, we will have many new treatments in these areas so that women can access more complete care.

We are also interested in intersections between behavioral and women's health – postpartum depression is an important example. In many cases, innovations should not only focus on treating, but also preventing conditions like postpartum depression. Also, we've seen some companies focus on the health and life transitions for women, from menarche to childbirth to menopause – each has mental health implications that are areas for potential treatment and investment.

***The Pulse*: As we wrap up, I am excited to ask about your experience as a female investor. In 2020, women represented just around 13% of all venture capital check-writers. With daunting numbers like this, it's inspiring to see your success as a female investor. Can you talk about your experience and how you hope to see numbers like this increase in the near future?**

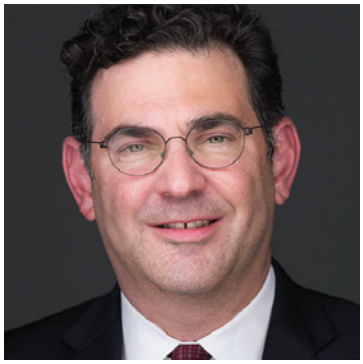
MG: I'm excited to see the growing presence of women in the investment community today. I've been investing for over 20 years since I graduated from Wharton and, since then, there have been substantially more women entering the space. I look forward to seeing the number of women investors continue to grow and similarly am excited to see the proportion of female entrepreneurs leading portfolio companies increase as well.

Interviewed by Niki Bakhru, December 2021

Panel 6: The Path to Price Transparency

Friday, February 11, 2022 - 2:35 PM–3:25 PM ET **Price Transparency**

Health care's opaque pricing practices have limited patients from truly shopping for affordable health care and limit the incentive of providers to compete on price. Recent regulations require hospitals and payers to publish their negotiated rates for the first time. But more work needs to be done to move the system and ultimately change consumer behavior. How will payers and providers change business practices to compete on price? What businesses and technologies will emerge to help consumers shop for health care? Join us for a conversation between leaders across the industry as we explore the path to price transparency.



Jonathan Blum (C'92)

Principal Deputy Administrator and Chief Operating Officer

Centers for Medicare & Medicaid Services

Jonathan (Jon) Blum currently serves as the Principal Deputy Administrator and Chief Operating Officer at the Centers for Medicare & Medicaid Services (CMS). In this dual role, Jon oversees CMS's program policy planning and implementation and day-to-day operations of the entire agency. CMS's programs provide health coverage to more than 147 million individuals, spending more than $1 trillion in annual benefits with an annual operating budget of more than $6 billion.

This is Jon's second time serving in a senior leadership position at CMS. He previously served as the Deputy Administrator and Director of the Center of Medicare from 2009–2014, leading the agency's Medicare payment and delivery reform strategies and the policy and program management of the Medicare program.

Jon has more than 25 years of public- and private-sector experience working in health care policy and administration. In addition to his positions at CMS, he has worked as a strategy and management consultant, an Executive Vice President for Medical Affairs at CareFirst BlueCross BlueShield, professional staff at the Senate Finance Committee, and a program analyst at the Office of Budget and Management.

Prior to joining CMS, Jon served on several nonprofit boards with missions to improve access and equity to health care and health coverage, including Mary's Center, a Federally Qualified Health Center; the Primary Care Coalition of Montgomery County; and the Medicare Rights Center.

Jon earned a Master of Public Policy from the Kennedy School of Government at Harvard University and a Bachelor of Arts from the University of Pennsylvania.

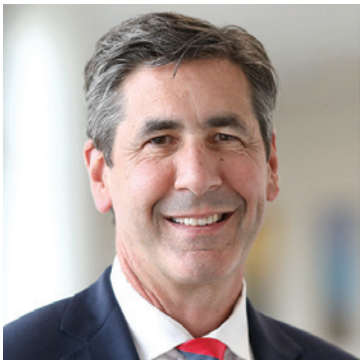
Lynn Garbee (WG'95)

Managing Director, Network Affordability Strategy
Cigna Health Care

Lynn Garbee is Managing Director, Enterprise Provider Strategy, for Cigna Health Care. In her role, Lynn is responsible for the long term vision for provider reimbursement and networks, integrating Evernorth health services supply with brick and mortar high performing providers to construct high performance network solutions across conditions, procedures and populations. She is part of the core team designing Cigna's next gen product, embedding these high performing networks and creating a differentiated experience for both providers and customers. She regularly partners with Cigna's most prominent value-based providers to co-create long term risk solutions optimizing affordability and quality of care. Previous to this role, Lynn focused on defining Cigna's value-based strategy and playbook, spanning accountable care organizations, hospital pay-for-performance, specialty care collaboratives and episodes of care.

Before joining Cigna, Ms. Garbee led the Solution Design team for McKesson Health Solutions, helping payer clients in addressing claims payment challenges and preparing for value-based reimbursement. Previously she led the claims consulting team and used analytic techniques to enable payers to optimize usage of their McKesson Health Solutions products.

Previously, Ms. Garbee directed operations for several entrepreneurial health care ventures focused on value-based reimbursement, specifically episodes of care, and headed the payment policy team and the contract management area of a major health plan. She spent several years in actuarial and benefits consulting and also managed health and welfare benefits of a Fortune 500 company. Ms. Garbee holds Bachelor of Arts degrees in Health Care Policy and Economics from Brown University and a Master of Business Administration in Health Care Management and Operations from the Wharton School of Business.



Dennis M. Murphy

President and Chief Executive Officer, **IU Health**
Chair, Transparency Task Force, **American Hospital Association (AHA)**

Dennis Murphy is president and chief executive office of IU Health, the largest integrated health care system in Indiana and one of the largest in the country, with over 38,000 employees, and provides approximately 30% of all care delivered in the state through its 16 hospitals, over 300 clinical sites, and a growing number of home-based and telemedicine services.

He joined IU Health in 2013 as chief operating officer and has guided IU Health as it seeks to fulfill its vision of making Indiana one of the healthiest states in the country. This goal will ideally be achieved through the provision of high-quality destination

health programs, building value-based care constructs with payors and employers, and addressing underlying impediments to health through community health programs. This vision will be driven by a collective culture that fosters purpose, excellence, compassion, and teamwork.

Dennis has spent his career at academic health centers, with previous leadership positions at Northwestern Medicine, University of Chicago Medicine, and Johns Hopkins Hospital.

A native of Chicago, Murphy earned a bachelor of arts degree from University of Notre Dame and a Master of Health Care Administration degree from Duke University. He is an adjunct faculty member in the Department of Health Policy and Management at Indiana University Richard M. Fairbanks School of Public Health.

Murphy serves on the boards of Indianapolis Chamber of Commerce, 500 Festival, Indiana Hospital Association, IU Health Foundation, Riley Children's Foundation, Central Indiana Corporate Partnership (CICP), National Bank of Indianapolis, Indianapolis Urban League and Indiana Health Information Exchange (IHIE). Murphy has chaired the American Hospital Association's (AHA) Transparency Task Force since 2019.

Maeve O'Meara

Chief Executive Officer

Castlight Health

Maeve O'Meara is the Chief Executive Officer of Castlight Health, where she is responsible for the strategy and day-to-day operations and also serves on the Board of Directors. Maeve has been with Castlight since 2010 and was appointed as CEO in July 2019 after leading multiple functions within Castlight, including Product Management, User Experience, Product Analytics, and Customer Experience. Maeve is an expert in health benefits, serves on the National Business Group on Health Cost Institute, National Business Group of Health Innovators Forum, and has been named a Top Digital Innovator by Employee Benefits News. Prior to Castlight, Maeve was a venture capital investor at Highland Capital Partners, where she focused on health IT, health care services, and the consumer internet market. She began her career at Bain & Company in Boston, MA, and holds an MBA from the Stanford Graduate School of Business and a BA from the University of Virginia.

Sunita Desai, PhD (C'09, GRW'15)

Assistant Professor

NYU Langone School of Medicine

(Moderator)

Sunita Desai is a health economist. Her research investigates how policies and incentives shape health care provider behavior and organizational structure. She also examines the role of information and price transparency in consumer decision-making in health care. Her work has been published in leading journals including JAMA and Health Affairs and has been covered by media outlets including the New York Times and Washington Post. She was awarded a 2017-2018 Becker Friedman Institute Health Economics Fellowship.

She is an assistant professor in the Department of Population Health at NYU School of Medicine with secondary appointments in the Department of Economics at NYU Stern and Health Policy at NYU Wagner.

From 2015 to 2017, Sunita was a Seidman Fellow in Health Policy and Economics at the Department of Health Care Policy at Harvard Medical School. Sunita received her PhD in Health Care Management and Economics from The Wharton School of the University of Pennsylvania in 2015 and her BA in Economics from the University of Pennsylvania.

Health Care at Wharton

The conference supports multiple health care focused student organizations. These provide MBA and graduate students with opportunities to build professional skills, network with fellow students and potential employers, and create impact in external organizations ranging from start-ups to hospitals, Fortune 500 companies, and health organizations in developing countries.

Wharton Health Care Management Department

The Health Care Management Department is the Wharton School's base for scholarship, education, and innovative thinking related to the business, management and policy of health care services, health care technology, and health care financing. The department sponsors three educational programs: the PhD in Health Care Management and Economics, the MBA Program in Health Care Management, and the BS in Economics with a Concentration in Health Care Management and Policy.

Website: **hcmg.wharton.upenn.edu**

Administration

Erika H. James, PhD
Dean, The Wharton School

Howard Kaufold, PhD
Vice Dean and Director, The Wharton Graduate Division

Scott E. Harrington, PhD
Chair, Health Care Management Department, The Wharton School
Director, MBA Program in Health Care Management

June M. Kinney, MA
Associate Director, MBA Program in Health Care Management

Rebecca Vold
Administrative Coordinator, MBA Program in Health Care Management

Janice Singleton
Administrative Coordinator, MBA Program in Health Care Management

Wharton Health Care Club

The Health Care Club organizes professional and social activities for all Wharton graduate students who are interested in exploring opportunities in the health care industry. Members share their knowledge and perspectives in addition to interacting with current industry leaders to develop an understanding of the issues facing hospital, physician, managed care, pharmaceutical, biotechnology, and medical device organizations.

Website: **www.whartonhealthcareclub.org**

Wharton Digital Health Club

The Digital Health Club is dedicated to providing Wharton Students with:

- Education about the field of digital health
- Experience through club sponsored activities
- Networking/Career opportunities

The Wharton Digital Health Club also strives to create an alliance of Penn schools focused on creating and maintaining a health IT start-up community within Philadelphia. The WDHC organized career treks to digital health companies and sponsors numerous events including analytics consulting projects and speaker events.

Website: **groups.wharton.upenn.edu/wdhc/about/**

Wharton Global Health Volunteers

Wharton Global Health Volunteers (WGHV) enables Wharton MBA students interested in health care to participate in global health projects in developing countries around the world. WGHV trips are student-organized and student-led.

Students work in teams of 3-6 with small non-profit organizations on the ground to tackle some of their most critical issues such as operations and financing. Projects typically take place for 10-14 days during winter, spring and summer breaks. Recent projects have included: developing a business education and health care entrepreneurship workshop for medical and pharmacy students in Tanzania, creating a marketing strategy to promote rehabilitative services in India, and developing strategies for creating operational efficiencies and increasing funding for a hospital in St. Lucia.

Some of WGHV's long-term partners include Aravind Eye Hospitals in India, the Association of Private Health Facilities in Tanzania, and St. Jude Hospital in St. Lucia. WGHV continues to reach out to partner organizations such as Médecins Sans Frontières to further broaden its footprint.

Website: **groups.wharton.upenn.edu/wghv/about/**

Wharton Health Care Management Alumni Association

Since its inception in 1971, the Wharton Health Care Management program has produced nearly 1,300 graduates who now represent all of the major sectors within the health care industry. The Wharton Health Care Management Alumni Association was founded to enable alumni of the program to continue to participate in a variety of professional development, networking and community service activities across the country — and around the world.

Website: **www.whartonhealthcare.org**

Penn Biotech Group

PBG is a cross-disciplinary, graduate student run organization at the University of Pennsylvania focusing on addressing the challenges and obstacles facing the life sciences industry. The club draws members and expertise from graduate programs at Penn, including the Wharton School, the School of Engineering and Applied Sciences, the Law School and the School of Medicine, as well as the larger life sciences community of Southeastern Pennsylvania. Our multidisciplinary teams have worked successfully for both Fortune 500 and start-up companies, consulting on real life projects from Strategy to marketing, from Operations to IP.

Website: **pbgconsulting.org**

Who We Are

For the past 27 years, the Wharton Health Care Business Conference is the University of Pennsylvania's largest, student-led conference. With over 500 annual attendees, the Wharton Health Care Business Conference is a renowned industry forum for industry professionals, academics, and students to meet and discuss the critical challenges and opportunities facing the industry today. Last year's conference brought together an impressive list of industry leaders to share how their organizations aim to innovate at the frontiers of health care.

2022 Co-Chairs

Content
Emily Albert
Jeremy Rubel

Sponsorship
Kristina Mani
Anna Purk

Marketing and *The Pulse* Magazine
Hannah Plon
Tara Sullivan

Operations
Abby Wank
Rachit Mohan

Conference Committee Members

Content
Albert Katz
Allison Morrison
Alex Zhang
Jaclyn Kawwas
Cate Stanton
David Spiritos
Jasmine Zhang
Jayati Verma
Goonjan Agrawal
Sarah Powers
Zaid Malhees
David Mui
Aradhana Parikh
Taylor Worthy
Alex Wess
Matthew Romano
Lauren Gardanier
Alex Yoo
Dana Green
Jess Brock

Sponsorship
Clare Peaslee
Tam Luong
Kienan O'Brien

Marketing
Sydney Bub
Camille Trangsrud
Natasha Sakraney
Caitlyn Rand

***The Pulse* Magazine**
Niki Bakhru
Emily Wang
Lauren Gardanier
Alex Yoo

Operations
Mia Steck
Eric Winter
Shalin Mandowara
Michael Temple

Keep Connected Today and Through the Year

Join the **Wharton Health Care Business Conference** group.

Follow us **@WhartonHCC** for updates and tweet **#WHCBC2022**.

Visit us on Facebook (**whartonhcbc**).

Visit us on Instagram (**@whartonhealth care**).

Visit **whcbc.org** and **whartonhealth careclub.org** for more updates.

This full program is also available on our website

whcbc.org

#WHCBC**2022**