WLSA

CONVERGENCE SUMMIT
2014 CONFERENCE SUMMARY

CONVERGENCE SUMMIT 2014

The WLSA's 9th Annual WLSA Convergence Summit took place May 14-16, 2014, at the Omni Hotel in downtown San Diego. The conference opened with a private session on May 14th for WLSA Members featuring a presentation by Dr. Alan Greene of Scanadu and a discussion of the state of investments in connected health led by Charles Boorady, Managing Partner at Triple Tree Capital Partners. The conference content focused on what is working in connected health today, and what can be learned from these early successes to drive greater success in the future.

Robert McCray, WLSA President & CEO, opened the public sessions of the Summit on May 15th with remarks recounting how far the field of wireless and connected health has come since the first WLSA Convergence Summit in 2006. He deplored the poor track record of the U.S. health care system when compared with other major sectors of society such as energy and transportation, where industry and government have worked effectively to dramatically increase the value of products and services while lowering their real cost to consumer and business.

McCray described the DNA of companies, perhaps yet to be founded, that will become breakout successes – the Amazons and eBays of connected health. They will be companies that understand what people want in health and health care:

- People want to be healthy, productive, and independent;
- We want to be in control of our health and health care;
- We want only the amount of health care that we need;
- Confronted by symptoms of concern, we want to know: whether symptoms require medical attention and how soon the attention is required, who we should see and what we should expect when we get there, and how much it will cost.

Photo Credit: Paul Savage Photography

CURATING FOR OUTCOMES

Led by Don Jones, WLSA Co-Founder and Chairman and longtime champion of the benefits of connected health, the Curating for Outcomes session focused on the opportunities and challenges posed by the utilization of connected technologies in health care research and new product development.

Dr. Leroy Hood, President and Co-Founder of the Institute for Systems Biology, described his vision to expand the scope of the application of systems biology to health care through a concept that he calls P4 (predictive, preventive, personalized and participatory) medicine with two main pillars: quantifying wellness and demystifying disease. The Institute is launching a new program which is expected to ultimately cover 100,000 individuals who will use connected health technology to share their genomic, proteomic, metabolomic, and traditional medical results with the goal of identifying early indications of disease and ultimately reducing costs by enabling a focus on health care rather than sick care.

Dr. David-Alexandre Gros, Chief Strategy Officer of Sanofi, described the strategic decision of his company to focus on the creation of tech-enabled, patient-centric solutions for disease rather than searching for new blockbuster drugs. When designing new products, Sanofi now seeks to improve the patient experience, reduce costs, and improve outcomes, as those are the products that will take hold in the market.

Dr. Steve Steinhubl, Director of Digital Medicine, Scripps Translational Science Institute, and Komathi Stem, Sr. Director of Product Development at Genentech, discussed the challenges of overcoming traditional thinking to change the clinical trials process and embrace new technology. Dr. Steinhubl also described the work being done at Scripps Translational Science Institute to validate and define connected health tools for managing and preempting disease.

Sanofi has shifted from searching for new blockbuster drugs to instead creating patient-centric solutions for disease, asking:
- *Will this improve the patient experience?*
- *Will this reduce costs?*
- *Will this improve outcomes?*

New products must achieve these three goals.

THE ENGAGED HEALTH CONSUMER

James Mault, Chief Medical Officer at Qualcomm Life, led a session on the Engaged Health Consumer and began by asking the audience and the panelists to consider what will compel patients to engage in health and wellness activities.

Chris Penrose, AT&T, and Jeremy Jauncey, TicTrac, described their partnership, founded after the two companies met at the 2013 Convergence Summit, to roll out a project currently being piloted for AT&T's 250,000 employees with plans to offer the same service to the market in the future. Jeremy described how the integration of social media and social networking with health data and rich, graphical presentation of actionable information can make every-day health activities more meaningful to users. Adam Pellegrini followed with an overview of the Walgreens digital health strategy as implemented in the past year, including statistics on their traction in the market: 1 prescription ordered per second from mobile devices; 1.4 million active users logging 85,000,000 miles and earning 1.6 Billion healthy points in the fist year based on word of mouth marketing.

Dave Monahan, CEO of Fitlinxx, David Pauer of the Cleveland Clinic, and Dr. Rajeev Kumar of ShapeUp described the successful results of their joint project through the Cleveland Clinic employee health plan. 85% of the 24,000 individuals who were provided with the Fitlinxx Pebble activity tracker engaged with the program, and of those who engaged, 96% reached their monthly goals. The panelists advocated for tying health goals to healthcare discounts.

In the final presentation, Gad Shaanan delivered an overview of his design thinking in developing the YOFiMeter blood glucose meter, a cellular device designed to remove obstacles for a testing diabetic by allowing them to carry strips and lancets in a compact and discrete device that automatically delivers results to a cloud-based database for management, distribution and support.

SUSTAINABLE HEALTH CARE SYSTEMS

Ralph Simon, the London based head of Mobilium Global, acted as session leader of connected conversations on programs being implemented to solve the access and cost problems in health care. John Doyle, Executive Vice President at Ascension, opened the session with an overview of the Ascension – Narayana Health partnership to develop Health Cities Cayman Islands, a specialty hospital with a goal of 2,000 beds focusing on heart surgery and orthopedic procedures using cutting edge technology. John described the commitment of Narayana to serve all patients without regard to ability to pay. Cost and quality are managed through a relentless attention to detail and efficiency, with a goal of importing this thinking to the US.

Mike Wons, CEO of CellTrak, discussed his experience in moving care from high to low cost settings in North America and the UK, utilizing a platform that is focused on supporting and standardizing remote clinical staff and caregivers. Ralph also interviewed Dr. Ilene Klein, Director of Global Medical Services for Qualcomm, about her insights on the development of a modern employee health clinic and program within a global employer.

In the second part of the session, Dr. Craig Friderichs, Director of Health at GSMA, shared his experience and perspective on the utilization of mobile networks to deliver health related content and services to underserved populations in underdeveloped regions including Africa and southern Asia. His work includes the assessment of hundreds of mobile health applications with a particular interest in services that would be disruptive to hospital and clinic care in developed markets but represent the only available services for disadvantaged communities. Dale Athey, CEO of OJ-BIO, introduced the OJ-Bio platform for consumer and remote clinical diagnostic services, and called for diagnostic tests to be more readily available to patients outside of clinical settings. Dale joined Ralph and Craig on stage for a discussion of the low margin high volume business models that are most common in emerging economies.

"Only 10% of the people in the world who need cardiac surgery can afford it."
- John Doyle, Ascension

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THE 6ᵀᴴ ANNUAL iAWARDS FOR CONNECTED HEALTH PRESENTED BY TRIPLE TREE

TRIPLE TREE

The TripleTree iAwards for Connected Health were created in 2009 by TripleTree in collaboration with the WLSA Convergence Summit to recognize innovative companies and solutions in connected health. Twelve finalists presented in three categories; Clinical Effectiveness, Consumer Engagement, and Operational Effectiveness. 2013 winner A.R. Weiler, CEO of Healthsense, kicked off the presentations with comments on his company's ongoing success since winning the award last year. Chris Hoffman, Sr. Director, Triple Tree, led the session and later announced the three winners.

The 2014 Finalists for the Triple Tree iAwards:

The 2014 winners were: Advanced ICU Care, Airstrip, and ShapeUp.

To learn more about TripleTree and the iAwards, please visit www.triple-tree.com.

POLICY & PAYMENTS

Brad Thompson, Attorney at Epstein Becker & Green P.C. and head of the Mobile Regulatory Coalition, and Stephanie Zaremba, Sr. Manager of Government and Regulatory affairs at athenahealth, conducted a friendly debate on the merits of recently proposed legislation that would limit the authority of the FDA with respect to certain categories of information technologies. Brad and Stephanie agreed that the current FDA legislation is confusing and challenging for connected health entrepreneurs, and both stated a desire to deliver certainty to the medical innovation community and to accelerate the development and commercial introduction of IT-enabled services. The primary source of disagreement between the two sides is over strategy. Specifically, Brad believes that the surest pathway to certainty is to continue to push the FDA to complete its promised guidance documents on several critical areas including definitions of when software is regulated as an "accessory" to a medical device or as an medical device itself, when is software unregulated as a "wellness" app, and the regulation of clinical decision support software. Stephanie urged that the most important next step is to define certain area of "medical" or "health" IT as never subject to FDA regulation rather than continuing to rely on the principle of "enforcement discretion" that is used by FDA and other agencies that act under very broad legislative powers.

Dr. David Gruber, Managing Director at Alvarez & Marsal, and David Saÿen, Regional Administrator at the Centers for Medicare & Medicaid Services, addressed the state of the US health services market from two complementary perspectives representing the policy goals and strategies of an industry financial and policy analyst and of the largest US payor. Reimbursement being a type of compensation plan, and with one-third of US healthcare spending "wasted" according to the Institutes of Medicine, traditional fee for service medicine is not sustainable in the long term, according to this discussion. However it will not necessarily decline quickly. Payments based on the quality of outcomes, on bundled payments for an episode of related services and products, and other forms of "accountable care" including at risk capitation will continue to represent a rising share of government and private payments. These payors will also continue to invest in services that are intended to preempt disease, thus decreasing the demand for more expensive services.

Photo Credit: Paul Savage Photography

Relevant Resources on FDA & Policy Reform:

- FDA Mobile Medical Apps Guidance (September 2013)
- The SOFTWARE Act (Introduced October 2013)
- The PROTECT Act (Introduced February 2014)
- FDASIA Health IT Report (April 2014)
- mHealth Regulatory Commission Comments on Policy
- athenahealth Comments on the PROTECT Act
- athenahealth Comments on the SOFTWARE Act

HEALTH CARE MEETS THE CONSUMER

Dan March, Managing Partner at Brand Force Health, led a panel session featuring presentations from Rick Valencia (Qualcomm Life), David Inns (Great Call), Jonathan Javitt, MD (Telcare), and Amare Kendale (MC10). Each panelist provided an overview of their company's product or service and shared their thoughts about how to design devices and systems to avoid or manage the challenges of consumer/end users. Some of the questions that were addressed included, "What is the top challenge you faced when it was introduced to end users, or what problems did you anticipate?" and "How did you overcome the problems or how effective were you in designing to avoid the problems?"

The four companies represent a spectrum of business models and relationships with end users so there was ample room for exploration and discovering the wisdom in this group on the core topic of meeting the needs of consumers in their use of complex health/health care technology in situations where training and support are limited by cost, competition, distance and related factors. Amar Kendale discussed MC10's goal that their technology will fade into the background of a consumers life, fitting into their existing habits while providing actionable goals. While this is a huge challenge in the development process, the long term outcomes are greatly improved. Jonathan Javitt claimed that traditional disease management has failed, but said that digital technologies which allow Telcare and the employer health programs they work with to have an ongoing, high-touch relationship with a user are showing consistent clinical effects and cost savings. The panelists agreed that distribution is still a barrier to adoption and innovation, as getting new technology into the hands consumers who can benefit from it the most can be a challenge. The increasing involvement of employer health programs holds promise for improving engagement, but pharmacies may be the best way to reach seniors and others segments of the population.

Photo Credit: Paul Savage Photography

CONNECTED HEALTH IN THE HOSPITAL

Don Jones and a group of panelists representing a diverse set of services for the hospital industry discussed the major impediments to the adoption of products by institutional health care and IT customers and shared their insights into overcoming those impediments.   Panelists included Tom Klopak, Skylight Healthcare Systems, who described Skylight's ability to improve patient satisfaction within the hospital and with post-discharge care, offering a system that takes advantage of technology that most patients already know how to use – the television. Terry Edwards, Perfect Serve, commented that EMR's have not solved all of the problems that they were expected to solve, and have in fact introduced new frustrations. PerfectServe aims to overcome the challenges of communications within the hospital through their technology-agnostic system that drastically reduces the communication cycle time and helps clinicians to make faster decisions. Mike Mitsock, AirStrip, and Byron Osing, Calgary Scientific, both reiterated the importance of solving issues of interoperability, allowing clinicians access to data no matter where it sits.

The panelists agreed that the biggest challenge of selling into hospital systems is proving that their system will save time and money without significantly disrupting existing workflows. Successful technologies are ones that are built to be interoperable between EMR systems and between the silos that exist within hospitals, acknowledging that healthcare institutions have already invested millions of dollars in setting up these new systems to comply with healthcare reform initiatives and cannot afford to start over again. As healthcare systems continue to consolidate, this is increasingly critical. Finding a few innovative health systems to partner with for initial trials is a key to success, as this allows a company the opportunity to refine the product with the help of an engaged and responsive client, and because successful relationships with industry figureheads are likely to lead to referrals to new clients.

Photo Credit: Paul Savage Photography

UNLOCKING HUMAN POTENTIAL

Jeff Arnold, Chairman and CEO of Sharecare, and founder and former CEO of WebMD, is undeniably one of the most successful health and tech entrepreneurs in the world. In a brief keynote, he described his development of the "high rise" that is Sharecare, a multi-modal platform for consumers to better manage their own health and for institutions to support the health and wellness needs of their beneficiaries. Sharecare, created with co-founder Dr. Mehmet Oz, is very much a work in progress with additional floors of capability being added on a regular basis. Arnold described recently developed consumer health and wellness devices as offering incredible potential to help humans unlock the potential of higher achievement.

Following these remarks, Jeff invited Sharecare collaborators Dr. Daniel Amen and LTC Daniel Johnston to join him on stage. Dr Amen, internationally known psychiatrist and author, gave an inspirational and engaging talk on the effect on brain health of diet, activity and other lifestyle activities that are most commonly associated with lower body chronic disease. Dr. Amen noted that psychiatrists are the only physicians who do not look at the body when diagnosing problems, and he believes that this needs to change. Although Alzheimer's and psychiatric disorders are better understood than they were several decades ago, outcomes are not improving. He is working to change the way that psychiatry is practiced, using functional brain imaging in his clinics to formulate wellness recommendations and quantify success.

LTC Johnston, Medical Director, Comprehensive Soldier Fitness for the US Army, discussed the Army's ongoing struggles to find recruits who meet high physical fitness standards, calling for a change in the way that we look at health and fitness in the US. He went on to discuss the use of monitoring systems and devices in deployed troops, where they use both the Real Age health risk assessment test and real-time monitoring to help determine which soldiers are best suited for leadership roles on any given mission.

Photo Credit: Paul Savage Photography

VOICES OF PATIENTS

Perhaps the most powerful session during the Convergence Summit, the Voices of Patients session, led by Dr. Moshe Engelberg, included the compelling and diverse personal stories of three individuals who have been compelled to focus on tasks traditionally left to medical and scientific experts in order to improve their own health and manage disease.

Kim Goodsell is an endurance athlete who developed heart disease in her 40's and a degenerative neurological disorder 15 years later. Looking for a link between these conditions, she researched her own genomic information and made a medical discovery that lead to her identification of a dietary change that stabilized and even reversed her neurological deterioration. She co-authored a study with her personal physician, leading her to be the first non-MD or scientist to submit to the Heart Rhythm Society annual meeting.

Dr. Ramesh Rao is a scientist but not in the health care field. He described his personal journey to improve his own physical and mental health through lifestyle and behavioral changes. He has been applying his scientific training to quantify behavioral changes and the effects on his health. Ramesh made keen observations on the state of quality and consistency among similar devices intended for consumer use in measuring health related parameters.

Anna McCollister-Slipp is an individual with type I diabetes, managing her condition using a variety of medical and consumer health devices and software. She delivered a powerful description of her day-to-day challenges with special attention on those that could be simplified through the use of fairly simple information technologies, if they were available.

Anna and Kim shared their frustration with the lack of access to personal data, and discussed the topics of data ownership, privacy, and patient control. The panelists agreed that individuals own and should have access to the data produced by their bodies. Anna is keenly focused on her inability to easily gather critical information from her continuous blood glucose meter, insulin pump and other monitoring and measurement devices into a single database or information application. In response to a question from Rob McCray, no one in the audience disagreed with the sentiment that the medical device community and health care community in general would be well served by incorporating the observations and sentiments of patients like Kim, Ramesh and Anna into the design process for all devices and disease management services.

CROWDFUNDING FOR HEALTH
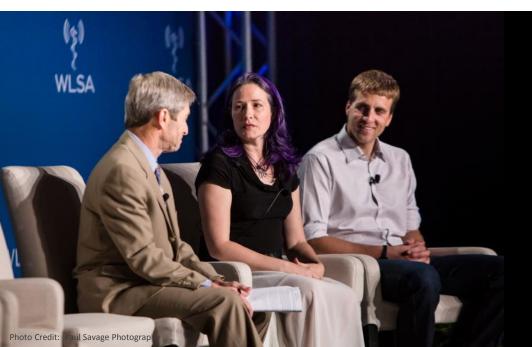
A panel on crowdfunding highlighted the benefits and risks of raising funding from early adopters. Silona Bonewald, Emotiv ($1.6M raised on Kickstarter), and Justin Butler, Misfit Wearables ($846K raised on Indiegogo) explained that while both their companies were well funded before launching their campaigns, crowdfunding offered them the opportunity to test the market with new ideas, leverage the marketing power of their early adopter community, and engage with customers to identify key features and further refine their products before entering the mass market.

The second part of this session added four vendors of complementary crowd funding services for individuals or companies with different needs, including:

- Christian Braemer, Benefunder, providing access to charitable donations for researchers.
- Andy Abramson, Velocity Growth, serving the "rewards-based" (non-equity) funding needs of very early stage entrepreneurs.
- Jeff Belk, Bright Light Management and Our Crowd, delivering equity funding for seed and Series A financings.
- Scott Jordan, HealthiosXchange, an equity funder associated with a broker-dealer focused on later stage equity funding and syndications.

It is very early in the development of equity-based crowd funding as a financial market. The non-equity or rewards-based model is quite well established with several high-profile successes. While there is uncertainty and even skepticism about the ultimate significance of equity funding, the panelists agreed that the traditional regional angel investor networks may be disrupted by these models.

Successfully funded companies have found that raising money is only part of the benefit of crowdfunding. It is also a highly valuable opportunity to build an engaged community of early adopters and product evangelists.

Photo Credit: Paul Savage Photography

NETWORKING & EXHIBITS

For Convergence Summit attendees, the opportunity for networking with fellow senior executives is the highlight of the event. Over the course of the three days of the Summit, registered attendees participated in more than 100 Structured Networking meetings with 15 host companies. 36 companies exhibited their products in the Innovators Pavilion, which served as the location for evening networking receptions. Birds of a Feather tables at lunch, hosted by speakers, allowed the session discussions to continue outside of the conference hall.

"The Convergence Summit was very valuable to me: being able to make 10+ qualified contacts in 2 days is a successful outcome compared to other events in the sector" – Romain Marmot, Chief Operations Officer, Voluntis

Photo Credit: Paul Savage Photography

SUMMIT NEWS AND RESOURCES

Selected News Stories:

iMedicalApps: WLSA Summit showcases innovative employee health, tele-ICU, and patient monitoring platforms

Empowered Patient Radio: Breaking Down Silos to Improve Healthcare

Xconomy: At the Threshold of a New Digital Health Landscape

Xconomy: Three Startup Companies Recognized for their Innovations

Xconomy: Wireless Health Summit: Barriers to Adoption and Tools for Change

The Doctor Weighs In: Living with Type 1 Diabetes and Data Dysfunction

Interviews and other videos from the Summit are available on the WLSA YouTube Channel.

Slides from many Summit speakers are available on the WLSA Slideshare Channel.

Photos from the Summit can be viewed on Flickr.

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