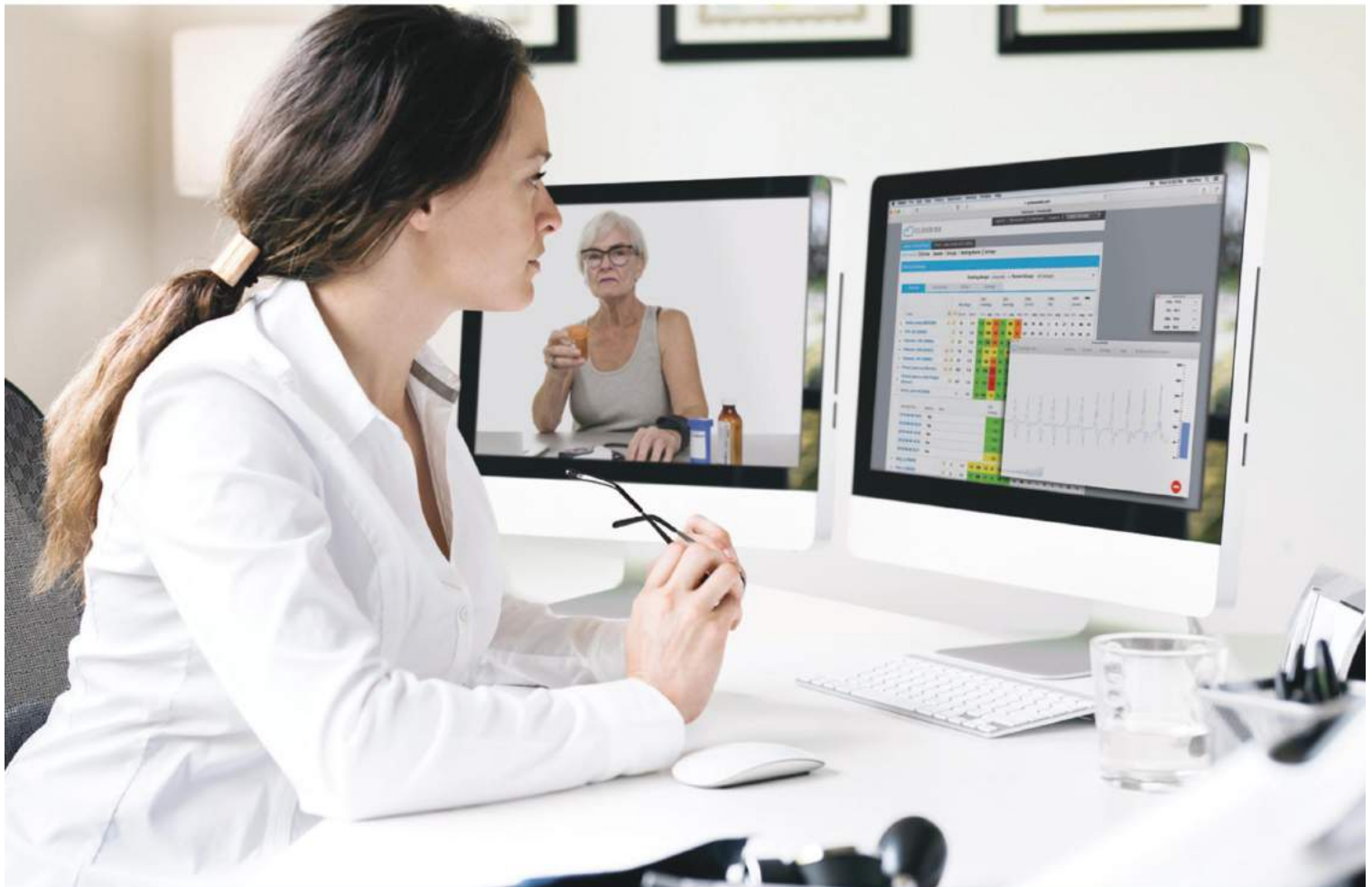


# Digital Health Innovations



## A Digital Health Leader



Larry Steinberg, Co-founder and EVP-BD is interviewed by the press.

**Cloud DX** is an established, fast-growing medical software platform developer based in Brooklyn, NY. We develop cutting-edge FDA-cleared medical solutions for payers, providers and remote patient monitoring services. Uniquely, we also develop and manufacture sleek, futuristic and highly accurate medical devices used to gather vital signs.

This booklet describes our Connected Health Platform, which consists of:

- Proprietary, FDA-cleared medical devices that collect all main vital signs
- Patient facing mobile apps, free to download on iPhone and Android
- Powerful 2-way communications between the care team, patient and family
- A clinical portal that enables remote monitoring and care plan management
- Smart notifications that ensure the right data reaches providers - no data overload!
- Workflow optimization in the clinic, automating the gathering of vital signs
- Streamlined entry of patient data, with EMR integration available

Disease management programs developed by Cloud DX customers have been shown to deliver academically validated improvements in patient satisfaction and health outcomes.

Our platform meets the needs of patients, providers and payers. We are delivering telehealth and remote patient monitoring services to health insurers, health systems, hospital systems, ACOs, SNFs, nursing homes and physician practices across the country. Cloud DX Connected Health data, secured with 256-bit encryption, is fully HIPAA compliant.



**Award-winning continuous vital sign monitor\*, available 2019-2020**

The winner of multiple awards for innovation, Cloud DX is an international leader in digital healthcare. Our Technology Center is located near Toronto, Canada and Cloud DX is supported and endorsed by the Canadian Medical Association.

Contact Cloud DX today to arrange for a demonstration of the most powerful, affordable Connected Health System in the world.

**Robert Kaul**  
Founder & CEO



EXPONENTIAL  
TECHNOLOGY  
MEDY AWARD



BOLD EPIC INNOVATOR AWARD



VOTED  
BY AARP  
READERS



WORLD  
CHANGING  
IDEAS  
FINALIST



BIGGEST  
UPSIDE  
POTENTIAL  
AWARD



WT  
INNOVATION  
WORLD CUP



2018  
Vision to Reality  
Awards  
The visionary | Finalist

\*device under investigational testing

## Connected Health Platform

*Designed for easy use*

*Precise, accurate results*

*Connected to caregivers*

The Cloud DX 'difference' consists of our patented software applications running on mobile devices, clinic PCs and in the cloud. We analyze streams of raw biological data in order to more accurately generate vital sign results; our experimental algorithms look for patterns that indicate changes to patient health outcomes.

Our clinical dashboard is designed to maximize efficiency when monitoring patients remotely. Once patients are enrolled, our smart software tools deliver the right data to the right clinical team members, avoiding "data overload". Even family members can be added to the circle of care!



To collect the highest-quality vital sign data we have developed our own proprietary suite of fully FDA-cleared medical devices for use in both the clinic/exam room and in the home.



- The Pulsewave® wrist cuff blood pressure monitor is among the most accurate in the world - designed and manufactured by Cloud DX.

- The Cloud DX bluetooth fingertip pulse oximeter is the affordable oximeter doctors and patients love.



- The Cloud DX bluetooth weight scale seamlessly pairs with our mobile apps and is safe even for patients who are pregnant or have a pacemaker.

- Additional wireless devices that are integrated with the Connected Health platform include a clinical bluetooth thermometer and a wireless bluetooth glucose meter.



### Mobile Apps

Experience Cloud DX Connected Health now on your iOS or Android mobile device. Download our award-winning mobile app, and sign up for a secure personal Connected Health account today.



## Pulsewave for Blood Pressure



Pulsewave<sup>®</sup> is a unique health monitor that turns any computer, iOS or Android device into an amazing window into the cardiovascular system.

Pulsewave<sup>®</sup> derives results that no other health monitor offers because Pulsewave<sup>®</sup> works like no other health monitor. The Pulsewave<sup>®</sup> sensor non-invasively gathers around 4,000 data points from the radial artery pulse. Our cloud-based analytics algorithms scan these signals, crunch the numbers and deliver a complete set of accurate medical results: average heart rate, precise blood pressure, pulse variability, average breathing rate\* and our proprietary Total Anomaly Score™, a screening tool for heart arrhythmias (currently undergoing clinical validation).

### Wrist Cuffs Preferred

Numerous studies have shown that consumers prefer a wrist cuff to an arm cuff – it's just more comfortable. In fact for some users, including the very elderly and the obese, only a wrist cuff will give accurate blood pressure measurements. The Pulsewave wrist cuff has achieved 100% patient satisfaction in 3rd party studies.

<sup>1</sup> Comparison and Calibration of a Wrist-Worn Blood Pressure Monitor for Patient Management: Assessing the Reliability of Innovative Blood Pressure Devices. S. Melville, K. Brunt, S. Lutchmedial. JMIR April 2018.

\* Average breathing rate is in investigational testing. Release is expected in 2019.

### Accuracy & Precision

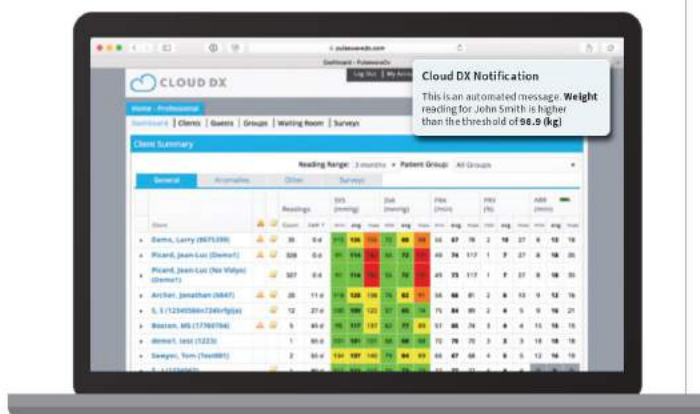
When it comes to accuracy, Pulsewave<sup>®</sup> leads the field. A rigorous third-party clinical study compared Pulsewave<sup>®</sup> results against an invasive surgical catheter; it was found that our Pulsewave<sup>®</sup> wrist cuff and Cloud Diagnostics<sup>®</sup> algorithms could non-invasively measure blood pressure at the level of the ascending aorta with clinical accuracy<sup>1</sup>. Furthermore, Pulsewave<sup>®</sup> is the only commercial blood pressure monitor to report statistical confidence intervals with every reading, a direct measurement of precision.

**This peer-reviewed study was published in the Journal for Medical Internet Research (JMIR).**



## Optimize Clinical Workflow

Cloud DX smart notifications work to manage the vital sign data flow. Exceptions occur when readings exceed limits created by the care team, and an email is then sent to the care coordinator. This functionality minimizes false alarms and “data overload” while closely monitoring the patient’s condition, trends and average readings.



## Reimbursement Ready

Centers for Medicare & Medicaid Services (CMS) has issued reimbursement codes for Complex Chronic Care Management and Remote Patient Monitoring. Providers are now able to claim payments for several aspects of the chronic care management cycle including care plan development, monthly review of patient data and review of remotely generated vital sign results. In 2018, Cloud DX Connected Health released updated features including detailed clinician time tracking, reporting and audit capabilities to fully enable billing for these new codes.



## EMR Integration

Cloud DX IT architecture enables fluid integration between our vital sign servers and Electronic Medical Record systems (EMRs). Cloud DX APIs can push vital sign results into the appropriate EMR fields automatically—or the EMR can pull vital sign data on demand. Cloud DX connectivity meets **HL7 standards**, and is secured by industry-leading 256-bit encryption. Secure token-based patient data identification preserves user privacy.

Cloud DX has completed integration with several popular EMR systems as well as leading care coordinations platforms. **Custom EMR integrations can be quoted upon request.**

*Custom EMR integration is available as a service for additional cost – please email [sales@clouddx.com](mailto:sales@clouddx.com) for a quote*

### ELECTRONIC MEDICAL RECORDS



### CARE COORDINATION PLATFORMS



## Remote Patient Monitoring

**Remote patient monitoring (RPM)** is a simple, powerful idea. The Cloud DX Connected Health System gathers key vital signs including heart rate, weight, blood pressure, pulse oxygen and glucose from patients at home on a daily basis. We also record survey results, 2-way texts and care plan compliance data. Clinicians can monitor these metrics from almost anywhere and look for patterns that might suggest a patient's condition is getting worse.

By keeping tabs on patients this way the care team can intervene early to change behavior, adjust medications or send a home-care nurse to make a house call. The result, in study after study, is that patients use the emergency room less, are admitted into hospital less, live at home longer and feel more in control of their health.

### CLINICAL RESULTS

#### Markham Stouffville Hospital, *Toronto, Ontario*

Chronic Obstructive Pulmonary Disease (COPD) is a serious chronic illness that causes painful symptoms including shortness of breath, weakness and low blood oxygen. According to the Canadian Institute for Health Information (CIHI.ca), over 73,000 Canadians are admitted to hospital every year due to COPD exacerbations, many of which are fatal.

**RESULTS SHOW A SIGNIFICANT REDUCTION IN COPD ADMISSIONS**



Markham Stouffville Hospital deployed Cloud DX Connected Health Kits to 125 COPD patients in a fully funded academic study. Preliminary results show a significant reduction in admissions for COPD-related exacerbations versus the standard of care.

### CLOUD DX CONNECTED HEALTH DEPLOYMENTS



**Heart Friendly Practice Program.** Cloud DX clinical vital sign deployments in Ontario, since 2012.



**Pendleton Health System.** Using Connected Health for complex chronic care patients.



**Wellspring@Home.** Virginia clinic network deploying Connected Health for RPM.



**Oscar Insurance.** Leading health insurance provider using Cloud DX for complex cases.



**University of Arkansas Medical Sciences.** Academic studies of remote patient monitoring, showing impressive results.



**Luminary MD.** Irvine CA-based launching Chronic Care Management and RPM.



**Cheyenne Regional Medical Centers.** Wyoming-based provider monitoring high-risk patients with Cloud DX.



**Community Care West Virginia.** Chronic care management & RPM reimbursed by Medicare and Medicaid.

*“Patients reported an increased awareness of their condition and felt more comfortable managing their care at home, with the added security of remote monitoring; we were pleased to report a 100% satisfaction rating with all participants expressing a desire to keep the equipment in their home after the pilot ended”*



Sarah Rhoads, PhD, DNP, APRN  
University of Arkansas Medical Sciences

CASE STUDIES | RPM DEPLOYMENT FOR COMPLEX CHRONIC CARE, WATERLOO REGION, ON

**CHF, Male, 70**

Nurse said, “this is a success story!” and shared that 6 months ago when he was brought into the program he “couldn’t walk 5 steps” without great difficulty due to extreme swelling in almost his entire body, from his feet/legs to his face. Last week she went to discharge him from the pilot and he was outside hammering in fence posts—he now has no swelling, lungs are clear and has been stable for 2 months.



**CHF, Female, 81**

Patient had two CHF exacerbations (couldn’t breathe, full of fluid) and was treated at home instead of calling 911 and going to hospital. Deterioration was caught early due to weight trending and low O2 sat. Prior to this, she didn’t have home oxygen and the Nurse was able to convince the Doctor (who was initially resistant) to have her assessed for home-O2. She qualified and now has home O2.



*model portrayal*

PARTNERS



**Trapollo LLC.** Leading provider of logistics & equipment for remote patient monitoring deployments in the United States; a division of Cox Communications, 4th largest US cable/internet provider.



**IDSolutions.** Video integration company providing custom solutions for video conferencing & streaming video with a large and growing healthcare customer base.



**Microsoft.** Cloud DX protects & stores client data in the secure, HIPAA-compliant Azure healthcare cloud from Microsoft. As an example of cutting-edge cloud-based digital healthcare technology, our Connected Health platform is on display at Microsoft Technology Centers (MTCs) across the US.



## Team



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