



ASX ANNOUNCEMENT

7 August 2019

June 2019 Quarterly Update

Key Revenue Drivers, and CEO Commentary

Highlights of Operations, Group Companies and Partnerships.

AtCor Medical

Overview: 100% owned subsidiary. FDA approved devices and software services for measuring central blood pressure as a key determinant of cardiovascular and hypertension risk.

Strategic Value: AtCor is the only FDA approved technology for measuring central waveforms in order to measure hypertension and related vascular disorders and risk. Global policy is shifting towards the measurement of central blood pressure and arterial stiffness in order to drive better global health outcomes.

AtCor is the gold standard in measurement of these indices and is looking to expand its market through partnerships, OEM integration, and next generation devices and software solutions.

Quarterly Highlights:

- Announcement of material and significant increase in sales targets for AtCor Medical for FY2020 driven by expansion of addressable market to general practitioners, clinicians, and healthcare providers combined with new pricing and lead generation initiatives across digital and offline sales platforms;
- National Medical Products Administration ("NMPA", formerly the Chinese FDA) approval for Oscar 2 with AtCor's "SphygmoCor® Inside" received by JV partner SunTech Medical. Oscar 2 is an Ambulatory Blood Pressure Monitor for the 24-hour patient monitoring of central and peripheral blood pressure;
- Oscar 2 now approved for sale in the **USA, Europe, and China**;
- New CardieX corporate website and change of registered office. New AtCor Medical website forecast completion Q1, FY2020 to help drive aggressive new sales targets and lead-generation for FY2020 and beyond;
- Major steps taken in global business development and corporate partnerships as the Company moves towards its software and SaaS strategy to enable medical and consumer wearables "powered by AtCor";



- New product strategy announced across consumer and home medical devices “powered by AtCor”;
- Unique and proprietary feature and product offerings incorporating AtCor’s SphygmoCor® technology in partnership with global medical and consumer device companies (see: “Product Strategy” below);
- Expansion of pharmaceutical trial contract with Bayer AG for an additional ~\$AUD500K. Revenues have commenced and expansion of trial has now increased to ~70 sites globally;
- Strong revenue start to FY2020 year with significant YOY increase in July sales over previous years.

Blumio

Overview: 50/50 partnership under a Joint Development Agreement (JDA) to develop non-invasive radar based sensor for detecting blood pressure (BP) and central blood pressure (cBP) using CardieX technology.

7.5% direct ownership by CardieX in Blumio via Convertible Note increasing to 10% on satisfaction of certain milestones under the JDA.

Strategic Value: The development of a non-invasive blood pressure monitoring sensor is considered to be one of the holy grails of medical technology which could displace and disrupt a \$USD45B industry (CNBC).

A combined BP and cBP sensor using Blumio and CardieX technology is initially focused on the global market for 24-hour ambulatory blood pressure monitoring (ABPM). Initial revenue model to be based on licensing/sale of reference design and technology for the sensor.

Quarterly Highlights:

- Achievement of successful measurement of central blood pressure using CardieX algorithm and Blumio Sensor via Macquarie University study further validating commercial opportunity for the group – and a significant milestone under the parties Joint Development Agreement (JDA);
- CDX currently working on desktop app for Blumio/CDX algorithm as next milestone under the JDA – scheduled for completion in Q1, FY2020;
- Results of validation trials between CardieX and Blumio announced at global IEEE Conference further advancing and strengthening CardieX’s wearables and direct-to-consumer health strategy;



- Deborah study by Blumio continues with anticipated completion late Q1 - with full data analysis to commence by Blumio at that stage. Forecast availability of commercial reference design still on target for end of Q2/beginning of Q3.

inHealth Medical (inHealth)

Overview: Agreement allowing CardieX to acquire up to 50.5% of the telehealth services company via a Convertible Note.

Strategic Value: inHealth provides digital telehealth solutions and health services that drive better health outcomes for its healthcare, private practice, and insurance partners.

Partnering with inHealth provides the opportunity to leverage inHealth's channels for CardieX's cardiovascular devices as well as giving AtCor a digital health solution as part of a full cardiovascular health program.

Quarterly Highlights:

- Signed multi-year contract to provide telehealth services to one of the worlds largest electronics and medical device companies (GEMDC). Rollout to clinician partnerships is underway;
- CardieX converts Tranche 1 of convertible note for 7.70% of inHealth. Tranche 2 debt of \$USD3M still remains in place and is due and repayable (with interest) by inHealth to CardieX by 31 July, 2020 (Maturity Date) unless converted to equity by CardieX (at its option) on or before the Maturity Date;
- If converted, Tranche 2 would increase CardieX's shareholding in inHealth to 41.33%. CardieX also holds a further option to acquire shares or invest further new capital to increase its shareholding to 50.5% of inHealth;
- Delivering initial revenue and patient growth via multi-year Anthem telehealth services contract. Revenue forecasts from Anthem contract increased for FY2020;
- CardieX and inHealth announce landmark US study and collaboration on cardiovascular disease, hypertension, and telehealth utilising AtCor Medical's *SphygmoCor*® technology;
- CardieX and inHealth announce collaboration on pilot program with leading Chinese telemedicine platform Health160 to investigate the deployment of inHealth's telehealth solutions in China.



Senior Executive Appointments

- Former Senior Vice President of Marketing for Masimo (NASDAQ: MASI: USD\$8 Billion), **Chris Dax** appointed as VP of Operations to drive revenue and sales growth for AtCor Medical;
- Former Johnson & Johnson (NASDAQ: JNJ: USD\$344 Billion) healthcare executive **Rhonda Welch** appointed to the new role of Vice President of Global Marketing to manage new product initiatives and clinical strategy;
- **Sean Merritt**, former Director of Research and Product at Cercacor, and Algorithm Engineer at Masimo, appointed Director of Product Innovation;
- **Niall Cairns** appointed Executive Chairman and joined the Board of inHealth;
- Search commenced for new Non-Executive Director to support and assist with the strategic growth of the company.

Chinese Operations and Business Development

Local operations and initial team established in China, rapidly accelerating CardieX's vision of implementing central blood pressure and related health technologies in the world's largest population market.

Trials and Healthcare Policy Initiatives

- Clinical abstract detailing extraction of central pressure waveforms from Blumio sensor using CardieX technology accepted for presentation at upcoming 2019 Asia-Pacific Congress on Hypertension;
- First Healthcare & Insurance Economics Report on CardieX 's central pressure technology anticipated Q2;
- Establishment of **Hypertension Steering Committee** headed by Rhonda Welch and Chis Dax together with key opinion leaders and medical advisors;
- New USA health guidelines announced which significantly increase CardieX's addressable market with upwards of 45% of US adults now considered to have hypertension and being at risk for cardiovascular disease.



CEO Commentary

It was a very busy period last quarter at CardieX and we continued to execute against our corporate vision of building the leading healthcare ecosystem of medical and consumer products and services focusing on cardiovascular and hypertension related disorders.

We're making great strides forward and over the past few months we've also attracted new top senior talent from major medical device and healthcare companies who are helping us execute on this global expansion strategy.

Key Revenue Drivers

Our focus on OEM partnerships, key executive recruitment, and new device and digital solutions is driven towards significantly expanding and building on our current revenue base over the next few years.

Going forward we see our key FY2020 and FY2021 short-term revenue drivers at a minimum as follows:

- (a) Increased sales targets for AtCor's key XCEL cardiovascular management device starting in FY2020. Minimum sales target increase of 20% in FY2020 with a return to profitability for the AtCor Medical group company in that year;
- (b) Forecast 3x increase in revenues in FY2020 from device and software sales related to Oscar 2 driven mainly by NMPA approval in China and expanded sales efforts in that market;
- (c) Potential in Q4 FY2020 for initial revenues from chip and reference design sales related to the Blumio sensor and Joint Development Agreement;
- (d) Q4, FY2020 consolidation of inHealth revenues subject to full conversion of the Convertible Note and the increase of CardieX's ownership to 50.5% (at CDX's option). As previously noted to the market, our expectation is that total inHealth revenues will be approximating a USD\$4M run rate by the end of Q4, 2020;
- (e) New partnerships and chip integrations in an expanding portfolio of devices in medical and consumer devices "powered by AtCor". Target of two (2) new revenue generating OEM partnerships in FY2020 with an additional home consumer device launch before Q1, FY2021. Material revenue impacts from each of these initiatives to accrue through FY2021.

Supporting this growth will also be key policy, trial, and study initiatives focused on expanding the market and awareness of central pressure and AtCor's technology as the most predictive, precise, and personalized hypertension management platform available today – the medical "gold standard" in this field of medicine and healthcare.

Combined with an enhanced lead-generation, new pricing and sales initiatives, and current partnerships under discussion, we believe we are well placed to execute against this revenue growth.



NMPA Approval for Oscar 2 in China

During April, our partner SunTech Medical announced approval by the National Medical Products Administration ("NMPA", formerly the Chinese FDA) of the Oscar 2 with AtCor's "SphygmoCor®" technology inside. Oscar 2 is a product collaboration between CardieX wholly owned group company AtCor Medical and leading US blood pressure device manufacturer and distributor SunTech Medical Inc.

The Oscar 2 allows for highly accurate blood pressure data to be collected from a patient over a 24-hour period outside of a physician clinic or hospital environment and features patented cuff design for patient comfort, as well as advanced motion tolerance algorithms.

The Oscar 2 will be the only available ABPM solution in China currently with "SphygmoCor®" technology and provides a unique market differentiation for ABPM devices in this significant market segment.

NMPA approval allows the Oscar 2 device to be utilised by over 20,000 physicians, hospitals and clinics throughout China where ABPM is the most effective method for detection, diagnosis, monitoring and management of hypertension. Hypertension is a massively growing health disorder in China with over half the adult population currently affected.

We forecast the total addressable market opportunity for sales of the Oscar 2 in China alone is approximately \$USD30 million per annum of which we believe a 15% market share is achievable. This potential is enhanced by the unique and proprietary nature of AtCor's SphygmoCor® technology that is not currently available in any other ABPM device.

The Oscar 2 features integrated SphygmoCor® technology supplied by AtCor and is manufactured by SunTech Medical, which is based in North Carolina, USA. Both AtCor and SunTech share sales margins on a defined ration that is a function, in part, of which company is the selling party.

AtCor also receives payment for the supply of the chip that provides the algorithm behind the measurement of central blood pressure (cBP) in the Oscar 2. The NMPA approval of Oscar 2 will add a new and important revenue stream to AtCor that will be further supplemented by other Chinese initiatives and partnerships going forward.

Oscar 2 is also currently FDA approved for sale in the USA and is CE marked for sale in the European Economic area and we continue to receive revenues from the sales in those markets.

Product Strategy

We also continued to push forward during the period with our product and software strategy focused on the expansion of the core AtCor business into new markets and expanding the integration of our SphygmoCor® technology with OEM partnerships and other joint venture initiatives. Our vision is to have an end-to-end integration of the SphygmoCor® technology into multiple devices and markets all "powered by AtCor".



PRODUCT STRATEGY ACROSS USER SPECTRUM

HARDWARE

POWERED BY ATCOR

TARGET USERS/ SEGMENTS	ATCOR PRODUCTS	OEM INTEGRATION
Researchers/Scientists (medical + pharma)	• XCEL SphygmoCor	--
Clinicians (hospital + office + retail pharmacy)	--	<ul style="list-style-type: none"> • Vital Sign Monitors • Professional BP Monitors • Hemodialysis Machines • BP Kiosks
Patients	• Home Use BPM (via ODM or acquisition)	<ul style="list-style-type: none"> • Home Use BP Monitors • Ambulatory BP Monitors (ABPM)
Consumers		<ul style="list-style-type: none"> • Wearables • Advanced BP Sensor for Next-Generation Wearables

SOFTWARE

SAAS SOLUTIONS

ANALYTICAL TOOLS
--
Patient Care Platform (PCP) to help monitor, analyze, and treat patients + improve compliance
PCP extends into patient's home to capture cBP and vitals more outside of clinical environment for higher resolution and more timely care
Cardiovascular Health tracker app that integrates data from AtCor-powered OEM wearables + other health/wellness devices

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Blumio

During the quarter, CardieX joint development partner Blumio, Inc ("Blumio") presented the results of a study undertaken with Macquarie University, Sydney in partnership with CardieX, which demonstrated that Blumio's novel radar-based blood pressure sensor can measure radial arterial waveforms containing strength, shape and spectral signatures suitable for pulse wave analysis and pulse transit time measurement for blood pressure tracking.

The study compared Blumio's sensor to a tonometer, the gold standard for non-invasive measurement of radial arterial waveforms and demonstrated that Blumio's novel radar-based sensor can be used by AtCor's *SphygmoCor*® system for central blood pressure estimation – an important milestone in the development process. Blumio's Principal Engineer, Dr Jessi Johnson, presented the results at the IEE Body Sensor Networks Conference held at the University of Illinois in the US on 19-22 May.

The study was a continuation of the Joint Development Agreement ("JDA") between Blumio and CardieX. Under the JDA, which was announced to the ASX 12 December 2018, the companies are jointly developing sensor technology which will be able to read both brachial and central blood pressures and assess arterial stiffness and cardiovascular health. Cuffless wearable blood pressure monitoring has been identified as a US\$45 Billion market opportunity.

During the quarter I also provided shareholders with an update on our wearables strategy and progress (ASX: 5 June 2019). The update included;

- A progress update on the Deborah Heart and Lung Study for the Blumio Sensor as well as activities being pursued in accordance with the Joint Development Agreement (JDA) between CardieX and Blumio;



- CardieX's competitive positioning regarding the commercialisation of a wearable blood pressure sensor;
- A major milestone that has been achieved under the JDA in the measurement of central pressure and blood pressure variability through the Blumio sensor using CardieX's technology and algorithms – a significant step forward in the Company's path to commercialisation; and
- Next steps and milestones for CardieX and Blumio going forward through FY2020 and beyond.

I refer you to that release for further details. At this stage there are no other material announcements in regards to the JDA that have not otherwise been communicated to the ASX.

Finally, as a reminder, and as pointed out in the release to the market on 5 June, 2019, we have also been focusing internally on multiple additional partnerships and opportunities to incorporate SphygmoCor® into the next generation of devices, independent of the partnership that we have with Blumio.

Our main focus with Blumio is on the integration of our technology into medical grade devices with a focus on the 24-hour ABPM (Ambulatory Blood Pressure Monitor) market and an initial revenue model based on licensing/sale of the reference design and technology for the sensor. However we continue to explore additional global partnerships in the consumer (non-medical) wearable and smart device market.

inHealth

The major news for the quarter surrounded the final agreement that inHealth signed with the previously announced confidential global electronics and medical device company ("GEMDC") – a significant commercial revenue-generating contract for the company.

Shareholders will be aware that we called a trading halt on 13 June 2019 pending an update about the GEMDC contract – and in order that we could review the final contract terms in anticipation of release to the market. During that process we received notification from the ASX that we were required to release all material terms of the contract including commercially sensitive terms that were at the core of the competitive positioning of GEMDC and inHealth.

At the same time, inHealth received notification from GEMDC that expressly prevented them from releasing commercial details as well as GEMDC's name. Ultimately a commercial resolution was reached that allowed the re-listing of our Company on terms satisfactory to the ASX – and a release to the ASX was made in this regard on 18 June, 2019.

Whilst we fully understand the markets desire to be fully informed of GEMDC's name we are also equally, if not more, sensitive to anything that will impact on the commercial viability and long-term relationship of inHealth and GEMDC – and it is for that reason that we support the maintenance of the ongoing commercial confidentiality between the parties. We will provide additional information to the market when appropriate regarding this contract.



Notwithstanding the above, during the quarter we reported on the initial growth generated by inHealth since January 2019.

Key achievements include:

- inHealth practitioner sessions have increased 5x from December 2018;
- Revenue and margins per session are as forecast;
- Anthem partnership is continuing to deliver quarterly growth and internal forecasts have been raised;
- Sales team being expanded to drive Private Practice growth; and
- GEMDC exclusive multi-year agreement signed and planning for implementation.

Looking forward, the focus is on developing the inHealth team to execute on the Anthem, GEMDC and other opportunities which have the potential to deliver material growth in the next 3 years.

In addition, during the quarter:

- (a) **CardieX and inHealth** signed a Memorandum of Understanding with Health160, one of China's top three telemedicine platforms to undertake a pilot program to deploy inHealth's telehealth solutions on the Health160 telemedicine platform. On completion of the pilot program, inHealth and Health160 will decide whether to proceed to full commercial terms for a long-term strategic partnership;
- (b) **inHealth** announced that it is undertaking a commercial study and collaboration on cardiovascular disease and telehealth utilising CardieX subsidiary AtCor SphygmoCor® technology;

inHealth's cardiovascular study is a world first in this field and will investigate how cost-effective telehealth solutions can prevent and improve cardiovascular disease. Cardiovascular disease is the top cause of premature death globally with costs expected to exceed \$1 trillion by 2035;

inHealth secured two highly coveted research collaborators for this world-first commercial trial; The Pennington Biomedical Research Center at Louisiana State University, which is the largest research center in the US – and one of the United States most well-regarded research health centers and The University of South Carolina. inHealth also secured top-tier California State University Long Beach (CSULB) and Coastal Carolina University (CCU) to also collaborate on the program;

The trial will be the first of its kind to leverage inHealth's telehealth solutions with AtCor's SphygmoCor® technology to analyse weight loss and central blood pressure changes with telehealth-based lifestyle coaching. AtCor's SphygmoCor® technology is the global golden



standard in central blood pressure and arterial stiffness assessment, with over 1400 published studies and 4000+ global deployments.

China Operations and Business Development

During May we announced that we had launched our local operations in China and established a marketing presence in Beijing and Shanghai to support our local business initiatives. Initial hires for the Company's China operations are in place and focused on business development and clinical marketing.

The China team reports directly to ZiHan (Zi) Lin, VP of Corporate Development at CardieX. Zi previously spearheaded the greater China market expansion efforts for Masimo (NASDAQ: MASI: USD\$8 Billion), where he aggressively developed a renewed presence and growth in Masimo's patient monitoring space, rapidly growing their China operations threefold within three years.

Our China strategy is focused on boosting growth by building on our existing in-hospital customer base and launching new technology partnerships to integrate AtCor's central blood pressure technology in China's rapidly growing health market - together with providing digital health and wearable solutions in partnership with leading Chinese smart wearable companies.

Senior Executive Appointments

Towards the end of the quarter, we announced two new senior appointments to our management team.

Senior health executive **Chris Dax** has been appointed to the role of Vice President of Operations. Chris has extensive pharmaceutical, biotech and medical device, commercial, and general management experience with a proven track record of exceeding business and sales objectives.

A former Senior Vice President of Marketing at Masimo and Vice President of Marketing at ISTA Pharmaceuticals, Chris was also the Vice President of Integrated Sales & Services – Pain Business, and Senior Vice President of Autoimmune Business and Market Access Services at Elan Pharmaceuticals. He was also the Vice President of U.S Pharmaceuticals at Valeant Pharmaceuticals.

Chris has demonstrated significant team leadership and expertise in building commercial organisations, developing new markets, and go-to market strategies. Chris' prime mandate is to rapidly grow sales of the Company's AtCor division within and beyond the existing markets for its core medical devices.

To this end we are targeting a minimum 20% increase in sales for the 2020 period for the AtCor business combined with a return to profitability for that division. Chris will also assist in redefining the market strategy for both AtCor's medical device business as well as new consumer and clinical health solutions under development.

During the same period we also appointed **Sean Merritt**, PhD to the role of Director of Product Innovation to support the Company as it moves to launch new products into global health markets.

Sean was most recently a Director of Research and Development for Cercacor's consumer non-invasive patient technology device business where he was responsible for engineering, design, and



product development of Cercacor's medical and direct to consumer (D2C) device solutions. He was also formerly an algorithm engineer at Masimo.

Sean and Chris have both hit the ground running and are already contributing significantly to the company's sales, revenue, product development, and marketing strategies for FY2020. In addition, Rhonda Welch also transitioned in May, 2019 from her previous role on our Advisory Board to the newly created position of VP of Global Marketing.

Closing Comments

I'll finish by highlighting a common theme in our recruitment – targeting top talent from companies that have been where we are today and have actively participated in massive and scalable growth of those companies' business operations.

Zi, Chris, and Sean all come from companies that were once small single product medical device companies born out of the garage of their founding shareholder and which are now multi-billion dollar companies.

It is that strategy that we are looking to replicate and that is why I'll continue to recruit best of breed from those organizations who share in our vision and growth opportunity.

Thank you as always for the support of our shareholders and corporate partners.

A handwritten signature in black ink, appearing to read "Craig Cooper".

Craig Cooper
CEO & Managing Director

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About CardieX

CardieX is a global health technology company that develops digital and device based solutions for large-scale population health disorders. The Company's XCEL device is the world leader in measuring "central blood pressure" which is considered essential for the management of hypertension and related cardiovascular disorders.

CardieX also has a joint venture partnership with Blumio, Inc in Silicon Valley for the development of a radar-based blood pressure sensor incorporating CardieX technology. In November 2018 CardieX entered into an agreement with inHealth Medical, Inc allowing CardieX to acquire up to 50.5% of inHealth by way of a convertible note.