



H&T Presspart and Cohero Health Launch First Market-Ready, Fully-Connected Metered Dose Inhaler to Optimize care of Asthma and COPD

eMDI enables improved adherence, engagement in self-care and real-time monitoring by caregivers

Poor adherence is a key driver of asthma attacks and COPD exacerbations that result in 3.25 million deaths and huge healthcare costs globally

Drug Delivery to the Lungs (DDL) 2016, Edinburgh, 8 December 2016 - H&T Presspart and Cohero Health have today launched the first market-ready, intuitive, fully-embedded and connected metered dose inhaler (eMDI) aimed at improving adherence and enabling continually optimized care of patients with asthma and COPD. It is the only eMDI integrated seamlessly with BreatheSmart from Cohero Health, a comprehensive respiratory disease management platform that uniquely enables tracking of both controller and rescue medications, along with clinically accurate lung function measurement, in real-time.

Adherence to preventer (controller) inhalers is vital to improve quality of life, control symptoms and prevent attacks, which are responsible for 3.25 million deaths globally every year^{1,2}, and represent a significant burden for healthcare systems.^{3,4} Yet fewer than 50% of patients take their preventer medication as prescribed⁵, leading to poor symptom management, hospitalizations, avoidable deaths and spiraling healthcare costs.^{6,7}

The H&T Presspart eMDI is the result of a multi-year development between H&T Presspart, the world's leading manufacturer of MDI devices, and Cohero Health, a digital health company that has established leading connected health tools and technologies to empower respiratory patients and improve care through smart mobile devices. It is an evolution of existing inhaler technology, and closely mirrors the design and compact size of existing MDI devices, making it as easy as possible for patients to adopt, and minimizing scale-up costs and time to market for pharmaceutical manufacturers.

"We already have effective medicines for asthma and COPD. But we can only improve and save lives in the face of rising healthcare costs if we find new ways to ensure that patients get the right dose at the right time every time," said Dr Caralee Caplan-Shaw, Assistant Professor, Co-Director of a New York City Pulmonary Clinic.

By tracking, recording and sharing data on the use of both preventer (controller) and reliever (rescue) medications, the eMDI will engage and empower patients in their self-care, leading to improved adherence, whilst enabling real-time monitoring of medication use and symptom flare-ups by caregivers and the healthcare community. Medication utilization data from the eMDI can be merged in real-time with lung function data from Cohero Health's mSpirometer - a clinical grade handheld wireless spirometer that precisely measures critical lung function metrics. This allows, for the first time, for the effects of preventer and rescue medication use on lung function to be tracked and analyzed.



"In designing the eMDI, our mission was to help pharmaceutical companies bring the best possible care to patients in an intuitive device in the fastest time and most cost-efficient way," said Peter Schmelzer, CEO of H&T Presspart. "We have thus combined the design of the world's most widely used and established inhaler technology with the only respiratory platform that gives a complete and objective picture of how a patient is responding to treatment between reviews," said Mellissa Manice, Co-Founder and CEO of Cohero Health.

eMDI functionality

Sensors embedded within the inhaler track the date and time of medication use as well as the quality of delivery, which is both recorded in onboard memory and shared wirelessly Bluetooth, syncing seamlessly with the BreatheSmart app, which can provide customized reminders, real-time alerts and updates on medication usage, as well as weekly and monthly summary reports.

Patients can opt to share their data with family, caregivers and/or healthcare providers, with access via a web app on a secure, dedicated, HIPPA-compliant server. The technology supports EMR integration, allowing patient data to be transferred automatically and securely directly into a patient's medical record.

The H&T Presspart eMDI incorporates an FDA approved mechanical dose counter allowing pharmaceutical companies to transition current products to connected devices more easily and in a step-wise manner. Additional sensors and electronic displays can be incorporated for additional data monitoring and messaging.

Unique features include:

- Fully embedded device to promote adoption and repeated use to generate unadulterated data
- Seamless integration into the BreatheSmart connected respiratory care platform from Cohero Health
- Embedded sensors to detect medication use and quality of medication administration (detection of proper inhaler actuation)
- Embedded mechanical or electronic dose counting and display
- Intuitive and discrete design, operation consistent with standard pMDI operation
- No disruption to medication delivery pathway, reducing regulatory hurdles and expediting time to market
- Compatibility with any valve or canister
- Battery life consistent with product shelf life – no replacement parts, no recharging or battery changes
- Modular design enabling sensing and communication capabilities to be applied to a range of MDI, DPI and other drug delivery devices

H&T Presspart and Cohero Health are currently collaborating with pharmaceutical manufacturers who are leveraging the technology for pipeline development and value-added product differentiation.



H&T PRESSPART + coherc health



H&T PRESSPART



coherc health



About H&T Presspart

H&T Presspart offers pharmaceutical customers high-precision injection moulded plastic components and deep drawn metal cans for respiratory drug delivery systems, with more than 40 years' experience and a worldwide reputation for competence, quality and innovation in pharmaceutical and industrial sectors. H&T Presspart Inhalation Product Technology Centre (IPTC) supports new product developments and strategic initiatives with its customers. Founded in 1970 and acquired by the Heitkamp and Thumann group in 2002, H&T Presspart has 3 European manufacturing sites in Germany, Spain and the UK, with Sales offices in China, India, South America and the USA.

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About Cohero Health, Inc.

Cohero Health is a digital health company developing innovative tools and technologies to improve respiratory care, reduce avoidable costs, and optimize medication utilization. The company's connected devices and mobile applications actively engage and empower respiratory patients by measuring lung function and tracking adherence. Based in New York City, the company is a member of StartUp Health, Springboard Enterprises, and Grand Central Tech. The company's platform has been used by pulmonary patients in over 25 commercial deployments reaching over 1 million covered lives.

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¹ World Health Organization. *Global surveillance, prevention and control of chronic respiratory diseases: a comprehensive approach, 2007.*

² WHO website. Burden of COPD. Available at: <http://www.who.int/respiratory/copd/burden/en/>

³ Global Atlas of Asthma, 2014

⁴ Anzueto A. Impact of exacerbations on COPD. *European Respiratory Review* 2010; 19: 113-118

⁵ World Health Organization. Adherence to long-term therapies: evidence for action. Available from: http://www.who.int/chp/knowledge/publications/adherence_report/en/; 2003. Geneva

⁶ Golay A. Pharmacoeconomic aspects of poor adherence: can better adherence reduce healthcare costs? *J Med Econ* 2011; 14:594e608

⁷ Makela. Adherence to inhaled therapies, health outcomes and costs in patients with asthma and COPD. *Respiratory Medicine* (2013) 107, 1481 - 1290

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