Asthma Management Platform through Smartphone Technology, Data Analytics and Gamification

Dr. Yechiel Engelhard
CEO & Founder

CEOCFO: *Dr. Engelhard, what is the concept behind Gecko Health Innovations?*
Dr. Engelhard: The idea started almost three years ago with the motivation to help children with asthma better regulate their condition. We began by working closely with asthmatic children and their parents to understand factors that contribute to poor regulation and developed a solution. Currently, we offer a full system that includes sensors that attach to asthma and COPD inhalers, which monitor and remind patients to use their medication. Inhaler use is tracked via a mobile and web app to help patients better self-manage their diseases. Patients can also share this data with caregivers who can help and support them in disease management.

CEOCFO: *Are many people addressing this aspect of COPD today?*
Dr. Engelhard: Unfortunately not. COPD and asthma are diseases that can benefit from a holistic approach to treatment, which includes more than just the traditional medication focus. While there are many educational programs, community initiatives and disease management programs offered by payers and ACOs, they miss the advantage of bringing technology into the process. At Gecko Health, we try to improve patients' quality of life by equipping them with better tools to take control of their diseases. Asthma and COPD regulation success is achievable if we can better engage with individual patients and use more efficient processes in improve clinical and administrative workflows.

CEOCFO: *Would you tell us more about the products you are offering?*
Dr. Engelhard: We offer sensors for inhalers, mobile software for patients and online software for caregivers. The sensor, which can be used with most inhaler types, collects accurate data about the use of different inhalers (rescue and maintenance) and glows as a physical reminder. On the backend, this complex data is saved to a secured server and simplified for users to interpret on both mobile and online platforms. In addition, our team performs analysis to identify relevant patterns and insights regarding medication adherence. The mobile app includes visualizations to remind patients to use inhalers on a pre-determined schedule, a function to track symptoms and triggers, and a disease journal. The journal component completely replaces the current manual journal that patients are asked to have and use. The app also allows patients to easily share information with their disease management teams. Providing objective, reliable information that can be extracted automatically or manually and can completely change the way patients self-manage their medical conditions and our healthcare system responds to patients remotely and effectively.

CEOCFO: *How does the device attach to the inhaler?*
Dr. Engelhard: The device looks like a small cap that easily snaps onto Meter Dose Inhalers canisters, which are the most common type of inhalers used today. The main intention of the sensor design isn't to change the way inhalers are used, so patients do not need to learn anything new or feel like there's an intrusive object in their daily medication usage.

CEOCFO: *What is the new version?*
Dr. Engelhard: The new product that we are currently introducing to our partners addresses larger problems surrounding respiratory diseases, such as asthma and COPD, and in more age groups. Our first version was deployed about a year and a half ago and was uniquely designed for asthmatic children. Both hardware and software components had features that appealed to children and their parents. During our redesign phase, we focused on supporting all different aspects of respiratory disease management for both patients and their caregivers. The new sensor includes technology that makes it more accurate and much easier to use. We understand that many patients are not necessarily tech savvy, and so we put a lot of effort into making sure that the entire experience is very intuitive and streamlined. We also build an entire web

software to manage the information in a way that can help disease managers to improve clinical effectiveness and cost efficiency.

CEOCFO: *Why do you feel that people will use it? What gives you the confidence that people are ready to take this step?*
Dr. Engelhard: In the last twelve months, we underwent a few pilot studies that included many users of different ages, and included healthcare providers that tested the product in various clinical scenarios. The results we obtained were extremely positive, indicating that the product was helpful. The feedback from the clinical community was also great because there is a real need for reliable patient information regarding asthma and COPD, as most treatment decisions are made based on patients' manual reports. From the perspective of seasonal and severe patients, we provide intuitive tools to support their current efforts to manage their conditions. Even for moderate patients who may visit the ER once or twice a year, being able to prevent the next visit by allowing for better control is a huge benefit. We know, however, that it might be difficult for users to see the immediate impact of the product. For this reason, we mostly work with healthcare organizations, disease management programs and healthcare providers to ensure that we have necessary support in partnerships to provide long-term benefits to patients.

CEOCFO: *How will you be doing that? What is the plan to reach the appropriate people?*
Dr. Engelhard: We have a few clinical trials to test the benefit from using the new version. We work very closely with a few leaders in the clinical community, healthcare programs around the country that focus on Medicaid and Medicare population health, and self-insured employers. Our overall goal is to improve the entire system around the patient by adding value to patients and their families, clinicians, and payers.

> **"Putting the patient in the center, with seamless connected sensors that can help them self-manage their disease while sharing relevant insights with their healthcare providers, is still new for a healthcare system that doesn't like the unknown. The industry is still in the learning curve of the connected health space, and it will take a few more years before our culture fully adapts." - Dr. Yechiel Engelhard**

CEOCFO: *Will you be seeking funding or partnerships?*
Dr. Engelhard: Yes, we are actively seeking more partnerships at this time. More specifically, we are working on growing our ecosystem with partners that support us in the way we help patients to be healthier. Providing better insight to doctors and payers, for example, can enhance the prescription refill process. On the other side, we work with health plans, ACOs, self-insured employers and payer organizations that already manage patient health.

CEOCFO: *How prevalent are respiratory diseases?*
Dr. Engelhard: Respiratory diseases are among the most prevalent chronic diseases worldwide, with asthma being the largest among children. Ten million children in the US alone have asthma. COPD is third most common cause of death among adults, with more than one hundred thousand deaths occurring every year. Asthma and COPD combined are some of most expensive diseases to manage, with an annual 100 billion dollar cost. One out of seven people living in some communities around the country have asthma, which drives recurring ER visits and hospitalizations. Better disease management can really improve the quality of life of those patients and keep them at home.

CEOCFO: *Are there products now that you would be competing with or are you striking new ground?*
Dr. Engelhard: Putting the patient in the center, with seamless connected sensors that can help them self-manage their disease while sharing relevant insights with their healthcare providers, is still new for a healthcare system that doesn't like the unknown. The industry is still in the learning curve of the connected health space, and it will take a few more years before our culture fully adapts. This early stage is definitely one of our biggest barriers. There are a few products that have comparable solutions and can help patients with asthma and COPD. Our product has unique features that address the problem differently. We put a lot of emphasis on the end user experience, and our software algorithm communicates information directly with patients and caregivers. In addition, we have a legacy of building a successful and well-received product uniquely for children. While we are now expanding to other ages, we are maintaining the best parts of the original product and adding enhancements. We have designed the best patient experience that avoids creating another chore for patients. Ultimately, this makes the engagement process easy and fun.

CEOCFO: *Why is Gecko Health Innovations noteworthy?*
Dr. Engelhard: We know that chronic disease and chronic medication usage will be managed completely differently in the near future. It may take 3 years or 5 years, but eventually medication dispensers and devices will all be connected with

healthcare networks, making disease management intuitive and automatic. Providers, payers and patients will be able to make decisions based on objective information regarding patterns. We have an opportunity to fill a gap in asthma and COPD medication adherence by streaming self-management and data collection. As a result, this will provide invaluable insights for clinicians and help drive our already overburdened healthcare system towards cost efficiency.

Interview conducted by: Lynn Fosse, Senior Editor, CEOCFO Magazine

---

BIO: Dr. Engelhard is the CEO and founder of Gecko Health Innovations, the first company to use connected sensors, mobile game app, and behavioral incentive tools to help patients take control of their asthma and COPD. Gecko was awarded as the Pediatric Health Management Entrepreneurial Company of the year, was recognized by TEDMED and leading publications such as the Huffington Post, Wall Street Journal, Boston Business Journal, Wired, and the Boston Globe as one of the best gadgets for asthmatic patients.

Yechiel spent the last 15 years as a healthcare entrepreneur, a practicing physician, and a clinical researcher. He has co-founded and worked with several medical and healthcare IT companies in Israel, India, and the US. Yechiel is a frequent speaker at industry events about mobile and connected devices in healthcare and games for health, and also serves as the EIR of the Healthbox global accelerator. Yechiel received his MD and MHA from BGU in Israel and his MBA from MIT Sloan. He currently lives next to the Charles River in Boston.

GECKO HEALTH
INNOVATIONS

Gecko Health Innovations
For more information visit
www.geckocap.com

<u>Contact:</u>
Yechiel Engelhard
6177589185
engelhard@caretrx.com