

ASTHMAXcel

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Founder & Director

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ASTHMAXcel®

Learn and Control Asthma

Industry:

Digital Health Technology

Executive Leadership:

Dr. Sunit P. Jariwala, MD; Director of ASTHMAXcel; Associate Professor (Medicine) and Director of Clinical & Research Innovation, Einstein

Scientific Advisory Board:

Dr. Yaron Tomer, MD; Chair, Department of Medicine, Einstein /Montefiore

Dr. David Rosenstreich, MD; Chief, Division of Allergy, Einstein / Montefiore

Dr. Parsa Mirhaji, MD, PhD; Director, Center for Data Health Innovations, Einstein /Montefiore

Other Advisors:

Eliza Ng, MD, MPH; CMO of Population Health, RWJ Barnabas

Lori Lonczak, RPh, MBA; President, Stratify Marketing

Steven Berman, MBA, CPA; Director of Innovation, Dialyze Direct, LLC

Team:

5 employees; 7 consultants

Funding to Date:

\$2.4 million in total grant funding (2014-2021): Federal (Agency for Healthcare Research and Quality); Foundations (American Lung Association, Price Family Foundation, Stony Wold-Herbert Fund); Professional Society (American Academy of Allergy, Asthma & Immunology); Pharmaceutical (Genentech); and Institutional sources (City University of New York, St. Barnabas Health System)

Seeking: \$550K (Sales/Marketing, UI/UX); Board members

Legal:

IP: Einstein Biotech (external counsel: Amster Rothstein & Ebenstein) and Montefiore Legal (external counsel: Wiggin and Dana)

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A provisional patent is being sought for the ASTHMAXcel proprietary algorithms.

Executive Summary: ASTHMAXcel is a patient-facing mobile application that delivers asthma education and personalized adherence support to reduce asthma exacerbations. This technology has been developed and clinically validated by a multidisciplinary team (Einstein/Montefiore-based) that includes asthma physician-researchers, a behavioral scientist, health information technology experts, and a statistician. ASTHMAXcel is currently available for iOS and Android smartphones and tablets, and has been pilot tested at Einstein/Montefiore with favorable results.

Company History: As a practicing Allergy/Immunology physician and Co-Founder of the Montefiore Asthma Center, Dr. Jariwala created ASTHMAXcel in response to the worsening asthma epidemic in New York City. ASTHMAXcel has been pilot tested at Einstein/Montefiore among adults and children with asthma, and demonstrated significant reductions in asthma emergency room (ER) visits, hospitalizations, and the use of steroids. Several large-scale controlled trials are currently being conducted. In 2018, ASTHMAXcel was enhanced to include personalized adherence support, and it is being integrated with the Epic electronic health record (EHR) system.

Market Opportunity/Unmet Need: The asthma epidemic afflicts 26 million individuals in the United States, with an annual economic burden of \$80B (CDC). Outpatient providers lack sufficient time to deliver comprehensive asthma education and adherence support, thereby contributing to preventable asthma morbidity and mortality. Less than 1% of the available asthma apps have been shown to improve asthma-related clinical outcomes, such as ER visits and hospitalizations. ASTHMAXcel has been linked to significant improvements in asthma control (by 12%) within 2 months of use, and significant reductions in asthma hospitalizations (by 83%), ER visits (by 63%), and steroid courses (by 50%) within 4 months.

Products/Services – Launched & Pipeline: Adult and pediatric versions of ASTHMAXcel are available through the iOS and Android stores. ASTHMAXcel is currently being developed and pilot tested for other clinical settings (ER) and chronic conditions (diabetes).

Commercial / Technical Milestones:

2019: Expand the ASTHMAXcel team to include Sales/Marketing and Board members; Integrate ASTHMAXcel with the Epic EHR system

2020: Complete the randomized controlled trials; Generate revenue via target customers (healthcare systems, payors, pharmaceutical companies, outpatient asthma providers).

Competition: Other available mobile interventions for asthma include text messaging platforms, electronic inhaler sensors, and educational tools. These modalities lack clinical validation (due to rigorous trials not being performed) and tailored content, and are linked to low rates of sustained use. ASTHMAXcel contains personalized content, and incorporates behavioral methods and a user-centered design strategy to promote long-term use of the app. ASTHMAXcel has also been linked to improved clinical outcomes.

Revenue Projections:

2020 (July-December): \$80,000 (350 users; 1 customer)

2021: \$960,000 (4,000 users; 4 customers)

2022: \$2.9M (12,000 users; 12 customers)