

Scaling Propeller's digital health program to improve outcomes for asthma and COPD

The Beginning

In 2014, the health system Dignity Health was interested in studying the impacts of digital health on patients with asthma. Rajan Merchant, MD, an allergist at Dignity's Woodland Clinic in northern California, believed that digital health had the potential to reduce rescue inhaler use and increase asthma control in his patients.

Propeller partnered with Dignity to conduct a randomized controlled trial of digital health's impact on 495 patients with asthma. The results were promising: 63% of previously uncontrolled patients demonstrated asthma control in the intervention group versus 49% in the control group. The proportion of days when patients did not need to use their rescue inhaler increased 21% with Propeller.

The Outcomes

- 63% of uncontrolled patients achieved asthma control, as defined by the Asthma Control Test (ACT™)¹
- Significant decrease in SABA use and increase in SABA-free days¹
- 59% of patients learned about a new asthma trigger as a result of using Propeller¹
- 53% decline in asthma-related emergency department visits and 57% decline in combined asthma-related ED visits and hospitalizations²
- 79% percent of patients reported being "very satisfied" with the Propeller system²

¹Merchant 2015, J Allergy Clin Immunol Pract

²Merchant 2018, World Allergy Organization Journal

The Asthma Control Test™ (ACT™) is a five-question patient survey used to measure asthma control. The survey measures the elements of asthma control as defined by the National Heart, Lung, and Blood Institute (NHLBI).

Building the Program

Based on the success of the RCT study, Dignity Health and Propeller Health expanded the program to include other clinicians. The program has run since 2015, enrolling hundreds of patients and demonstrating positive clinical outcomes across multiple peer-reviewed publications.

Patients are enrolled onto the Propeller platform in their provider's clinic. With the help of Propeller and their clinician, patients can receive reminders to adhere, keep tabs on their rescue inhaler use and work with their provider to make data-driven adjustments to their treatment plan.

Propeller and Dignity Health have partnered on four peer-reviewed publications on the impacts of digital health on adherence, rescue use and healthcare utilization. The organizations also published data in 2020 showing that exposure to the air pollutant ozone is strongly linked to increased rescue inhaler use.

“Propeller has changed how I care for my patients. It allows me to have real conversations with my patients, tailor their therapy, and focus on the patients that need the most attention. It makes me and our clinic staff more effective at and satisfied with our jobs, which results in more satisfied patients.”

– Rajan Merchant, MD, Allergist, Dignity Health

“Propeller's digitally-connected medicine uniquely addresses the disruptive effect asthma has on patients' lives. When the sensor communicates more data to physicians, and patients have greater insight into their asthma triggers, outcomes improve and everyone wins.”

– Rich Roth, Chief Strategic Innovation Officer, Dignity Health