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**Science Internship Program:
Nursing Care**

Civic Education
Office of Government and
Community Relations



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Science Internship Program:
Nursing Care

The Correlation Between Healthcare & Wireless Bluetooth Devices

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Abstract

- Technology improves healthcare by allowing caregivers to efficiently monitor their patients. This study explores how well Propeller Health benefits its users and caregivers. Results show that Propeller is useful for decreasing the amount of severe asthmatic patient visits and other issues in healthcare.

Background

- Propeller Health is a mobile platform that offers sensors, mobile apps, analytics, and services to support respiratory health management.
- The Propeller Health smartphone allows people to view data captured by sensors.

Background

- Records trends including time, date, and location of when users take inhaled medications.
- Patient care is safer and more reliable in most applications.
- Made it very possible for healthcare providers to classify illnesses and become aware of symptoms.

Problem/Purpose

- The healthcare field has had too many incidents where patients have frequently visited the hospital due to poorly-controlled asthma.

Hypothesis

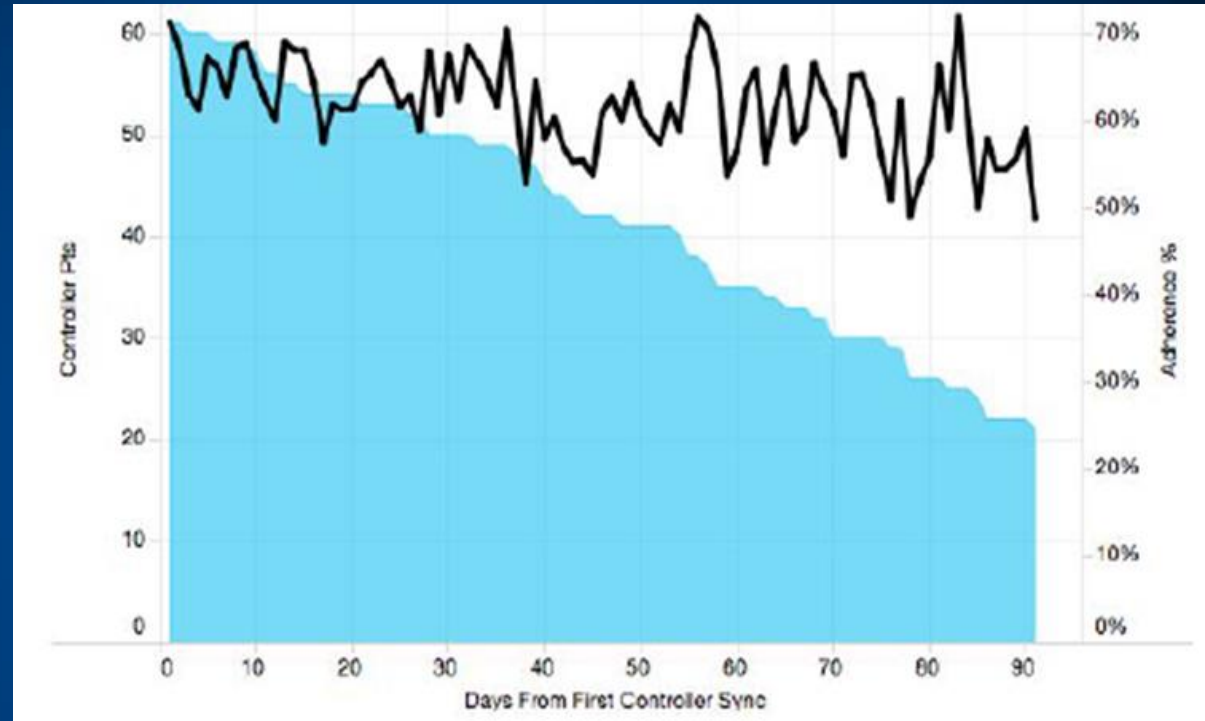
- Bluetooth monitoring devices allowed healthcare providers to become more effective and efficient in their care of patients.
- They also allowed patients to benefit from a higher quality of life.

Methodology

- Information regarding Propeller Health was collected to prove my hypothesis.
- Additional research was done on other Bluetooth devices and their involvement in improving healthcare.
- A paper survey was given to care providers who were involved in the use of Propeller.

Data

Normalized Adherence



Adherence to controller/daily medications is important to improve and maintain asthma control over time.

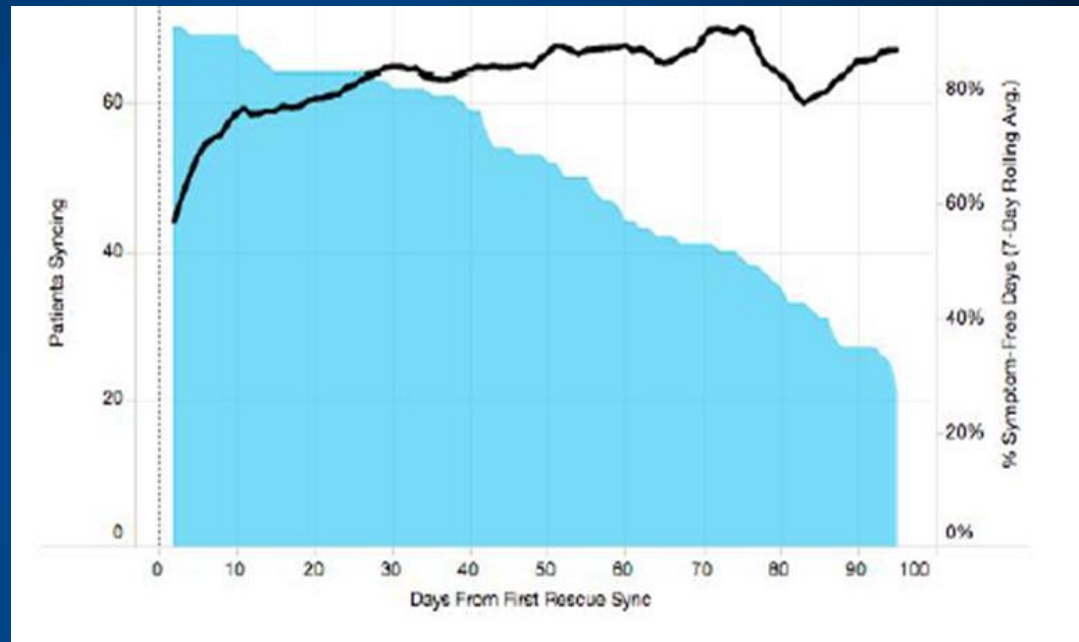
Legend:

Blue = All patients between first and last sync of rescue inhaler

Black = Rescue trend

Data (cont.)

% of
Symptom
Free Days



As the frequency of rescue use decreased and adherence increased, we expected patients to demonstrate a greater level of control.

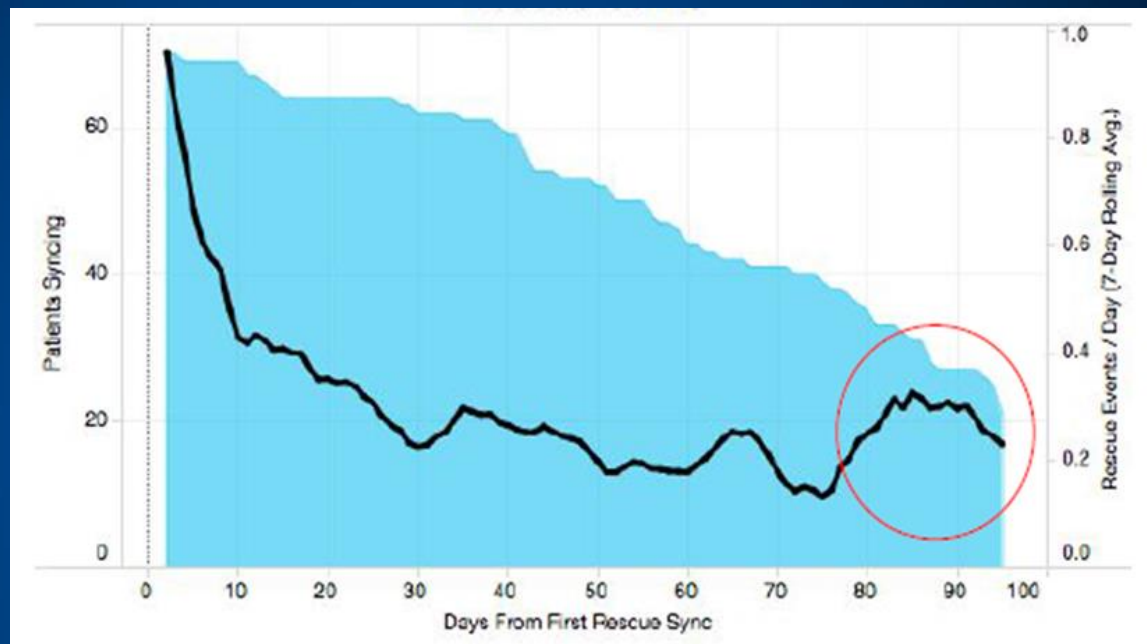
Legend:

Blue = All patients between first and last sync of rescue inhaler

Black = Rescue trend

Data (cont.)

Rescue Curve



The frequency of rescue inhaler use represents one of the most valuable indicators of exacerbation and resulting health care utilization.

Legend:

Blue = All patients between first and last sync of rescue inhaler

Black = Rescue trend

Results/Outcomes

- 100% of people surveyed felt that Propeller Health was useful for asthmatic patients.
- Healthcare providers felt that Propeller Health helped non-adherent patients become more adherent.
- All providers surveyed would recommend Propeller Health for their asthmatic patients.

Conclusions

- Wireless Bluetooth devices play a huge role in the involvement of healthcare.
- Caregivers are able to have an insight into their patients' information with just a touch of a button.
- Propeller Health has made it much more efficient for healthcare providers to monitor their patients.

Recommendations

- The pharmacy could create an app to make patients aware of when their prescriptions have been approved, refilled, or are ready, and provide updates on more medicine-related topics.
- More offices should utilize these types of devices to improve medication adherence for their patients.

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