Using technology to engage in health outcomes:

Incorporating Bluetooth monitoring into a comprehensive asthma program

St. Charles HEALTH SYSTEM

# of kids touched by asthma program: 40 and counting

**Engagement Strategy**

**PATIENT IDENTIFIED THROUGH:**

- Identified during inpatient (IP) stay:
  - Telephone follow up within 3 days of discharge

- Identified while outpatient (OP):
  - Telephone call for support

**ENGAGEMENT IN PROGRAM**

- **POST EDUCATION SUPPORT:**
  - 0-5 months: monthly phone check-ins
  - 6-12 years: monthly phone check-ins
  - 0-18 years: monthly phone check-ins

- **GRADUATION FROM PROGRAM**
  - 0-5 months: 5 weekly educational support group
  - 6-12 years: 5 weekly educational support group
  - 0-18 years: 0-5 months: phone check-ins

**Background**

Asthma is one of the leading causes of childhood illness and hospitalization. Over the past five years, $2.4 million was charged to St. Charles Health System. Over the past five years, $2.4 million was charged to St. Charles Health System. Over the past five years, $2.4 million was charged to St. Charles Health System. Over the past five years, $2.4 million was charged to St. Charles Health System. Over the past five years, $2.4 million was charged to St. Charles Health System.

**What is the CareTRx Program?**

CareTRx is a cloud-based program that combines Bluetooth technology and an asthma management app to provide at-home care monitoring and management. It provides the ability to track trends in medication use as well as receive alerts on potential problems.

**Program aim**

Within 48 months, a decrease in preventable pediatric asthma-related hospital encounters will show a 5% cost savings to St. Charles Health System.

**Demographics**

- 18 years of age
- Primary diagnosis of asthma
- Medicaid insurance preferred, but not exclusive
- Primary diagnosis of asthma
- 0-18 years of age
- Must have guardian willing to participate
- Living within the Central Oregon tri-county region
- Preference for greater than three asthma-related hospital encounters in the past five years
- Identified as poorly controlled by PCP
- Over the past five years, $2.4 million was charged to St. Charles Health System.

**Learned so far**

**Successes**

- Providing the time to the community where the patient resides
- Increasing the number of engaged and informed parents
- Allowing the patient to receive benefits of their medication management
- Establishing relationships between the Nurse Navigator and primary care team
- Partnering with school nurses to identify and support high-risk patients and families for comprehensive care

**Challenges**

- Identifying patients with consistent inhaler use
- Implementing school and local needs of the patient and their families
- Can the patient access their inhaler continuously in a low-accommodation setting, or when they travel?
- Tracking with multiple families who have varying access to healthcare services should be managed

**Metrics**

- Evaluate frequency of patient and parent utilization
- Comparing 12 months before engagement and 12 months post-implementation

**Cost to patient: $0**

**Expansions**

- Bluetooth monitoring as deemed appropriate by:
  - 0-5 months: 5 weekly educational support group
  - 6-12 years: 5 weekly educational support group
  - 0-18 years: 0-5 months: phone check-ins

**EXCESSION:**

- Option for Bluetooth monitoring as deemed appropriate by:
  - 0-5 months: 5 weekly educational support group
  - 6-12 years: 5 weekly educational support group
  - 0-18 years: 0-5 months: phone check-ins

**Future plans for expansion:**

- Additional locations in surrounding communities
- Program services available in English
- Student access in English
- Spanish

**Option A:**

**Option B:**

**FUTURE PLANS FOR EXPANSION:**

- Additional locations in surrounding communities
- Program services available in English
- Spanish

**Asthma Champions Program Design**

"When she's at school, I can't monitor what she's doing,"

a mother says of their daughter.

"The app will tell us when she took her inhalers and how many doses she took."

Robin Anderson, PsyD, Chief Behavioral Health Officer and Vice President of Strategic Integration; Julia Lodge, RN, BSN, Pediatric Nurse Navigator; Report/Editors: ME, Pediatrics at St. Charles Family Care in Redmond

**DEVELOPMENT**

**IMPLEMENTATION**

**EXPANSION**

**MAY 2014**

Identified asthma as one of the highest-risk pediatric utilization categories.

**SEPTEMBER 2014**

Initiated CareTRx program to identify the need for the inhaler medication assistance.

**OCTOBER 2014 - DECEMBER 2014**

- Program development:
  - Owner consultant
  - Chaired framework for program direction
  - Identified project champions and community partners

**DECEMBER 2014**

KICK-OFF EVENT: Invited community providers to come learn about the program and build excitement.

**JANUARY 2015**

Kicked off CareTRx to CareTRx community.

**JANUARY 2015 - CURRENT**

- Kicked off CareTRx to CareTRx community.
  - One on one nurse visits and educational classes for all patients and their families

**JULY 2015 - CURRENT**

First expansion: Bluetooth monitoring available for 0-5 months.

**OCTOBER 2015 - CURRENT**

Second expansion: Bluetooth monitoring available for 0-18 years.