Exploring Medical Innovations
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Smart Inhaler - Medical Innovation

Reference Page


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SMART INHALERS

DESCRIPTION
- Smart inhalers connect to your smart device using Bluetooth. This allows an app on your device to track information about the usage of your inhaler. For example:
  - The last time your medication was taken
  - It uses this information to
    - Create medication schedules
    - Create dosage reminders

HISTORY
- The first inhaler was invented in 1778, by Dr. John Mudge. It consisted of a pewter tankard and a 3-ounce flexible tube where the patient would inhale for 20-30 minutes.
- Susie Maison, a young girl who had asthma, questioned her father why her inhaler wasn’t in a spray can like hair spray. This lead to the MDI.
- In 2009, Clement Kleinstein, a Mechanical Engineer, developed a computer-controlled inhaler. This was the start of smart inhalers.

BENEFITS
- Some of the benefits of owning a Smart Inhaler are:
  - Better asthma control
  - Improved quality of life
  - Patients who used smart inhaler technology displayed a number of positive medical outcomes, such as:
    - Decreased doctor visits
    - Better adherence to medication schedules

WHY CHOSEN
- More than 300 million people are living with asthma and an estimated 250,000 people die prematurely due to asthma worldwide each year. These deaths can be avoided with proper treatment and correct medication dosage.
- I myself am one of those 300 million people that lives with asthma. What I came across an article that mentioned smart inhalers, it piqued my interest.

CHALLENGES
- Since the smart inhalers are new, some challenges might include:
  - The accuracy and reliability of the device
  - Potential technical issues
  - Interference with a patient’s usual inhalation technique

COST
- The Smart Inhaler costs $99.
- Some insurance companies that cover Smart Inhalers are:
  - Medicare
  - Medicaid
- The number of Smart Inhalers sold is estimated to increase significantly by the year 2025.

CAREER IMPLICATIONS
- Smart Inhalers fit into the healthcare field that cares for patients with breathing problems such as:
  - Pulmonologist
  - Respiratory therapist
  - Cardiologist
- Smart Inhalers can be, and are used by both child and adult asthma patients.

CHANGES TO HEALTHCARE
- Some people with asthma struggle remembering when their medication was last taken. Having a smart inhaler changes that because now you have access to all your information on your smart device.
- The Smart Inhaler allows people to do regular activities again without having to worry about asthma attacks.
- Preventing asthma attacks lowers healthcare costs.

REFERENCES
[Insert references here]
**DESCRIPTION**

- Smart inhalers connect to your smart device using Bluetooth. This allows an app on your device to track information about the usage of your inhaler. For example:
  - The last time your medication was taken
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  - Create medication schedules
  - Create dosage reminders

**HISTORY**

- The first inhaler was invented in 1778, by Dr. John Mudge. It consisted of a pewter tankard and a 5-6 in. flexible tube where the patient would inhale for 20-30 minutes.
- Susie Maison, a young girl who had asthma, questioned her father why her inhaler wasn’t in a spray can like hair spray. This lead to the MDI.
- In 2008, Clement Kleinstreuer, a Mechanical Engineer, developed a computer-controlled inhaler. This was the start of smart inhalers.

**BENEFITS**

- Some of the benefits of owning a Smart Inhaler are:
  - Better asthma control
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- Patients who used smart inhaler technology displayed a number of positive medical outcomes, such as:
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**CHALLENGES**

- Since the smart inhalers are new, some challenges might include:
  - The accuracy and reliability of the device
  - Potential technical issues
  - Interference with a patient’s usual inhalation technique.

**WHY CHOOSE**

- More than 300 million people worldwide suffer from asthma and an estimated 250,000 die prematurely due to asthma each year.
- These deaths can be avoided with proper treatment and correct medication.
- Myself am one of those 300 million people dealing with asthma. When I first heard of a Smart Inhaler that mentioned smart inhalers, the thought genuinely interested me.

**COST**

- The Smart Inhaler costs $99.99.
- Some Insurance companies cover smart inhalers:
  - Medicaid
  - Medicare
- The number of Smart Inhalers in the market is increasing significantly by the day.
**Benefits**

- CTI increases the quality of life.
- CTI can allow for remote monitoring.
- CTI can reduce the number of visits to the doctor.
- CTI can improve adherence to daily medication schedules.

**Challenges**

- CTI are new, and some difficulties include:
  - Technical issues.
  - Patient adherence.

**Why Chosen**

- More than 300 million people are living with asthma and an estimated 250,000 people die prematurely due to asthma worldwide each year.
- These deaths can be avoided with proper treatment and correct medication dosage.
- I myself am one of those 300 million people that lives with asthma. When I came across an article that mentioned smart inhalers, it piqued my interest.

**Cost**

- The Smart Inhaler costs $99.
- Some Insurance companies that cover Smart Inhalers are:
  - Medicaid
  - Medicare
- The number of Smart Inhalers sold is estimated to increase significantly by the year 2025.

**Career Implications**

- Smart Inhalers fit into the healthcare fields that care for patients with breathing problems such as:
  - Pulmonologist
  - Respiratory therapist
  - Cardiologist
- Smart Inhalers can be, and are used by both child and adult asthma patients.

**Changes to Healthcare**

- Some people with asthma struggle remembering when their medication was last taken. Having a smart inhaler changes that because now you have access to all your information on your smart device(s).
- The Smart Inhaler allows people to do regular activities again without having to worry about asthma attacks.
- Preventing asthma attacks lowers healthcare cost.

**References**