



How To  
**Use Inhalers**



Enhance Patient Education  
with  
Interactive Technology

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# WHAT ARE THE MAJOR ISSUES WITH PATIENT EDUCATION?

- Multiple Inhaler devices - Complex instructions
- Patient and provider knowledge needs improvement
- Inhaling Skills can't be learned easily from written or verbal instructions
- Busy providers – not able to devote the time needed



# Why?

## Devices Vary

Different types of inhalers require different techniques



## Teachings Vary

Lack of clear instructions on correct use of inhalers




## Patients Vary

Individual ability to learn the correct inhaler technique



# WHAT DO PATIENTS NEED TO KNOW?

- Can patients breathe with the device?
  - Can patients use the device properly?
  - Can patients understand what mistakes to avoid?
  - Do patients remember critical steps even after continuous device usage?
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# CAN PATIENTS USE THE DEVICE?

- **Problem:**

Too many steps, complex techniques and poor retention

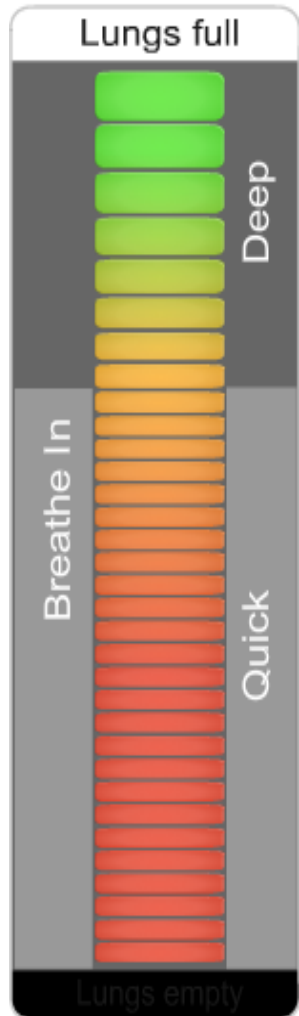
- **Solution:**

Audio-Visual Interactive Self Learning with step-by-step instructions



# *Problem: Different breathing patterns needed*

## *Solution: “How to Inhale” App*



“Breath Bar” to pace breathing speed, identify the empty lung, full lung and correct actuation points.

Practice actuation with pen or empty inhaler.

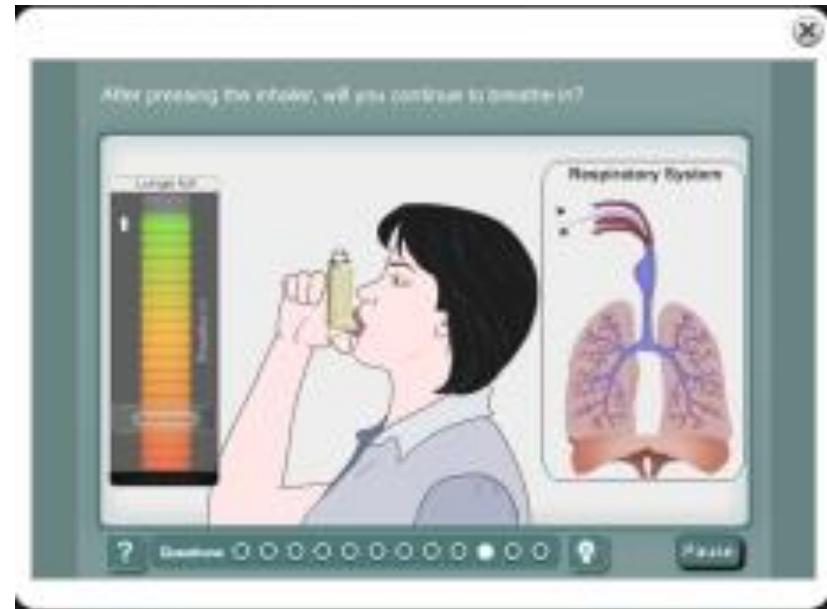
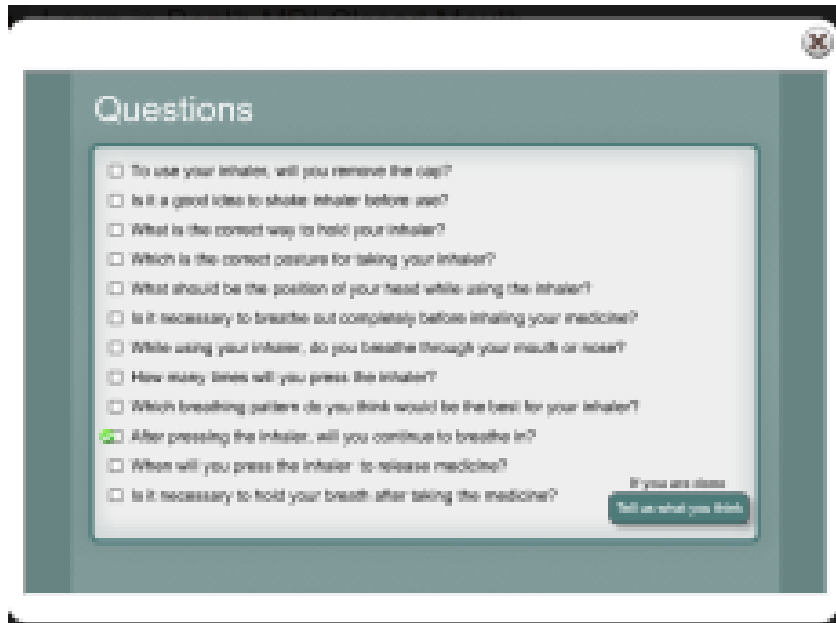
Practice with WEBCAM



# *PROBLEM: UNDERSTANDING KEY ASPECTS*

## *SOLUTION: “TAKE A QUIZ”*

Interactive questions & answers using animations



# CAN PATIENTS UNDERSTAND WHAT MISTAKES TO AVOID?

## **Problem:**

Lack of knowledge of what happens when they do mistakes and what happens when do it correctly?

## **○ Solution:**

Audio-Visual feedback on responses to questions formulated based on most common mistakes done by majority of patients.





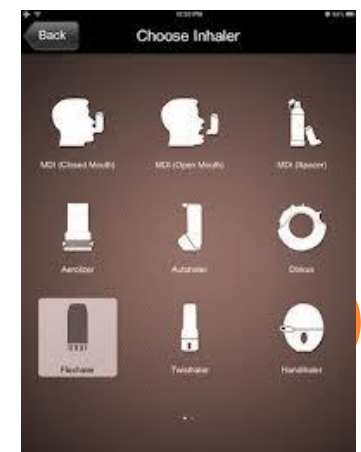
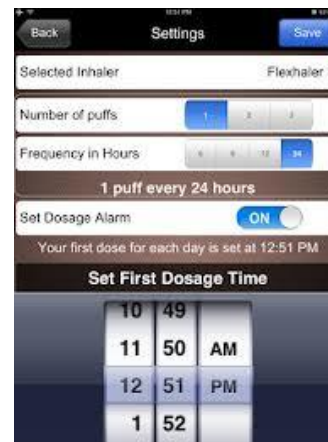
# DO PATIENTS REMEMBER CRITICAL STEPS EVEN AFTER CONTINUOUS DEVICE USAGE?

Problem:

Same issues – Multiple Inhalers, Many Steps, Complex Devices, Never trained, long gaps of retraining.

○ Solution:

Reinforced regularly every time they use the inhalers with the exact steps.



# REINFORCEMENT – ASSIST ME

## ○ An App that Assists and not makes you work

- Reminder and Alerts
- Reinforcement of usage instructions
- Usage of Multiple Inhalers
- Reminders by Location
- Reminders by Environmental factors such as pollen count



# TECHNOLOGICAL INNOVATION TO ENHANCE PATIENT EDUCATION



## How To Use Inhalers

Practice real time using innovative webcam



Save the cost of medicine



**Get Started** by choosing your inhaler

MDI with Spacer

English Español



MDI with Spacer



MDI Closed Mouth



MDI Open Mouth



Diskus



Handihaler



Twisthaler



Autohaler



Aerolizer



Flexhaler



Neohaler



Respimat



# TAKE AWAY MESSAGE

1. Web/mobile device based patient education is likely to be more effective and accessible for teaching inhaler technique.
2. Many potential ways to use the technology
  - Patient education – in provider office – “inhaler kiosk”, In patient, ER, Pharmacies, Patient home, schools
  - Provider Education – for office/hospital staff, accreditation requirements, CME,
  - Vision to allow physician’s computer (and care plan) to communicate with patient devices and vice versa.

