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Use of Vitalograph Aerosol Inhalation Monitor (AIM) in a Pharmacy Practice Laboratory

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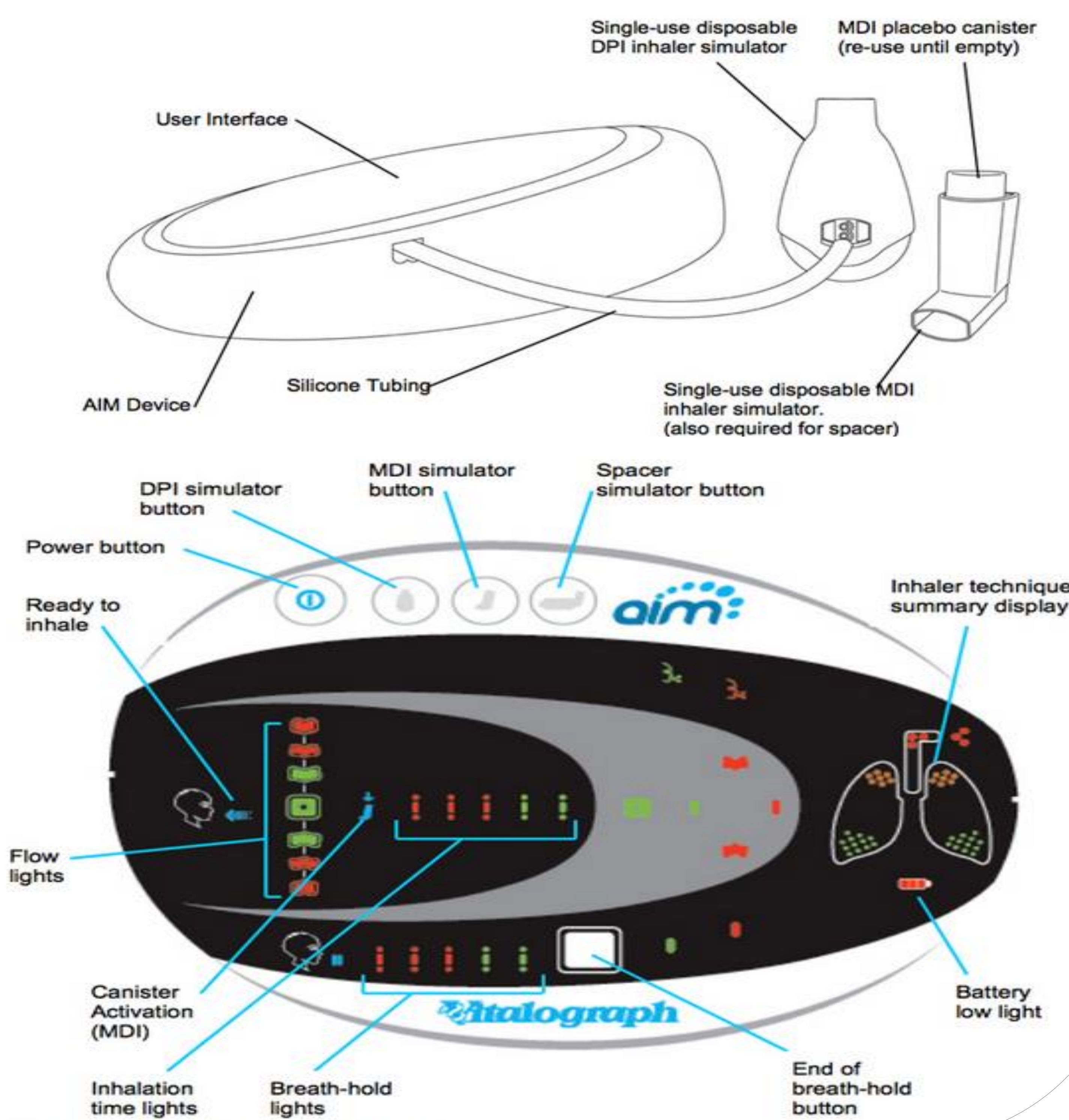
BACKGROUND

- Implementation of innovative teaching techniques in a practice-based simulated pharmacy laboratory course is critical in providing students with a strong knowledge on drug delivery devices.
- Strong knowledge that students gain will have a profound impact on their ability to educate patients in a real practice setting which can lead to positive clinical outcomes and improved patient quality of life through enhanced medication adherence.

Vitalograph Aerosol Inhalation Monitor (AIM)

- Device designed to assist individuals to learn proper inhaler techniques.
- Consists of a digital monitor with tubing that is attached to a mouthpiece fitted with a canister that contains a non-medicated propellant.
- Utilizing multi-colored indicator lights, the monitor identifies specific steps in the inhalation process where further inhaler training may be necessary.
- Device can simulate taking a medication delivered by a metered-dose inhaler or dry powder inhaler.
- Although AIM is a valuable device that can be used to teach individuals about proper inhaler usage techniques, very little is known about the use of AIM in a pharmacy laboratory course and its impact on student learning.

Components of the AIM



RESULTS

- 240 surveys were analyzed
- 65% of the students strongly agreed and 30% agreed that AIM is an effective tool for learning
- 90% of the students indicated high self-efficacy in counseling patients on a MDI at the end of the lab

Demographic Characteristics

Variable	n (%)
Gender	
Female	159 (66.2)
Male	80 (33.3)
Race	
Asian	163 (67.9)
White	51 (21.2)
Other	25 (10.42)
Current Use of MDI	
Yes	14 (5.8)
No	225 (93.7)
Past Use of MDI	
Yes	47 (19.5)
No	190 (79.1)
Counseled on MDI as Intern	
Yes	58 (24.1)
No	166 (69.1)

* n may not equal 240 participants (100%) due to missing responses.

OBJECTIVE

To explore the use of Vitalograph Aerosol Inhalation Monitor (AIM) in training student pharmacists on proper metered-dose inhaler (MDI) usage technique.

METHODS

Participants

- P2 student pharmacists enrolled in pharmacy practice lab during spring semester of 2017

Procedure:

- Students voluntarily used AIM device during patient assessment component of the lab to gain an experience of using a MDI before performing standard patient counseling on MDI.
- At the end of the lab, students were asked to complete a survey regarding their perception of AIM, as an effective tool for learning and self-efficacy in counseling on the use of MDIs.

Implications

- AIM seems to be a valuable device to use in teaching student pharmacists proper inhaler usage techniques.
- Further study is needed to examine how use of AIM in a pharmacy lab course can truly impact students' learning and ability to educate patients on proper MDI usage technique.

† Above two figures were taken from Vitalograph AIM User Training Manual.