

Living With and Learning About Asthma on the College Campus



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Disclosures

- ▶ Association of Asthma Educators
 - ▶ President-Elect
 - ▶ Chair of the Education Committee
 - ▶ Research Director - Reviewer/Referee for the annual conference abstracts & poster presentations
 - ▶ Member of the Annual Conference committee
- ▶ Past member of the Board of Directors of the Texas Society for Respiratory Care.
- ▶ Guidepoint Global, Inc., New York. Clinical advisor for healthcare subject matter expertise.
- ▶ Expert Witness representing plaintiff and defense attorneys in cases of respiratory therapists accused of medical negligence.

Researcher's Connection With This Study

- Associate Professor of Respiratory Care
- Certified Asthma Educator
- Father of four; one son with asthma



Research Environment

- Study was conducted at a large public university located in the southwest region of the United States.
- On the campus is a large student health center that is accredited by the Accreditation Association of Ambulatory Health Care Centers.
- The student health center staffs six physicians and six nurse practitioners and consists of 22 exam rooms.



Research Environment

- The university consists of a 457-acre main campus and 4,777 additional acres in recreational, instructional, farm and ranch land.
- The hilly campus is home to 225 buildings.
- The changing elevation and extreme weather conditions create daily challenges for students with asthma.





Research Problem

- ▶ Asthma is a debilitating, chronic disease for which there is no cure (National Institute of Health [NIH], 2014)
- ▶ American College Health Association reports that 8.9% of college students have an asthma diagnosis (ACHA, 2016)
- ▶ College students with asthma may be ill equipped to self-manage their asthma (Lemly et al., 2014)
- ▶ Adults may experience barriers in learning about their chronic illness (Baumgartner, 2011)
- ▶ Adult physicians feel unfamiliar with chronic disease, so they tend to be more reactive to illness than proactive (Srivastava et al., 2012)

College student's death spurs family to advocate awareness, education





Research Questions

- 1) How do college students with asthma learn from their experiences in the self-management of their asthma during their college years?
- 2) How do college students cope with their asthma on campus?
- 3) How do healthcare providers at the student health center perceive the current state of asthma education and management of college students on the campus?

Literature Review

- ▶ Many colleges do not have a system in place to identify students with asthma, (Lemly et al., 2014)
- ▶ A high percentage (40%) of college students with asthma do not seek medical attention for asthma symptoms, (Carpentier et al., 2007)
- ▶ There are deficiencies on college campuses that leave students with asthma vulnerable and at risk for poor academic performance, lower graduation rates, decreased quality of life, and increased absenteeism from work or school (Levy, 2015; Molzon et al., 2013)
- ▶ Improper management of asthma contributes to partially controlled symptoms (Molzon et al., 2013)
- ▶ Asthma death rate is higher among people 18 or older when compared to children with asthma (Centers for Disease Control and Prevention, 2017)



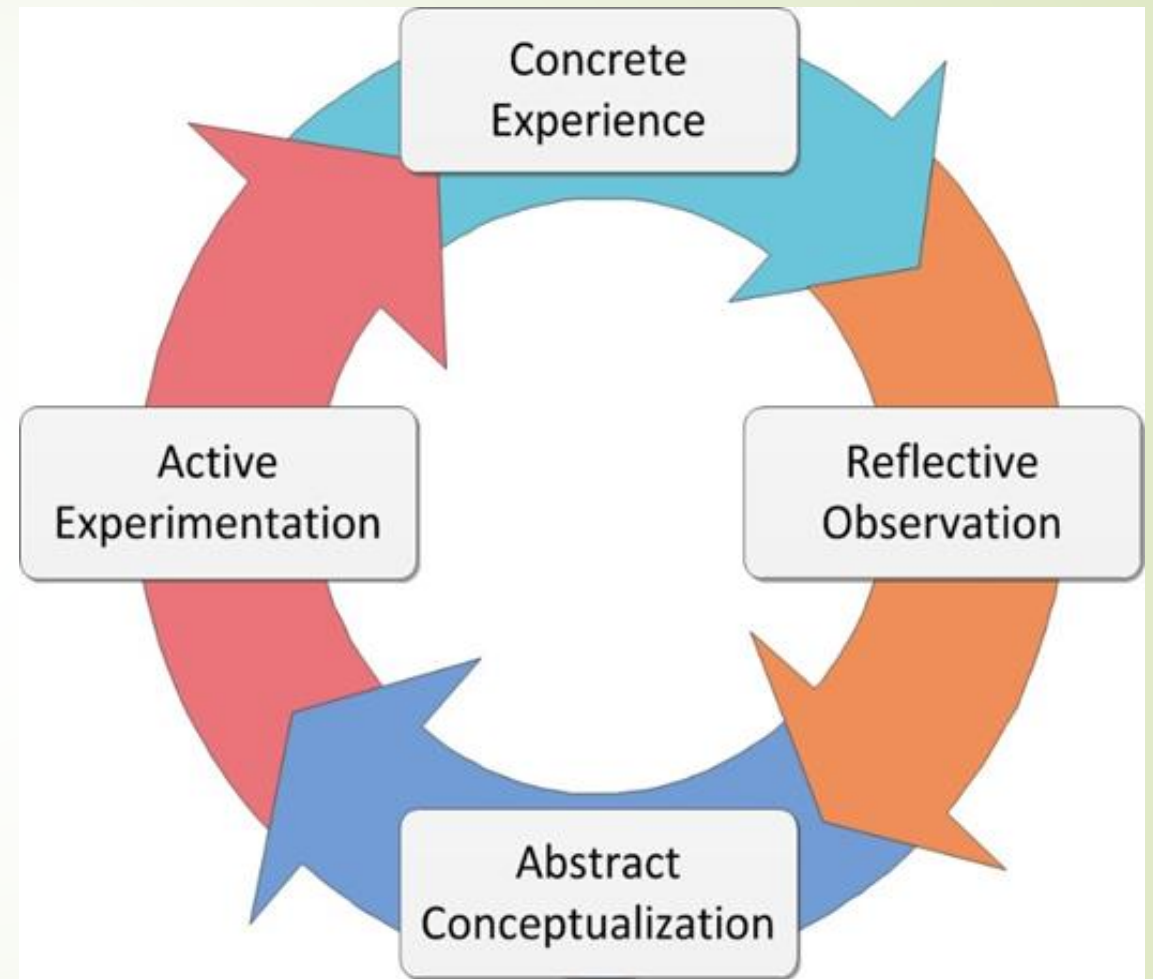
Literature Review

- ▶ College students with asthma have higher levels of anxiety and general psychological distress when compared to healthy peers (Carpentier et al., 2007)
- ▶ Gaining independence from parents and developing an adult identity are intricately tied to the challenges of managing life with a chronic illness (Houman & Stapley, 2013)
- ▶ For adults, learning about their chronic illness is integral to coping with their chronic illness (Baumgartner, 2011)
- ▶ Global Initiative for Asthma guidelines recommend establishing a partnership between the person with asthma and the healthcare provider (GINA, 2017)
- ▶ The transition from pediatric-based health care to an adult health care model requires a structured, comprehensive approach to improve the care of the college student (Unwin et al., 2013)

Theoretical Framework

Experiential Learning Theory (ELT)

- Knowledge is a transformation process, being continuously created and recreated (Kolb, 2015)
- Learning cycle consists of the learner integrating each of the four modes in a repetitive process that is sensitive to the learning situation and what is being learned (Kolb, 2015)



Kolb's (2015) Learning Cycle



Transition to Adult Health Care

Adolescents preparing to transition to adult health care wanted:

- continuity of care
- healthcare provider knowledge of disease
- honesty
- confidentiality
- a named staff member
- clinic hours that are less disruptive

Reference: Srivastava et al. (2012)

Adult Independent Healthcare Decisions

The providers' ability to identify where students are on a continuum of personal investment and accountability in reference to making adult independent health care decisions versus someone who is transitioning to an adult with independent health care decision making skills is a valuable tool in the development of an appropriate asthma treatment plan that the student will agree to and comply with over time.



A Difficult Population to Deal With

The denial by students of the chronicity of asthma affects their adherence to a physician prescribed asthma action plan, thereby making it difficult for the providers to create an effective asthma treatment plan and to get buy-in from the student.



Overview of the Ten Participants

5 College Students with Asthma

- ▶ Recruited from the student health center's EMR database of asthmatic students
- ▶ Five female students with poorly controlled asthma
- ▶ Age range: 22 – 57 years
- ▶ Academic Major:
Psychology (2), Nutrition (1), Microbiology (1), and one graduate student - History
- ▶ Level: One junior, three seniors, and one graduate student

5 Healthcare Providers

- ▶ Employed at the student health center (SHC) on campus
- ▶ Experience in caring for and treating students with asthma at the SHC
- ▶ Two physicians (one male, one female)
- ▶ Three nurse practitioners (all female)
- ▶ Average of 10.6 years of college health work experience

Findings

Research Question #1

How do college students with asthma learn from their experiences in the self-management of their asthma?

- ▶ **Students really do want to know more about their asthma.**
 - ▶ **Self-Directed Learning**
 - ▶ Peer-reviewed journal articles
 - ▶ Mayo Clinic website
 - ▶ **Non-Deliberate Approach to Learning**
 - ▶ Asthma literature received from the SHC
 - ▶ Encounter with the healthcare provider at the SHC
 - ▶ New health information

“I’ve looked up peer-reviewed journal articles on Google Scholar to understand what it is; I learned a lot about asthma reading the articles”

“I go online and read on my own; I use Mayo Clinic a lot.”

“I read any information any of the doctors give me. I don’t really do much research on my asthma”

“I like listen and ask questions to the doctors, but I don’t sit on the side and look stuff up”

Findings

Research Question #1

How do college students with asthma learn from their experiences in the self-management of their asthma?

➤ Students do learn from experience.

- Adherence to a physician prescribed daily asthma medication regimen results in better asthma control
- Being self-aware of their asthma triggers and knowing how to prevent an asthma flare-up
- Students' interactions with their doctors are integral to their learning about asthma

“I have better medications to manage my asthma, it is making a huge difference.”

“I just got to be aware of what triggers it and avoiding it.”

“I think they're [Healthcare Providers] really helpful”

“It's wonderful. It has actually been a God-send”

Findings

Research Question #2

How do college students cope with their asthma on campus?

Surviving asthma.

- Self-monitoring of environmental conditions for potential asthma triggers
- Pretreating the lungs with a quick-relief inhaler prior to traveling to campus
- Limiting walking distances on campus to avoid overexposure to extreme weather conditions
- They do not have their parents to constantly manage their behaviors for them

“It’s a lot of walking, so I just make sure I have my inhaler on me basically”

“When the pollen is high . . . I have the Weather Channel app and they tell you the pollen in your area”

“My rescue inhaler is my coping mechanism”

“Coping, I mean I stick to my normal medications the doctors have me on”

Findings

Research Question #2

How do college students cope with their asthma on campus?

Owning the disease.

- Transitioning to an adult role was ongoing for some of the students in this study
 - Students recognize they need to take full responsibility for their asthma care
 - Evidence of independent health care decision-making
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“I’m living alone, so I don’t have my mom on my back about taking care of my asthma as much, so I’ve had to take it under control”

“My mom texts me every day about the weather, like the humidity and the pollen”

“The biggest challenge was from like being forced to take asthma medicine to actually wanting to”

“Being a college student, I don’t want to spend my money on like an inhaler or a doctor’s appointment. But I ignored my asthma a lot when I got to college”

Findings

Research Question #3

How do healthcare providers perceive the current state of asthma education and management of college students?

Learning about asthma treatment and management.

- ▶ The HCPs' asthma management education and training was minimal during their formal medical education programs
- ▶ They engaged in self-directed learning by studying the national asthma guidelines, websites such as www.mayoclinic.org and www.uptodate.com, and attending conferences to gain new knowledge
- ▶ HCPs in this study are learning from experience as they provide care to asthmatic students

“I think my level of confidence with managing asthma appropriately is probably...okay”

“I didn't have an asthma action plan initially; I was just treating and not really having a set plan. I found the National Heart Lung and Blood Institute online has a wonderful asthma action plan”

“I guess initially in my residency program, but truthfully by practicing medicine”

“I learned about asthma briefly in my training”

Findings

Research Question #3

How do healthcare providers perceive the current state of asthma education and management of college students?

HCPs' perceptions of treating and managing asthmatic students.

- Providers are constrained by time during a sick visit with an asthmatic student
- Providers want to do the right thing in providing optimal asthma care to students
- The denial of asthmatic students about the chronicity of their lung disease; it's a very difficult population to deal with
- Cost of asthma medications contributes to the difficulty in effectively treating and managing asthma

“It’s a time intensive visit. It’s an assessment, a nebulizer, there’s teaching, there’s often prescriptions that have to be reviewed”

“This may sound bad...but, the way medicine is today, you can’t go looking for problems all the time. We just don’t have the time”

“Oh no, but I had asthma only as a child, I don’t have it anymore”

“My primary concern is to make sure we reverse the situation and get them out of any potential danger zones”

“I can’t give them the meds they need even if they would take them because the cost is outrageous”

Findings

Research Question #3

How do healthcare providers perceive the current state of asthma education and management of college students?

HCPs' perceptions of treating and managing asthmatic students.

- Providers are interested in learning more about performing and interpreting spirometry
- Providers recognize the need for additional training for the SHC staff in the performance and interpretation of lung function testing on asthmatic students

“If you ask me to do a spirometry test right now and interpret it, I’d be like, uh”

“We do not have it [spirometry] in our rooms for each patient visit like I would prefer because I understand it’s a better measuring instrument”

“I know you’re supposed to say, go, go, go, blow, blow, blow”

“I’m not trained in spirometry, so I haven’t done it. I’ve had it done to me, so I kind of know how it’s done”

Discussion

Asthmatic Students

- The goal of asthma management is to “promote patient self-management” (EPR-3, 2007)
- Students are not always confident in their asthma self-management skills and need additional education and training:
 - Understanding the role of asthma medications
 - Proper use of medication delivery devices
 - Access to affordable asthma medications, especially inhaled corticosteroids
 - Understanding of the pathophysiology of asthma
 - Acceptance of the chronicity of their asthma
- Some college students with asthma are ill-equipped to effectively self-manage their asthma (Levy, 2015; Molzon et al., 2013)

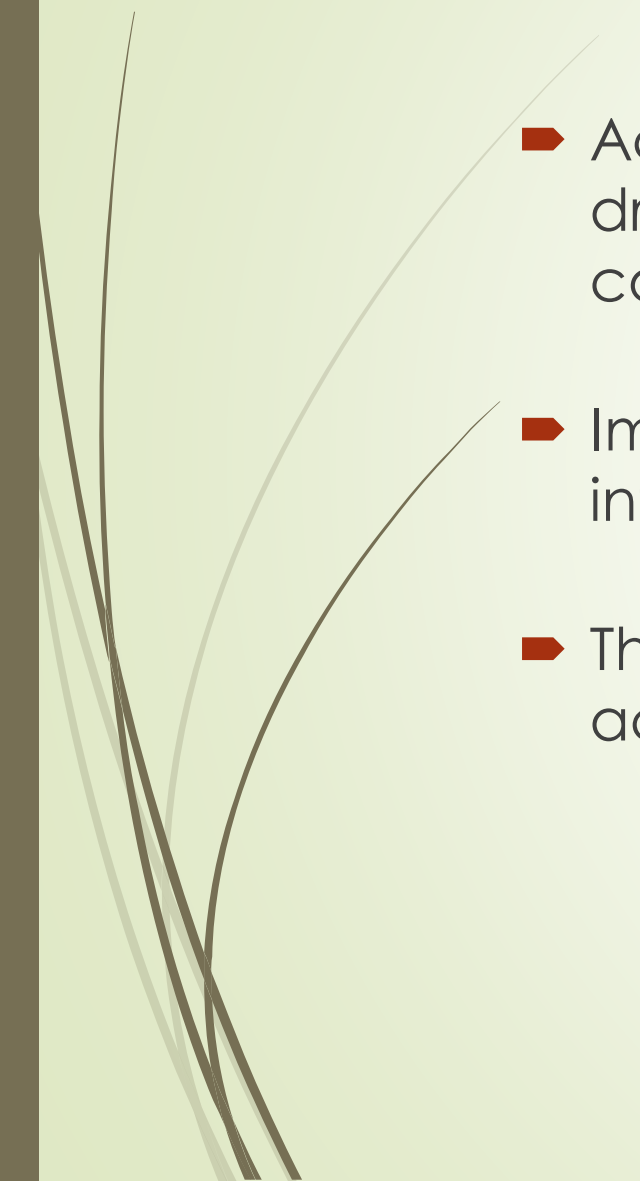
Discussion

Healthcare Providers

- A partnership between the patient and his or her health care provider is important for effective asthma management (GINA, 2018)
- Moving toward a more future-focused approach to asthma management:
 - 1) development of a standard asthma education curriculum
 - 2) written literature tailored to asthmatic college students on this campus
 - 3) provider training in lung function testing
 - 4) update the providers on the national asthma guidelines



Implications for Practice

- ▶ Access to free or lower cost asthma medications through a drug assistance program offered by pharmaceutical companies.
 - ▶ Improving the physician/student encounter through an interactive, process referred to as shared decision-making
 - ▶ The implementation of a consistent individualized asthma action plan among the provider for each asthmatic student
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Implications for Policy

Implementation of the following:

- Comprehensive system to Identify which students on campus have an asthma diagnosis
- Training for residence hall directors and resident assistances to increase their knowledge about asthma to serve as a resource for residents with asthma
- Biennial refresher course in spirometry for providers at the student health center
- Procedure/checklist for transitioning an asthmatic student from pediatric care to adult care

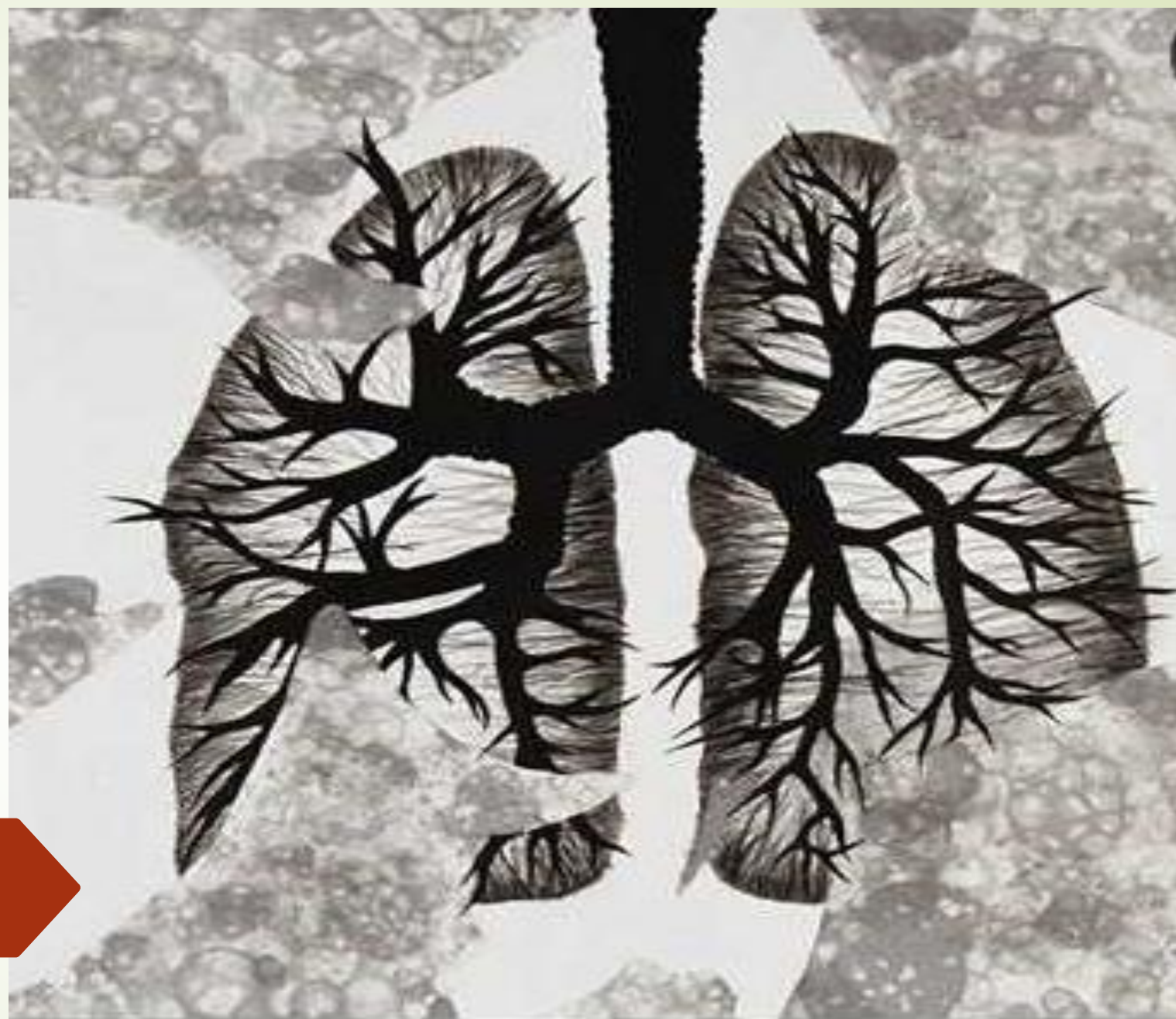


Future Research

- ▶ A study utilizing telehealth to provide disease education and self-management training to students with asthma
 - ▶ **Control group:** usual asthma care at the SHC
 - ▶ **Intervention group:** usual asthma care in addition to participating in telehealth disease education and self-management training
 - ▶ **Outcome Measures (pre and post):**
 - ▶ Medication compliance
 - ▶ Utilization of healthcare resources, (urgent care, ER, SHC sick visit, hospitalization)
 - ▶ Asthma control test score
 - ▶ Asthma Quality of Life Questionnaire

THANK YOU!

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Artwork by Zyndi Namuhmuh