The Effectiveness of Multi-Session Asthma Education

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BACKGROUND
- In CT, 12.9% of school-aged children have asthma
- Asthma exacerbations are a major reason for school absenteeism
- Few, if any, clinics offer programs aimed at reducing asthma triggers
- Current asthma education programs
  - Single education session
  - Lack of student-centered education (focus is on parent education)
- School-Based Health Clinic’s (SBHC’s) offer a unique opportunity for nurse practitioners to offer multi-lesson education sessions during the school year
- Need insurance companies to approve more preventative services
- More emphasis needs to be placed on the value of these visits

AIMS
- Design and follow theory-based asthma education
- Evaluate the effectiveness of a multi-session asthma education program
- Elicit feedback from participants and determine if a program can be adapted to take place in SBHC’s.

IGGY AND THE INHALERS
- Iggy and The Inhalers© is an asthma education project created by cartoonist and board-certified pediatric allergist Alex Thomas, MD.
- Teaches kids with asthma about asthma symptoms, asthma treatment, and asthma medications using the language of comic books (i.e., repeated images, spatial connections, self-paced reading).
- The project imitates the multi-format narrative used by popular children’s entertainment.
  - The collectable cards and comics aim to extend learning beyond the brief period of one-on-one instruction in the clinic setting
  - More information can be found at iggyandtheinhalers.com

REFERENCES

OUTCOMES

QUANTATIVE RESULTS
- 5-7-year-olds (n=11), mean knowledge scores improved from 68% pre-camp to 87.5% post-camp
- 8-10-year-olds (n=10) improved from 58% to 88%
- Largest improvement seen with spacer question for both age groups

QUALITATIVE FEEDBACK
Positive results, campers loved the characters and activities. When asked what they liked, some responses included:
- “The hero's because they save kids with asthma like me”
- “Coltron, he cleans really slow so your lungs can be good”
- “Broncho because he loosens up your lungs fast and the purple guy because he works slow and gets the mucus out”

DISCUSSION
- Results indicate success and participant enjoyment with the multi-lesson format.
- Components of the program can easily be adapted to fit into five 20-minute counseling sessions offered in SBHC’s.
- Further interventions are currently being proposed to local SBHC’s in Connecticut with the goal of approving more CPT codes for preventative asthma education services

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Extra special thanks goes to Booster Shot Media, Inc for donating free comic books, trading cards, and posters to the camp!
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REFERENCES

ACTIVITIES

INNOVATION

QUANTITIVE RESULTS

OUTCOMES

APPROVAL FROM ALL PARTICIPANTS IN PHOTOS. Iggy and the Inhalers© pictures and information is courtesy of 2017 Booster Shot Media, Inc©
Background: In Connecticut, 12.9% of school-aged children have asthma and asthma exacerbations are a major reason for school absenteeism. Despite this fact, very few clinics offer programs aimed at reducing asthma triggers. Those that exist focus on a single education session, even though the National Asthma Education Prevention Program (NAEPP) stresses the effectiveness of multiple education sessions which include demonstration of medication administration. In addition, student-centered education is lacking. Many programs offer education geared towards parents, but not towards the child themselves, even though children spend a substantial part of their day away from parents in a school setting. School-Based Health Clinic’s (SBHC’s) offer a unique opportunity for nurse practitioners to offer multi-lesson education sessions during the school year. However, insurance companies are slow to approve preventative services. More emphasis needs to be placed on the value of these visits.

Aims: Evaluate the effectiveness of a multi-lesson asthma education program targeted towards elementary school-aged students. Elicit feedback from participants and determine if a program can be adapted to take place in SBHC’s.

Innovation: The program took place through “Camp Easy Breezy,” a six-week asthma camp run by New Haven Department of Parks, Recreation, and Trees and the Department of Public Health. Each child enrolled in the camp had a diagnosis of mild to severe asthma. A twice weekly asthma education lesson was given to campers ages 5-10. The curriculum was broken up into five topics: What is asthma, medicine administration, identifying your triggers, medication management, and following your asthma action plan. Each topic included talking points, hand-outs, interactive games, and use of the Iggy and the Inhaler® materials. Iggy is an asthma education project created by a board-certified pediatric allergist which teaches kids about asthma using the language of comics (i.e., repeated images, spatial connections, self-paced reading). Materials included posters, a comic book, and trading cards.

Outcome: A total of 21 children were included in the pilot program. Pre-test and post-tests on asthma knowledge were collected from participants. Two knowledge tests were created due to different reading/comprehension levels. For the 5-7-year-olds (n=11), mean knowledge scores improved from 68% pre-camp to 87.5% post-camp. The 8-10-year-olds (n=10) improved from 58% to 88%. Qualitative feedback on the curriculum was also positive.

Discussion: Results indicate success and participant enjoyment with the multi-lesson format. Components of the program can easily be adapted to fit into five 20-minute counseling sessions offered in SBHC’s. Further interventions are currently being proposed to local SBHC’s in Connecticut with the goal of approving more CPT codes for preventative asthma education services.

Discussion Question: If insurance companies begin to accept Individual Preventive Counseling Services (asthma education sessions) and Group Preventative Counseling Services as reimbursable visits do you think it is feasible to fit these sessions into a nurse practitioner’s schedule? Why or Why Not?

This project would not have been possible without the support of the New Haven Department of Public Health, the New Haven Department of Parks, Recreation, and Trees, the Yale Presidential Public Service Fellowship, and Booster Shot Media, Inc.

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