

GROWING HEALTHY CHILDREN AND YOUTH
*Increasing Awareness of Childhood Asthma Prevalence
and Improving Collaboration within the Community*

**A Submission to the
Public Health Agency of Canada**

Respiratory Health Program
Part B: Asthma Awareness Programs for School-
Aged Children that Identify and Replicate
Successful Models

Project Summary

The Ontario Lung Association implemented the “Roaring Adventures of Puff” (RAP), an asthma program, to elementary schools via the Primary Care Asthma Program (PCAP) Sites, in collaboration with Public Health School Asthma Program (PHSAP). The project focused on school aged children with asthma in high risk population. This included the First Nations specifically in Northwestern Ontario communities. The project aimed to demonstrate replication of significantly positive outcomes of RAP in a study, “Breaking the Access Barriers: Evaluating an Asthma Centre’s Efforts to provide education to children with asthma in schools” by Dr. L. Cicutto. The project’s intent is to build on established relationship and linkages of the PCAP sites with First Nations communities. In this project, culturally appropriate materials were used to address the needs of the communities. The success of the project will indicate that the RAP model of asthma education for school-aged children is adaptable and modifiable to cultural acceptability. A culturally appropriate methodology is beneficial for a target population to control asthma. ¹

Roaring Adventures of Puff

The “Roaring Adventures of Puff” (RAP), asthma program has been proven to help improve the access barriers within the communities. Evidence has shown improved asthma management. Providing an asthma education program to children in their school can significantly improve quality of life and reduce the burden of childhood asthma. ²

The RAP program is based on the current asthma practice guidelines. It consists of 6 sessions of 50-60 minutes in length. The sessions include: 1) Asthma Pathophysiology, 2) Asthma Triggers, avoidance, and control 3) Understanding medications and proper device techniques, 4) Symptom recognition, learning the asthma zones and use of an Action Plan, 5) Coping strategies: exercise, lifestyle and managing episodes 6) Final session includes invitation to parents, family, friends, and the school to share asthma information. The RAP instructors are trained to include: puppetry, games, role playing, model building, discussions and asthma diary recordings. The children are encouraged to discuss their lessons learned with their parents and are given weekly asthma related-activities to complete at home.

¹ Neganegijig T. **First Nations Asthma Education Research for Northwestern Ontario Asthma Clinic & The Lung Association.** October 2006

^{2,7} Cicutto, L. **Breaking the Access Barrier. Evaluating asthma education centres’ effort in providing asthma education in the schools** *Chest* 2005;128;1928-1935

To measure and evaluate the impact of the RAP program, data were collected from questionnaires and interviews with children and their parents. Data collection was done pre and post intervention. Significant outcomes were revealed in the number of emergency visits, and office visits for acute asthma episodes at the end of 1-year follow-up period and quality of life. Other outcomes measurements reported on: self-efficacy, the number of days absent from school, the number of days of interrupted activity, and parental absenteeism from work. Tools utilized to measure these outcomes were: the Juniper Paediatric Asthma Quality of Life Questionnaire and the Child Asthma Self Efficacy questionnaire. The Juniper Paediatric Asthma Quality of Life Questionnaire consists of three domains (activity, symptoms and emotion) and uses a 7-point Likert scale, with a higher score reflecting a higher quality of life. The child asthma self efficacy questionnaire reflects skills involved in asthma attack identification, prevention, and management, and uses a 5-point Likert scale in which 1 represents no confidence and 5 represents complete confidence in one's ability.³ The "Breaking the access Barrier" study, used a school based asthma education program delivered by Certified Asthma Educator who was also trained as Rap instructor, demonstrated favourable outcomes.

Project Outcomes:

The time allocated for the project was restricted and so the number of indicators was reduced to three as approved by the Public Health Agency of Canada.

Indicators used were the tools already built in to the delivery of the asthma program, which eliminated the need to obtain a written consent. Verbal consent was done. The tools included:

- 1) Children Asthma Control Test (ACT) for 4-11 years old
- 2) Inhalation Device Assessment Technique (IDAT –RNAO Best Practice Guideline)
- 3) Satisfaction Questionnaire (for the children)

Expected results	Success Indicators	Outcomes
1) Decrease access barriers for FN children's asthma self-management skills	Compare: <ul style="list-style-type: none"> ➤ Clinic hours for asthma education in each of the centres, and # of barriers, i.e., no shows, travel, access, parking... ➤ Feasibility of delivering asthma education outside of the centre to an elementary school ➤ Reach: # of participants (of children- compare # that have asthma over the # that actually participated in RAP) 	<ul style="list-style-type: none"> ➤ Educator travel to the elementary school ➤ Asthma presentation <ul style="list-style-type: none"> ○ Students ○ Teachers and staff ➤ Asthma presentation to <ul style="list-style-type: none"> ○ Community Health Representatives ○ Nurses and staff ○ Chiefs and council ○ Community (using a native translator)
2) Improve asthma self-management - inhalation technique - coping strategies	<ul style="list-style-type: none"> ➤ Inhalation Device Assessment Tool of the inhalation devices ➤ Session 4 & 5 – Coping Strategies session with the children and RAP instructor 	<ul style="list-style-type: none"> ➤ RAP program to children using puffers/ other medication devices, Using IDAT tool ➤ Trigger avoidance and management, coping strategies ➤ General Action Plan with the Asthma Zones
3) Increase participation in daily physical activity in school 4) Improve asthma control 5) Decrease school absenteeism 6) Improve use of controller medication 7) Increase the use of action plans	<ul style="list-style-type: none"> ➤ Asthma Control Questionnaire as per asthma program protocol in monitoring control every visit, in this case at every session 	Discussion on <ul style="list-style-type: none"> ○ Asthma control questionnaire (pre intervention was completed) ○ Asthma symptoms ○ Asthma Warning signs ○ Asthma Medication: controller versus rescue
8) Improved progress with participation in the program	<ul style="list-style-type: none"> ➤ Tracking progress as per the asthma program through follow up questions 	<ul style="list-style-type: none"> ➤ Introduction to the: <ul style="list-style-type: none"> ○ OLA Asthma Helpline ○ Mena Ya Win Health Centre Asthma Clinic ○ Potential for telemedicine via KOTM
9) Satisfaction Questionnaire	<ul style="list-style-type: none"> ➤ Children Satisfaction Questionnaire ➤ Parent Satisfaction Questionnaire 	<ul style="list-style-type: none"> ➤ Children Satisfaction Questionnaire completed