Clinical Profile of Children Attending Asthma Camps

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Abstract

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M Welch, C Archibald, D Larson, and the Consortium on Children's Asthma Camps.

Rationale: 15,000 children attend over 150 asthma camps each year, but a clinical description of these children and their degree of asthma control has never been reported. **Methods**: The Consortium on Children's Asthma Camps compiled data from a common health history application used by 3 different camps in a 2002 pilot study to characterize the type of child attending camp. Parents of 372 children, ages 7 – 14 (mean 10.5) completed an application about their child's medical history, functional status, and medication use. Results: The majority had never camped before; 46% were returnees to camp. Only 30% used a PF meter regularly while nearly 70% had no asthma action plan. One-third used their rescue inhaler at least 4 days/week, 25% were awakening \geq 3 nights/week, 85% had asthma interfering with their exercise ability, and almost 15% missed > 2 weeks/year of school. One out of 8 campers had been admitted for asthma \geq 3 times in the last 5 years. Only 43% were followed by an allergist or pulmonologist. Merely 45%* were using inhaled corticosteroids. When returnees were compared to first time campers, there was a trend toward fewer ER visits (p=.09) in the returnees. **Conclusions:** The significant degree of sub-optimal asthma control and apparent undertreatment of children who attend asthma camp represents both a challenge and an opportunity for asthma camp programs to make an appreciable difference in the lives of these children.

*erratum: repeat analysis showed 73%

Background/Purpose

- 15,000 children attend 125 asthma camps in US every year
 Asthma camps are a "window" into world of pediatric asthma
- •Clinical description of children attending camp never reported
- Different camps collect different information on attendees
- •Different camps •
 Purpose:
- -Assess whether multiple camps are able to use common health hx application (HHA)
- -Compile aggregate data about children attending camps (asthma control, treatment, functional status, healthcare utilization)
- -Determine if difference exists in asthma control between returnee campers and new campers

Methods

- Common HHA administered to 3 different asthma camps in US
- Parents of 372 children, ages 7 14 (mean 10.5) completed HHA re: their child's:
- medical hx, including HC utilization
- medication use
- functional status
- methods of asthma control

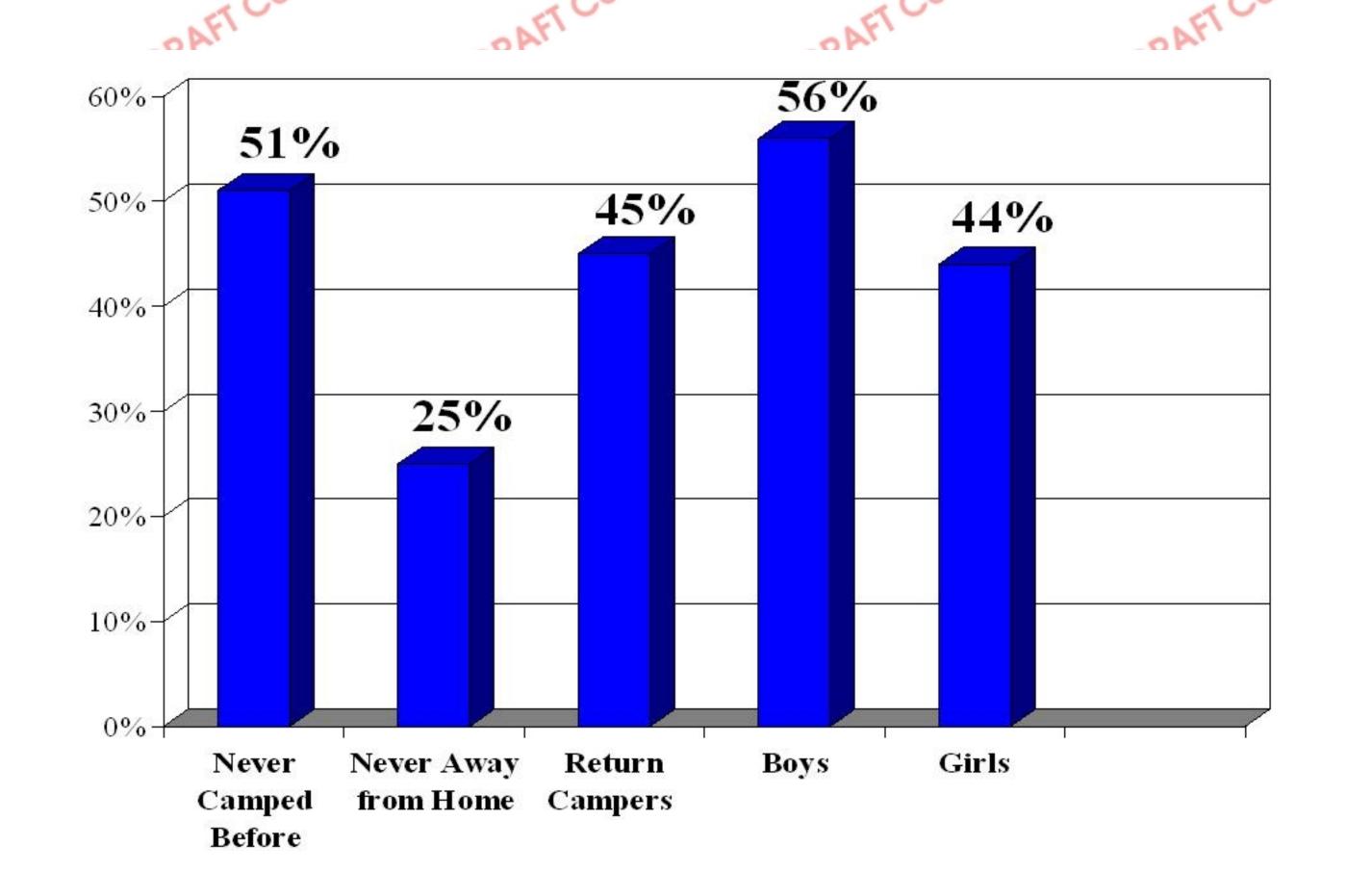
Results

Correlations of Health Status Measures

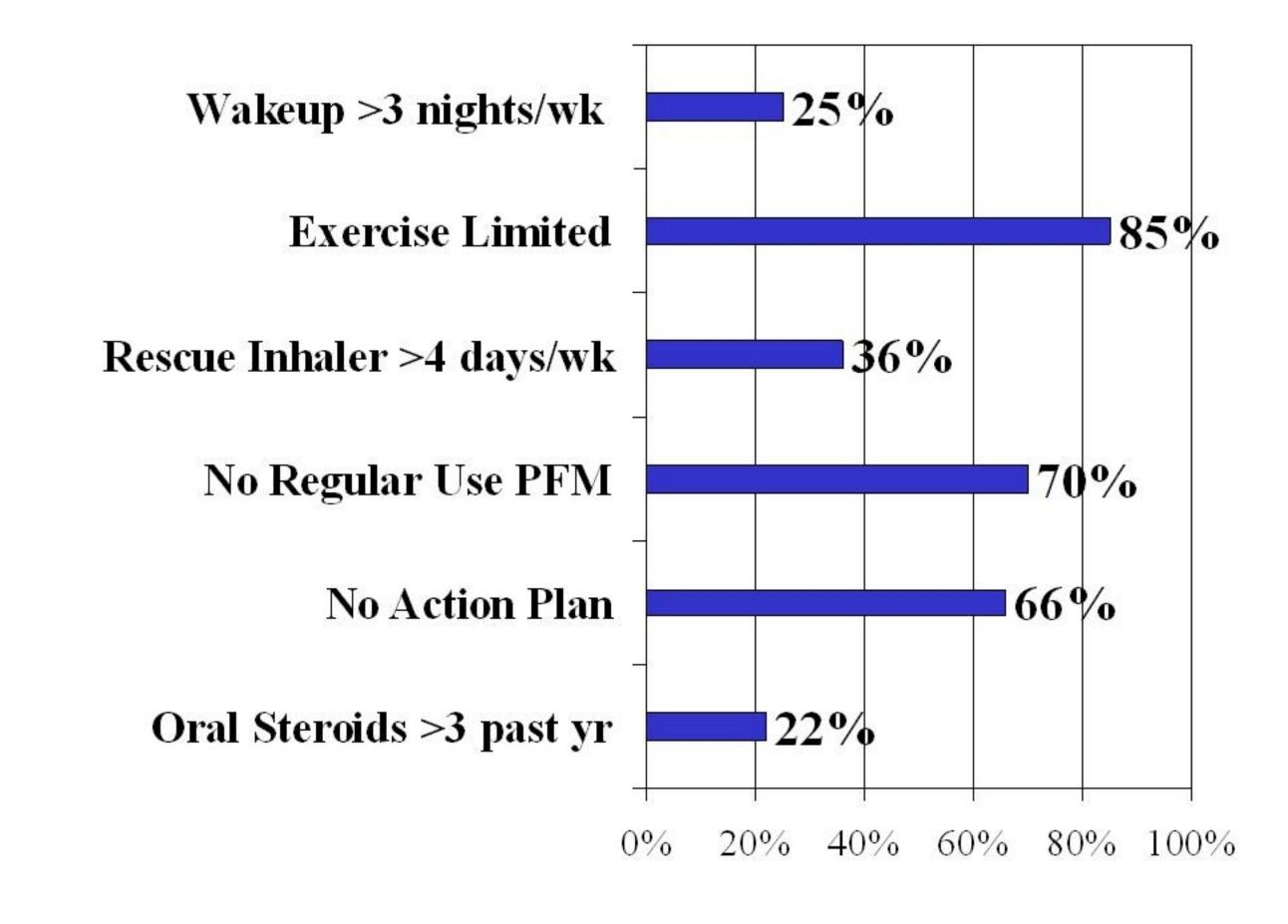
	r-value	p-value
School absences and times wakeup at night	.3	0.0001*
School absences and ER visits	.44	0.0001*
School absences and Dr visits	.46	0.0001*
Times wakeup at night and Dr visits	.17	0.0025*
Times wakeup at night and ER visits	.27	0.0001*
Exercise limitation and Dr visits	.21	0.0001*
Dr visits and ER visits	.51	0.0001*

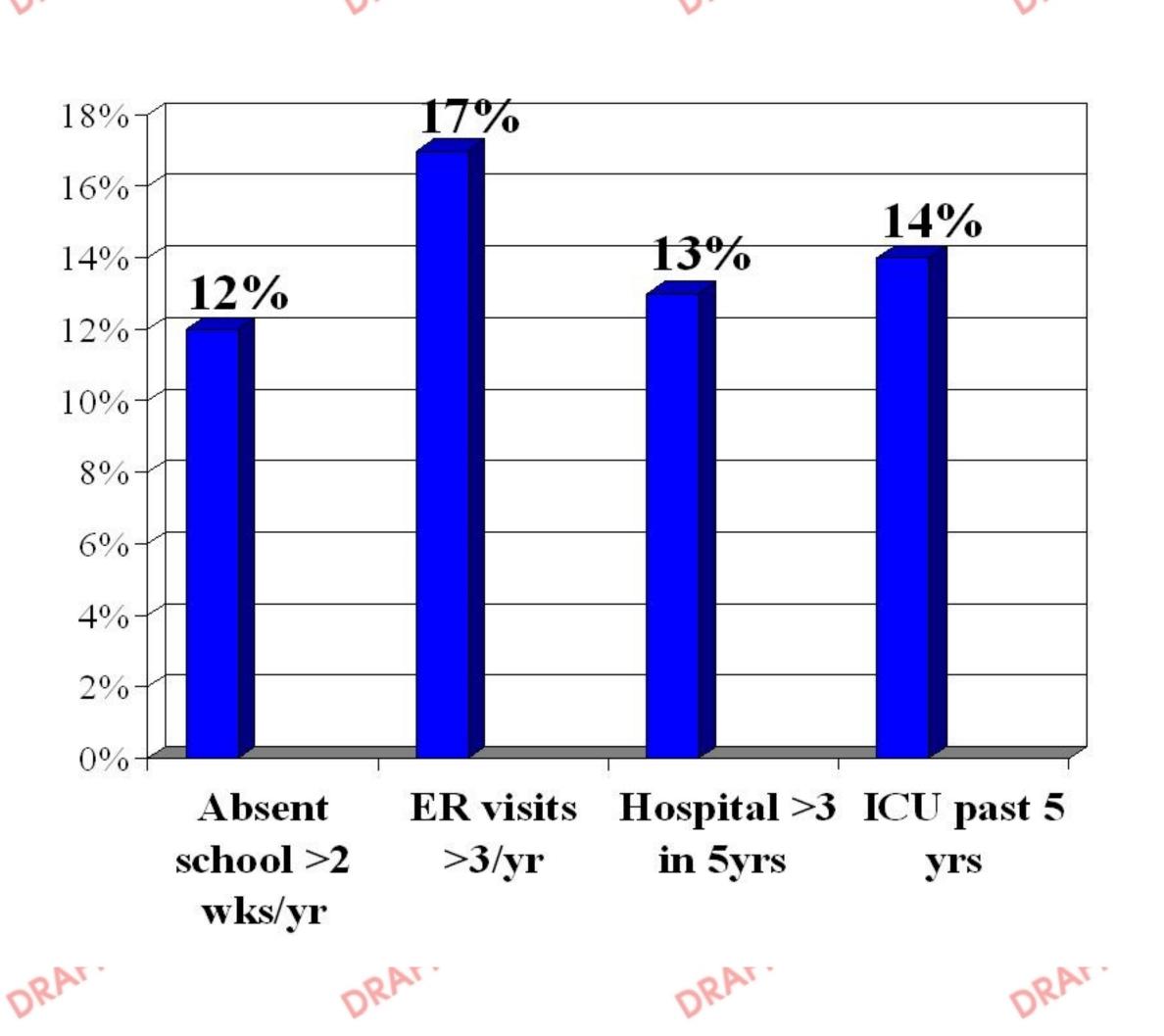
*Significant (p<.05) n=372

Conclusions: responses were internally consistent



Results (cont)





Medications Used by Campers

- Inhaled Corticosteroids 73%
- Leukotriene Modifiers 40%
- Any Controller Medication 78%

43% followed by allergist or pulmonologist

PFM & Asthma Action Plan more commonly used in children followed by an allergist (p<0.01, p<0.0001, respectively)

Results (cont)

Profile of Health Status Measures in Previous Campers versus New Campers

	Previous Campers (n = 172, age 11.3 <u>+</u> 1.6)	New Campers (n = 200, age 9.9 <u>+</u> 1.6)
Days absent from school/yr	6.2 ± 9.6 (0 – 60)	6.1 ± 7.7 (0 – 60)
Times wakeup at night/wk	1.4 ± 1.5 (0 – 7)	$1.4 \pm 1.7, 0 - 11$
PFM regular use	32%	30%
Action plan in place	37%	29%
Doctor visits/yr	2.6 ± 3.3, 0 - 20	3.1 ± 3.8, 0 - 30
ER visits/yr	$0.8 \pm 1.8, 0 - 15*$	$1.2 \pm 1.7, 0 - 10*$
Hospitalizations/5 yrs	$1.1 \pm 2.2, 0 - 11$	1.1 ± 3.3, 0 - 35
ICU admissions/5 yrs	$0.3 \pm 1.0, 0 - 7$	$0.3 \pm 2.5, 0 - 35$

*p = 0.09, approached significance (p < .05) using student's t-test

Conclusions/Future Plans

A common Health History Application was successfully utilized by multiple asthma camps and the parents' responses to the questions about their child's asthma were internally consistent.

Useful aggregate information was collected about the degree of asthma control and type of asthma treatment in these children attending camp, and suggest:

- A significant degree of sub-optimal control exists
- Under-treatment appears to be common

Children who have been to camp previously tend to have fewer ER visits compared to those attending for 1st time

Future Plans:

Expand the number of camps using common HHA with goal of:

- Increasing size and accuracy of database
- Increasing our understanding of profile of children attending

camps to better serve their needs

Take advantage of opportunity asthma camps represent in making an appreciable difference in the lives of children with asthma

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