

# Do Home Visits Improve Retention Rates in a Low-Income School-Based Mobile Asthma Clinic Program

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CHOC Breathmobile

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## Background

The CHOC Breathmobile program was developed to improve children's health status and quality of life by providing specialty care to asthmatic children at their local schools. As with any program, successful outcomes often depend on good retention and compliance of patients. Here we examine if the addition of home visits by a community health educator, outside of regularly scheduled physician visits on the CHOC Breathmobile, improve retention rates in the program.



## Methods

Children were participants in a school-based low-income asthma mobile van program, the CHOC Breathmobile. Recruitment was through referrals by school nurses and community public health clinics, parental response to flyers, and asthma screening questionnaires. The CHOC Breathmobile provided ongoing, continuity of care service at each school site monthly. Some families were referred to have home visits for individual education and assistance in environmental controls were having particular difficulties in managing medications, understanding asthma basics, needing other social or medical support resources, and having poorly controlled asthma despite daily anti-inflammatory medications. Home visits were performed by a community health educator in a two-step process with an initial home survey of the environment and a three-hour interactive session on understanding the basics of asthma. A second home visit a month later assessed environmental changes and the families' understanding of asthma.

## Results

From April 2002 to June 2005, of the 1,007 asthmatics cared for on the CHOC Breathmobile, 136 children received home visits. These children showed significantly improved retention rates compared to those without home visits ( $p < .001$ ) for median number of visits (5 visits vs. 2 visits), median number of days in the program (299 days vs. 63 days), percentage of patients in the program for at least 6 months (67.8% vs. 31.3%), and percentage of patients with at least 3 visits (90.9% vs. 43.6%). However, the show-rate of return visits was not significantly different between the two groups (80.0% vs. 77.5%).

Table 1. Demographic Profile of Intervention Groups

Characteristic	Intervention Group		p-value**
	Home Visits (n=136)	No Home Visits (n=871)	
# Patients	136	871	
Age (years)			
< 5	38 (28.0%)	48 (5.5%)	< .001
5 - 10	59 (43.4%)	35 (4.0%)	
> 10	79 (58.6%)	68 (7.8%)	
Gender			
Male	69 (50.7%)	45 (5.1%)	< .001
Female	67 (49.3%)	63 (7.2%)	
Ethnicity			
Hispanic	81 (59.6%)	52 (5.9%)	< .001
Other	55 (40.4%)	45 (5.1%)	
Insurance Status			
Medicaid	111 (81.0%)	71 (8.1%)	< .001
Medi-Cal	25 (18.3%)	14 (1.6%)	
Medicare	0 (0.0%)	0 (0.0%)	
Private Insurance	0 (0.0%)	0 (0.0%)	
Uninsured	0 (0.0%)	0 (0.0%)	

Table 2. Overall (All Severity Groups Combined)

Characteristic	Intervention Group		p-value**
	Home Visits (n=136)	No Home Visits (n=871)	
# Patients	136	871	
# Patients - lost to follow-up	2 (1.5%)	7 (0.8%)	> .05
# Patients with < 3 visits	59 (43.4%)	77 (8.8%)	< .001
# Patients with 3-5 visits	59 (43.4%)	77 (8.8%)	< .001
# Patients with > 5 visits	21 (15.4%)	20 (2.3%)	< .001
Median number of visits	5	2	< .001
Median number of days in program	299	63	< .001
% Patients in program > 6 months	67.8%	31.3%	< .001
# Patients with > 3 return visits	80.0%	77.5%	> .05

## Conclusions

Home visits improved retention rates significantly in the CHOC Breathmobile program. This illustrates the potential benefits of increased support, education, and points of contact with families of children with chronic diseases such as asthma.