

BENEFIT OF ASTHMA ACTION PLANPagadpally Srinivas¹**HOW TO CITE THIS ARTICLE:**

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ABSTRACT: AIM: The aim of this study was to evaluate the role of asthma action plan on asthma control, reducing unscheduled hospital visits of children with asthma. The study also was to know if the instructions regarding management are being documented in the patient notes. **METHOD:** It was a retrospective study. The data was collected from a random sample of 100 patients with asthma between Jan. 2012 to Dec. 2014 who were admitted as in-patients to the children's ward in our hospital. **RESULTS:** Children who received asthma action plan had fewer exacerbations and fewer lost school days. Good documentation of symptoms led to better compliance and outcome in the child.

KEYWORDS: Asthma; Action plan.

INTRODUCTION: BACKGROUND: Asthma is a chronic inflammatory condition of the lung airways resulting in episodic airflow obstruction. This chronic inflammation heightens the twitchiness of the airways-Airway Hyperresponsiveness (AHR)- to provocative exposures.^[1]

Asthma is the result of chronic inflammation of the airways which subsequently results in increased contractability of the surrounding smooth muscles. This among other factors leads to bouts of narrowing of the airway and the classic symptoms of wheezing.

Guided self-management, which includes self-monitoring and asthma action plan, clearly reduces asthma morbidity in children.^[2,3,5,6] A Written Asthma Action Plan is a set of written instructions which is kept by patients or their caretakers to assist in the management of asthma. Hence the aim of this study was to evaluate the impact of a written action plan on reducing unscheduled doctor visits, and asthma control in children with asthma.

The British Thoracic Society Guidelines.^[4] for Patients with Asthma Recommends: Patients with asthma should be offered self-management plan that should focus on individual needs and be reinforced by written action plan. Prior to discharge, in-patients should receive individualized asthma action plans, given by clinicians with appropriate training in asthma management Introduce asthma action plans as part of a structured educational discussion.

A written Asthma Action Plan should have Information Regarding:

- The asthma medicines the child take regularly every day.
- The things that make the child's asthma worse (triggers)
- The symptoms that mean the child needs their reliever inhaler.
- The signs and symptoms when the child needs to see the doctor.

The child's written asthma action plan should be filled in by the doctor in consultation with the parents.

MATERIALS AND METHODS: This was a retrospective study from data records of 100 random children who were admitted as asthma from 1st January 2012 to 31 December 2014. The study was approved by the local ethics committee. Asthma was defined as recurrent episodes of wheezing, cough

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and shortness of breath and still requiring asthma treatment at the time of admission. The case sheets of all the patients were scrutinized for proper documentation of symptoms during the first & any subsequent visits; also it was checked whether the children were offered written/printed asthma action plan.

RESULTS: In our study, the patients were divided into four groups: well documented and given action plan 38%, documented but not given action plan 35%; inadequate documentation were 19%, and not documented with poor outcome were 8% (Figure 1).

Those with good documentation and given action plan had significant decrease in unscheduled visits and good asthma control; patient with good documentation alone also had good asthma control; patients with inadequate documentation had unsatisfactory control and patient with very poor documentation had poor control and poor outcome (Figure 2).

A line graph plotting number of exacerbations every 3 months against visits showed a decrease in the number of exacerbations in the group given action plan against those not given or with poor documentation showed significant decrease in the number of symptoms over a 3 month period (Figure 3).

A bar diagram showing the average number of admissions over a year showed significant difference in the number of admissions in the children given action plan and those who were not given or were poorly documented.

In this study, there was significant reduction in asthma exacerbations, asthma control with use of a written asthma action plan in children with all severities of asthma.

Age in Years	No. of Cases	Percentage
3-6	23	23%
6-9	48	48%
9-12	29	29%

Table 1: Age Distribution of Cases

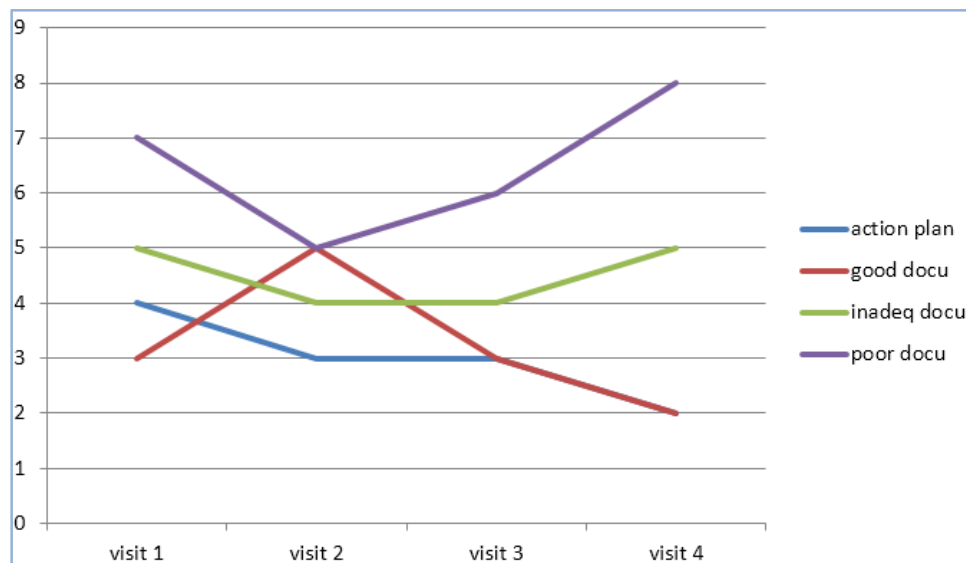


Figure 1: Distribution of Cases

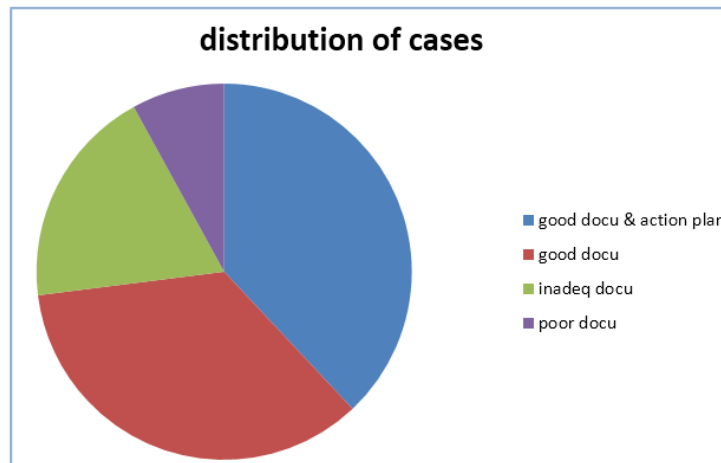


Figure 2: Distribution of Cases

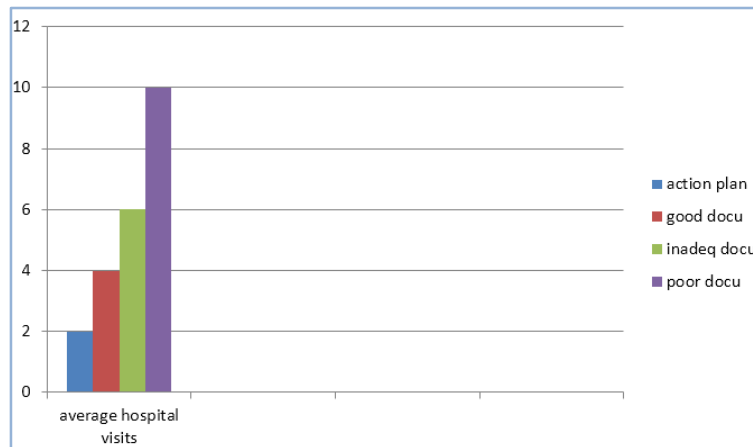


Figure 3: Average admissions over a year

DISCUSSION: In this study, there was significant reduction in asthmatic exacerbations, asthma control and quality of living with use of action plan in children with all severities of asthma. A systematic review of randomized controlled trials examining written action plans in asthmatic children revealed written asthma action plan had a significant effect on asthma control and quality of life.^[2,3,6,7,8,9]

CONCLUSION: There was no significant reduction in asthmatic exacerbations, improvement in asthma control or quality of life with the written asthma action plan when used in children with all severities of asthma.

SUGGESTIONS:

- Written personalized action plans should be given to all patients diagnosed as being asthmatic
- The action plan should include information about: the condition, the medication, how to take medication, spacer, specific advice about recognizing loss of asthma control, action taken if asthma deteriorates.


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- Tailor the advice and education to the individual needs of the patient. Identify areas where patient most wants treatment to take effect.
- Brief simple education linked to patient goals is most likely to be acceptable to patients/carers.
- Review self-management skills at each hospital visit and review compliance.
- The action plan should be documented in the patient notes every time the patient is admitted.

Massachusetts Asthma Action Plan

Name:		Date:
Birth Date:	Doctor/Nurse Name	Doctor/Nurse Phone #
Patient Goal:		Parent/Guardian Name & Phone
Important! Avoid things that make your asthma worse:		

Personal Best Peak Flow: _____



The colors of a traffic light will help You use your asthma medicine.

Green means Go Zone!
Use controller medicine.


Yellow means Caution Zone!
Add quick-relief medicine.

Red means Danger Zone!
Get help from a doctor.

GO – You're Doing Well! ➔
Use these daily controller medicines:

You have all of these:

- Breathing is good
- No cough or wheeze
- Sleep through the night
- Can go to school and play




MEDICINE/ROUTE	HOW MUCH	HOW OFTEN/ WHEN

CAUTION – Slow Down! ➔
Continue with green zone medicine and add:

You have any of these:

- First signs of a cold
- Cough
- Mild wheeze
- Tight Chest
- Coughing, wheezing, or trouble breathing at night




MEDICINE/ROUTE	HOW MUCH	HOW OFTEN/ WHEN

CALL YOUR DOCTOR/ NURSE: _____

DANGER – Get Help! ➔
Take these medicines and call your doctor now.

Your asthma is getting worse fast:

- Medicine is not helping
- Breathing is hard and fast
- Nose opens wide
- Ribs show
- Can't talk well



MEDICINE/ROUTE	HOW MUCH	HOW OFTEN/ WHEN

GET HELP FROM A DOCTOR NOW! Do not be afraid of causing a fuss. Your doctor will want to see you right away. It's important! If you cannot contact your doctor, go directly to the emergency room and bring this form with you. **DO NOT WAIT.**
Make an appointment with your doctor / nurse within two days of an ER visit or hospitalization.

Doctor /NP/PA Signature: _____ Date: _____

I give permission to the school nurse, my child's doctor/NP/PA or _____ to share information about my child's asthma

Parent/Guardian Signature: _____ Date: _____

SEE BACK OF SCHOOL COPY FOR STUDENT MEDICATION ADMINISTRATION AUTHORIZATION

Model Asthma Action Plan

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