

Comparing Three Ways to Prepare Children and Caregivers to Manage Asthma after an Emergency Room Visit – The CHICAGO Trial

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What was the research about?

Asthma affects 1 in 10 children in the United States. When asthma isn't managed well, children may need treatment in an emergency room, or ER. Doctors in the ER can use guidelines based on research to decide how to prepare families to manage asthma after they go home.

This study compared three ways to prepare children and caregivers to manage asthma after they leave the ER:

- **Guideline-based, ER only.** In this approach, the children and caregivers received instructions in the ER about how to use their medicines and inhalers. Afterward, ER staff set up follow-up office visits.
- **Guideline-based, ER plus home visits.** In addition to the meeting in the ER, children received up to five at-home visits from a community health worker who reviewed information and instructions from the ER meeting.
- **Enhanced usual care.** Children received the care usually provided in the ER, plus education on how to use their inhalers. Children also received two free inhaler spacers. A spacer is a tube that holds the medicine in place so that it's easier to breathe in.

What were the results?

The three ways of preparing families to manage asthma at home didn't make a difference in how families said asthma affected their lives, such as whether children had trouble breathing or if caregivers could work. However, compared with children who received enhanced usual care, children who received guideline-based care in the ER—with or without home visits—were more likely to

- Use medicine at home, including steroids, inhaler medicine, and rescue medicine
- Schedule an office visit

Children who received at-home visits were more likely to fill prescriptions and go to the office visit than children who received guideline-based care in the ER only or enhanced usual care.

Who was in the study?

The study included 373 children ages 5 to 11 who received care at six hospitals in Chicago. Of these children, 64 percent were black, and 31 percent were Hispanic or Latino. The average age was 7, and 67 percent were boys. Eighty percent had public insurance.

What did the research team do?

The research team assigned children, by chance, to receive one of three types of care. During the ER visit and six months later, the team asked children and caregivers to fill out a survey about how asthma affected their lives. The team also looked at patients' health and pharmacy records to find out how often

- Children got an appointment for an office visit
- Children went to the office visit
- Children got prescriptions for asthma medicine before leaving the ER
- Caregivers filled children's prescriptions

Doctors, community health workers, public health officials, people with asthma, and caregivers of children with asthma helped plan the study.

What were the limits of the study?

The research team enrolled fewer children in the study than planned. In addition, only 63 percent of children completed the six-month study. Results may have been different if more children had enrolled in or completed the study.

Future research could look at how guideline-based meetings and the use of community health workers affect children and caregiver's lives with more people in different locations.

How can people use the results?

Hospital staff and doctors can consider the results when planning ways to help children and caregivers manage asthma at home after going to the ER.

To learn more about this project, visit www.pcori.org/Krishnan184.