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AAAAI: School supervision aids asthma therapy in students
Terry Murray

Salbutamol use, absenteeism both improved

By Terry Murray

SAN ANTONIO, TEX. – Directly observed therapy(DOT)by non-medical personnel has been successful in the treatment of tuberculosis. Now, clinicians are finding it can also work for pediatric asthma, especially in inner cities.

Seeing the success of some DOT programs administered by school nurses, Chicago researchers have now shown improved outcomes for asthmatic schoolchildren when non-medical school staff gives the treatment.

In a pilot study in Chicago, students who got their morning dose of an inhaled steroid at school showed a greater reduction in daily salbutamol use and school absences than those whose asthma therapy was delivered at home.

"Home adherence is likely lowest on hectic school mornings," said Dr. Lisa Sullivan, an allergy fellow at Rush University Medical Centre.

The pilot study included 31 children, ages six to 15 years, with an established diagnosis of asthma and already being managed on daily fluticasone, the steroid of choice offered by the asthma clinic at Chicago's Cook County Hospital.

In the study, conducted during the 2003/04 school year, 15 children(who attended 14 different schools)received the morning dose of steroid at school, any time between 8 a.m. and noon. Any adult could supervise, and they included a school principal, office staff, teachers' aides and in one case, a security guard.

The adults directly observed children age seven and up who could administer the drug themselves; they administered the drugs to six-year-olds.

The control group of 16 children were left to take all asthma medications at home, and both groups received basic asthma education at each of six study visits.

They were also allowed to continue all other medications, as well as salbutamol for their acute asthma symptoms. The primary endpoint of the study was the number of salbutamol treatments per day.

Through the fourth and fifth visits, both groups of children improved "dramatically," decreasing daily salbutamol use by up to 50%, Dr. Sullivan said, which she attributed to the education provided during the study. But by the end of the school year, the kids who had been getting their morning steroid dose at school showed a significantly greater decrease of about 73% from baseline. They had gone from an average 1.5 salbutamol treatments per day to 0.4, Dr. Sullivan said.

As far as school absenteeism, both groups also dramatically improved through the fourth visit, when the control group "peters out," although with a 70% reduction in monthly absences from baseline.

"But the intervention group improved that much more," she added, and by the sixth visit, their reduction in absences was significantly greater than that of the control group—from 2.8 days absent per month at the start to 0.5 days.

Dr. Sullivan called the results "promising."

"Schools are uniquely situated to have the largest impact on inner-city asthma," she said. "They would offer one 'square' treatment a day," similar to the "square meals" provided in school breakfast and lunch programs.