

# ICU stays for worst asthma drop 74 percent, review finds

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A review of 30 years of life-threatening asthma cases in a San Antonio intensive care unit found that annual ICU admissions for the condition have dropped 74 percent. The study, by UT Medicine San Antonio physicians who reviewed cases at University Hospital between 1980 and 2010, also showed intubation in the emergency department to help patients breathe did not result in longer hospital stays.

UT Medicine is the clinical practice of the School of Medicine at The University of Texas Health Science Center San Antonio.

Faculty studied inpatient care of status asthmaticus at University Hospital. Patients with this condition experience [respiratory failure](#) because their asthma is not responding to standard therapies.

To review status asthmaticus cases, the team extracted all notes and orders from an [electronic medical record](#). This showed 227 patients were admitted to the medical [intensive care unit](#) with 280 episodes of status asthmaticus over the three decades. Encouragingly, the hospital analysis showed only one death — and it was of a different cause after the asthma improved.

## Patients making wise choices

"The main reason for the decline in cases is that more of our patients are taking their controller medications such as inhaled corticosteroids, which

reduce the amount of inflammation in the airways," said lead author Jay I. Peters, M.D., professor and chief of pulmonary diseases in the School of Medicine.

In a separate study of 1,000 children and adults, 70 percent of asthma patients reported routinely taking their corticosteroids. Dr. Peters credited this high rate of compliance to asthma education programs provided in neighborhood clinics, including patient care facilities in the University Health System.

"Studies show if you use your corticosteroid at least 11 months out of the year your risk of dying from [asthma](#) comes down exponentially," Dr. Peters said. "Many times asthmatics don't comply because they feel fairly good on a daily basis, but the steroids reduce the risk of exacerbations and death."

Pulmonary physicians thought too many asthmatics were intubated in emergency departments, leading to longer hospital stays. Intubation is insertion of a tube to increase airflow. Previous studies in the medical literature concluded asthmatics should not be intubated because of increased risk of complications such as pneumonia.

## **Don't be afraid to intubate**

In the San Antonio study, patients were intubated either because they quit breathing or their carbon dioxide levels had risen dangerously. High carbon dioxide causes blood to be acidic, and irregular heartbeat can result when acid is elevated. This raises the risk of cardiac arrest.

According to the data, few patients suffered complications after being intubated. "I think our methods of treating patients in the [emergency department](#) have improved so much that previous studies of issues with intubation don't hold up anymore," Dr. Peters said.

"On the front end, this study reinforces the importance of staying on controller medications," he said. "On the back end, it shows low mortality for patients in the medical ICU and that we don't need to be afraid to intubate [patients](#) and place them on mechanical ventilation if necessary."

**More information:** The study is described in *Respiratory Medicine*.  
[www.ncbi.nlm.nih.gov/pubmed/22188845](http://www.ncbi.nlm.nih.gov/pubmed/22188845)

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