and interactions. By helping the busy emergency physician focus on the evaluation and streamline the treatment of the poisoned patient, the poison center can save both time and money. Although many emergency physicians have special interests and expertise in toxicology, physicians who subsequently treat the patient may not be as comfortable or qualified, and early consultation with the poison center can be beneficial to subsequent treating physicians.

Medical toxicologists are not interchangeable with poison centers. Poison center consultation is appropriate for almost all poisoning cases, and medical toxicology consultation is appropriate in more complex cases.

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47/8/103838

1. *American College of Emergency Physicians. Clinical policy for the initial approach to patients presenting with acute toxic ingestion or dermal or inhalation exposure.* Ann Emerg Med. *1999;33:735-761.*

2. *American College of Emergency Physicians. Clinical policy for the initial approach to patients presenting with acute toxic ingestion or dermal or inhalation exposure.* Ann Emerg Med. *1995;25:570-585.*

In reply:

On behalf of the ACE P Clinical Policies Committee, I would like to thank Dr. Casavant for his comments on the "Clinical Policy for the Initial Approach to Patients Presenting With Acute Toxic Ingestion or Dermal or Inhalation Exposure." The Clinical Policies Committee shares Dr. Casavant's belief that poison information centers are an important resource to physicians. Certainly, poison information centers and medical toxicologists have unique and complementary roles in the management of poisoned patients. We would encourage emergency physicians to report toxic exposures to poison information centers, if only for the important public health benefits routine reporting provides. Because there is not strong research-based evidence to support involvement of a poison information center "in every poisoning case," we did not make this a rule. Because of the complex nature of patients presenting with toxic exposures, no rule or guideline can adequately dictate when an emergency physician should use additional resources. The Clinical Policies Committee believes that emergency physicians have access to additional resources, including poison information centers and medical toxicologists.

Edwin K. Kuffner, MD
On behalf of the ACEP Clinical Policies Committee

47/8/103837

Ipratropium Bromide in Emergency Management of Acute Asthma Exacerbation

To the Editor:

In a recent meta-analysis, Stoodley et al[1] (article #98146) conclude that ipratropium offers a "moderate statistical improvement in airflow obstruction" as an adjunctive treatment to β-agonists for acute asthma. On closer examination, it is not clear that the trials available for inclusion in the meta-analysis allow even this cautious endorsement of combination therapy in adults.

The primary objective for most of the included studies was to determine the bronchodilatory effects of a single ipratropium/β-agonist combination treatment compared with a single β-agonist treatment. The stated endpoint was change in pulmonary function, usually measured 45 to 90 minutes after the treatment ended. This study design, however, is not consistent with routine emergency department treatment, which currently includes several β-agonist treatments administered over the first hour and additional treatments administered hourly until a disposition is made. A single β-agonist treatment is not sufficient therapy for most patients with acute asthma. Because only one treatment was given for most of the studies referenced, this leaves the possibility that additional treatments with β-agonists might have negated any of the small beneficial effects attributed to ipratropium. Some additional support for this comes from the largest study (n=394) referenced, which actually included 2 treatments administered over 90 minutes.[2] After one set of treatments was given, a 110-mL difference between combination therapy and β-agonist therapy was noted; after a second set of identical treatments 45 minutes later, there were virtually no differences between the combination and β-agonist groups.

Regarding the interpretation of admission data, similar problems apply. The 3 referenced studies that included hospitalization rates did not evaluate improvement in admission rates as a primary objective.[2-4] The protocols ended 90 minutes after 1 or 2 treatments were administered, and any additional therapy given in the ED was not reported. In examining the individual studies, it is also difficult to determine what occurred after the 90-minute study period ended. Some clarification may come from a recently published pooled analysis of the 3 studies, which indicates that "90 minutes after baseline patients were either admitted or discharged from the ED, depending on clinicians assessment of the response to the therapy."[5] Any disposition made at 90 minutes, before additional β-agonists are given, would be premature because the assessment would be based simply on the addition of ipratropium to inadequate β-agonist therapy. In the one large study in which 2 treatments (as opposed to one) were given, the admission rates were virtually identical (13% versus 14%), further suggesting that additional β-agonist treatments would negate any benefit from a single combination therapy.[2]

The meta-analysis confirmed the presence of a small bronchodilatory effect from a single combined treatment but did not answer the question of whether ipratropium improves outcomes when added to standard ED therapy. This is a difficult task for any "adjunctive" agent, given the powerful and immediate influence of β-agonists and the limited time a patient spends in the ED. Although ipratroprium has relatively few side effects and can be easily administered, the published literature currently does not support its use as an adjunct to standard care for adults. Before we make a determination on the role of ipratropium in acute asthma, large studies evaluating combination therapy with established ED treatment protocols need to be performed and applied with the same rigors as the study of other potential adjuncts.

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47/8/103839

1. Stoodley RG, Aaron SD, Dales RE. The role of ipratropium bromide in the emergency management of acute asthma exacerbation: a metaanalysis of randomized clinical trials. Ann Emerg Med. 1999;34:8-18.

2. Karpel JP, Schacter EN, Fanta C, et al. A comparison of ipratropium and albuterol vs albuterol alone for the treatment of acute asthma. Chest. 1996;110:611-616.

3. Garrett JE, Town GI, Rodwell P, et al. Nebulized salbutamol with and without ipratropium bromide in the treatment of acute asthma. J Allergy Clin Immunol. 1997;100:165-170.

4. Fitzgerald JM, Grunfeld A, Pare PD, et al. The clinical efficacy of combination nebulized anticholinergic and adrenergic bronchodilators vs nebulized adrenergic bronchodilator alone in acute asthma. Chest. 1997;111:311-315.

5. Lanes SF, Garrett JE, Wentworth CE, et al. The effect of adding ipratropium bromide to salbutamol in the treatment of acute asthma. Chest. 1998;114:365-372.

In reply:

We appreciate the comments of Dr. Silverman concerning the conclusions of our meta-analysis, and we would like to reply to some of his concerns.

The purpose of a meta-analysis is to pool individual randomized controlled trials together to arrive at an overall estimate of the effect of the intervention under consideration.[1] When we set out to evaluate the effectiveness of ipratropium as an adjunct to β-agonists for emergency treatment of asthma, we systematically searched the literature for relevant clinical trials. Almost all of the retrieved clinical trials used variations of the same study design; that is, patients were treated with a single dose of either a β-agonist/ipratropium combination or with a single dose of β-agonist plus placebo. Effects on airflow were determined 30 to 90 minutes after the study medications were administered. Our meta-analysis of the 10 clinical trials, all of which used this study design, determined that the use of a β-agonist/ipratropium combination was associated with a modest statistical improvement in airflow obstruction compared with use of β-agonists and placebo.[2]

We agree with Dr. Silverman that routine emergency department treatment of acute asthma often involves several β-agonist treatments administered over the first hour. Unfortunately, we were not able to find any double-blind, randomized, clinical trials evaluating ipratropium that used this approach. Therefore we could not include any such studies in a meta-analysis.

Dr. Silverman hypothesizes that additional treatments with β-agonists within the first hour might have negated any of the small beneficial effects seen with the addition of ipratropium. To date, there are no published clinical trials of acute asthma that have compared multiple doses of β-agonist/placebo given in the first hour with multiple doses of β-agonist/ipratropium. Therefore, there is currently no evidence to support Dr. Silverman's conjecture that ipratropium is ineffective if multiple doses of β-agonists are given.

In summary, our meta-analysis presented a synthesis of all of the best available study data and concluded that adding ipratropium to β-agonists produced a modest statistical benefit in airflow obstruction. We agree with Dr. Silverman that future studies should use multiple doses of bronchodilators given in the first 60 to 90 minutes, large study sizes, and repeated measurements. Finally, important clinical outcomes, such as risk of hospitalization or risk of re-presentation to the ED, will need to be confirmed by large studies that use clinical endpoints as their primary outcome measures.

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47/8/103840

1. Moher D, Olkin I. Meta-analysis of randomized controlled trials. A concern for standards. JAMA. 1995;274:1962-1964.

2. Stoodley RG, Aaron SD, Dales RE. The role of ipratropium bromide in the emergency management of acute asthma exacerbation: a metaanalysis of randomized clinical trials. Ann Emerg Med. 1999;34:8-18.

Accident or Crash?

To the Editor:

The language police are at it again. For years, I have avoided using the forbidden phrase *emergency room* in polite company for fear that I would be viewed as some type of vermin in the house of emergency medicine. More recently, the realization that everyone outside our profession thinks of us very favorably as *ER docs* (thanks, in part, to Anthony Edwards, Eriq LaSalle, et al) has begun to soften this linguistic taboo.

Just when things were starting to look up, though, another forbidden phrase has reared its head, *motor vehicle accident*, with its corresponding abbreviation MVA. It is now widely suggested that crashes involving motor vehicles are predictable and preventable and therefore are not accidents.

Webster's New Collegiate Dictionary[1] gives several definitions of *accident*, including "lack of intention or necessity," and "an unfortunate event resulting from carelessness, unawareness, ignorance, or a number of causes." *Accidental* is defined as "happening without intent or through carelessness and often with unfortunate results." Collisions or crashes involving motor vehicles meet these definitions and can properly be called accidents. It should be noted that these definitions do not preclude the prevention of accidental events.

Public safety and the prevention of injury are and must continue to be a high priority for emergency physicians and the organizations that we create. Those who wish to use the term *crash* to emphasize the preventability of motor vehicle accidents are right to do so. I hope that enforcing a linguistic correctness of the words we use will not become a diversion from the work that needs to be done.

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47/8/103841

1. Woolf HB, et al, eds. Webster's New Collegiate Dictionary. Springfield, MA: G & C Merriam Co; 1979:7.

Assuring That Managed Care Organizations Provide Appropriate Instructions Regarding Use of Emergency Departments

To the Editor:

As officers of the California Chapter of the American College of Emergency Physicians, we read with interest the article entitled