

Does Patient Education in the Emergency Department Increase Patient Awareness that Acetaminophen is Contained in Percocet?

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Introduction

Acetaminophen (*N*-acetyl-*p*-aminophenol OR APAP) is one of the most commonly used drugs in the United States (US) with over 100 APAP combination medications including multiple opioid-APAP formulations¹. Because it is so widely available, APAP overdose is the leading cause of calls to US Poison Control Centers each year.²

Approximately 40% of cases of hepatotoxicity resulting from APAP are due to unintentional overdoses.³ The FDA has developed an Acetaminophen Advisory Committee which has made several recommendations about how to prevent unintentional acetaminophen overdoses. Two of the recommendations are to enhance public education efforts and to eliminate acetaminophen containing combination products. Companies that produce APAP-combination drugs are resistant to discontinue their products.

The percentage of people with acute liver failure associated with APAP increased from 28% in 1998 to 51% in 2003. Approximately half of this group overdosed unintentionally either by taking more than the recommended dose of one APAP-containing product, or by taking multiple combination APAP-containing products. In 2009, APAP combination drugs were associated with approximately 9% of the total reported fatalities from overdose.^{4,5}

Many studies have shown that patients are unaware that APAP is contained in many combination prescription medications. Our hypothesis is twofold; to prove that patients in the ED are not aware that acetaminophen is contained in Percocet (APAP & oxycodone) and that educating patients about their prescribed medication will increase their knowledge that Percocet contains acetaminophen. Our study assesses if patient education in the Emergency Department (ED) can lead to increased awareness of acetaminophen in their prescription opioid-acetaminophen medication.

Materials and Methods

Our study was conducted in a suburban academic ED with approximately 100,000 visits a year. We performed a prospective randomized study on patients 19 years and older, that presented to the ED Fast Track and were being discharged with an outpatient prescription for Percocet (or its generic equivalent). At the time of discharge patients were asked if they would participate in a voluntary questionnaire.

On odd months the patients in the control group were given a paper questionnaire to complete. On even months the patients in the case group were given a 30 second to 1 minute scripted talk about Percocet from an Emergency Medicine resident, then they were given the same questionnaire. There were three questions on the questionnaire that were addressed on the scripted talk and six unaddressed questions which were used to serve as a control for both groups.

At random, patients were contacted about four months after their encounter for a repeat phone questionnaire to see if the education provided in the case group in the ED caused them to have better questionnaire scores than those who did not receive the education in the control group. A t-test was used to compare the control and case groups.

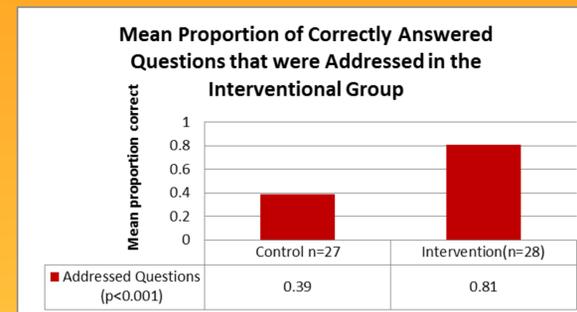


Figure 1. A comparison of the correct answers given by the group who did not receive education on Percocet (control) and the group who did receive education (case) for the questions that our education addressed. (**p<0.001**)

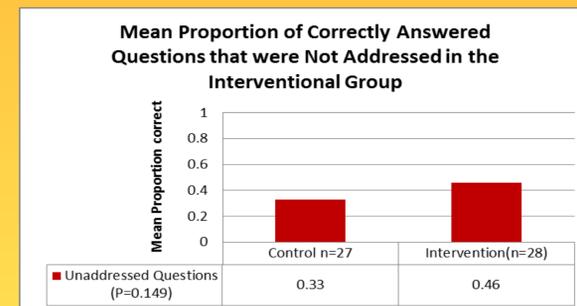


Figure 2. A comparison of the correct answers given by the group who did not receive education on Percocet (control) and the group who did receive education (case) for the questions that our education did not address. (**p=0.149**)

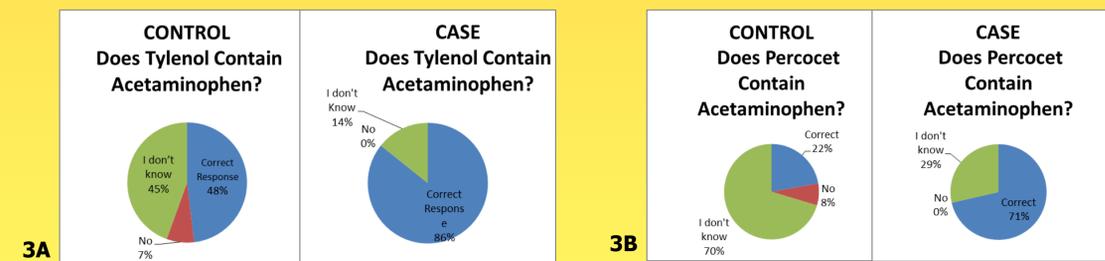


Figure 3. The percentage of patients who answered "yes", "no" and "I don't know". To the questions (3A) "Does Tylenol Contain Acetaminophen?" and 3B. "Does Percocet contain Acetaminophen?"

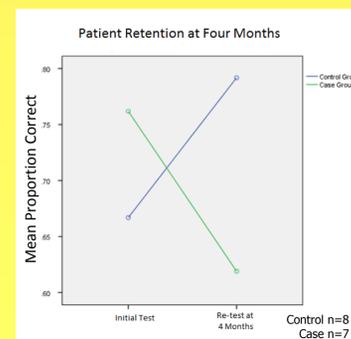


Figure 4. Patient retention of the addressed information at four months in the control and case groups.

Results

We enrolled 55 patients (27 control, 28 case) in our study. We found that the case group performed significantly better ($p<0.001$) answering the questions we addressed in our scripted talk than the control group (**Figure 1**). Both groups answered similarly on the questions that were unaddressed in the scripted talk, which served as a control between the educational levels of both groups (**Figure 2**). 48% of patients in the control group answered the question "Does Tylenol contain Acetaminophen?" correctly compared to 86% of the case group, however there were still 14% of the case group who answered "I don't know" after receiving education on that information (**Figure 3A**). Only 22% of patients in the control group answered correctly to the question "Does Percocet contain Acetaminophen?" as compared to 71% of the case group, however there were still 29% of the case group who answered "I don't know" after receiving education (**Figure 3B**). At a 4 month follow up, the scores of patients in the case group decreased greatly as those in the control group increased (**Figure 4**).

Limitations

The sample size was small and in the follow up results were not significant. Another limitation of the study could have been the educational tool we used. Future studies could look at a different intervention such as playing a video for patients to watch or making a pamphlet to take home that would allow patients to understand and retain the educational information. Because we only tested the patients after 4 months we were unable to determine when the decrement in information retention occurred.

Discussion

Our study showed that patients are able to retain educational information that is told to them for a short time, however after a 4 month period of time patients may not retain this information. Furthermore, we are concerned that even immediately after verbally being educated about APAP and Percocet, there were some patients that did not understand the information that they were just told. This is concerning because the current practice when prescribing APAP containing prescription narcotics is to verbally inform patients at the bedside as in our study. The FDA is currently trying to implement new labels and interventions to protect patients from taking an unintentional overdose of APAP. Despite the FDA's efforts, unintentional APAP overdose still remains a large public health problem.⁶

Our study shows that many patients do not know APAP is contained in Percocet and that even if educated by a scripted intervention they may not retain this information. Physicians should use extreme caution when prescribing APAP-combination medications and should continue to inform patients when prescribing these medications to check for APAP in any additional prescription or over-the-counter medications they take.

References

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