

## POSTGRADUATE MEDICAL JOURNAL

### UK trainee doctors still in the dark about potentially fatal allergic reaction

*...Despite major changes in medical education and updated guidelines on anaphylaxis over past decade*

[Correct recognition and management of anaphylaxis: not much change over a decade  
Doi 10.1136/postgradmedj-2013-132181]

[Editorial Adrenaline in anaphylaxis: overtreatment in theory, undertreatment in reality  
Doi 10.1136/postgradmedj-2014-133185]

UK trainee doctors on the frontline of care seem to be no better at recognising and treating the potentially fatal allergic reaction, known as anaphylaxis, than they were 10 years ago, reveals a small study published in ***Postgraduate Medical Journal***.

This is despite major changes to medical education, designed to equip trainees with the core knowledge and skills needed to deal with emergencies, such as anaphylaxis, and updated guidelines on the correct management of the condition, say the researchers.

Anaphylaxis, also known as anaphylactic shock, is an extreme and severe allergic reaction to common triggers, such as nuts, shellfish, or a bee sting. It typically causes breathing and circulatory problems, and can be fatal. Around 30 people die in the UK every year as a result of anaphylaxis. Prompt treatment with adrenaline is advised.

The evidence suggests that it is becoming more common, with current UK estimates indicating that 1 in 1333 people will experience anaphylaxis during their lifetime.

The researchers asked 107 trainee doctors working in one hospital in 2013 what they would do in five hypothetical scenarios, involving patients with potentially allergic reactions. Only one of the scenarios depicted true anaphylaxis (case 1).

Some 68 trainees completed the survey, and their responses were compared with those of junior doctors asked to complete the same survey in the same hospital in 2002 to see whether the knowledge gaps evident then had since been plugged.

Half of the respondents were in their first year of training after graduation (F1), so would not have gone on an Advance Life Support (ALS) course, which includes critical events such as anaphylaxis, or worked in an emergency care department.

The other half were in their second year of training (F2), and virtually all of them had done the ALS course and around one in 10 had worked in emergency care.

While all respondents in 2013 recognised the need for adrenaline in case 1, crucially one in four got the injection route wrong, which, if translated into real life, could have proved life-threatening.

F2 doctors were only marginally better at identifying the correct route than F1 doctors. And only one in three of all the respondents knew both the correct dose and route.

These figures represent a significant improvement on the 2002 responses, but are “still unacceptably low,” say the researchers.

And, worryingly, almost half of the 2013 juniors (49%) would have used adrenaline in the other four scenarios compared with one in three (32%) of the 2002 juniors.

The researchers acknowledge that theirs is a small study, conducted in one hospital, so may not reflect the picture nationally.

But the fact that the results expose a continuing knowledge gap among frontline junior doctors despite efforts to plug it is “worrying,” say the researchers, who call for formal education and training outside the ALS course to be implemented.

In a linked editorial, New Zealand immunologists Pete Storey and Penny Fitzharris echo the researchers’ concerns, concluding that “little seems to have changed over time,” and pointing out that the knowledge gap around anaphylaxis is not unique to the UK.

“We need to rethink how we train doctors and nurses in the care of all aspects of the management of this life-threatening condition,” they write.

“We know that some patients die because they are not given adrenaline soon enough, or at all, or are given it by the wrong route. This is a longstanding and international problem. Doctors, especially those in emergency departments, need to be skilled and confident in the care of these patients,” they conclude.