



Relations between number of cardiac arrests attended and (a) confidence in performing resuscitation and (b) skill of preregistration house officers

patient survived and the other in which the patient died.

The doctors also rated how confident they felt when performing resuscitation, stated how many cardiac arrests they had attended in their previous six month appointments, and rated the perceived importance of their own skills to patient survival. Each doctor's resuscitation skills were then assessed without warning before the training programme started.

Experience was associated with increased confidence (Spearman's rho=0.56) but not with increased skill (Spearman's rho=0.18) (figure). A one sided test of the differences between the two correlation coefficients was of borderline significance (95% confidence interval 0.87 to -0.11;  $z=1.59$ ;  $p=0.06$ ). Doctors thought that their resuscitation skills and those of the cardiac arrest team were much less important when the patient died

than when the patient survived. The median difference for perceived importance of own skills for when the patient survived compared with when the patient died was 1.50 (95% confidence interval 1.00 to 2.00; Wilcoxon's matched pairs signed ranks test:  $z=2.20$ ;  $p<0.05$ ); the median difference for perceived importance of team skills was 1.0 (95% confidence interval 0.53 to 1.58; Wilcoxon's matched pairs signed ranks test:  $z=2.4$ ;  $p<0.05$ ). The perceived importance of the patient's age and clinical diagnosis was unchanged by the outcome of the resuscitation attempt.

## Comment

These results suggest that the confidence of pre-registration house officers in performing resuscitation is artificially inflated by attending cardiac arrests. Many factors affect the outcome of a resuscitation attempt, so doctors can attribute more or less importance to their own skills on different occasions. There is a well described tendency to invoke competence after success but not question it after failure,<sup>4</sup> and this is evident in our study. Though this tendency protects self esteem, it may stand in the way of a realistic perception of competence.

These results agree with those from a study of trained nurses<sup>1,5</sup> and suggest that the phenomenon of experience increasing confidence but not competence is pervasive, certainly with regard to resuscitation skills. Experience is no substitute for training. Giving more feedback on performance during training, as well as pointing out the erroneous confidence that experience sometimes brings, may improve the relation between confidence and competence.

Copies of the resuscitation skills checklist may be obtained from the authors.

- 1 Wynne G, Marteau TM, Johnston M, Whitley CA, Evans TR. Inability of trained nurses to perform basic life support. *Br Med J* 1987;294:1198-9.
- 2 Kaye W, Wynne G, Marteau TM, et al. An advanced resuscitation training course for preregistration house officers. *J R Coll Physicians Lond* 1990;24:51-4.
- 3 Gardner MJ, Altman DG. *Statistics with confidence*. London: British Medical Journal, 1989.
- 4 Miller DT, Ross M. Self-serving biases in the attribution of causality: fact or fiction? *Psychol Bull* 1975;82:213-25.
- 5 Marteau TM, Johnston M, Wynne G, Evans TR. Cognitive factors in the explanation of the mismatch between confidence and competence in performing basic life support. *Psychology and Health* 1989;3:173-82.

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## Correction

### Increasing suicide rates in young adults

A printer's error occurred in this paper by Dr Adam Lowy and colleagues (10 March, p 643). The 95% confidence interval for the rise in suicide rate among people aged 35 and over was -1.4% to 2.8%, not 1.4% to 2.8% as printed.

## ONE HUNDRED YEARS AGO

Much has been said concerning the undoubtedly evil effects of excessive tea drinking. Dr. F. Mendel has recently enjoyed opportunities of studying the results of an unbridled abuse of coffee, and his results are now published. The great industrial centre round Essen includes a very large female population. Whilst the women of the working classes in this country are often addicted to dosing themselves with tea that has stood too long, it appears that the workmen's wives at Essen drink coffee from morning till night. Some consume over a pound of Ceylon coffee weekly, and one pound contains over sixty-four grains of caffeine. In consequence, nervous, muscular, and circulatory disturbances are frequent. The nerve symptoms are characterised by a feeling of general weakness, depression of spirits, and aversion for labour even in industrious subjects, with headache and insomnia. A strong dose of coffee causes the temporary disappearance of all

these symptoms. The muscular symptoms consist of distinct muscular weakness, and trembling of the hands even during rest. The circulatory symptoms are marked by a small, rapid, irregular pulse, and feeble impulse of the apex of the heart. Palpitations and heaviness in the precordial region are frequent. The hands and feet feel very cold, and the complexion becomes sallow. Dyspeptic symptoms, chiefly of the nervous type, are very common. Acne rosacea is seen in a large number of the sufferers. These coffee drinkers cannot be cured by simple abstinence from their favourite drink, with substitution of milk as a beverage. They require rest from work, open-air exercise, cold ablutions followed by friction, and small doses of brandy. Care must be taken, especially when a large body of working women are under the care of a medical officer, lest the first and last items of treatment do not lead to malingering. (*British Medical Journal* 1890;i:309.)