NAP5: aware of the limitations

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Editor—I would like to congratulate P.S. Myles on an excellent editorial in the BJA,¹ and reiterate the caution he expresses regarding the appropriateness of applying the findings of NAP5 (or indeed any clinical trial, survey or audit) to a different population than that which has been sampled. Myles refers to the misguided tendency/desire of clinicians to extrapolate the results of a specific study to incompatible contexts or populations beyond the sampling frame, and therefore the need for a judicious approach when considering the application of the NAP5 findings to an international setting.

As a UK trained anaesthetist practising in Hong Kong I am only too aware of the differences that exist between the native Hong Kong Chinese population and that which was studied in NAP5 – in particular decreased BMI, altered body composition (increased fat percentage), reduced alcohol intake and pharmacogenetics/genetic polymorphism affecting both the sensitivity to anaesthetic agents and pharmacokinetic properties within the local population, with demonstrable differences in drug metabolism (allelic variants for drug metabolising isoenzymes), bioavailability, drug redistribution, receptor binding, therapeutic ranges and renal clearance (to mention a few). Thus, the NAP5 findings must be interpreted in the context of observed clinical differences in response to anaesthetic agents, especially hypnotic drugs, opiates and muscle relaxants.

For example, when considering total i.v. anaesthesia (identified as a high-risk group by NAP5), if one was to apply internationally accepted target controlled infusion rates to the Hong Kong Chinese, the issue of awareness would be far outweighed by the negative sequelae of significantly overdosing most of your patients.

It is also necessary to consider the different implications of a case of accidental awareness in each population. Such are the medicolegal ramifications of an accidental awareness event in the UK, the NAP5 authors deemed it necessary to include a separate paper² on the relevant issues and the BJA also chose to commission an editorial dedicated to it,³ whilst such an emphasis is perhaps less warranted in Hong Kong, where societal, cultural, social and behavioural differences combined with altered patient expectations create a local population that is probably less likely to pursue legal action, should such an (equally serious and devastating) event occur.

And so, whilst one can learn a great deal from NAP5, as Myles suggests it is essential to interpret its findings with the utmost care before making any inference about its applicability to patient populations outside the UK.

Declaration of interest
None declared.

References
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Postoperative atrial fibrillation and diastolic dysfunction; the contribution of autonomic nervous system function

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Editor—With great interest, we read the recent article by Ashes and colleagues¹ regarding the association between the dynamic changes in diastolic function during the perioperative period and postoperative atrial fibrillation (AF); in patients undergoing coronary artery bypass graft (CABG) surgery. The authors very clearly discussed the relationship between postoperative atrial fibrillation and diastolic dysfunction (DD). They showed that new or worsened DD after CABG surgery is associated with an increased incidence of postoperative AF.

As a complement to their discussion, we have summarized other possible mechanistic relationships between DD and postoperative AF; in particular the effect of autonomic nervous system function.

There are many published reports of associations between alterations in autonomic nervous system and development of postoperative AF.²–⁴ Amar and colleagues³ hypothesized that parasympathetic resurgence competing with increasing sympathetic activity, is the triggering mechanism for postoperative AF. In addition, Bauernschmitt and colleagues² showed that the