is an emotional skill and a rational one; and routine use sends a
cultural message across the user’s institution that videolaryngoscopy is the way forward.

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authors.

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Videolaryngoscope as a standard intubation device

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Editor—The editorial article by Zaouter and colleagues1 re-
mending videolaryngoscopy as a new standard of care was of
great interest.

Videolaryngoscopes are indeed promising intubation devices
because they provide an improved laryngeal view. However, we
do not agree with the authors that videolaryngoscopes should
replace direct laryngoscopes and be used for all intubations in
current practice. The quantitative review and meta-analysis re-
garding the performance of video- and direct laryngoscopes indi-
cate that in patients with a normal airway, the success rate of
intubation with videolaryngoscopes is approximately the same
as with direct laryngoscopes, but the intubation time is signifi-
cantly prolonged with videolaryngoscopes;2–6 that is, tracheal in-
tubation in patients with a normal airway can be achieved
quickly and in a cost-efficient manner with direct laryngoscopes.
In fact, the most convincing literature to date supports the use of
videolaryngoscopes only in unanticipated, difficult, or failed in-
tubations with direct laryngoscopy.2 3 6

The available evidence also shows that videolaryngoscopes are
associated with better intubation success and faster intubation
time only for inexperienced operators, but they provide
no benefit in either of these outcomes with experienced oper-
ators.3 6 Thus, we argue that videolaryngoscopes are not the best
care for all patients and the direct laryngoscope is not an out-
dated intubation device, especially for providers able to com-
plete substantial training in controlled circumstances, such as
experienced anaesthetists, who are often called as airway
experts.

Furthermore, there are several different types of videolaryn-
goscopes available, each with a different blade shape, user in-
terface and geometry, and tube insertion strategy.2 3 So far, there is
inconclusive evidence to indicate which videolaryngoscope de-
sign could be more advantageous in various clinical situations.
Thus, the open questions remain. Which videolaryngoscope is
the most cost-effective device for routine or difficult intubation?
Which one is the optimum to become a new standard of care?

Given that device-specific proficiency is critical for successful
use of any intubation device, if videolaryngoscopes are used as rou-
tine intubation devices, do anaesthesiologists need to learn and
achieve clinical competence for all devices? Perhaps, there might
be a need to revise the current airway training programmes because
they do not include videolaryngoscopic intubation training in the
minimal skill set acquired by a trainee during an airway rotation.7

In addition, most of current difficult airflow algorithms are
developed as rescue guides in the event of difficult or failed di-
laryngoscopy, and these algorithms rely on videolaryngoscopes as
rescue tools for difficult or failed direct laryngoscopy.6–10

Although use of videolaryngoscopes is rapidly growing in clinical
practice, there is still no evidence-based airway algorithm where
tracheal intubation relies mainly on videolaryngoscopy. If video-
laryngoscopes are used as the routine first-line intubation de-
vices, one pertinent question is, what should one do in the

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event of a difficult or failed videolaryngoscopy? It must be emphasized that despite the very good visualization of the glottis, videolaryngoscopy does not give a 100% success rate. In a two-centre study, the GlideScope videolaryngoscope failed once every 33 patients with a difficult airway and once every 16 patients with failed direct laryngoscopy. Thus, if videolaryngoscopes are part of a new airway management protocol in which they are routinely used as first-line intubation devices, there would be a need to reconsider airway management algorithms and adopt a strategy to manage failures.

Finally, Zaouter and colleagues advise integration of videos obtained during videolaryngoscopic intubation into an anaesthesia information management system. To the best of our knowledge, most videolaryngoscopes used in current practice have no such function to transmit moment-by-moment videos into an anaesthesia information management system, and some of them even have no functional design for recording and saving intubation pictures. Perhaps, the manufacturers of videolaryngoscopes should be encouraged to provide such electronic additions to their products in order to integrate imaging of the patient’s tracheal intubation into anaesthesia electronic charting. We believe that with further developments and refinements in technology, this may no longer be an issue.

**Declaration of interest**

None declared.

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**NAP5 and the isolated forearm technique**

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Editor—The NAP5 team have delivered a landmark study with important new findings about accidental awareness during general anaesthesia (AAGA). The summary paper published in this journal makes extensive reference to the main report which contains additional data and detailed recommendations. Unfortunately, the authors have chosen to give extensive coverage of the isolated forearm technique (IFT) and described it in approximately equal terms to processed EEG (pEEG).

The isolated forearm technique, IFT, is an experimental technique used by a very small group of investigators in a limited number of small clinical studies. Perhaps surprisingly, it has not been adopted by the global research community interested in depth of anaesthesia monitoring. IFT ‘responsiveness’ during apparently adequate anaesthesia is a scientifically interesting and arguably disturbing phenomenon. Its incidence is unclear given the contradiction between reports. It occurs commonly when what some would consider an inadequate anaesthesia technique is used whereas it is very infrequent during more ‘standard’ anaesthesia. Nevertheless the idea that a patient can voluntarily respond to verbal commands during surgical anaesthesia demands attention.

IFT has not been tested in large clinical studies either for efficacy in reducing awareness (i.e. the equivalent of the B-aware study), nor has it been compared with alternatives (in the manner of the B-unaware & BAG-recall studies). There is no CE marked equipment approved for IFT monitoring, no training packages for its use have been developed or validated, and the practicalities and clinical consequences of titrating patients to an IFT non-responsive state are not known. Overall IFT can...