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The rehearsal of clinical skills in sequence, through case-based scenarios

Background and context

First year clinical students in the Department of Veterinary Medicine of the University of Cambridge have timetabled sessions dedicated to task-based training using benchtop models in the Pauline Brown Clinical Skills Centre. Combined with self-directed skills rehearsal, this results in students well-practiced with the majority of available skills stations by the start of their second year of clinical studies. Rather than further rehearsal of isolated skills, these students require additional challenges. Additionally, whilst procedures taught out of context are a beneficial starting point for the inexperienced learner, continued practice in this way can misrepresent what is required in the clinical setting[1].
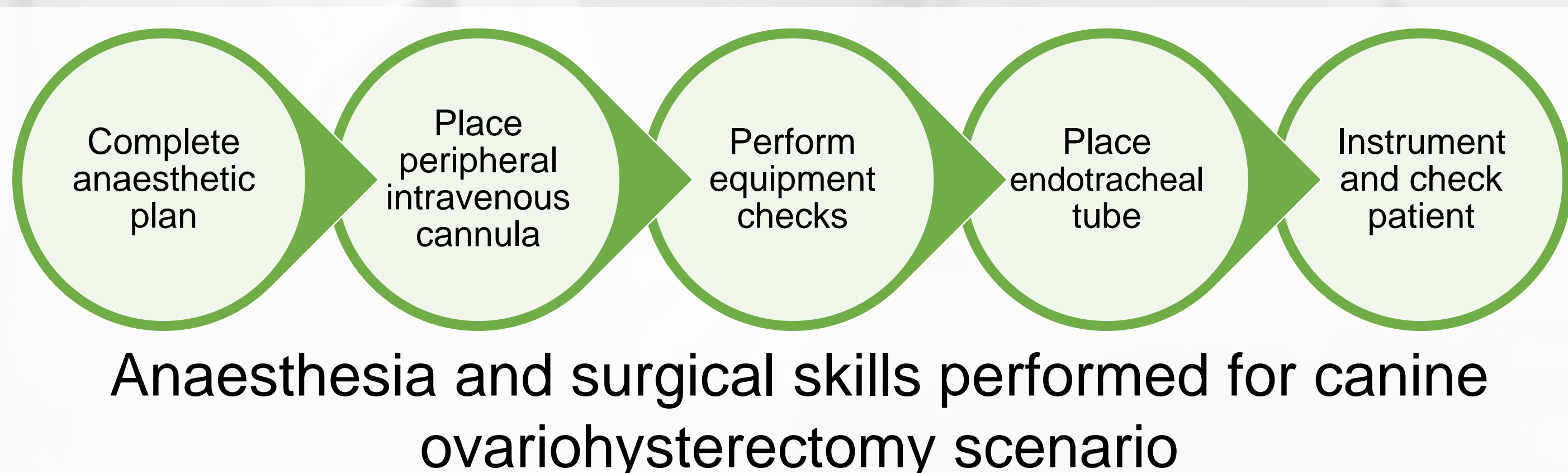
Innovation and methods

Case-based scenarios were devised, each necessitating a series of procedural skills to be performed in sequence, as required in the clinical context. The scenarios include canine ovariohysterectomy, feline urethral obstruction and equine wound management. Figures 1. through 3. illustrate the elements of each scenario.

Complete anaesthetic plan → Place peripheral intravenous cannula → Perform equipment checks → Place endotracheal tube → Instrument and check patient

Anaesthesia and surgical skills performed for canine ovariohysterectomy scenario

Surgical hand and arm antisepsis → Gown and glove → Lay instrument trolley → Drape patient → Close surgical incision

Figure 1.

Obtain blood sample → Fluid and drug therapy → Cystocentesis → Urinalysis → Communicate with client

Skills performed for feline urethral obstruction scenario

Figure 2.

Select sedation protocol → Administer sedation → Assess and close wound → Medical bandaging → Communicate with client
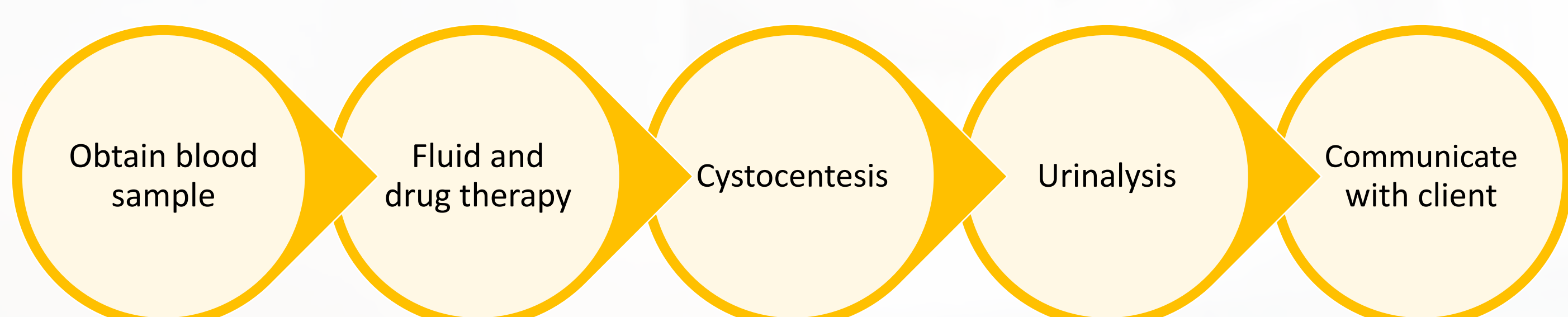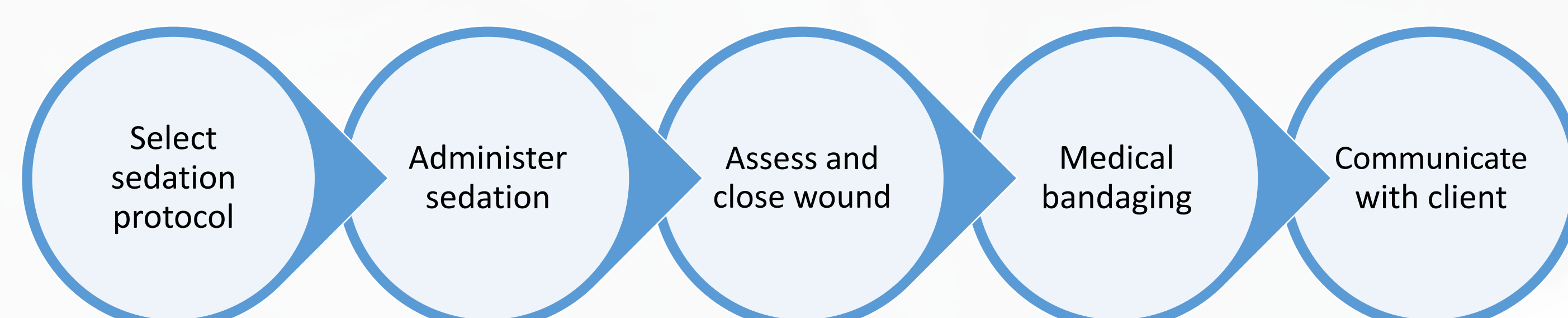
Skills performed for equine wound management scenario

Figure 3.

Additional dimensions of the simulations include clinical decision making and the use of local documentation. Students complete the scenarios with the supervision and assistance of teaching staff. Figure 4. shows students working through the equine wound management scenario.
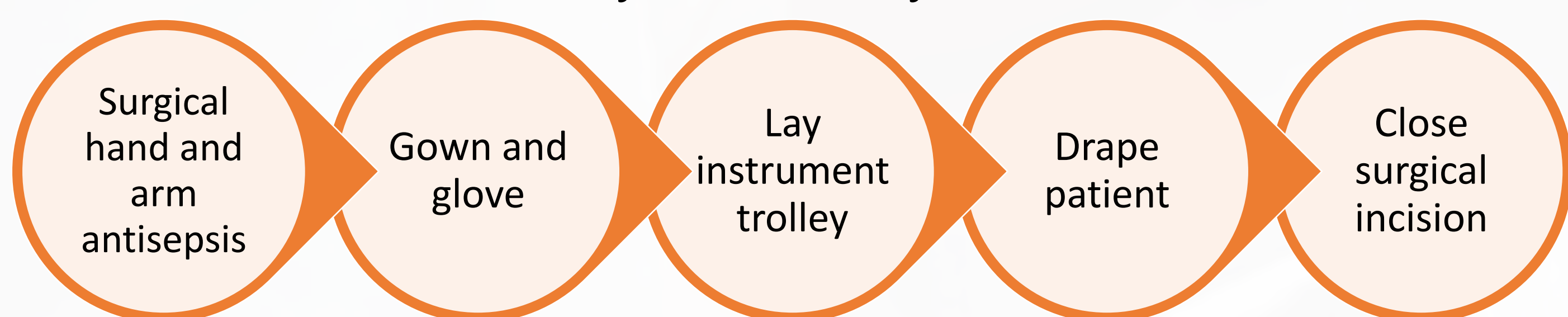

Figure 4.

Each scenario was run across one cohort of second year clinical students. Students were asked for open comments on their experience, via an anonymous online feedback mechanism.

Outcomes and further development

Each scenario was run across one cohort of second year clinical students. Students were asked for open comments on their experience, via an anonymous online feedback mechanism. 97 per cent of the responses (n=148) were positive, with 22 per cent of these comments specifically citing the sequencing of clinical skills into a case-based context. Some examples of these comments are shown in figure 5.

'Very useful to work through a whole scenario in sequence.'

'Really liked the case-based set up, and following the case around as you would do in real life.'

'Really good to practice the skills in context. Makes it all much easier to remember.'

Figure 5.

Opportunities for further development of this approach in this setting will therefore now be sought, with continuing reference to the established medical literature on contextualised simulation and procedural skills.

Reference

1. Kneebone, R., Nestel D., Bello, F. and Darzi, A., 2008. An Integrated Procedural Performance Instrument (IPPI) for learning and assessing procedural skills. The Clinical Teacher, 5 (1), pp.45-48