Animal dummy models and simulators for anesthesia training

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Organisation
Name of the organisation Ghent University (UGent)
Department Veterinary skillslab
Country Belgium

SCOPE OF THE METHOD

<table>
<thead>
<tr>
<th>The Method relates to</th>
<th>Animal health</th>
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<tbody>
<tr>
<td>The Method is situated in</td>
<td>Education and training</td>
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<tr>
<td>Type of method</td>
<td>Other</td>
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</tbody>
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DESCRIPTION

Method keywords
veterinary medicine
skillslab training
dummy
anesthesia
manual ventilation
mechanical ventilation
anesthetic monitoring
Scientific area keywords
Veterinary education
clinical training
Preclinical model

Method description
In the skillslab, dummy models and simulators are used for teaching various clinical skills. The veterinarians in training need to learn how to monitor and approach an animal under anesthesia. Furthermore, they need to learn ventilation techniques and comprehension of an anesthetic machine. An important part of this training process can be performed on dummy models and simulators in the skillslab also using anesthetic machines.

Lab equipment
Commercial dummies:
- Critical care Jerry (Rescuecritters.com)

Home-made dummies:
- stuffed toy dog with artificial lungs, endotracheal tube, ECG patches and IV catheter
- stuffed toy piglet with artificial lungs, endotracheal tube, ECG patches and IV catheter

Method status
History of use
Internally validated

PROS, CONS & FUTURE POTENTIAL

Advantages
The use of educational animal models in a skillslab offers a number of significant advantages:
- Reduced use of laboratory animals and reduced discomfort for patients, as procedures can be practised on dummy models and simulators before performing them on a live animal.
- Teaching of clinical skills in a quiet and safe environment, reducing anxiety and stress for the veterinary student.
- Complex practical skills can be split into a number of small steps when practising them in the skillslab.

**Challenges**

- High cost of models,
- Clinical training on live animals needed as well,
- Creating and repairing the home-made models is time consuming for a large group of students.
- Also, students learn how to connect monitoring cables in a logical order, but no real or simulation of monitoring parameters is included in the simulator up to now.

**Modifications**

Further optimisation of home-made models and purchasing available commercial models. Certainly, a simulation of monitoring parameters in different situations might be included in the future.

**Future & Other applications**

Training for lab animal anesthetic procedures.

**REFERENCES, ASSOCIATED DOCUMENTS AND OTHER INFORMATION**

**Associated documents**

- 20201008_085507.jpg
- USPL9293.JPG