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| **Using Living Animals for Training in Veterinary Surgery** |
| **Current Situation**Veterinary schools often start surgical training in the third year of a veterinary student’s curriculum. During this year, animals are put under anesthesia while surgical training is performed on these animals. These animals are immediately euthanized, eliminating any risk that the animal would experience any pain. The variety of surgical lessons that are taught, can depend on the instructor and the school. |
| **Positives of this Current Situation*** Animals are always under anesthesia and will die under anesthesia. This means that the animal will never feel any pain.
* The veterinary students are often in their third year, but they are accompanied by an instructor who is guiding them.
* Animals that are donated are often close to death. The principle of utilitarianism suggests that for the greater good, these animals should be used for surgical training.
* Students who make mistakes on these animals will not cost them, as compared to making dire mistakes on a real patient’s pet.
* Performing on live animals teaches students early what it is like to work with a real, living, and breathing animal.
* Anesthesia is best taught using living animals, as dosage can vary between size, species, and weight.
 | **Negatives of this Current Situation*** Some might argue that the mutilation of an animal body while it is still living is distasteful.
* What makes a sick dog at a shelter any different from a dog of mine? The fact that the dog is my property?
* There is a financial cost to housing and transporting the animal, constant anesthesia, and other general welfare. If animals are immediately euthanized after surgical training, then is an animal life and the financial cost worth one or two surgical lessons?
* If the animal regains consciousness at any point during the surgery, is the pain that the animal felt, worth the training?
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| **Proposed Change to the Current Situation**I’d like us to advance the way that we learn veterinary medicine. I propose that until the end of the third year, we strive to use only computer models, 3D printed models, specific fabrics, or even digitalized video games. In other words, until the 4th year, living animals will not be subjected to any surgical training. With the recent influx of computer science students, biomedical engineers, and the exponential growth of technology, I believe that both veterinary and human medicine will be more concordant with technology. Thus, much like how the hybridization of the internet (Carmen) and universities have innately taught students how to maneuver and use computers, moving to a digitalized form of veterinary school can innately teach students how to work with newer technology that might find a special niche in their veterinary career. For example, while 3D printing is listed as a replacement for using live animals during the 3rd year of schooling, I believe that experience with this technology and its software can find some ingenious use in their veterinary career. Doctors for example, are already developing 3D printed casts which can be applied to dogs. This change could possibly lead to a Renaissance of newer and novel veterinary diagnostics, medical, and surgical techniques. |
| **Positives of this Proposed Situation*** No animals will be euthanized after having surgical training performed onto them during the third year of veterinary school.
* This proposal also follows the 3R’s, which is important for following animal welfare standards in research and academia. Specifically, this strategy would Replace and Reduce.
* The veterinary students will have enough practice using novel methods of surgical training that by the time it is the student’s 4th year, performing on a live animal is relatively easier.
* This proposed method teaches veterinary students engineering skills (For example, learning computer programming to 3D print bones) These skills are critical to keep up with the radical evolution of technology during this time of society
* The ability for a computer to constantly scan the internet to constantly self-update and store recent research and data all by itself means that it can be possible to teach everything through technology, but only if it is digitally on the internet.
 | **Negatives of this Proposed Situation*** There is an expensive cost to develop software and purchase computer systems and hardware.
* There is a large cost of time and teaching to implement such a large scale change.
* It is difficult to practice anesthesia using a computer program.
* Difficulty in finding instructors who would be able to teach using these new methods. (Could this suggest that physical instructors are becoming obsolete?)
* The amount of variety and random diversity that occurs with animals can’t be 100% taught by technology. What if the student encounters a rare medical condition that the computer never studied?
* If I was to go to a veterinarian and they told me that my dog was the very first living animal they ever worked on, then I would feel rather nervous. This means that those 4th year students may have a harder time finding patients, which hinders their experience with living organisms.
* If happened immediately instead of over time, there could be a huge gap between two generations of veterinarians with different trains of thought
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