

## **Daniel Fletcher**

### **Newborn Resuscitation | *Daniel Fletcher***

The 2024 RECOVER evidence evaluation and treatment recommendation process was expanded to investigate the unique aspects of resuscitating newborn dogs and cats immediately after birth. In this session, attendees will learn about the RECOVER evidence-based newborn resuscitation algorithm. This algorithm provides a step-by-step approach to essential resuscitation measures for puppies and kittens as they transition from intra- to extrauterine life. Key questions addressed in this presentation are: Which newborns need resuscitation? How does the heart rate guide resuscitation measures? What monitoring should be used during resuscitation? Should oxygen supplementation always be given? How about doxapram? What is the most important intervention to save non-vigorous newborn puppies/kittens? Attendees will further gain awareness of how fundamentally different newborn resuscitation is from CPR in adult dogs and cats. (Note: the Newborn Resuscitation Guidelines have not yet been published).

#### Learning Objectives:

- Develop an approach to resuscitation in the newborn puppy or kitten based on heart rate.
- Explain why ventilation is prioritized over circulation in newborn resuscitation efforts.
- Describe the indications for the use of epinephrine during CPR in newborn puppies and kittens.
- Describe the correct use of oxygen supplementation during newborn resuscitation.

### **Monitoring During CPR: ECG, ETCO<sub>2</sub> and Beyond | *Daniel Fletcher***

Effective monitoring during CPR is crucial for guiding resuscitation efforts. This presentation focuses on the use of ECG and end-tidal CO<sub>2</sub> (ETCO<sub>2</sub>) monitoring, providing an algorithmic approach to diagnosing and managing cardiac rhythms during CPR. Additionally, there are emerging information on the use of other monitoring modalities like direct arterial blood pressure and ultrasound during CPR that we could be considering. You'll learn how to use these tools to make real-time decisions that improve patient outcomes.

#### Learning Objectives:

- Explain the role of ECG and ETCO<sub>2</sub> monitoring during CPR and how they influence decision-making
- Apply an algorithmic approach to diagnosing cardiac rhythms and adjusting CPR interventions.
- Explain how direct arterial blood pressure monitoring can be used to guide vasopressor therapy during CPR
- Describe how point of care ultrasound can be used during CPR

## **Post-Cardiac Arrest Care & Focus on Neuroprotection | *Daniel Fletcher***

After cardiopulmonary arrest (CPA), patient outcome is largely determined by the events that led to and the duration of CPA, but the processes that occur during and after reperfusion can also play a major role. Two thirds of human CPA victims that achieve ROSC die during the post-cardiac arrest (PCA) phase that starts after a return of spontaneous circulation (ROSC) occurs. In veterinary medicine, less than 20% of dogs and cats initially successfully resuscitated survived to hospital discharge. Clearly, PCA management strategies are important for improving survival from CPA. The RECOVER Initiative published the first evidence-based veterinary CPR guidelines based on an extensive review of the primary literature (Note: the PCA Care Guidelines update has not yet been published). This session will focus heavily on Neuroprotection in PCA Care. PCA Care can be successful if your team is trained and prepared. Come learn about these important guidelines!

Learning objectives:

- Devise a therapeutic and monitoring plan to meet ventilation and oxygenation goals in a patient in the post-cardiac arrest period.
- Use global hemodynamic targets to develop a plan to optimize perfusion to tissues in a patient in the post-cardiac arrest period.
- Implement neuroprotective measures to improve neurologic function and outcome in the post-cardiac arrest period.