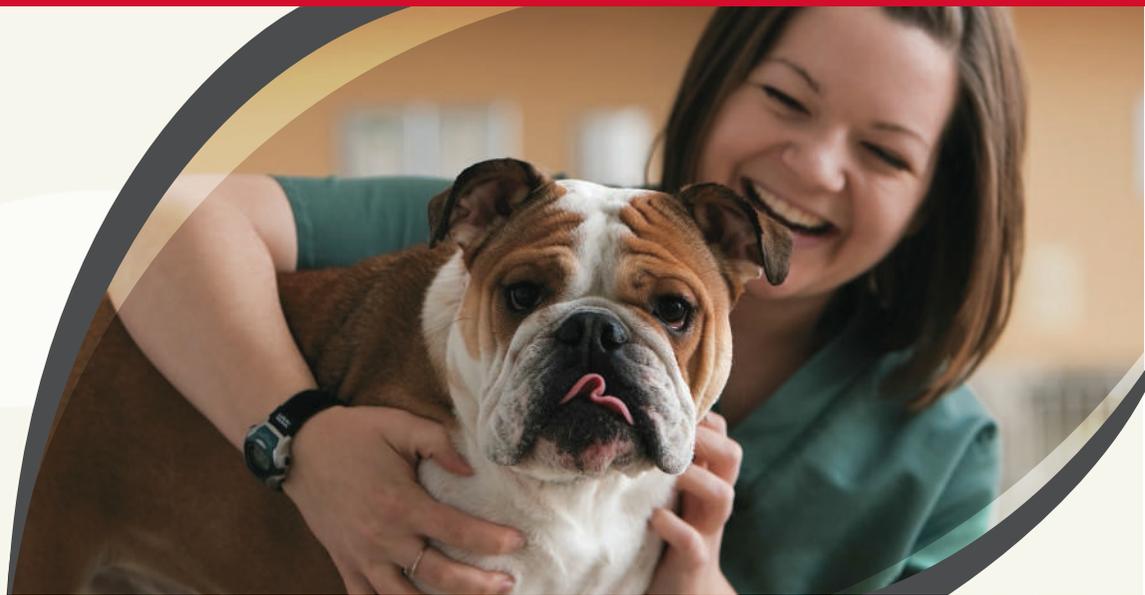


# Referral Connections

Keeping veterinary professionals in Northeast Wisconsin connected.

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- Upcoming CE Opportunities
- Community Events and Announcements



Spring 2017



## THE MEDICAL MINUTE

### Non-Invasive Ventilator Support in Small Animal Patients

Lisa Peters, DVM, DACVECC and Lou Licari, DVM, DACVECC

Oxygen therapy in small animal medicine can be administered by invasive and non-invasive methods. Invasive methods include nasal pharyngeal/tracheal catheters and mechanical ventilation/intubation. Invasive methods can lead to more complications such as nasal/tracheal irritation, pneumothorax, and infection to name a few. Non-invasive methods such as flow by oxygen therapy and cage oxygen therapy have advantages of being more patient friendly but are limited in the amount of oxygen concentration that is administered to the patient. Two other noninvasive methods utilized in human medicine include continuous positive airway pressure (CPAP) and high flow oxygen therapy (HFOT). These have been recently evaluated in veterinary medicine.

CPAP provides constant airway pressure to spontaneously breathing patients. This improves gas exchange and respiratory mechanics in patients with intact neuromuscular function. The main advantages are reduced airway resistance, reduced work of breathing, and recruitment of alveoli. Disadvantages are intolerance of the hood itself and size limitations (cannot be used in dogs or cats under 10kgs). Overheating tends to not occur due to the high flow rates utilized.

High flow oxygen therapy utilizes nasal prongs and can deliver higher flow rates and oxygen concentrations to severely hypoxemic dogs in attempt to avoid mechanical ventilation. Complications of this therapy can include patient discomfort and some patients require light sedation.

HFOT is a viable clinical intervention for dogs with moderate-to-severe hypoxemia assessed to be failing traditional oxygen therapy.

Recently one patient at the Fox Valley Animal Referral Center, Vader, survived severe aspiration pneumonia after spending many days on high flow oxygen therapy with a unit leased from a local respiratory center.

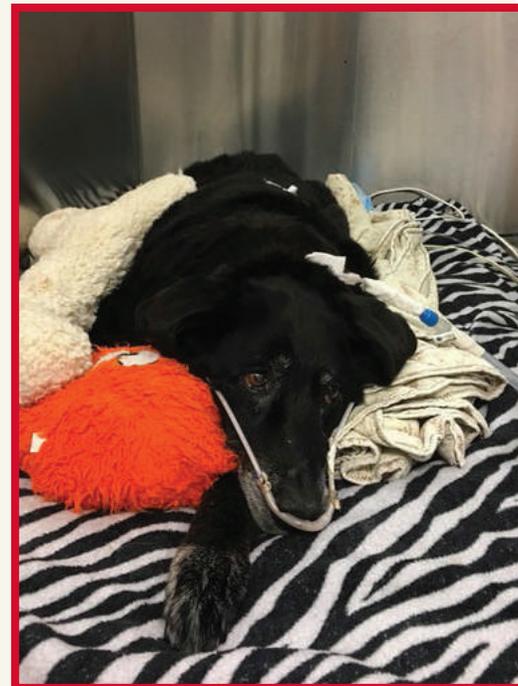
#### References:

*Continuous positive airway pressure using a hood in dogs*

Francesco Staffieri DMV, PHD

IVECCS 2016

*Retrospective evaluation of the effect of high flow oxygen therapy delivered by nasal cannula on PaO<sub>2</sub> in dogs with moderate-to-severe hypoxemia.* Keir L, et al. JVECC 2016 Jul;26(4):598-602



## Conference Pearls

Through the year, our doctors and staff attend various conferences and bring back pearls of knowledge to share. Pearls are designed to spark conversation, ignite interest, and highlight new therapies.

### North American Veterinary Conference, Feb 2017

**Lecture: "How I Treat Pneumothorax"**

**Speaker: Elisa Mazzaferro, MS, DVM, PhD, DACVECC**

In some cases of spontaneous pneumothorax, when surgery is not an option, Dr. Mazzaferro has had some success using an autologous blood patch (ABP). In ABP, 5-10 mls of blood is drawn from the patient's jugular and then injected into the pleural space. This may need to be repeated once or twice. The idea is that the autologous blood forms a clot and seals the air leak.

*Submitted by Courtney Stahl, CVT*

### North American Veterinary Conference, Feb 2017

**Lecture: "Feline Pancreatitis: Acute, Chronic, and Confusing"**

**Speaker: Steve Hill, DVM, MS, DACVIM (SAIM)**

Ultrasound guided FNA or surgical biopsies are uncommonly used as diagnostic tools for feline pancreatitis. Supportive treatment is usually effective and includes antiemetics, pain management, and acid-suppressors. I found it most interesting in this lecture that the speaker only with holds food from a patient if the patient is vomiting and that fat restriction in felines is probably not as important as it is in canines when treating pancreatitis.

*Submitted by Anne Jones, CVT*

## BIOGRAPHY SPOTLIGHT

### Amelia Gessner-Knepel, DVM

Amelia graduated from Michigan State University in 2014 and completed a small animal rotating internship at Texas A&M University Teaching Hospital in 2015. She spent 6 months at an exclusive exotics practice in South Florida and started at the Animal Referral Center hospitals in 2016.

Amelia has special interests in emergency, zoo, wildlife, and exotic animal medicine. She is excited to have the opportunity to expand on both her emergency and exotic animal medicine interests at the Animal Referral Centers and to use and expand her knowledge helping out at the NEW Zoo.

When not at work, Amelia enjoys sports and fitness, reading, music, crafts, and spending time with her husband, Caleb, and cat, Otis. Otis particularly loves his time with Amelia as she takes him on walks around the neighborhood.

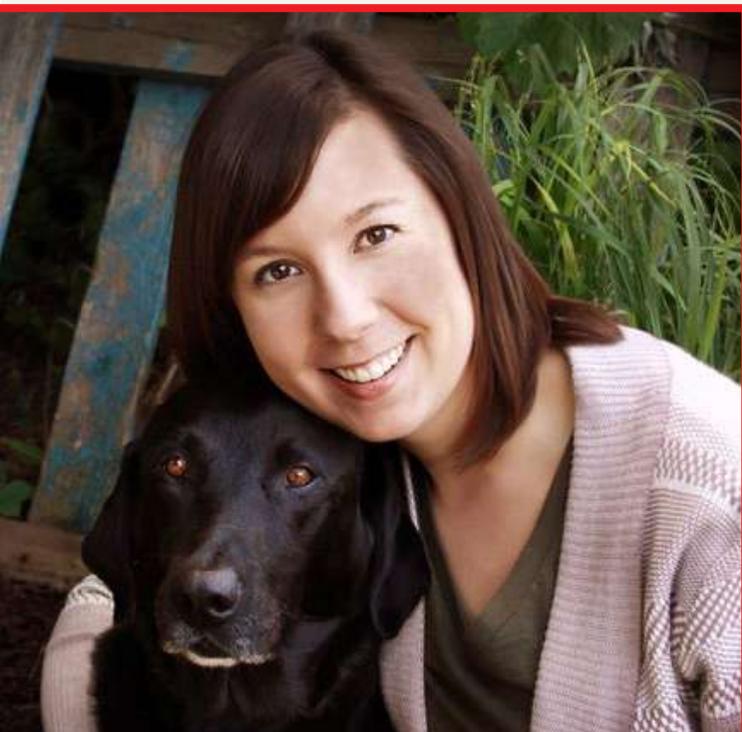


### Brianne Miller, DVM

Brianne graduated from the University of Wisconsin School of Veterinary Medicine in 2014 and also obtained a Certificate in Small Animal Ultrasound from the University of Illinois College of Veterinary Medicine in November 2014. She spent 2 years in general practice and started at the Animal Referral Center hospitals in 2016.

Brianne has a special interest in ultrasound and interventional procedures with ultrasound guidance and she enjoys the close working relationship with the veterinary specialists and emergency clinicians at both hospitals.

At home, she enjoys reading, pheasant hunting, camping, canoeing, winter sports, and weeding the garden. She shares her house with a black Labrador, two cats, 3 backyard chickens, and her husband. Brianne has the honor of being the first legacy student to graduate from the University of Wisconsin School of Veterinary Medicine (Her father is a veterinarian as well).



## Check It Out!

One of my favorite medical authors is Atul Gawande. He has written an assortment of books, but one that I often refer to is *The Checklist Manifesto – How to Get Things Right*. Gawande writes in this book “Our great struggle in medicine these days is not just with ignorance and uncertainty, it’s also with complexity: how much you have to make sure you have in your head and think about. There are a thousand ways things can go wrong.”

At the heart of Gawande’s idea is the notion that doctors are human, and that their profession is like many others. “We miss stuff. We are inconsistent and unreliable because of the complexity of care.” During Gawande’s medical career he was one of the first clinicians to utilize surgical checklists. He developed a checklist in his hospital of employment. Following implementation, he found that surgical mistakes were minimized, medicine improved, overall medical costs were decreased, team morale was higher, and lives were saved.

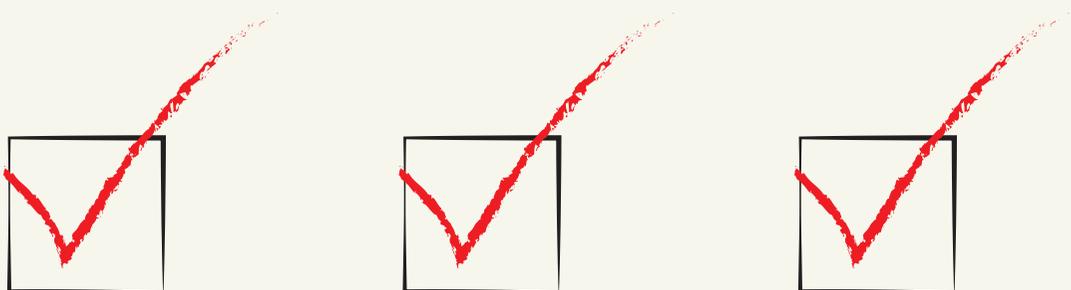
Over the years, surgical checklists have become a routine part of human medical care. The World Health Organization (WHO) has standardized the surgical checklist and a range of professional societies and organizations from countries worldwide have expressed their support for the creation of the WHO Surgical Safety Checklist and the Safe Surgery initiative. Surgical safety checklists (SSCs) are associated with reductions in postoperative morbidity and mortality and have now achieved widespread implementation.

Checklists are not only beneficial in the surgical suites but in other areas of medicine as well – placement of central lines, product manager duties, and cardiopulmonary resuscitation to name just a few. So why do checklists fail? The main reasons are failure to complete the checklist, an illogical checklist, faulty implementation of the checklist, or the checklist was thought to be a waste of time and therefore completed incorrectly or not at all.

In Veterinary Medicine, checklists are still not the norm in most primary care practices, however many university and private referral hospitals have implemented them. A recent peer reviewed study by Bergström, A. et al; (2016), *Reduction of Surgical Complications in Dogs and Cats by the Use of a Surgical Safety Checklist*. *Veterinary Surgery*, 45: 571–576 assessed the rate and severity of surgical complications in 300 dogs and cats undergoing surgery prior to the introduction of a surgical checklist. The checklist was then put in use, and the next 220 surgical patients were evaluated for complications. The comparison showed quite clearly that, “The frequency and severity of postoperative complications was significantly decreased after introduction of a surgical checklist.”

From personal experience, we implemented a surgical checklist over one year ago as well as a central line placement checklist at the Animal Referral Center. I believe this has improved our quality of medicine, reduced medical errors, decreased infection rates, and saved lives. Are checklists the answer to everything? And does this mean we just stop thinking about our patients? Absolutely not. However, if implemented correctly, checklists will be an added safeguard for the veterinary team to improve quality of care.

*Lisa Peters, DVM, DACVECC*



## UPCOMING CONTINUING EDUCATION OPPORTUNITIES

### **March 25 - 26 WVMA Practice Profitability Workshop**

Monona Terrace Conference Center, Madison 8:00am - 5:00pm  
More information at [www.wvma.org](http://www.wvma.org)

### **March 30 WVMA What's your place in animal welfare?**

Marriott West, Madison 9:00am - 5:00pm  
More information at [www.wvma.org](http://www.wvma.org)

### **March 30 - April 2 American Animal Hospital Association Conference**

Music City Center, Nashville, TN  
More information at [www.aaha.org](http://www.aaha.org)

### **April 22 Animal Referral Center - Spring CE Event**

Includes 6, RACE approved hours of scientific CE for veterinarians and technicians as well as team building CE for support staff.

Liberty Hall, Kimberly, 8:30am until 5:00pm, cocktail hour starts at 5:00pm

More information will be emailed soon or contact Lyn Schuh at [lschuh@horizondvm.com](mailto:lschuh@horizondvm.com) or 920-882-4304

## COMMUNITY EVENTS AND ANNOUNCEMENTS

### **March 11**

**Beer and Biscuits** - a fundraising event for Happily Ever After animal shelter

Stadium View, Green Bay 6:00pm - 10:00pm

More information at [www.heanokill.org/events/page/beer-amp-biscuits](http://www.heanokill.org/events/page/beer-amp-biscuits)

### **May 7**

**Meet "Hank" the official dog of the Milwaukee Brewers**

Timber Rattlers game at the Neuroscience Group Field, Appleton - game starts at 1:05pm

More information at [www.milb.com/schedule/index.jsp?sid=t572&m=5&y=2017](http://www.milb.com/schedule/index.jsp?sid=t572&m=5&y=2017)

### **May 19 - 20**

**Door County Scottie Rally**

Animal Referral Center doctors and staff will be performing ultrasounds to screen for health issues affecting Scottish Terriers

More information contact [dcscottierally@gmail.com](mailto:dcscottierally@gmail.com)

### **May 20**

**Bark in the Park: Rescue Reunion** - a fundraising event for the Fox Valley Humane Association

Greenville Lions Park, Greenville 9:00am - 2:00pm

More information at <http://www.foxvalleypets.org/barkintheparkrescuereunion/%23rescue-reunion-2017->

### **June 11**

**Bark in the Park - Timber Rattlers** - bring your dog to the ball game

Timber Rattlers game at the Neuroscience Group Field, Appleton - game starts at 1:05pm

More information at [www.milb.com/schedule/index.jsp?sid=t572&m=5&y=2017](http://www.milb.com/schedule/index.jsp?sid=t572&m=5&y=2017)

**Lunch 'n Learns** - can be scheduled for your clinic.

The CPR talk is RACE approved. This is a great way to stay up-to-date on current CPR recommendations.

For more information, or to schedule, contact Lyn Schuh at Lyn Schuh at 920-882-4304 or [lschuh@horizondvm.com](mailto:lschuh@horizondvm.com)

If you would like to request a topic for our newsletter, or suggest an event or announcement for our listing, please contact Ruth Peters at [newsletter@horizondvm.com](mailto:newsletter@horizondvm.com)



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**Green Bay Animal Referral Center** | 2141 Lime Kiln Rd, Green Bay, WI 54311  
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