Update from the 2016 Veterinary Leadership Conference

by Andrew O'Carroll, DVM

A warm winter greeting to all. Alternate delegate John Brooks and I were both able to attend the 2016 Veterinary Leadership Conference and winter House of Delegates meeting in Chicago last month. Despite the frigid climate, we both had a productive meeting and were proud to represent the great state of Maryland, as always.

Our schedule in the actual winter session was surprisingly light this time as we only had two resolutions up for discussion and vote. The first one created an incredibly constructive discussion and debate since it regarded revision of the AMVA's policy on free-roaming and abandoned feral cats. The AVMA put over two years' worth of work into the revisions, which were extensive. However, what created the most debate was the final paragraph which discusses humane euthanasia as an option for handling colonies not achieving attrition or causing a public health risk. A select few wanted this language stricken from the revision which resulted in an intense debate on the efficacy of depopulation versus trap-neuter-release programs. Ultimately, the language remained because, as worded, euthanasia was recommended only as a final option if all other options were exhausted.

The other resolution presented to the House regarded the AVMA establishing a new blast email-based system for the delegates to be able to reach all of their state's constituents once or twice per year. This is not intended to be a means for spam or advertising, but for the delegates to reach out prior to the House meetings to get feedback prior to voting. This was voted in favor, so stay tuned for more over the next year. If you're an AVMA member, you'll likely start receiving emails directly from me.

Additionally, at my personal behest, the AVMA has now added the National Institutes of Health to the House Advisory Panel. This panel includes representatives from federal government agencies who are there on an official capacity and include the FDA, CDC, USDA (APHIS and FSIS) and the uniformed services. NIH will be proudly represented by Rear Admiral Terri Clark of the U.S. Public Health Service, who was recently featured in an issue of JAVMA.

While we may have had a light schedule in regards to resolutions which required our attention, we were kept plenty busy with informational sessions and committee meetings. I learned that the AVMA's Early Career Development Committee has been developing products geared towards newer graduates and they can be found on their Facebook page. Additionally, the AVMA's GHLIT has rebranded and is now called AVMA LIFE since they no longer offer health insurance. However, they offer a number of new services including a new veterinary student plan which covers some of the expense of their rabies vaccinations.

Lastly, I would like to bring to your attention two programs within the AVMA which could use your help and generosity. Many are not aware that the AVMA has a political action committee (PAC) which has made tremendous efforts with protecting our profession from harmful legislature while promoting legislature which is both beneficial to our profession and that of animal welfare. The PAC cannot function without the generosity of those in our profession.

Click here to learn more and become involved, please visit.

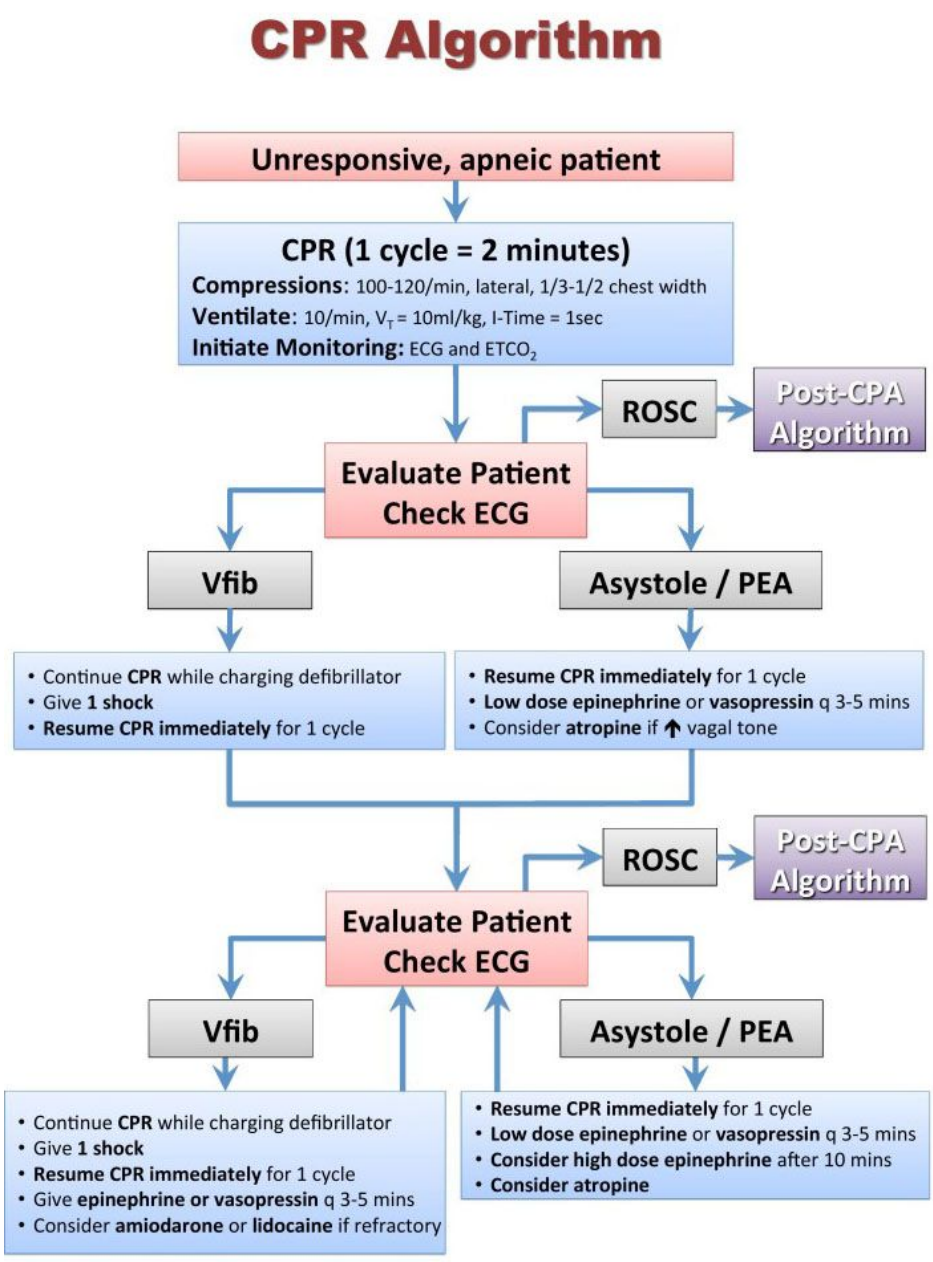
The other program is the American Veterinary Medical Foundation (AVMF): the charitable arm of the AVMA. One of Dr. Brooks' many responsibilities is being the chair for this wonderful foundation. For those who may not be aware, the AVMF now runs and maintains the Veterinary Care Charitable Fund. This is a fund that any veterinary practice can both donate to, and solicit financial assistance from for clients who may be disabled or enduring a financial hardship. It is free for veterinary hospitals to enroll and your clients can donate to your hospital's account. I'm aware some hospitals will operate their own "Good Samaritan" funds for this purpose, but the AVMF can eliminate the hassle of maintaining it at no charge to you. To learn more, please visitwww.avmf.org.

As always, it has been an honor and privilege to represent Maryland at the AVMA. If you have any questions or concerns, please do not hesitate to reach out. I wish you all a warm and speedy winter.

Veterinary CPR Guidelines

by Tanya Tag, DVM, DACVECC

In June 2012, a committee of veterinary professionals published a set of clinical consensus guidelines for the practice of CPR in dogs and cats based on the Reassessment Campaign on Veterinary Resuscitation (RECOVER) initiative. The 101 guidelines developed were categorized regarding the risk-benefit ratio and strength of the evidence supporting the recommendation. From this, a small animal veterinary CPR algorithm was created (Figure 1, click on chart to enlarge image). The algorithm helps veterinary clinicians make quick decisions regarding how to proceed during CPR, emphasizing the most important interventions and recommendations.



(FIGURE 1)

Among these recommendations are instructions for proper chest compression procedures. High quality chest compressions are very important in achieving a return of spontaneous circulation (ROSC). These compressions should not be delayed; in unresponsive patients only a quick assessment of airway, breathing, and circulation should be done prior to starting. For most patients, compressions should be done in lateral recumbency without interruptions for 2 minutes. A compression rate of 100-120 per minute and depth of 1/3 to 1/2 the width of the chest while allow-ing full chest recoil between compressions is important. Proper

positioning is to stand above the patient maintaining straight elbows, shoulders over hands, in order to achieve the appropriate compression width. If possible, rotating compressors after each two-minute cycle will help prevent compression fatigue and maintain the highest quality compression. When rotating compressors, it is vital to do so quickly in order to minimize the disruption in compressions and to use this time between cycles to interpret monitors and reassess the patient.

Additionally, ventilation is most important when the cause of arrest is ventilatory, which is the case for the majority of veterinary patients. When securing an airway, it is important to keep the patient in lateral recumbency and to continue doing chest compressions as you intubate. A ventilation rate of 10 bpm and tidal volume of 10 mL/ kg with a short inspiratory time 1 second should be de-livered.

CPR Emergency Drugs and Doses

		Weight (kg)	2.5	5	10	15	20	25	30	35	40	45	50
		Weight (lb)	5	10	20	30	40	50	60	70	80	90	100
	DRUG	DOSE	ml	ml	ml	ml	ml	ml	ml	ml	ml	ml	ml
Arrest	Epi Low (1:1000)	0.01 mg/kg	0.03	0.05	0.1	0.15	0.2	0.25	0.3	0.35	0.4	0.45	0.5
	Epi High (1:1000)	0.1 mg/kg	0.25	0.5	1	1.5	2	2.5	3	3.5	4	4.5	5
	Vasopressin (20 U/ml)	0.8 U/kg	0.1	0.2	0.4	0.6	0.8	1	1.2	1.4	1.6	1.8	2
	Atropine (0.54 mg/ml)	0.05 mg/kg	0.25	0.5	1	1.5	2	2.5	3	3.5	4	4.5	5
Anti-Arrhyth	Amiodarone (50 mg/ml)	5 mg/kg	0.25	0.5	1	1.5	2	2.5	3	3.5	4	4.5	5
	Lidocaine (20 mg/ml)	2-8 mg/kg	0.25	0.5	1	1.5	2	2.5	3	3.5	4	4.5	5
Reversal	Naloxone (0.4 mg/ml)	0.04 mg/kg	0.25	0.5	1	1.5	2	2.5	3	3.5	4	4.5	5
	Flumazenil (0.1 mg/ml)	0.01 mg/kg	0.25	0.5	1	1.5	2	2.5	3	3.5	4	4.5	5
	Atipamezole (5 mg/ml)	50 ug/kg	0.03	0.05	0.1	0.15	0.2	0.25	0.3	0.35	0.4	0.45	0.5
Defib Biphasic	External Defib (J)	2-4 J/kg	6	15	30	50	75	75	100	150	150	150	150
	Internal Defib (J)	0.2-0.4 J/kg	1	2	3	5	6	8	9	10	15	15	15

(FIGURE 2)

Once basic life support has started it is important to start advanced life support: monitoring, vascular access, and medications indicated. Even with the best external chest compressions, one can only achieve 25-30% of normal cardiac output, making vasopressors an essential component of resuscitation. The RECOVER guidelines include a CPR drug dosing chart (Figure 2, click on chart to enlarge image). I recommend keeping both figures referenced in this summary posted prominently by your crash cart for easy referencing, guidance and to reduce calculation errors.

Once an arrest has been determined, available staff should fill as many roles as possible to help facilitate the CPR response. Ideally, a per-son leading the CPR response (leader) will assign the roles of compressor, ventilator, drug pusher, and recorder to available staff. In this scenario, the compressor and ventilator change roles every two-minute cycle, the drug pusher pulls up and administered medications ordered by the leader, and the recorder notes the time of arrest, calls out the two-minute cycles and notes the and amount of medications or other interventions per-formed.

The above information was taken from the Journal of Veterinary Emergency and Critical Care 22 (S1) 2012. I would encourage you to read this free edition available online:http://onlinelibrary.wiley.com/enhanced/doi/10.1111/j.1476-

Common Pitfalls during CPR:

1. A delay in the start of chest compressions
2. Stopping compressions to intubate/ putting the patient in sternal to intubate. Consider practicing intubation in lateral recumbency on stable patients being intubated for routine surgeries so that this is easier during a CPR event
3. Stopping compressions to interpret the ECG

4. Stopping compressions to place an IV catheter. If you cannot get IV or IO access, place a red rubber catheter intratracheally and administer the CPR drugs (NAVEL: naloxone, atropine, vasopressin, epinephrine, and lidocaine) at 3 to 10 times the dose listed per the chart referenced above. The catheter should be flushed with sterile saline after medication administration.
5. Poor quality chest compressions: rate too fast, elbows bent, compressor not standing over the patient, compressor not rotating every cycle.
6. Discontinuing CPR when there is a normal waveform on the ECG but pulses are absent
7. Bolusing IV fluids in a euvolemic patient. This increases right atrial pressure which decreases coronary perfusion pressure (CoPP). A decrease in CoPP decreases the likelihood of a ROSC.
8. Not practicing CPR
9. Not performing post arrest debriefing

www.veritasdvm.com has CPR basic and advanced courses to help train and certify your staff. Please do not hesitate to reach out to me with any questions or if you are interested in me visiting your hospital to talk more about small animal veterinary CPR.

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(P) 410.252.8387

MVMA Monitors State Legislation Impacting Veterinarians

by Hannah Powers Garagiola, Government Relations Director

The 2016 Maryland General Assembly is well underway. Because it is the second year of the term with a new(ish) governor and 65 new members of the General Assembly, there are going to be over 4,000 pieces of legislation introduced by the time it's all said and done. We are keeping a watchful eye on every bill as it progresses and flagging anything of interest that has to do with animal welfare, drug monitoring, taxes on small businesses, and other matters that could affect the practice of veterinary medicine.

One of those pieces of legislation is Senate Bill 614 which will help clarify under Maryland law that veterinarians can dispense compounded medication. We are confident that the language in SB 614, which was worked on and perfected over that past couple of months by members of the board of the MVMA as well as government officials from the Board of Pharmacy bill will address the uncertainty in the law.

The hearing for SB 614 will take place on February 17 and we encourage you to monitor and follow the process as the bill moves through the General Assembly and hopefully to the Governor's desk by midnight on April 11. We are pleased that our bill sponsors are established leaders on health care matters as the Senate sponsor is Education Health and Environmental Affairs Chairwoman Joan Carter Conway and our House sponsor is Delegate Eric Bromwell who chairs the Health Occupations Subcommittee. Both legislators are very committed to passing the legislation. The House bill has not been assigned a bill number at this time but we anticipate a bill number as early as this week.

To track matters of interest before the Maryland General Assembly please go towww.mgaleg.maryland.gov. We look forward to your feedback and participation in the process. To reach me for questions or to submit testimony on matters of interest to you please contact me at hgaragiola@alexander-cleaver.com.

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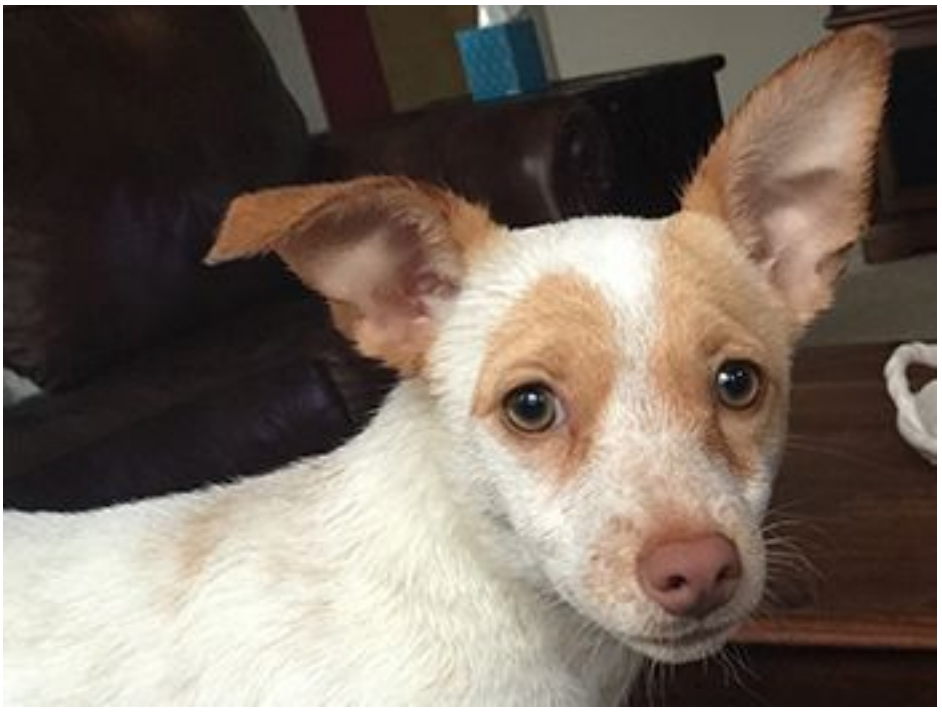
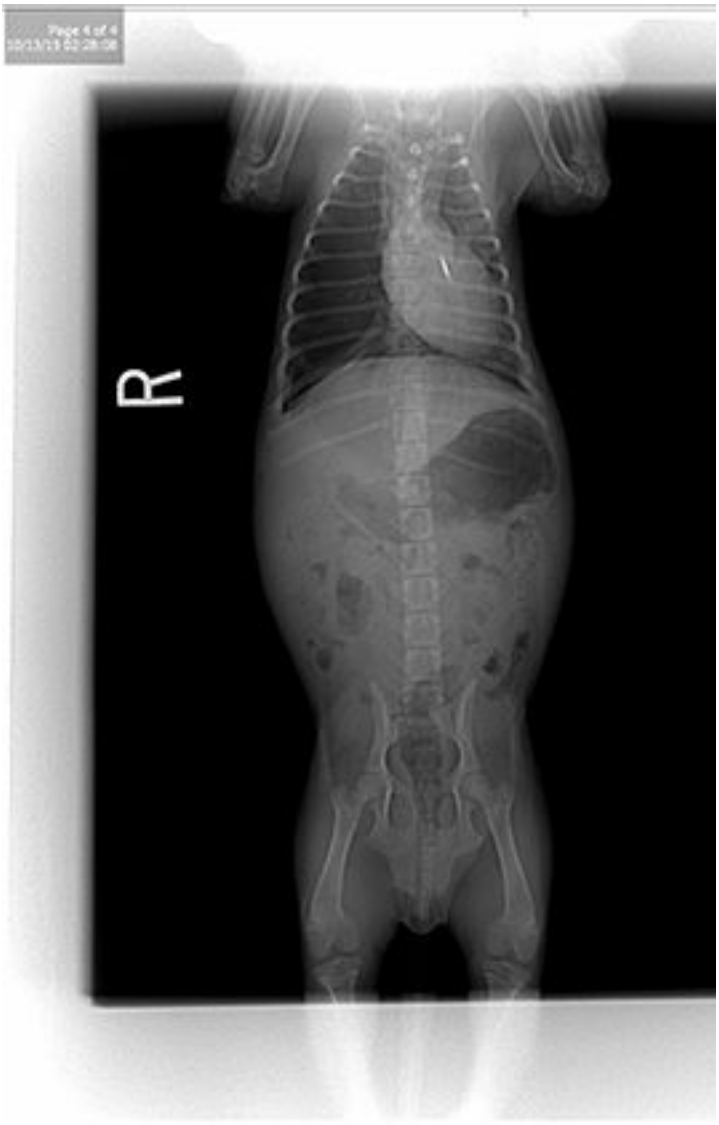
Guess What I Saw?

by **Brendan B. Anders, DVM, DACVS**

A 16 week old intact female Jack Russell Terrier presented for abnormal respiratory rate, effort and wheezing since adoption. Auscultation suggested abnormal respiratory sounds and muted heart sounds on the left side. Owners reported normal appetite but slower to gain weight then simultaneously adopted sibling. Thoracic imaging suggested



atelectasis on the left side and hyperinflation on the right hemithorax (see attached images). The pet was currently being treated and had reportedly improved when started on terbutaline. Radiographic interpretation was suggestive of right hemithoracic lung lobe inflation, left mediastinal shift with mild elevation of cardiac silhouette off the sternum most consistent with congenital lobar emphysema and the pet was referred for additional imaging.



MRI was performed under anesthesia and results showed marked left sided mediastinal shift with lung consolidation in the caudal segment of the left cranial lobe, hyperinflation in the right cranial and caudal lung lobes and consolidation surrounding the caudal lobar bronchus. Consultation with owner reviewed surgical options and recommendation for pnuemonectomy of affected lung lobes. The pet was admitted for surgery shortly afterward and the right side of the thorax was approached via a lateral thoracotomy. Gross evaluation of the lungs showed hyperinflation of the right cranial and middle lung lobes. These sections were removed independently with stapling device and appropriate ligation. Evaluation of the accessory and right caudal lung lobes was performed and each appeared to inflate and deflate appropriately and therefore no further manipulation of these lobes was performed. The left caudal lung lobe was visible through the mediastinum and appeared to inflate well. Prior to closure of the thorax a chest tube was placed and secured. Recovery from anesthesia was routine and the chest tube was

removed the following day. The pet was discharged 3 days after surgery and continued on the bronchodilator with antibiotics and analgesics as needed.
Histopathologic results confirmed pulmonary changes consistent with lobar emphysema. 6 week follow up was completed elsewhere and the pet reportedly was improving but continued to have some exercise intolerance. Respiration was described with a normal effort and rate without any supplemental medications.

Congenital Lobar emphysema is an uncommon disease which has been reported sporadically in the veterinary literature. This condition should be considered a differential in dogs less than 1 year of age with respiratory distress or abnormal breathing patterns or following acute death. Clinical signs may be absent but usually include progressive dyspnea and possible cyanosis with auscultation identifying muted heart sounds, wheezes or crackles. Radiography often demonstrate over distention, atelectasis, and possible mediastinal shift or cardiac displacement (2). The right middle lung lobe has been involved in the majority of the cases reported (4). It is suspected that compressive atelectasis develops in the unaffected lobes due the normal negative thoracic pressure and an increase in affected lung lobe size. The pathological changes in abnormal bronchi lead to air trapping and potentially dynamic collapse of the bronchi during expiration which can lead to secondary conditions like pleural rupture, bullous emphysema and tension pneumothorax. Histologically there has been a common finding of bronchial cartilage hypoplasia(1 & 3) . Treatment in humans and dogs has traditionally been with surgical removal of the affected lung lobes although recent reports of medical management in humans have been published.

VMCVM Student Officer Profiles

Meet the veterinary students leading MVMA's Student Chapter at the Virginia-Maryland College of Veterinary Medicine.

Jennifer Malkus
President-Elect
Jenn is from Forest Hill, MD and she has her bachelor's degree in Dairy Science from Virginia Tech. She is tracking food animal medicine with a particular interest in cows and small ruminants. To relax Jenn enjoys skiing, going to the beach, and reading. She is excited to start her work with the MVMA as the new student chapter president-elect.

Samantha Perry
Vice President
Samm is a first year DVM student from Woodstock, MD with primary interest in small animal medicine. Samm always wanted to be a veterinarian and is grateful to have worked under Dr. Ellen Colwell of the Sykesville Veterinary

Clinic before starting vet school. Samm aspires to own/co-own a practice someday that integrates veterinary medicine, grooming, and an excellent boarding facility. Her interests outside of the profession include gymnastics, art, exercise and spending as much time as possible with her two-legged and four-legged family. She is the very proud owner of a Golden Retriever, Dallas, who recently received his Canine Good Citizen certification, and a very feisty cat—aptly named Stitch.

Chelsea Meh
Secretary
Chelsea, from Howard County, MD, is a second-year DVM candidate in the VA-MD Vet Med Class of 2018. Chelsea is in the equine track with interests in reproduction, rehab medicine, and behavior. Prior to vet school, Chelsea graduated from the University of Maryland, Baltimore County where she received Bachelors of Science in Biology and Psychology. In addition to her position with the MVMA student chapter, Chelsea is involved at the college as Vice President of the Theriogenology club, Mare Palpation Chair in AAEP, and a student ambassador. Outside of school, she enjoys photography and yoga.

Carolyn Oehrig
Historian
Carolyn is from western Howard County and is tracking equine medicine in the Vet Med Class of 2019. Carolyn also participates as vice-president of the class and as treasurer for the student chapter of AAEP. Before starting vet school, she received a Bachelors of Science in astrophysics and biophysics from Haverford College. Carolyn enjoys evening with her horse, Lionheart, and taking her rabbit, Waffulz, for walks in the snow.

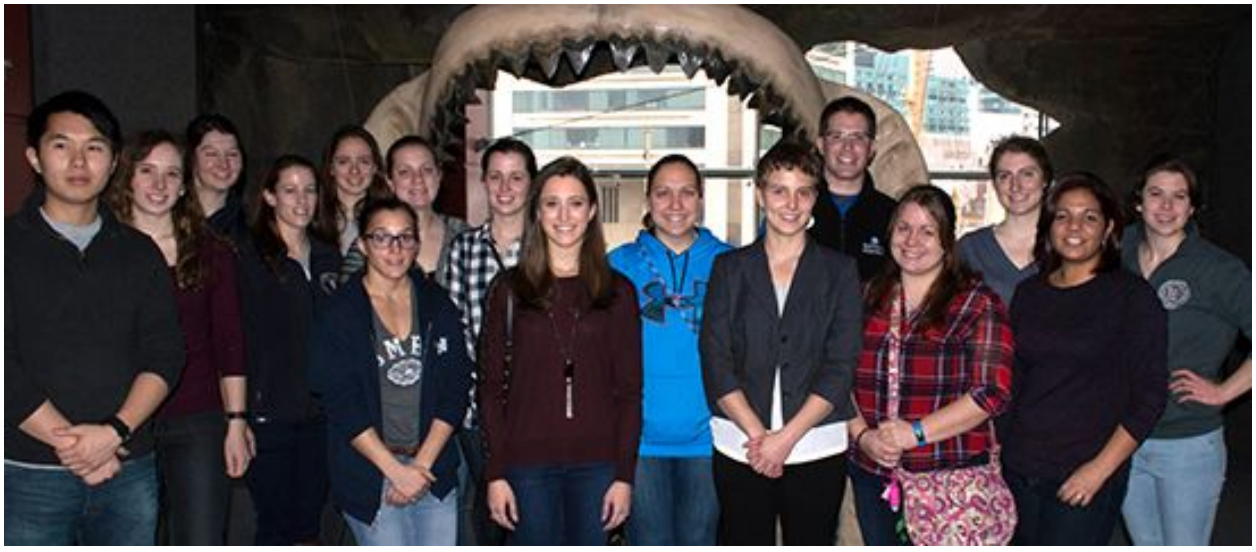
Laura Hopkins
Fundraising Co-chair
Laura is a second year veterinary student at the Virginia-Maryland College of Veterinary Medicine. This is also her second year as a member of the MVMA student chapter, and this year she will be serving as a fundraising chair. Laura has lived on the eastern shore of Maryland her entire life and she is proud to call such a beautiful place home. She looks forward to a wonderful year serving the student chapter of the MVMA.

Erin Burns
Fundraising Co-chair
Erin Burns is a first year student at Virginia- Maryland College of Veterinary Medicine. She was born and raised in Salisbury, MD. She aspires to be a mixed animal veterinarian and hopes to practice veterinary medicine in

Maryland. Outside of class, she loves to ride horses, snowboard, and take her two dogs on walks through the local trails.

Brittany Trexler
4th Year Representative
Brittany Trexler is a current third year student from Leonardtown, MD. She is tracking equine at Virginia-Maryland College of Veterinary Medicine. Brittany is very excited to start her fourth year at VMCVM and can't wait to transition from vice president to the fourth year member of the MVMA-SC.

A Baltimorean and Animal Lover's Dream Tour



by Christina Betta

As a Baltimore native, I can personally say that you haven't visited Baltimore until you've visited the National Aquarium. I can still clearly remember being splashed by dolphins jumping several feet out of the water or walking along the walkway surrounded by tanks of sharks. So when the MVMA offered our Student Chapter at VMCVM the opportunity to go on a behind-the-scenes tour with the veterinary personnel, I didn't give it a second thought.

While not directly interested in aquarium or zoo medicine, I found the trip extremely intriguing. Our guide focused mainly on their health facilities such as tanks for isolation of sick animals, their diagnostic laboratory and surgical suite. I was amazed by the overwhelming animal to veterinarian ratio. Obviously, I knew that there were tons of fish, amphibians, sharks, dolphins, sting rays, jellyfish, and so on. But when I realistically thought about how many animals were under their care, I realized that it truly takes the coordination of an entire team to care for all these animals. Finally, the National Aquarium was

gracious enough to allow us tickets to go explore the aquarium on our own. By far, my favorite moment was touching a jellyfish! And the veterinary side of me was highly relieved when I saw sinks and hand soap close by. But one of the most insightful aspects of this trip was our discussion on the recent controversies of zoo and aquarium medicine.

Recently, critics have raised concerns over the care of captive animals, making us wonder as veterinarians or vet students, exactly how we should respond. Films such as Blackfish purport that these animals have higher levels of stress that pose a threat to both the animal itself but also those around them. So how exactly should we react as those looking to ensure “the protection of animal health and welfare” as well as “the prevention of animal relief and suffering?” Our guide raised the important point that opposition can be beneficial and emphasized the need to objectively look at both sides. We need an opposition to hold us accountable to our oath and ensuring the welfare of all animals. However, looking from the other perspective, I also believe there has to be a benefit to zoo and aquarium medicine. These establishments attract the attention of young and old alike and motivate the public to care more deeply for the world, not only for ourselves but for animals. Without these programs, we wouldn’t have any knowledge or research on more elusive species. Finally, many of these animals cannot be released usually for medical reasons. These programs provide a sanctuary for those that would not survive otherwise. Both sides have valid points so where does that leave us?

I would never tell anyone how to respond to a situation. Many times these issues are not black-and-white and to make it so is to diminish its true complexity. The most important message that I took away was that as future veterinary professionals we need a balanced approach to the issue. These programs can be highly beneficial by igniting public interest, promoting education, and increasing our research to better care for both captive and wild animals. However, we ultimately must ensure that this is never to the detriment of the animal itself.

My hope is that some other child will experience the same excitement and amazement that I felt so many years ago. My hope is that they will be inspired to care for animals in their own life in whatever way that may be. This way the impact of zoos and aquariums extend far beyond their own walls to a larger impact on the world.

University of Maryland Provost, Dean Visit Veterinary College in Blacksburg

From left to right: Dean Cyril Clarke; Siba Samal, associate dean for the University of Maryland (UMD) campus; Mary Ann Rankin, UMD provost; and Craig Beyrouty, dean of the UMD College of Agriculture and Natural Resources.

The veterinary college hosted the University of Maryland's dean of the College of Agriculture and Natural Resources Craig Beyrouty and Provost Mary Ann Rankin in December.

The University of Maryland's College of Agriculture and Natural Resources houses the Veterinary Medical Sciences Graduate Program, part of the Virginia-Maryland College of Veterinary Medicine.

Beyrouty is the Maryland college's new dean, taking over the role in November of 2015. He earned his bachelor's degree in soil science from Cal Poly State University and a master's degree and doctorate in soil chemistry from Purdue University. He also worked for the Soil Conservation Service and Castle and Cooke Foods prior to pursuing graduate studies. Previously, he held positions as professor and head of agronomy at Purdue University, professor at the University of Arkansas, and director of the Agricultural Experiment Station for Colorado State University. He most recently served as the dean of the College of Agricultural Sciences at the Colorado State University before becoming dean of the College of Agriculture and Natural Resources.

Rankin, who is the senior vice president and provost of the University of Maryland's College Park campus, has held her current position since 2012. She previously spent 37 years at the University of Texas at Austin, including six years as chair of biological sciences and 17 years as dean of the College of Natural Sciences. She has previously visited the veterinary college.

During their visit, Beyrouty and Rankin met with Virginia Tech Provost Thanassis Rikakis and faculty at the veterinary college.

Exploring Veterinary Economics: Impact on the Veterinary Workforce of More Veterinary School Seats

by Michael Dicks, Ph.D., Director, AVMA Economics Division

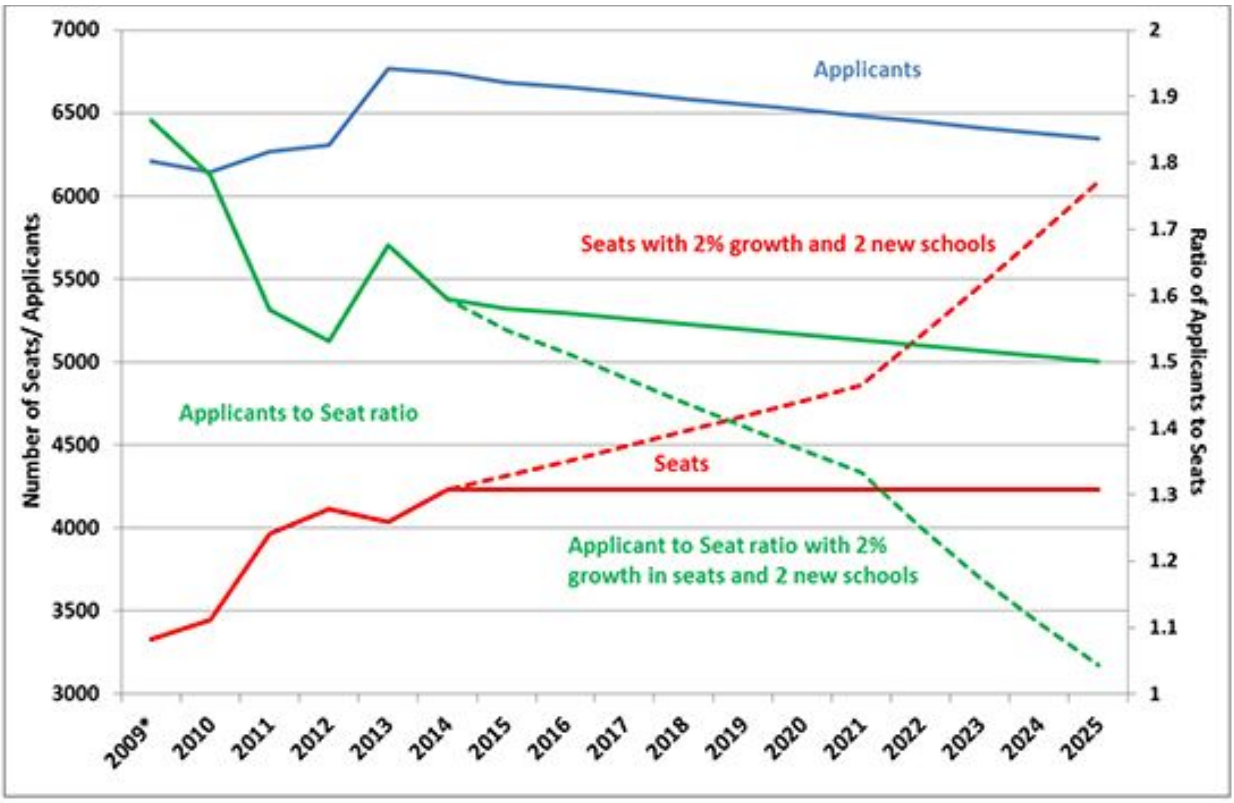
In light of recent news related to the proposed creation of new U.S. veterinary schools, the American Veterinary Medical Association's Economics Division conducted an economic analysis of how the veterinary workforce and, more specifically, the market for veterinary education may be affected by expanding the number of seats available to veterinary students. This analysis is a reflection of the AVMA's appropriate role as the national association representing the interests of its members. It does not take an opinion on the merits of the addition of new veterinary schools.

In one of my former roles of advising foreign governments and agencies on small-business development, I would always begin with three basic prerequisites that I feel are most important and need to be answered before starting a new business. First, can you physically do it? Second, can you make money doing it? And third, can you sustain it in a competitive market?

The continued push to expand the number of veterinary schools (and thereby the number of seats available to veterinary students) certainly has me wondering whether all of these basic prerequisites are being considered in the planning process and before commitments are made to pursue the necessary approvals and begin the accreditation process. There is no doubt that the necessary resources, both in terms of capital and expertise, to build new veterinary colleges can be acquired anywhere in America. Based on current information about the willingness of veterinary college applicants to pay for the veterinary degree, new colleges can probably be profitable, more so if they are state-funded.

The third prerequisite, however, offers a more daunting hurdle, as is frequently the case. The market for veterinary education faces a competitive demand for seats from applicants, as well as a competitive market for veterinarians that is derived from the competitive market for veterinary services. Thus, the new veterinary college must consider both forces, now and in the future, in determining the sustainability of its business.

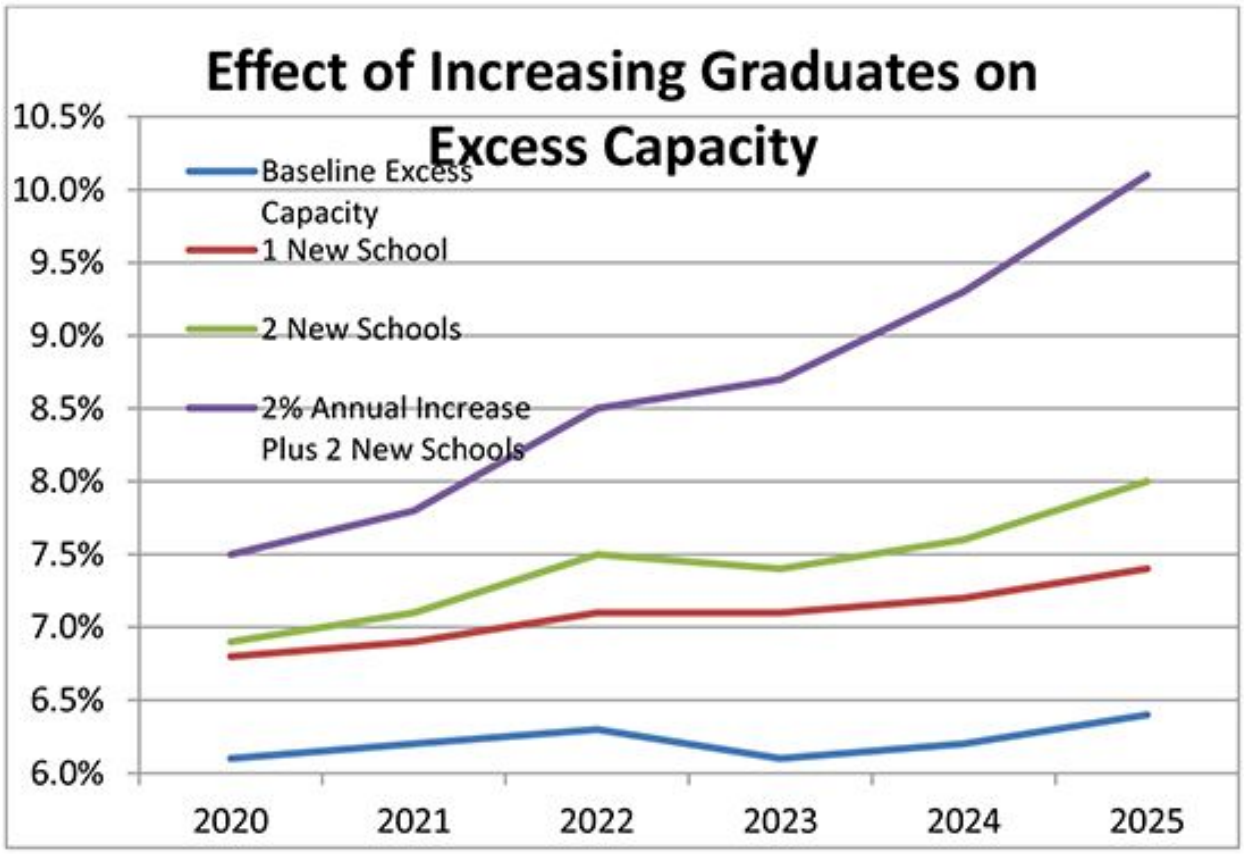
The number of applicants may have already reached its apex in what has historically been a roughly 22-year cycle of steady growth followed by a decline in the number of applicants. The number of applicants peaked with the classes admitted in 2014, when there were 6,769 applicants and 4,230 seats available, yielding an applicant-to-seat ratio of 1.6:1 (2015 AVMA Report on the Market for Veterinary Education). As the cost of education continues to climb, and as college students become increasingly knowledgeable of the financial hardships associated with the profession's high debt-to-income ratio, this applicant-to-seat ratio is forecast to decline even with a constant number of available seats through 2025.



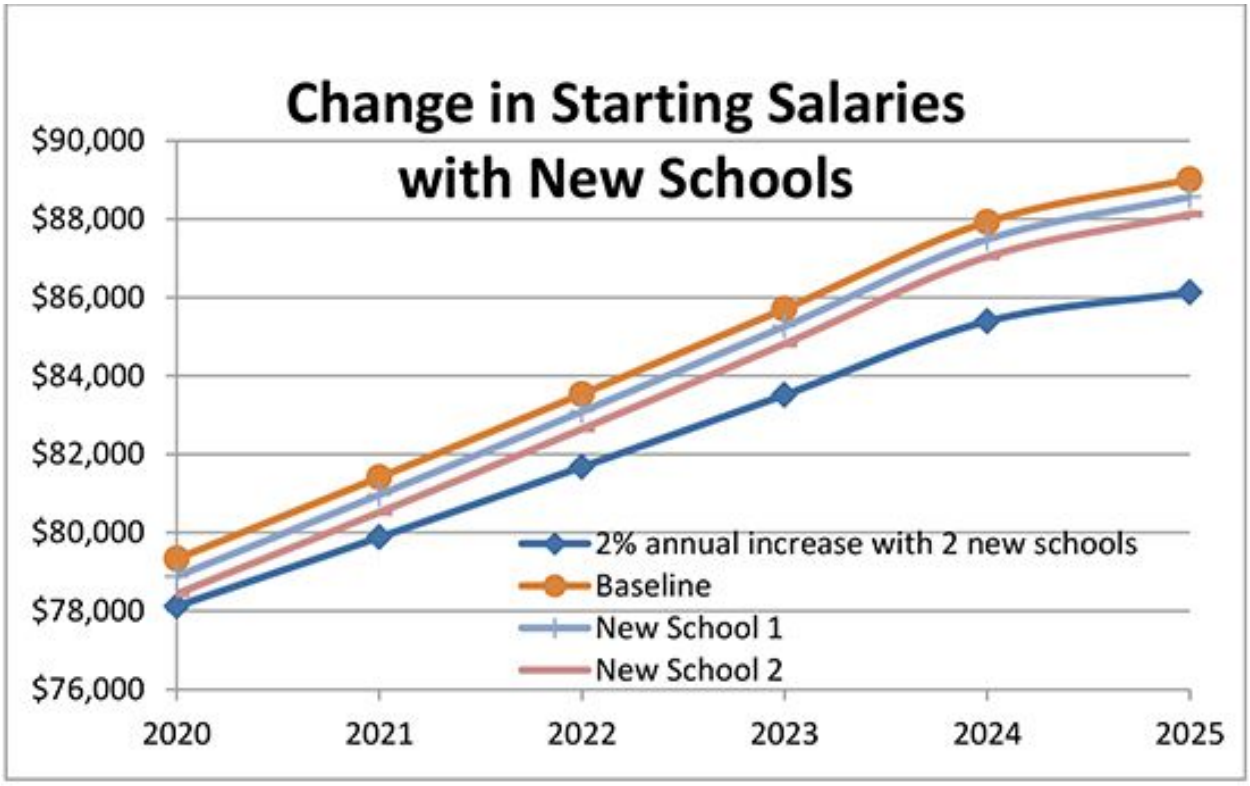
However, if the rate of increase in the number of seats at existing schools continues the long-term trend and two new schools are added, then the combination of new seats and declining applicants will bring the applicant-to-seat ratio to an estimated 1.04:1 by 2025. While this is likely to be a worst-case scenario, the competitive environment at veterinary schools is currently increasing from highly competitive to extremely competitive; veterinary schools will in the near term have to compete for students. With the addition of even more seats, the market for veterinary education would become a buyer's market, meaning that each applicant (the buyers in this case) would face less competition for seats at veterinary colleges (the sellers in this case).

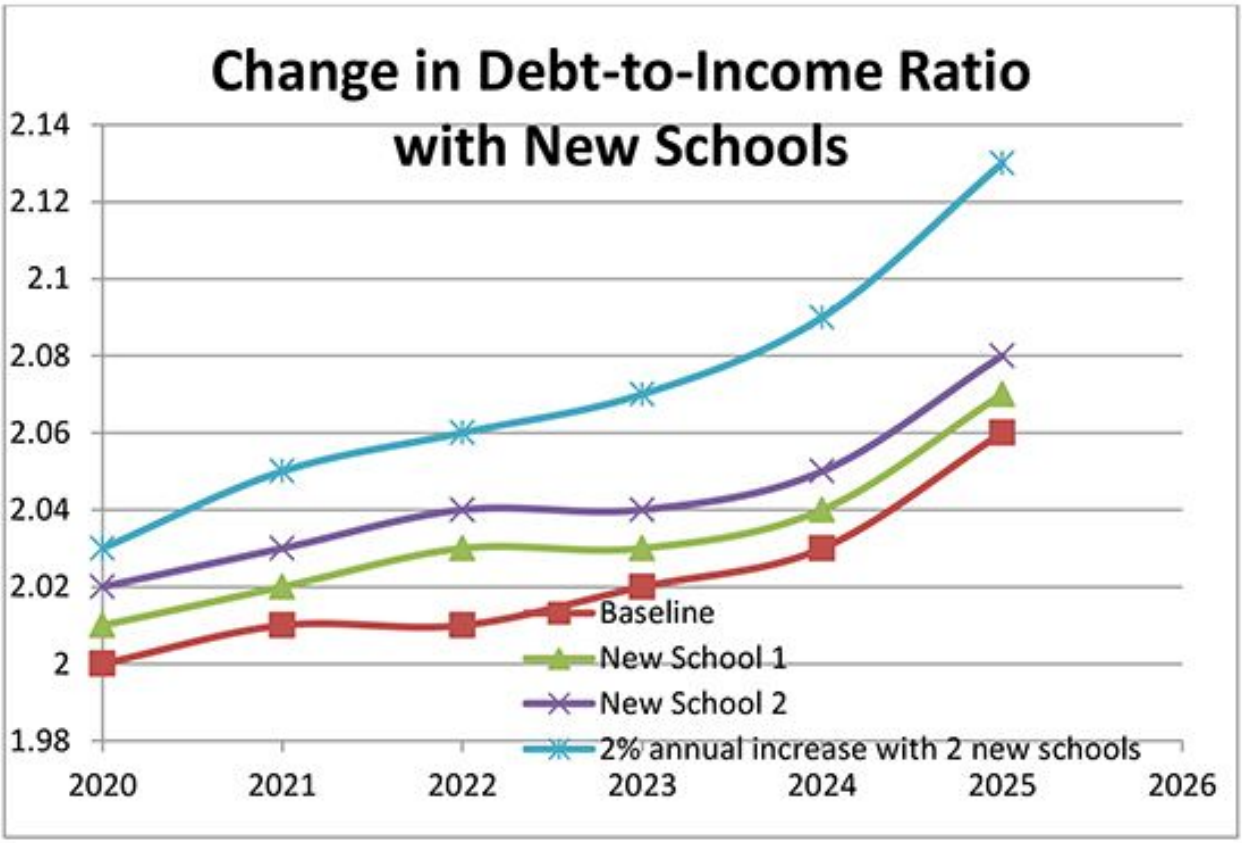
Based on our modeling, there is a threshold value for tuition costs that the average student is willing to pay; above that threshold, the number of applicants decreases, and recent analysis has shown that this threshold may be declining. Those schools whose total costs fall in the top 20th percentile are currently above that threshold. The bottom line here is that unless a new school can provide a veterinary education at a cost to students at or below the threshold in this increasingly competitive market, a veterinary degree program will not likely be sustainable. This analysis assumes that no change from the baseline occurs in the applicant pool. But because the applicant pool will be adversely impacted by an increasing debt-to-income ratio, this assumption likely won't hold. Therefore, what is presented is essentially a conservative scenario.

The increase in the number of seats will increase the number of graduates entering the employment market for veterinarians. At this time, we do not have a model for the effect on unemployment. However, our analysis has tied increases in excess capacity in veterinary practices to increased numbers of graduates without an accompanying increase in the demand for veterinary services. If one new school opens, providing 100 new seats, the impact on excess capacity will likely be approximately a one percentage point increase, from 6.4 percent to 7.4 percent by 2025. Two new schools of 100 students each will likely increase excess capacity by about 1.6 percentage points. And if we consider a scenario where two new schools are created and the number of graduates increases continuously at 2 percent per year, then excess capacity will likely increase by more than 3 percentage points to 10.1 percent by 2025.



The starting salaries of veterinarians will likely be adversely impacted by an increase in the number of graduates. The longer-term trend has been that for every 100 students, 39 take a full-time position at graduation; this modeling is based on the AVMA Senior Survey reports for full-time positions accepted at the time of graduation, and does not include those who accepted part-time employment, internships, residencies or additional education, as well as those who accepted full-time positions after the survey was completed. The addition of 100 students above our baseline projection would potentially reduce annual income for each new veterinarian (1,298 in the class of 2015) by $500, and the combined effect of two new schools and a 2 percent growth rate in existing school class sizes would potentially lower starting salaries by over $3,000 per year per veterinarian by 2025. This decline in income would exacerbate the existing disparity between growth rates in income and debt, causing the debt-to-income ratio to rise. The rising debt-to-income ratio will likely accelerate the reduction in applicants, perpetuating the potentially negative effects on the market for veterinary education.


Change in Starting Salaries with New Schools
$90,000
$88,000
$86,000
$84,000
$82,000
$80,000
$78,000
$76,000
2020
2021
2022
2023
2024
2025
2% annual increase with 2 new schools
Baseline
New School 1
New School 2


Change in Debt-to-Income Ratio with New Schools
2.14
2.12
2.1
2.08
2.06
2.04
2.02
2
1.98
2020
2021
2022
2023
2024
2025
2026
Baseline
New School 1
New School 2
2% annual increase with 2 new schools

All of these factors point to an increasingly competitive market for the colleges of veterinary medicine, greater competition for employment and higher debt-to-income ratios for graduates, all other factors being equal. Whether new schools can sustain their programs under this increasing competition will depend on their ability to produce graduates at a cost less than those currently doing so, or producing graduates with a greater ability to increase the demand for veterinary services.

Minding Your Ps an dQs with Hospital Ownership Changes

by Laura Downes, Executive Director, State Board of Veterinary Medical Examiners

Purchasing or selling a veterinary hospital can be an exciting, but stressful experience. There are many steps that need to be taken, whether a hospital owner is handling the entire process on their own or is enlisting the services of an attorney or other professional. Recent years have seen an increase in the number of hospital purchases by out-of-state corporations. While these purchases may alleviate existing hospital owners of certain administrative burdens, such as handling payroll, taxes, and filing licensure renewal applications on time, new hospital owners may not be aware of regulatory requirements that come into play when such a purchase is made.

Inspectors for the State Board of Veterinary Medical Examiners (Board) are seeing a rise in the number of situations where an application for a hospital license has been submitted to the Board's office weeks or months after a new owner purchased a practice and the hospital has been operating under new ownership without an inspection by the Board. When asked why the application was not submitted before the hospital's doors opened under new ownership, new hospital owners or practice managers are indicating that they did not know when settlement would take place. Submitting the application for licensure under new ownership was simply another form to be completed.

Please be mindful that, under Code of Maryland Regulation 15.14.03.01-1F., "The Board may not issue a hospital license for, and the owner may not operate a veterinary hospital from, a building or portion of a building which has not previously passed board inspection until such time that the facility passes board inspection. The Board shall attempt to inspect the new facility within 2 weeks from receipt of the owner's application." If, however, a veterinary hospital was inspected by the Board within 12 months preceding the Board's receipt of the hospital application and the hospital passed the inspection conducted within that 12-month period, the Board shall issue a license without first conducting an inspection. In this case, the inspector will contact the new hospital owner to arrange for an inspection within 60 days from the Board's receipt of the application.

Because the Board is mandated to inspect each veterinary hospital at least once every two years, it is possible that a hospital in the process of being sold has not been inspected within the most recent 12 months. In this case, the hospital must be inspected by the Board before the hospital doors can legally open under new ownership. Operating a veterinary hospital without a valid license issued by the Board is a violation of Board regulations and a civil penalty may be imposed upon the new hospital owner.

If an existing hospital owner is considering selling their practice and does not remember the date that the most recent sanitation inspection was conducted, that person may contact the Board's office to obtain that date. This information can then be shared with a prospective purchaser.

Click here information on the Board's webpage on hospital licensure.

The Board's laws and regulations are also available on its webpage. Existing hospital owners or prospective hospital owners are encouraged to contact the Board's office at 410.841.5862 if they have additional questions on licensure or inspection requirements.

Where Does the Buck Stop?

by David L. Handel, DVM, Chairman, State Board of Veterinary Medical Examiners

There was a sign on President Truman's desk in the Oval Office that stated, "The buck stops here." This bold statement was meant to instill confidence in the American people that our President would make decisions and accept the ultimate responsibility for them.

Where does the buck stop in today's veterinary practice? The Code of Maryland Regulations (COMAR) answers that question. COMAR 15.14.03.01B(5) states that a "responsible veterinarian" means a veterinarian who is licensed and registered by the State Board of Veterinary Medical Examiners (Board) and provides direct supervision and control of a licensed veterinary facility. This veterinarian must be regularly present at the facility more than 50% of the time that the facility is open for business. In the past, the responsible veterinarian was typically the owner of the practice. However, today, an increasing number of veterinary hospitals are owned by corporations or non-veterinarians. In these situations, a "responsible veterinarian" needs to be designated by the owner.

What does it mean to be a "responsible veterinarian"? A thorough knowledge of the laws governing veterinary practice in the State of Maryland is a good place to start. A person who I admire once told me to write "RTQ" on the top of every test I took. This meant that I should thoroughly "read the question" so that I understood what the instructor was asking. I would encourage all veterinarians to RTB. This means to read the book of regulations that has been provided to you by the Board. In this instance, a thorough review and understanding of the regulations that involve all aspects of the practice are imperative.

The responsible veterinarian needs to insure that there are protocols in place that comply with all Board regulations. Adherence to these protocols must take place even when the "boss" is away. I recently read the Checklist Manifesto by Atul Gawande, MD. Dr. Gawande discusses the use of checklists to minimize the likelihood of oversight. It may be useful to discuss this concept with your staff. Work together to determine which hospital operations can be summarized in a checklist. Once the checklist is developed, you can use it regularly to ensure that policies are followed and to limit errors. Dr. Gawande's book is a practical and well-written book that should be a part of a practice's library.

Reviewing all of the applicable regulations is beyond the scope of this article, but there are a few regulations that have been discussed more frequently than others in recent Board meetings.

COMAR 15.14.11.03J indicates that the Board may impose a penalty if a veterinarian is employed or permitted to practice veterinary medicine without a current veterinary registration. The responsible veterinarian may be penalized by allowing this to occur. This is easily avoidable by reviewing the licenses that should already be prominently posted in the practice. Reminding all veterinarians in the practice that license renewal is in June of each year is in order. With the exception of reinstatements and initial licensures, veterinary registrations are valid from July 1 to June 30. Mark your calendars for June 1st. If you or one of your associates have not received a license renewal notification by that date, for any reason, it is your responsibility to call the Board's office to inquire about your license renewal

application. If a responsible veterinarian knowingly or unknowingly employs a veterinarian with an expired license, both the associate and responsible veterinarian are in violation of COMAR.

Additional responsibilities of the veterinarian in charge include ensuring that the workplace is safe for all employees. Protocols should be in place and periodically revised to insure this. Radiation safety is a topic that is sometimes overlooked in a busy practice. Staff should be properly protected at all times while radiographing patients. Human body parts such as hands should not be visible on a patient's radiograph. Staff should also be provided with radiation monitoring equipment.

There are multiple regulations that have been devised to insure proper patient care. COMAR 15.14.03.01-3 reviews animal housing and care. Regular inspections of veterinary hospitals are conducted by the Board inspectors to insure compliance.

Further, the Board encourages the veterinarian in charge to notify their hospital owner when there are changes to information provided on the hospital license application. While a hospital owner is required to notify the Board of changes in information, due to an increase in the number of corporate-owned hospitals, such information is frequently not brought to the Board's attention in a timely manner. Changes to information supplied on the hospital license application are to be sent in writing to the Board's office within 30 days of the change. Changes made in the days and hours of practice operation, employment of veterinarians or registered veterinary technicians, and telephone or facsimile numbers are just a few that shall be made within 30 days.

Being the responsible veterinarian can be a rewarding position within the veterinary hospital. However, failure to comply with the regulations regarding veterinary practice can result in penalties. I implore you to familiarize yourself with the applicable COMAR. Knowing the regulations to which you are held will improve your practice and the safety of staff and patients.

Dispersing Tranquilizers and Sedatives to Non-Veterinarians for Equine

by John W. Stott, DVM, State Board of Veterinary Medical Examiners

Reports have recently been brought to the attention of the State Board of Veterinary Medical Examiners (Board) regarding equine dental technicians and farriers administering tranquilizers to some of the horses they service. The Board would like to caution Maryland veterinarians regarding the dispensing of tranquilizers and/or sedatives to horse owners or lay individuals who may administer them. Code of Maryland Regulation 15.14.01.04A(9) prohibits prescribing or dispensing veterinary prescription drugs outside of a veterinarian-client-patient relationship.

According to Dr. Nina Mouledous of the AVMA/PLIT, when you dispense tranquilizers, you could be held legally liable for adverse outcomes that may arise from the administration of these drugs. If a problem should arise from the owner or another lay individual administering a tranquilizer and legal action is brought, the veterinarian is generally the only party with liability insurance and may ultimately be named in a case. This may occur whether you are present or have dispensed the drugs and left the farm. Dr. Mouledous suggests doing as much as you can to educate the owner regarding the dos and don'ts of tranquilizing horses. Providing the owner with a handout or flyer on safety concerns may be beneficial should a problem develop. The Board suggests that a veterinarian dispensing tranquilizers to an owner be confident in the owner's ability to handle the horse after tranquilization with the specific

task intended. Dispensing tranquilizers to equine dental technicians and farriers should not be done. Remember: it is your license that allowed these drugs to be purchased and prescribed.

Questions regarding the Board's laws and regulations may be directed to the Board's office, at 410.841.5862.

AVMA LIFE - the Former AVMA Group Health & Life Insurance Trust Introduces a New Name and Brand

by Gillian Hopkins

As your local AVMA LIFE representative, I am so excited to introduce the new name and brand of the Trust to members of the MVMA. The former AVMA GHLIT has provided insurance coverage for veterinarians, by veterinarians for over half a century, and will continue to do so with a new name, but the same great coverage.

AVMA LIFE will continue to offer life insurance, disability insurance and other coverage for veterinarians, by veterinarians. Over the years, we have added coverage such as dental, vision, long-term care, professional overhead expense, maternity and student loan liability coverage. Additionally, we continue to offer guaranteed coverage to veterinary students and recent graduates – for life, disability, student loan and other lines of coverage. While the implementation of the Affordable Care Act necessitated the discontinuation of health insurance, the Trust designed and operates a Health exchange marketplace for AVMA members.

AVMA LIFE is committed to offering insurance for the AVMA members' personal lives and is focused on looking at what AVMA members want, even beyond insurance. Libby Wallace, CEO of AVMA LIFE, has said that the Trust is exploring services such as refinancing student debt and providing an advocate program for costly or complex medical exams. Additionally, the Trust has updated its disability insurance, by increasing maximum monthly benefits, adding maternity benefits to its short term disability and professional overhead coverage, added critical illness coverage, and life insurance for seniors, which includes an early payment benefit for certain medical conditions. Additionally, the Trust has included a $300 benefit towards rabies vaccination to our SCAVMA benefits, and increased the guaranteed issue coverage offered to recent graduates.

For existing AVMA GHLIT members (there are about 28,000 of you), your policy will not change. You will not receive a new certificate, but you will see the new name and logo on your correspondence from the Trust. And you will start to access the AVMA through our new website, www.AVMALife.org.

As your local AVMA LIFE representative, I am so excited about all of the changes within the Trust – for our new name AVMA LIFE, and branding, to our new products and services, to our renewed commitment to be a part of your life from your first day at veterinary school through your career and into retirement. With this name change, I am sure there will be questions - I will be available at all the MVMA meetings this year, sponsoring a Hot Topics, Cold Drinks evening later this winter (exact date and location TBA), and will be providing lunch meetings at many local clinics. Additionally, you can always

reach me at (443) 226-5850 (cell) orglotz@ft.newyorklife.com. If you would like me to come into your practice for a breakfast or lunch meeting, please email me at glotz@ft.newyorklife.com.
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Upcoming Events

Mid-Atlantic States Bovine Conference
March 31 - April 1, 2016
Hagerstown, MD
Click here for details
Mid-Atlantic States Veterinary Clinic
May 19, 2016
West Friendship, MD
Click here for details

Highlights from the 2015 Potomac Regional Veterinary Conference

Members of the Maryland, Virginia, DC and West Virginia Veterinary Medical Associations met in November at the Potomac Regional Veterinary Conference. Here are some photographic highlights.

Attendees engaged at the companion animal education session.

Dean Clarke meets with VMA leadership.

The MVMA bowling team.

MVMA President-Elect Rick Streett III shows off his form.

MVMA NEWS

"Like Us" on Facebook

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Don't Forget to List Your Externship with MVMA

MVMA is compiling a list of externship opportunities to support our relationship and communication with the students at VMRCVM. If you are a member and want to list your externship, click here.

Welcome New Members

MVMA welcomes the following members who have joined since our last newsletter was published.

Srinivasulu Chigurupati, PhD
Catherine E. DeJesus, VMD
David L. Dycus, DVM, MS
Megan C. Hensler, DVM
Denise Kessler – CVCA
Mike McClung – First National Bank, PA
Lauren E. Robinson - Student
Shadawn T. Salmond-Jimenez, DVM
Matthew F. Weeman, DVM

MVMA Classifieds

MVMA's most recent job listings and listings for practices and equipment for sale. Click here read them.