

# Education newsletter

VOL. 3

ISSUE 3



Bill Brandt, Training Chief

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People will forget what you said; people will forget what you did.  
But people will never forget how you made them feel.  
-Maya Angelo

I would like to offer my praise to you all for the excellent patient care you provide and for the professionalism you show on every call. But mostly I want to thank you for doing your good work in such a way that the people we serve feel seen, and important. Hundreds of times each day people's lives are thrown into chaos and they call you. You bring order to their chaos by giving them the best first aid you can, and by offering kind, and comforting words when they need that most of all.

Many times our patient outcomes are not positive, and it may feel to us like our efforts have come up short. Often I have blamed myself for poor patient outcomes. If only I had done this or that then maybe the outcome would have been better.

With significant reflection I don't feel this way any longer. There are many cases when the very best care by the finest provider cannot reverse the effects of trauma or illness on our patients.

The kindness we show in those circumstances can have a profound impact on the people we serve for a lifetime.

Thank you again,

Bill



John "JZ" Zahn, Training Captain

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I hope this issue finds you all enjoying a great summer. It seems we have many activities to pack in to a short season. The July calendar is reflective of that. Class load regains momentum in August however. Our next issue will have us into fall and an approaching winter. I am sorry I used the "W" word.

Allina Health EMS has designated 2019 as the year of the airway. All of our staff are being educated to improve our airway management skills and procedures on a continuous basis. Airway management is job one regardless of the certification you may hold. This is true for first responders to physicians. The science behind airway management has been a hot topic in EMS and the only constant is change.

Included in this newsletter is an article from "JEMS" that covers much of the new science and procedures. As we bring our instructors up to speed on this information, we will be bringing it to your education sessions.

Thank you for your service to our communities. Please contact me if you have questions, concerns or requests. Have a safe day, JZ



Paul Melvin, Training Captain

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It is that time of year where all of our EMRs, EMTs and Paramedics need to think about getting their continue educational hours completed for their level of certification. Do not wait until the last minute classes you need and/or to sign up to get into refresher class for your level of training. Many of our educational clients often wait until the last minute for them figure out what they need to complete before the deadlines with EMSRB and/or NREMT occurs. So feel free to contact our department if you or your training officers are wondering where you stand and what if educational class opportunities through Allina are available to help you or your department meet your educational needs.



# A MODERN APPROACH TO BASIC AIRWAY MANAGEMENT

Sun, Apr 1, 2018

By [Andrew Merelman, BS, NRP, FP-C](#) , [Richard Levitan, MD, FACEP](#)

A modern approach to the essentials of ventilation & oxygenation



Administering oxygen via nasal cannula while treating a patient with CPAP increases the fraction of inspired oxygen and doesn't typically interfere with the mask seal. Photos courtesy Andrew Merelman

You arrive on scene and find a 68-year-old man is lying on the couch with difficulty breathing. He's obese and obtunded, with severe respiratory distress. His wife tells you he has a history of congestive heart failure. He appears pale and diaphoretic, with snoring, slow, shallow breaths and his initial oxygen saturation is 72%.

What are the most important first steps in managing his airway and breathing?

## PATIENT POSITIONING

The most crucial factor in airway management is patient positioning. Improper positioning can, and frequently does, inhibit effective ventilation and oxygenation.

It's commonly taught that patients must be supine to enable airway management. This teaching is flawed, as supine is the most dangerous position for a patient with a compromised airway. The most detrimental position for a patient, from an airway perspective, is flat on his or her back. Supine is best described as the "COFFIN position," or "Cannot Oxygenate Face Flat In Neutral position."

Why is supine such a compromising position? The primary reason is the tongue. If a healthy person lies on their back, their intrinsic reflexes maintain upper airway tone, which keeps the tongue from occluding the airway. But, when a patient with airway compromise is on their back, the tongue falls to the posterior pharynx. Additionally, the soft tissues of the upper airway relax and contribute to compression of the pharynx narrowing the airway.<sup>1</sup> This can sometimes be managed with basic airway maneuvers, but can often be addressed simply by optimizing positioning.

Supine positioning also significantly reduces lung capacity due to compression of the diaphragm and chest by soft tissue. Additionally, almost all airway interventions are more difficult in the supine position. This is especially true for bag-valve mask (BVM) ventilation, as upper airway collapse makes ventilation significantly more challenging. Mask seal is also more challenging as the soft tissue of the face falls posteriorly.

Overall, airway management is improved in the upright position. The initial response to a patient with airway compromise and a decreased level of consciousness should be "OOPS," or, "Oxygen On, Pull the Mandible Forward, Sit the Patient Up."<sup>2</sup> Oxygen should be applied via nasal cannula at 15 Lpm or higher. Traditionally, it's taught that the nasal cannula can only be used up to 6 Lpm but it's actually capable of effectively delivering much higher flow rates.<sup>3</sup>

Higher flow rates are necessary in cases of severe distress as patients regularly generate negative inspiratory flow rates in their airway of more than 30 Lpm. Oxygen delivery must be titrated to match the patient's demand. Keep in mind that nasal cannulas capable of end-tidal carbon dioxide (EtCO<sub>2</sub>) monitoring typically can't deliver flow rates higher than 6 Lpm. This is because the oxygen is delivered via small holes above the nasal prongs and not from the prongs themselves.

**The nose is the ideal route to provide oxygen ... applying 'Os up the nose' is the best initial response to hypoxia.**

The nose is the ideal route to provide oxygen. The nasopharynx acts as a reservoir that can fill with a high concentration of oxygen that the patient can utilize on inspiration. Applying "Os up the nose" is the best initial response to hypoxia.

Sitting the patient up takes them out of the compromising supine position and helps to open the upper airway. Once upright, applying a significant jaw thrust will further open the airway by pulling the tongue and soft tissues forward, away from the posterior pharynx. This will allow nasal oxygen to passively begin to oxygenate the patient.

Additionally, it's been demonstrated that the head-tilt-chin lift technique that's commonly taught does *not* open the airway. The jaw thrust is the most effective basic airway maneuver.

OOPS as an initial response to airway compromise will rapidly address many likely causes of respiratory failure and start to improve the patient's condition.





The initial response to a patient with airway compromise and a decreased level of consciousness is not to keep them supine, but to follow OOPS: Oxygen On, Pull the Mandible Forward, Sit the Patient Up.

### *CASE (CONTINUED)*

You recognize that your patient has immediate airway compromise. Due to his size and supine position on the couch, the quickest thing you can do is elevate his head, which you do by placing towels underneath. This somewhat improves the snoring being caused by his tongue.

Pillows are then placed underneath his back and head to maintain that position. Once upright, you apply a nasal cannula at 15 Lpm and perform a jaw thrust by pulling the mandible forward maximally. His snoring stops, and you begin to see some improvement in the pulse oximetry. However, you recognize that he needs further intervention.



X-rays demonstrate that head-tilt chin-lift doesn't impact upper airway patency; however, the head/jaw forward position is shown to increase patency.

### OXYGENATION & VENTILATION

After applying the OOPS principles, the next step is to decide whether the patient has a ventilation problem as well as an oxygenation problem. Many patients will have significant improvement in oxygenation with only the nasal cannula and may not need further intervention. However, we have many prehospital resources to address patients who require more assistance.

The most frequently taught intervention for the hypoxemic patient is the non-rebreather (NRB). However, the NRB is a flawed device for several reasons. It's a myth that an NRB can provide >90% fraction of inspired oxygen ( $\text{FiO}_2$ ). In reality, NRBs typically used in the emergency setting can only deliver about 60–70%  $\text{FiO}_2$ .<sup>4</sup> The primary reason for this is that most NRBs don't come with two exhalation valves; they only have one. This means that room air is entrained into the mask every time the patient inhales.

Another factor is that the NRB mask is rarely sealed properly to the patient's face. This is another way that room air can leak into the mask and lower the  $\text{FiO}_2$ .

## CASE (CONTINUED)

You may have seen a patient in respiratory distress pull an NRB off their face. We typically say that “they wouldn’t tolerate” the NRB. But why do patients do that? Don’t they know the NRB helps? The reason is that, at 15 Lpm, an NRB may not provide enough flow to match the patient’s minute volume.<sup>5</sup>

A person with normal respiratory status has a minute volume of about 6–7 Lpm. But a patient in respiratory distress will be breathing faster and deeper and could easily have a minute volume >15 Lpm. Additionally, the liter flow of oxygen must match the patient’s high negative inspiratory flow rate in the airway.

If the NRB is truly fitted to the patient’s face and isn’t matching their demand, they will feel air hungry, and this leads them to pull the mask off. However, combining an NRB with a nasal cannula provides higher flow rates that may be able to match your patient’s demand.

With OOPS being performed, you consider the best next steps to improve the patient’s respiratory status. Your partner quickly applies an NRB at 15 Lpm. However, as an NRB doesn’t help with work of breathing, the patient still appears in significant distress—and his oxygen saturation has only improved to 81%.



## POSITIVE PRESSURE

Some patients will need more support, as a nasal cannula and NRB don’t improve respiratory function, they only increase the oxygen concentration that the patient is breathing. Additionally, patients with lung disease and poor respiratory effort have pulmonary shunt. This is caused by atelectasis or lung infiltrates, such as fluid or infection, that interfere with the function of alveoli in a particular area of the lung.

**A non-rebreather mask applied in combination with a nasal cannula will provide higher minute volumes that may be able to match your patient’s demand.**

## CASE (CONTINUED)

These situations require an increase in mean airway pressure, typically by using continuous positive airway pressure (CPAP) or assisting with a BVM. Delivering positive end expiratory pressure (PEEP) and positive pressure ventilation can re-inflate alveoli that have collapsed or are filled with fluid.

CPAP or a BVM should always be used in combination with a nasal cannula. Adding a nasal cannula increases  $\text{FiO}_2$  and doesn't typically interfere with mask seal.<sup>6</sup> Patients who are candidates for CPAP have adequate respiratory effort but are still in significant distress. It isn't as effective in patients who are fatigued or have diminishing respiratory effort. Patients should also be able to follow commands and be open to coaching for CPAP to be utilized.

CPAP is simply a method of delivering PEEP. Increasing PEEP raises the mean airway pressure, and this will improve oxygenation and help recruit alveoli. It can typically be titrated as high as 15  $\text{cmH}_2\text{O}$ . It's recommended to start at 5  $\text{cmH}_2\text{O}$  for all patients and increase pressure as needed. This practice improves patient tolerance of the procedure, which is one of the most crucial factors in ensuring CPAP is successful. Be sure to brief the patient before applying the mask, so they know what to expect. Apply the mask slowly and coach them through each step as they take their first assisted breaths. In some cases, it may be appropriate to use sedative agents such as benzodiazepines to help improve CPAP tolerance. However, it's important to exercise extreme caution when using sedatives in patients with severe respiratory distress. Even small doses of benzodiazepines can decrease respiratory drive and cause respiratory failure. Ketamine may be a better option as it's less likely to decrease respiratory drive.

Patients who have insufficient respiratory effort or are otherwise not CPAP candidates require BVM ventilation. This skill is notoriously performed poorly. The problem is that it's often taught as an easy, "basic" procedure that doesn't require practice. This mindset causes providers to downplay its importance during resuscitation of a critically ill patient and, in many cases, the most junior member of the crew is assigned to the BVM without supervision.



**Ventilation is often the most important intervention being performed and doing it correctly should be a priority.**

The reality is that ventilation is often the most important intervention being performed and doing it correctly should be a priority. Without conscious awareness, the tendency is for providers to ventilate too fast and with excessive volume.

Proper BVM technique is composed of three main principles: 1) consistent mask seal; 2) proper tidal volume; and 3) controlled rate. Mask seal is best optimized by using a two-person technique.

**The ideal way to ensure a proper mask seal using a two-person approach is for one provider to place the pads of the hand and the thumbs on the mask, while the second provider uses the index and other fingers to pull the jaw forward maximally.**



## CASE (CONTINUED)

The ideal way to obtain an excellent seal is by placing the pads of the hands and the thumbs on the mask and using the index and other fingers to pull the jaw forward maximally. This technique provides sufficient pressure to seal the mask and delivers a strong jaw thrust to maintain airway patency. This method is recommended over the traditional “C-E” when using a two-person approach.

When a one-person technique is necessary, “C-E” is the best option for mask seal. The biggest detriment to the “C-E” technique is that the provider only has their pinky and ring fingers available to perform a jaw thrust. These fingers are weaker and can’t easily displace the jaw to open the airway.

After the mask seal, squeezing the bag properly is the other critical component of BVM use. A standard adult BVM has a volume of about 1,000–1,200 mL. Most adult patients only need around 400–500 mL of volume delivered in each breath. This means that providers should use one hand and attempt to only squeeze about half or less of the volume of the bag in each breath. Using lower volumes and squeezing slowly also reduces the chance of filling the stomach with air and causing vomiting. One way to ensure more appropriate tidal volumes is to use a pediatric BVM for adult patients. They generally provide a volume of 400–600 mL, which is perfect for adults.<sup>7</sup>

Additionally, the person squeezing the bag must consciously limit the ventilatory rate to avoid over-ventilation. It’s common to see providers over-ventilating as they aren’t focused on the task and are under an adrenaline surge.<sup>8</sup>

Ventilatory rate should typically be somewhere between 10–20 bpm, depending on patient condition. EtCO<sub>2</sub> titrated to 35–45 mmHg can help guide ventilatory rate.

In addition to good technique, there are a few ways the BVM should be optimized to ensure the patient gets the best quality ventilation. The first is that all BVMs should have PEEP valves installed. Without a PEEP valve, a BVM doesn’t maintain airway pressure even if the mask isn’t broken. This means that any improvement in lung function is lost between breaths, as no pressure is accumulated in the lungs.

A PEEP valve ensures that when the mask seal is maintained, the airway pressure remains at a minimum level between breaths to help keep the alveoli inflated. PEEP valves can typically be set anywhere from 5–20 cmH<sub>2</sub>O. As a rule, the worse a patient’s oxygenation is, the higher the PEEP valve should be set. For example, patients with severe pulmonary edema often require high PEEP levels to displace fluid and recruit alveoli.



A one-person approach to ensuring mask seal during BVM ventilation isn't ideal because the “C-E” technique requires providers to use their pinky and ring fingers to perform a jaw thrust.



## CASE (CONTINUED)

The other way a BVM should be optimized is by using capnography. An inline EtCO<sub>2</sub> adapter can be placed between the bag-valve and the mask. If the mask seal is maintained, an EtCO<sub>2</sub> waveform will be generated and provide valuable feedback about the quality of ventilation. If there's no EtCO<sub>2</sub> waveform, you know that ventilation isn't occurring and a change needs to be made.

Recognizing that your patient is obtunded and has poor respiratory effort, you decide to initiate BVM ventilation. You ensure that your BVM has EtCO<sub>2</sub> attached and a PEEP valve set to 10 cmH<sub>2</sub>O.

With the patient sitting upright and the nasal cannula still in place, you perform a two-handed mask seal. Your partner begins squeezing the bag and initiates slow, controlled breaths in sync with the patient's own.

An EtCO<sub>2</sub> waveform appears, so you know ventilation is occurring. You see improved chest rise, skin color, and work of breathing. The patient's oxygen saturation improves to 95%. At this point, you're ready to extricate the patient to the ambulance and begin transport.

## SUPRAGLOTTIC DEVICES

One of the most important recent developments in airway management is modern supraglottic devices. They've evolved quickly, and today, they are more effective and easier to insert than ever before—so much so that many surgical procedures under general anesthesia are being performed with laryngeal mask devices in lieu of endotracheal intubation.

The most revolutionary of these devices is the laryngeal mask style airways. The third and fourth generation devices of this type have improved mask design, and are made to function under patient movement and with secretions in the airway. Additionally, they're easier to insert than older laryngeal mask devices or other supraglottic airways.

These modern airway adjuncts have changed the way we approach BVM ventilation. We know that ventilating with a mask is often difficult and can cause gastric distention. In patients who can tolerate it and don't have an intact gag reflex, a laryngeal mask airway should be utilized when BVM ventilation is necessary. Inserting the device is quick and easy, and it allows more definitive and effective ventilation and airway control. It eliminates the need for a handheld mask seal while significantly lowering the risk of gastric insufflation and vomiting. In fact, upper airway collapse actually improves laryngeal mask functionality as the airway tissues collapse into the bowl and improve the mask seal. These principles are also true in cardiac arrest. If a BVM is going to be used, placing a laryngeal mask is beneficial.

Upon moving your patient to the stretcher, you note that his breathing is slowing and his mental status is decreasing. You keep him sitting upright, elevate his head and continue BVM ventilation. Your partner prepares a laryngeal mask and you insert it rapidly, confirming placement with waveform EtCO<sub>2</sub> while beginning bag valve ventilation.

## CONCLUSION

Basic airway management has evolved significantly in recent years. Techniques and devices are being developed and changing constantly. Modern concepts, such as OOPS, O's up the nose, upright positioning, and laryngeal masks, improve our ability to oxygenate critically ill patients and are helpful to EMS providers of all levels.

## REFERENCES

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8. Khoury A, Sall FS, De Luca A, et al. Evaluation of bag-valve-mask ventilation in manikin studies: What are the current limitations? *Biomed Res Int*. 2016;2016:4521767.

## Program

At Pulse Check Leadership Summit, attendees will hear inspirational ways diverse members of EMS, Public Safety agencies and Health Care systems are able to innovate and successfully drive the future of leadership. [Register](#) for the Pulse Check Leadership Summit for the opportunity to learn from the nation's best who are at the forefront of the leadership revolution.

### DATE

**Thursday, September 26, 2019**

7:30 – 8:30 a.m. – Breakfast and Registration

8:30 a.m. – 4:30 p.m.

## shop

### DATE

**Wednesday, September 25, 2019**

1:00 – 4:00 p.m.

This interactive 3-hour workshop will break the participants into small groups where they will collaborate on a series of unexpected, but real-world events that build upon each other to develop crisis management skills.

## Featured Speakers



### Jill McElwee

Jill McElwee is District Chief at Jacksonville Fire and Rescue Department in Jacksonville, Florida.

As a staunch advocate for continuing education,

Jill leads the Training Division in addition to being a career paramedic and firefighter. As Chief of Training, McElwee is responsible for all training programs developed and delivered to JFRD's 1,300 employees. She uses her educational background, coupled with 24 years of fire and rescue service experience, to ensure that appropriate and innovative training is delivered to the seasoned firefighter as well as the newly hired recruit.

Jill earned undergraduate degrees in nursing and emergency medical services as well as public administration. She also holds a master's degree in security studies, specializing in homeland security.



### John Todaro

John Todaro is assistant director of the University of South Florida, College of Nursing, George & Marian Miller Center for Experiential Learning & Simulation.

John has been lecturing at national conferences for more than 30 years. He was named the 2009 EMS Education Program Director of the Year, 2003 Continuing Education Instructor of the Year and 1995 Florida EMS Educator of the Year. In 2009, NAEMSE awarded him their prestigious Legends Who Walks Among Us Award. He is a Charter Member and Past President of the NAEMSE, and a Charter Member of the NAEMT. He serves as a member for EMS World Magazine Editorial Advisory Board and Jones & Bartlett Publishers EMS Advisory Board. He is a nationally certified EMS educator, with a bachelor's degree in business administration and healthcare management, and associate's degree in paramedicine and nursing.



# Pre-Conference Workshop

## DATE

Wednesday, September 25, 2019

### Managing Unexpected Legal Risk

EMS leaders are being faced more and more with unexpected risk scenarios that place their organization, the public, and their careers in jeopardy. Sometimes, we are called on to step into situations that we could never have envisioned. This interactive 3-hour workshop will break the participants into small groups where they will collaborate on a series of unexpected, but real-world events that build upon each other to develop crisis management skills.

#### Learn to:

- Develop tools for identifying high-risk areas in an organization,
- Develop techniques for managing unexpected risk areas,
- Develop strategies for responding to unexpected risks,
- Develop tools for pre-event mitigation.



**Allison J. Bloom, Esq., EMT, EMS-I, FACPE,** is an EMS industry attorney and a member of the National EMS Management Association (NEMSMA) Board of Directors. She is a nationally-recognized author on EMS, legal and healthcare reform topics and lectures frequently on healthcare reform, legal, compliance, and risk management topics.



**Matthew Streger** is a paramedic and attorney with more than thirty years of EMS experience. Matthew is a Partner at the law firm of Keavney & Streger in New Jersey and currently sits on the Panel of Commissioners for CAAS. He is an internationally-known author and lecturer.

For further information  
or to register  
Go to our website:

<https://emspulse.org/leadership-summit/>

# Third Quarter Class Schedule

## North Metro

DATE:	Day of Week	Class Time:	Topic:	Location:
7/8/2019	2nd Monday	18:30-20:30		Fridley Fire
7/9/2019	2nd Tuesday	18:00-22:00		Anoka/Champlin
7/9/2019	2nd Tuesday	08:00-10:00		Fridley Fire
7/15/2019	Monday	18:30-20:30		Columbia Heights Fire
7/15/2019	Monday	09:00-12:00		Coon Rapids Fire
7/17/2019	Wednesday	09:00-12:00		Coon Rapids Fire
8/5/2019	1st Monday	18:30-20:30		SBM Fire
8/5/2019	Monday	18:30-20:30		Fridley Fire
8/6/2019	Tuesday	08:30-10:30		SBM Fire
8/12/2019	Monday	09:00-12:00		Coon Rapids Fire
8/12/2019	2nd Monday	18:30-20:30		Fridley Fire
8/13/2019	2nd Tuesday	08:00-10:00		Fridley Fire
8/19/2019	3rd Monday	19:30-21:30		Little Canada Fire
8/20/2019	3rd Tuesday	09:00-12:00		Coon Rapids Fire
8/21/2019	Wednesday	09:00-12:00		Coon Rapids Fire
8/26/2019	Monday	18:30-20:30		Columbia Heights Fire
9/10/2019	2nd Tuesday	18:00-22:00		Anoka/Champlin
9/16/2019	3rd Monday	18:30-20:30		Columbia Heights Fire
9/16/2019	Monday	09:00-12:00		Coon Rapids Fire
9/17/2019	3rd Tuesday	09:00-12:00		Coon Rapids Fire
9/18/2019	Wednesday	09:00-12:00		Coon Rapids Fire

### Lead Instructors

Brian Peterson – [brian.peterson@allina.com](mailto:brian.peterson@allina.com) – Anoka Champlin Fire

Steve Hagstrom – [steve.hagstrom@allina.com](mailto:steve.hagstrom@allina.com) – Coon Rapids FD, Fridley FD, Columbia Heights FD

Jennifer Zahler – [jennifer.zahler@allina.com](mailto:jennifer.zahler@allina.com) – SBM FD

Paul Melvin – [paul.melvin@allina.com](mailto:paul.melvin@allina.com) – Little Canada FD

## South Metro

DATE:	Day of Week	Class Time:	Topic:	Location:
7/2/2019	Tuesday	07:30-08:30	CPR/AED/FA	Apple Valley Maintenance
7/8/2019	Monday	18:30-20:30	EMS II	Bloomington Fire Station 4
7/11/2019	Thursday	09:00-12:00	Ambulance Safety, Adult Arrest, Peds Arrest, Active Shooter Pre	Eden Prairie Station 1
7/11/2019	Thursday	19:00-22:00	Ambulance Safety, Adult Arrest, Peds Arrest, Active Shooter Pre	Eden Prairie Station 1
7/16/2019	Tuesday	07:00-17:00	HEAT	Edina Training Tower
7/17/2019	Wednesday	07:00-17:00	HEAT	Edina Training Tower
7/18/2019	Thursday	19:00-22:00	Ambulance Safety, Adult Arrest, Peds Arrest, Active Shooter Pre	Eden Prairie Station 1
7/25/2019	Thursday	19:00-22:00	Ambulance Safety, Adult Arrest, Peds Arrest, Active Shooter Pre	Eden Prairie Station 1
7/29/2019	Tuesday	07:00-17:00	HEAT	Edina Training Tower
7/30/2019	Tuesday	07:00-17:00	HEAT	Edina Training Tower
8/12/2019	Monday	18:30-20:30	EMS III	Bloomington Fire Station 1
8/26/2019	Monday	09:30-11:30	EMS III	Bloomington Fire Station 1
8/26/2019	Monday	18:30-20:30	EMS III	Bloomington Fire Station 1
8/27/2019	Tuesday	07:00-17:00	HEAT	Edina Training Tower
8/28/2019	Wednesday	07:00-17:00	HEAT	Edina Training Tower
8/29/2019	Thursday	09:00-12:00		Eden Prairie Station
8/29/2019	Thursday	19:00-22:00		Eden Prairie Station
9/6/2019	Friday	07:00-17:00	HEAT	Edina Training Tower
9/7/2019	Saturday	07:00-17:00	HEAT	Edina Training Tower
9/9/2019	Monday	18:30-20:30	EMS III	Bloomington Fire Station 1
9/10/2019	Tuesday	08:00-13:00		Bloomington Sta 1
9/12/2019	Thursday	19:00-22:00	Tactical - MCI/Active Shooter	Eden Prairie Fire
9/19/2019	Thursday	09:00-12:00	Tactical - MCI/Active Shooter	Eden Prairie Fire
9/12/2109	Thursday	19:00-22:00	Tactical - MCI/Active Shooter	Eden Prairie Fire
9/24/2019	Tuesday	18:30-22:00		Savage FD
9/25/2019	Wednesday	09:00-12:30		Savage FD
9/26/2019	Thursday	19:00-22:00	Tactical - MCI/Active Shooter	Eden Prairie Fire
9/30/2019	Monday	18:30-20:30	EMS III	Bloomington Fire Station 1

### Lead Instructors

Greg Delo – [greg.delo@allina.com](mailto:greg.delo@allina.com) – Bloomington FD & PD, MAC FD

Bill Brandt – [william.brandt@allina.com](mailto:william.brandt@allina.com) / Sherry Hoffman – [sherry.hoffman@allina.com](mailto:sherry.hoffman@allina.com) - Eden Prairie FD

Jennifer Jones - [jennifercwhite@gmail.com](mailto:jennifercwhite@gmail.com) – Shakopee FD



## North Rural Service Area

DATE:	Day of Week	Class Time:	Topic:	Location:
7/10/2019	2nd Wednesday	09:00-12:00	Cardiac Arrest Mgmt	St Francis Fire
7/10/2019	2nd Wednesday	18:00-21:00	Cardiac Arrest Mgmt	St Francis Fire
7/18/2019	3rd Thursday	18:00-20:00		Elk River Ambulance
8/13/2019	2nd Tuesday Even Mos.	18:30-20:30	Extrication	Isanti Sheriff Safety/Rescue
8/14/2019	1st Wednesday	08:30-10:30		Ramsey Fire
8/14/2019	1st Wednesday	19:00-21:00		Ramsey Fire
8/19/2019	3rd Monday even Mos.	19:30-21:30		Braham Fire
8/21/2019	3rd Wednesday	19:00-21:00		Andover Fire
8/21/2019	3rd Wednesday	09:00-11:00		Andover Fire
8/22/2019	3rd Thursday Even Mos.	18:00-20:00		Elk River FD
8/22/2019	3rd Thursday	18:30-20:30		Elk River Ambulance
8/22/2019	4th Thursday Even Mos.	19:00-21:00		Dalbo Fire
8/26/2019	4th Monday Even MOS.	09:00-11:00		East Bethel Fire
8/26/2019	4th Monday Even MOS.	19:00-21:00		East Bethel Fire
9/4/2019	1st Wednesday	08:30-10:30		Ramsey Fire
9/4/2019	1st Wednesday	19:00-21:00		Ramsey Fire
9/11/2019	2nd Wednesday	09:00-12:00		St Francis Fire
9/11/2019	2nd Wednesday	18:00-21:00		St Francis Fire
9/18/2019	3rd Wednesday	09:00-11:00		Andover Fire
9/18/2019	3rd Wednesday	19:00-21:00		Andover Fire
9/19/2019	3rd Thursday	18:00-20:00		Elk River Ambulance
9/23/2019	4th Monday	19:00-21:00		Ham Lake FD
9/26/2019	Thursday	9:00-11:00		Ham Lake FD

### Lead Instructors

Laura Reynolds – [laura.reynolds@allina.com](mailto:laura.reynolds@allina.com) – Ramsey Fire Department, St. Francis Fire Department  
 Steve Hagstrom – [steve.hagstrom@allina.com](mailto:steve.hagstrom@allina.com) – Elk River Ambulance, Andover Fire  
 Mike Peach – [medicpeach@comcast.com](mailto:medicpeach@comcast.com) – Elk River fire Department  
 JZ – [john.zahn@allina.com](mailto:john.zahn@allina.com) – Isanti County Safety and Rescue, East Bethel Fire Department  
 Jennifer Zahler – [Jennifer.zahler@allina.com](mailto:Jennifer.zahler@allina.com) – Braham FD, Dalbo FD, Ham Lake FD

## West Rural Service Area

DATE:	Day of Week	Class Time:	Topic:	Location:
8/5/2019	1st Monday	18:30-20:30	2018 Review, Trauma Assess., (MARCH/Skills), Airway	Annandale Fire
8/7/2019	1st Wednesday	19:00-21:00	2018 Review, Trauma Assess., (MARCH/Skills), Airway	South Haven Fire
8/12/2019	2nd Monday	19:00-21:00	2018 Review, Trauma Assess., (MARCH/Skills), Airway	Monticello Fire
8/12/2019	2nd Monday Second Month/Quarter	18:30-21:30		Hutchinson FD
8/14/2019	2nd Wednesday	19:00-21:00	2018 Review, Trauma Assess., (MARCH/Skills), Airway	Clearwater Fire
8/19/2019	3rd Monday/Second Month/Quarter	18:30-21:30		Plato FD
8/20/2019	3rd Tuesday	19:00-21:00	2018 Review, Trauma Assess., (MARCH/Skills), Airway	Hanover FD
8/20/2019	Tuesday	19:00-21:00	2018 Review, Trauma Assess., (MARCH/Skills), Airway	Buffalo Fire
8/21/2019	4th Wednesday	19:00-21:00	2018 Review, Trauma Assess., (MARCH/Skills), Airway	St Michael FD
8/22/2019	3rd Thursday	19:00-21:00	2018 Review, Trauma Assess., (MARCH/Skills), Airway	Alberville Fire
8/26/2019	4th Monday	19:00-21:00	2018 Review, Trauma Assess., (MARCH/Skills), Airway	Rockford Fire
8/26/2019	4th Monday	18:30-20:30		Maple Lake Ambulance
9/23/2019	4th Monday	18:30-20:30		Maple Lake Ambulance

### Lead Instructors

Greg Delo – [greg.delo@allina.com](mailto:greg.delo@allina.com) – South Haven FD, Buffalo FD

Steve Hagstrom – [steve.hagstrom@allina.com](mailto:steve.hagstrom@allina.com) – Maple Lake

Mike Peach – [michael.peach@allina.com](mailto:michael.peach@allina.com) – Rockford FD, Monticello FD, Hanover FD

Jim Bonin – [james.bonin@allina.com](mailto:james.bonin@allina.com) – Clearwater FD, Annandale FD, St. Michael FD

Amy Dettman – [amy.dettman@allina.com](mailto:amy.dettman@allina.com) – Hutchinson Area Providers

## ALF Area Providers

DATE:	Day of Week	Class Time:	Topic:	Location:
7/2/2019	Tuesday	07:30-08:30	CPR/AED/FA	Apple Valley Maintenance
7/23/2019	Tuesday	08:00-16:00	EMR Refresher	Lakeville PD
7/30/2019	Tuesday	08:00-16:00	EMR Refresher	Lakeville PD
8/12/2019	Monday	08:00-13:00	FA/CPR/AED	Lakeville PD
8/20/2019	Tuesday	08:00-13:00	FA/CPR/AED	Lakeville PD
8/27/2019	Tuesday	08:00-13:00	FA/CPR/AED	Lakeville PD
9/9/2019	Monday	18:00-22:00	EMR "B" (CPR)	AVFD #1
9/12/2019	Thursday	08:00-12:00	EMR "B" (CPR)	AVFD #1
9/16/2019	Monday	18:00-22:00	EMR "B" (CPR)	AVFD #1
9/23/2019	Monday	18:00-22:00	EMR "B" (CPR)	AVFD #1
9/30/2019	Monday	18:00-22:00	EMR "B" (CPR)	AVFD #1

### Lead Instructor:

Paul Melvin – [paul.melvin@allina.com](mailto:paul.melvin@allina.com)