MAINE EMS 2019 PROTOCOL LESSON PLAN		
BLUE SECTION		
SLIDE #	***LESSON***	***NOTES***
1	1. Blue- Title Slide	
2	2. Pre-Intubation Checklist a. The protocol title has been changed to "Pre-Intubation Checklist" at the request of providers. b. Changes on the checklist reflect an effort to align the protocols with the Comprehensive Airway Management Review program that was released along with the approval of Video Laryngoscopy equipment this year:	
3	i. CHECKLIST ITEM #2 1. OG tube added to checklist a. Paramedic ONLY b. With ADVANCED airway management c. Oral only- no NG tube use d. May attach low suction i. less than 80 mmHg	
4	ii. CHECKLIST ITEM #6 1. Patient positioning 2. “Ear-to-Sternal-Notch” 3. Slide Illustration clarifies what this position actually looks like a. Many providers don't learn this positioning correctly-- resulting in merely hyper-flexing the head!!	
5	iii. CHECKLIST ITEM #7 1. Reminder that sedation requires OLMC consult 2. Sedation can be accomplished using EITHER (but not both) medication a. Midazolam; OR b. Ketamine	
6	iv. CHECKLIST ITEM #8 1. Automatic ventilator settings a. 8L volume changed to range of 6-8 mL/kg 2. NOTE: automatic ventilators are for EMERGENCY 911 transports only, and NOT for interfacility transport use.	
7	3. Airway Algorithm a. Now applies to BOTH adults and peds. No separate Peds Airway Algorithm. b. INADEQUATE RESPIRATORY EFFORT box: i. CPAP is for adult patients only	
8	c. BIAD/ETI PLACEMENT SUCCESSFUL box: i. Contact with receiving hospital	
9	d. PEARLS i. Low suction may be connected to OG tube: 1. <80 mmHg ii. Emphasis on ALWAYS having a back-up plan	

	iii. Emphasis on using a commercially purpose-designed device to hold the ETT, or tape, versus manually holding ETT in place	
10	4. Post-Intubation/BIAD Pain Control a. Pediatric dosing moved from PINK i. EMS-C Bear added to denote PEDS b. PARAMEDIC: i. PEDIATRIC pain control 1. Fentanyl dosing 2. Standing order vs anxiolysis	
11	ii. PEDIATRIC Anxiolysis 1. Midazolam dosing ranges- age based 2. *0.05 mg/kg is appropriate for any patient age 3. REQUIRES OLMC	*Medication dosing is on slide* **The use of 0.05 mcg/kg as a dose for use across all age groups is common and approved by MDPB.*
12	5. Respiratory Distress with Bronchospasm #1 a. AEMT i. Item #8 reformatted for clarity 1. Emphasis that CPAP should never replace bronchodilators 2. Bronchodilators should be use at the same time as CPAP a. This is easiest to do when CPAP set includes an attachable neb set. ii. Item #9 (FOR ASTHMA PTs ONLY) 1. Pediatric Epi dose added from PINK 2. NOTE: a. AEMT- EPI is 1st line b. Paramedic- Magnesium Sulfate c. First line	
13	b. Paramedic i. Pediatric albuterol and ipratropium bromide dosing added	
14	ii. Pediatric dosing added: 1. Dexamethasone 2. Magnesium Sulfate a. Consider putting this on a pump. 3. EPINEPhrine 1 mg/mL	
15	c. ASTHMA PEARL i. CPAP: 1. Is a LAST resort. It should not be used in place of bronchodilator therapy 2. Is a bridge to intubation	

	a. If you get down to using this in an asthma patient, things are not going well. You should be ready to intubate the patient, which is the next step if CPAP treatment is not effective 3. Use the lowest PEEP possible 4. When used the asthmatic patient, MUST use continuous Neb a. Use with capnography if possible	
16	d. PEARL- Bronchiolitis vs Wheezing i. Bronchiolitis and asthma are two different diseases with two different etiologies. Treatment for each will vary. 1. Inhaled albuterol does not always benefit bronchiolitis patients a. But a trial is appropriate to conduct b. Bronchiolitis patients DO NOT BENEFIT from steroids 2. Consider O2, Keeping airway clear of secretions with suctioning, and nebulized epinephrine instead ii. Added to PEARL regarding progressive airway measures iii. When considering whether or not to progress to advanced airway measures from using a BVM: 1. Consider a. Pt age b. PT Diagnosis (Dx) c. Transport time d. Provider experience e. Effectiveness of BVM use so far 2. In most situations with short transport time situations, BVM use has been shown to be equivalent to ETI.	
17	6. Anxiolysis in CPAP a. Since CPAP is not approved for pediatric patients, the word "adult" is used in describing the indications for use. b. Medication route change i. For anxiolysis with CPAP, "IO" has been added as a route of administration for the following meds: 1. Ondansetron 2. Midazolam 3. Ketamine	
18	7. Surgical Cricothyrotomy--NEW PROTOCOL a. Intent i. It is important to impress that the intent of this protocol is: 1. Educational awareness that this procedure is available as an option if indicated	

2. NOT intended to be a point of care resource, *i.e.: directions to be used on-scene, or as definitive prescribed way of performing the procedure.*

ii. This skill requires regular practical skills training to obtain and maintain proficiency.

1. Skills competency and method of performance can be affected and vary by the following factors:
    a. Personnel experience and training
    b. Frequency of didactic and practical skills competency training
    c. Equipment used by the service
    d. Medical Director preference, where:
        i. Service level Medical Directors are involved in provider training-- usually specialty care programs

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b. Indications

i. Failure to maintain the airway through other less invasive means in a patient who is:

1. 8 y/o or older; AND
2. Has palpable surgical landmarks

ii. Other means of doing the following have failed:

1. Oxygenation
2. Ventilation
3. Airway protection

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8. Tracheostomy Care- NEW PROTOCOL

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a. Intent

i. To create a protocol which addresses the increase in the number of patients living out of the hospital with tracheostomies

ii. Providers have seen an increase in the numbers of patients who are going home with tracheostomies, and who routinely call 911 for issues common to trach patients, such as secretions and mucus plugs.

iii. A protocol was needed that would allow EMS providers to address these issues they are commonly called for

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b. Indications

i. An adult or pediatric patient with and established tracheostomy, with signs of respiratory distress or failure

c. SKILLS NOTE:

i. This may be a new practical skill for many providers. Competency should be obtained through *regular skills practice*.

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d. EMT/AEMT

i. The protocol covers:

1. Tracheostomy assessment

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2. O_2 administration

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3. Suctioning

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4. Use of nebulized saline

	5. Consider other causes, if issue not resolved and refer to the appropriate protocol, if applicable.	
27	e. Paramedic i. Consider replacing trach tube if above measures have not resolved the issue, OR if the trach tube has become dislodged. 1. Tracheostomy must be *2 weeks old* or there is risk of perforating the tracheal lining and creating a false lumen (false pathway for the new trach tube to get caught into).	*Two weeks allows time for tracheostomy wound to heal enough to decrease likelihood of mucosal tearing.*
28	ii. PEARLS 1. Shiley: a. Common brand of trach tube b. Has OUTER and INNER cannula-- inner is removable. c. Only inner cannula has 15mm adapter to fit BVM. d. INNER CANNULA MUST BE IN PLACE TO VENTILATE PT WITH BVM. 2. *Bleeding at site: any bleeding from the trach should be evaluated emergently. Follow Hemorrhage and Hemorrhagic shock protocols.* a. With severe bleeding, hyperinflate the trach tube cuff in an effort to tamponade the bleeding blood vessel. Inflate slowly to prevent cuff rupture and reassess.	
29	iii. Indications for replacement of trach tube 1. Indications a. Trach > 2 weeks old b. Signs of respiratory distress/failure NOT improved c. Dislodged trach tube 2. Contraindications a. Trach < 2 weeks old b. *Secure airway from above trach site if possible*	
30	iv. Replacement Procedure 1. Protocol covers the following: a. Required equipment b. Replacement procedure 2. THIS IS A HIGH RISK/LOW FREQUENCY SKILL. 3. This skill requires regular practical skills training to gain and maintain skill competency. 4. Key to skill is to GENTLY advance the new tube-- DO NOT FORCE. a. *Excessive force with insertion of new trach tube can cause perforation of the mucosal lining and creation of a false lumen, into*	

	which the new trach tube may get caught in and cause major damage	
31	v. Trach tube sizing chart 1. Table lists sizes and ETT equivalents for both Portex and Shiley trach tubes. 2. The INTERNAL DIAMETER (I.D.) in the size/name for the trach tubes.	
32	9. Video Laryngoscopy (VL) a. SEE SLIDE b. The video laryngoscopy handle and blade is a specific type of equipment approved by MDPB for use in intubation by EMS services. c. Though MDPB has put restrictions on some of the specifications of the equipment approved for use, the procedure for use of VL technology in the care of patients is governed by protocol in the same manner Direct Laryngoscopy (DL) equipment. d. Therefore, at this time (2019), there is no specific VL protocol	
33	10. Questions	*Please make an effort to take note of provider questions for construction of a forthcoming 2019 Protocol FAQ*
END OF BLUE SECTION		