



****Infection Prevention and Control Considerations**

- Appropriate PPE must be worn while caring for all suspected ILI patients
- N95 respirator is mandatory with any Aerosol Generating Medical Procedure (AGMP)
- The patient should wear a procedure mask, if tolerated. Oxygen can be administered while the patient is wearing the procedure mask via nasal cannula. If the patient requires additional oxygen, a NRB can be used with the accompanying procedure mask

***Influenza-Like-Illness (ILI) Signs / Symptoms:**

- Acute onset of NEW cough or change in existing cough
- Fever (greater than or equal to 38°C on arrival or by history)
- Sore throat
- Joint pain
- Muscle aches
- Severe exhaustion
- In patients under 5, fever may not be prominent

Etiology

Dyspnea is an abnormal and uncomfortable awareness of breathing. Dyspnea implies shortness of breath or breathlessness, but also a sense of discomfort; breathing is no longer unconsciously or effortlessly performed. Patients with chronic diseases usually delay calling EMS as they attempt to gain relief by usual measures. In an attempt to avoid hospitalization, they often wait too long and as a result may present as decompensating or “in extremis”.

Consider differential diagnoses for dyspnea such as:

- Asthma
- Inhalation injury
- Pneumonia
- Infection
- ILI (Influenza like illness)
- Pulmonary edema
- Pulmonary embolism
- Pulmonary effusion
- Pneumothorax
- Myocardial infarction
- Anaphylaxis
- Diaphragm injury
- Hyperglycemia
- Anxiety (diagnosis of exclusion only)

Patients with respiratory conditions are challenging to assess and treat. Underlying medical problems or concurrent illnesses may make determining the actual cause for the patient’s distress difficult. There are no clear-cut rules regarding the treatment of respiratory disorders; in determining the appropriate treatment, consideration should be given to the following:

1. Not all asthmatics wheeze
2. All that wheezes is not asthma
3. All that crackles is not pulmonary edema
4. Hyperventilation due to anxiety is a diagnosis of exclusion
5. Dyspnea can be an anginal equivalent and may be the only symptom or sign of a myocardial infarction; therefore, a 12-lead ECG should be performed
6. Pneumonia can lead to Congestive Heart Failure (CHF)

Pediatric Considerations

Respiratory emergencies are one of the most common reasons EMS is called for pediatric patients. Some respiratory illnesses are minor, causing only mild symptoms, while others can rapidly prove fatal. The approach to a pediatric patient depends on the severity of the dyspnea. If the child is alert and talking, you can take a more relaxed approach; however, if the child appears ill or has marked respiratory difficulty, you must immediately intervene. Respiratory emergencies may quickly progress from respiratory distress to failure, and then to respiratory arrest. Prompt recognition and treatment can have a dramatic effect on the outcome.

Pediatric signs of respiratory distress include:

- Nasal flaring
- Grunting
- Mottled, dusky skin colour
- Tachypnea, shallow breathing
- Altered level of consciousness
- Sounds – stridor, hoarseness, muffled voice, wheezing
- Tripod positioning
- Retractions
- Asymmetrical chest movement
- “See-saw” respirations
- 1 to 2 word sentences

Interventions

1. Medical information that is important in diagnosing and treating dyspnea includes:
 - a. **MEDICATIONS:** dosage, compliance with home regime as well as post-hospital care, (e.g. steroids, theophylline, beta agonists, inhalers)
 - b. **HISTORY:** past respiratory or cardiac diagnosis, smoking, family history, travel, trauma, do not resuscitate (DNR) orders or goals of care designation (GCD) – attempts must be made to determine what level of airway management is applicable
 - c. **PATTERN OF DISEASE:** triggers, previous hospital admissions (ICU), previous intubation
 - d. **ALLERGIES TO MEDICATIONS**
 - e. **CONCURRENT ILLNESS:** colds, infections, cardiac disease, etc
2. Apply oxygen and contact OLMC early if uncertain about the most appropriate medical control protocol
3. PCPs are to perform a 12-lead ECG and transmit to the receiving hospital for interpretation (if able)

Pharmacology

Not applicable

Special Circumstances

Influenza-Like-Illness (ILI)

Signs and symptoms of ILI include:

1. Acute onset of respiratory illness, NEW cough or change in existing cough PLUS 1 or more of the following:
 - a. Fever (greater than or equal to 38°C on arrival or by history)
 - b. Sore throat
 - c. Joint pain
 - d. Muscle aches
 - e. Severe exhaustion
2. In children under age 5, gastrointestinal symptoms may also be present. In patients under age 5, fever may not be prominent

Infection Prevention and Control (IP&C) Considerations

Many therapies for respiratory conditions and airway management techniques are known as aerosol generating medical procedures (AGMPs). These often produce splashes of oral secretions, as well as blood, and emesis when they are present. In the presence of an infectious state, oral secretion can transmit harmful pathogens. Personal protective equipment (PPE) that protects the pre-hospital care provider's eyes, nose and mouth as a minimum is mandatory.

Appropriate PPE must be worn while caring for all suspected ILI patients. AGMPs should be avoided when possible, and only performed in consultation with OLMC. Common AGMPs performed by pre-hospital care providers:

- Airway management eg intubation or BVM ventilation
- Suctioning
- Nebulization of medication
- CPAP

The patient should wear a procedure mask, if tolerated. Oxygen can be administered while the patient is wearing the procedure mask via a nasal cannula. If the patient requires additional oxygen, a NRB can be used without the accompanying procedure mask

Pre-notification of the receiving facility is mandatory and must be done as soon as possible

Patient Experience Considerations

- Regardless of the etiology, dyspnea is experienced and described differently by patients. The person feels a sensation of not being able to breathe fast enough or deeply enough. It can be a terrifying experience and hypoxia can further compound the situation. Often, as the patient experiences air-hunger, the family will panic along with the patient.
- Acknowledge this fear. Provide the patient and family with clear explanations of the nature of the dyspnea and reassure them that relief is possible.