**Queen’s University Internal Medicine Simulation Course**

**Case:** Pneumonia

**Synopsis:**

67 year old patient, otherwise healthy, that presents with pneumonia and sepsis.

**Number of Participants:**

1 – 2 senior medicine residents

**Objectives:**

Management of sepsis with early goal directed therapy.

Appropriate antibiotic choice.

Crisis resource management in the setting of critically ill medicine patients

Airway management in pneumonia

**Stem:**

67 year old patient with 3 day history of fevers, chills, cough, progressively work.. This morning spouse found patient to be confused and brought to ER. On assessment by ER staff patient was found to be hypotensive, tachycardic, and hypoxic. A central line was urgently inserted, patient was given a dose of ceftriaxone and started on normal saline (bolus 1 L). ER consulted medicine for further resuscitation and management.

**Roles:**

1) Primary Senior Internal Medicine Resident

2) Secondary Senior Internal Medicine Resident (optional)

3) Nurse

**Script for Roles:**

Nurse: Since arrive to ER you’ve placed the patient on monitor and have assessed the ER staff with placement of a right IJ. You’ve given 1 dose of ceftriaxone and have started a litre of saline wide open. Patient has been placed on 4L O2 by nasal prong to maintain appropriate sats. Blood work has been drawn, a CBC with Diff, BUN, lytes, creatinine, and blood cultures. Patient is otherwise healthy according to EMS.

**Pneumonia**

**Setting:** Hospital ER

**Manikin:**

* Hospital gown
* 18 gauge peripheral IV running normal saline wide open
* Right triple lumen IJ.

**Resources:** IV’s, normal saline, 5% albumin, pentaspan, volunen, blood products, levophed, dopamine, dobutamine, antibiotics.

**Initial Parameters:**

**Patient:** Dyspnea, responds to questions, usually with 2-3 word sentences, pain with deep inspiration and movement.

**Vitals:** BP 80/50, HR 135, RR 28, O2 sat 92% on 4L, Temp 39.8 C

Eyes: Open

Lungs: ++ Crackles right lung, decreased air entry

Heart Sounds: Normal

Heart Rhythm: Sinus Tachycardia

Scenario Flow Chart

Initial Vitals: BP 80/50, HR 135, RR 28, O2 sat 92% on 4L, Temp 39.8 C

RT Art line insertion anytime

Exam, check RR, order gas

Blood Work – KGH Lab

IV Fluids (Normal Saline, Ringers, or Albumin 5%

No IV fluids, patients hemodynamcis decompensat

Increased O2 and assess for CPAP / BPAP

No increased O2 decompensates

Check Blood Gas

Further Decompensation

Start BPAP

Improves

Dies

ABG 7.23/57/60/21 Sats 91%

Block:

Checklist: Pneumonia

* Begin fluid resuscitation
* Add Appropriate antibiotics - Azithromycin
* Indications for Vancomycin
* O2 Supplementation
* ABG