SIMulatED

Royal Darwin Hospital Emergency Department

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# Scenario Run Sheet: Severe Sepsis (melioid pneumonia)

## Scenario Overview

**Estimated Scenario Run Time:**  8-10 mins

**Estimated Guided Reflection Time:** 10-15 mins

**Target Group:** ED Registrars and Nurses

**Brief Summary:** *38yo indigenous male, longrasser* presents with fever, cough and weakness.

Severe sepsis from bilateral pneumonia requiring early intubation and inotropes. Alcohol intoxication/abuse

## Learning Objectives

**General**

Team work/Communication

**Scenario Specific**

Recognition and grading of severity of sepsis

Knowledge of local seasonal antibiotic protocols for CAP/severe sepsis/melioidosis

Timely collection of relevant microbiological specimens

Rationalisation of interventions for septic shock and respiratory failure (early intubation in this case)

Rationalisation of RSI technique for the clinical scenario

Consideration/timing of CT imaging for deep seated infection (mediastinal, abdominal and lung abscess)

## Equipment Checklist

**Equipment**

IV access and blood collection including BC/serology

Culture specimens (Ashdown, swabs, urine)

Adult Resus Trolley

IDC / bag

Monitor, infusion pump, CVC/arterial pressure bag

**Medications and Fluids**

Giving set, Saline 3L and plasmalyte

Ceftriaxone, Meropenem, vancomycin, azithromycin, Thiamine

RSI + sedation drugs: Propofol, Thio, Ketamine, Fentanyl, Midazolam, Morphine, Sux and Roc

**Documents and Forms**

Triage Form and Obs chart

Adult CAP in the Top End Protocol (only if specifically asked for)

**Diagnostics Available**

ECG – Sinus Tachycardia

CXR – Bilateral consolidation (Synapse)

VBG – Modest metabolic and respiratory acidosis

## Scenario Preparation/Later Parameters

**Initial Post intubation**

GCS **11** (E3 V3 M5) RR 38 P 138 BP 90/58 GCS **3T** RR vent HR 148

Sats 88% RA T 38.8 BSL 9.8 SaO2 92% F1.0 BP 82/50 T 37.8 Too breathless to perform BAL

**Mannequin Features**

Male, clothed

## Participants

**Staff Actors**

Registrars x2 Radiographer

Nurses x3ED +/- SJA paramedics for handover

**Instructor Roles**

- Provide the team with CXR, VBG showing a metabolic acidosis, bloods suggestive of sepsis, UA NAD and the CAP protocol only if specifically asked

## Candidate Instructions/Triage Information

You have gone to resus to see an ATS2 patient. He is a 38yo indigenous man brought in by ambulance with fever, cough and SOB. Please assess and treat as you would in your everyday practice.

## Patient Instructions

**How do you feel?**

“Short wind”, “hot-cold”, “feel weak”, “shaking”

**How do you behave?**

Severe respiratory distress and drowsiness, unable to lie flat, head slumping. Drowsy and confused, simulated voice or patient speaks in words only. Confused and irritable with questions, interventions and handling

**Medical History**: etoh abuse

**Social** (From paramedics)

Drinking for past 2 weeks (2-3 boxes wine every day), from Barunga, staying at Mindil Beach long grass past 2 months

## Proposed Scenario Progression

Resuscitation team assesses source / severity of sepsis, metabolic and other issues (etoh)

Instigates interventions for respiratory and circulatory failure, appropriate AB coverage, thiamine

Focussed history taking, culturally appropriate interaction with patient

Septic screen relevant to WET season protocol (BC pre AB’s)

Severe Type 2 respiratory failure precludes NIV/HFNO2 and requires early ETT; post intubation checks

Early consultation with on call ED consultant and ICU/medical referrals

## Case Considerations/Discussion

**Human factors:**

Teamwork, ED specialist oversight (“managing up”), transition of care (ICU referral)

**Clinical factors:**

Assessment and management of severe sepsis, wet season protocol / local microbiology

Source identification (CT chest abdo pelvis for deep seated melioidosis)

Rationale for timing/type of interventions for respiratory and circulatory failure

Cultural safety – remote-dwelling indigenous person, long-grass + alcoholism lifestyle