SIMulatED

Royal Darwin Hospital Emergency Department

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# Scenario Run Sheet: Retrieval

## Scenario Overview

**Estimated Scenario Run Time:**  15-20 mins

**Estimated Guided Reflection Time:** 20-30 mins

**Target Group:** ED Registrars and Nurses, ICU and Surgical registrars

**Brief Summary:** 45yo male, helicopter retrieval from Batchelor with sepsis from abdominal wall cellulitis. Haemodynamic instability 30 mins from ED due to sepsis and cardiogenic shock. Requires coordinated approach between prehospital/ED team to continue resuscitation during transfer to ED bed, escalation of cardiovascular support and early intubation. Requires Rx of cardiogenic and septic shock and early surgical referral for debridement of necrotising fasciitis in OT

## Learning Objectives

**General**

Trauma team communication

**Scenario Specific**

Preparation of resus team after prehospital notification, early notification of surgical and ICU

Understand logistics of patient arrival from RDH helipad to ED resus room

Expert transition of care in a critically unwell patient (clinical handover, bed/equipment transfer without reduction in level of patient care or monitoring)

Recognition of severe sepsis and suspicion of necrotising fasciitis of the abdominal wall

Rationale for appropriate AB therapy, invasive monitoring and supportive management of cardiogenic shock

Timely consultation with surgical and ICU team for definitive management and ongoing monitoring

## Equipment Checklist

**Equipment**

SJA stretcher, Careflight bridge and monitoring; I sim and heart sim (for careflight monitor)

Adult Resus trolley

Central line and arterial line modules

**Medications and Fluids**

Giving set, Normal saline, plasmalyte, mero, vanc, clinda

RSI/sedation drugs (M+M)

**Documents and Forms**

ED Nursing chart, FBC, ETG nec fas, Vanco LD chart

**Diagnostics Available**

CXR – poor inflation

ECG – ST depression/TWI anterolateral. Clinic documentation. Careflight documentation. Istat result

VBG –mixed resp/metabolic acidosis, creat 180, K 4.2, Gluc 22, Ketones 2.0. UA: bloods, prot, gluc

## Scenario Preparation/Later Parameters

**Initial Later**

GCS **10** RR 30 P 140 BP 85/50 GCS **3(T)** RR vent HR 130

Sats 93% NRB T 37.8 BSL gas SaO2 95% O2 BP 100/60 T 38.2

**Mannequin Features**

Male 3G mannequin, abdo wall obese with cellulitis and insulin needle marks

## Participants

**Staff Actors**

ED Registrars x3, CF reg Radiographer

Nurses x3ED, CF RN ED Consultant available by phone

ICU + SACU reg referral by phone

**Instructor Roles**

- Provide the team with clinical signs, bedside diagnostics, CXR

## Candidate Instructions/Triage Information

It is 0200h. You are informed by the triage RN that the Careflight helicopter is 15 mins away with a 45yo male with sepsis from abdominal wall cellulitis. Sudden drop in BP to 80-50 upon landing in Darwin, being given IV fluids and aramine, currently GCS 13, RR 30, HR 140, SaO2 94% NRB, T 37.8, BSL 22. Had been given IV flucloxacillin 1g in community.

## Patient Instructions

Confused, no history

**Medical History (careflight MO)**: DM-2 on lantus 18U daily, actrapid 10-12U tds, metformin and gliclazide; Irbesartan, aspirin and simvastatin. **Estimated weight 90kg**

**Social** Smoker/drinks daily. Manages a Batchelor petrol station, lives with wife (driving to Darwin)

HPC: seen by Batchelor GP with fevers and infected insulin injection sites not responding to 3 days diclox. Increasing fevers, malaise; started vomiting and became confused on waking yesterday. GP reviewed 4 hours ago : Glucose 26, BP initially 100/80, HR 120, T 38.5, - gave IV fluclox, antiemetics, paracetamol and insulin 6 units. Helo dispatched: on arrival at clinic: Confused GCS 13, BP 90/60, HR 130, T 38.2, RR 30, SaO2 95 on 4L. Bibasal creps, tender swollen Left abdo wall, no palpable surg emphysema or discharge. Given 2 L N Saline and 1g meropenem with HR 120, BP 105/60. Istat: (hands over slip)

5 mins from Darwin airport: drop in GCS to 10, HR 130, BP 80/50: given further 1 L saline and peripheral aramine, temp increase BP to 95/60; total 6mg. Last 1mg bolus given just before arriving at ED.

## Proposed Scenario Progression

* Preparation of resus team, medications and equipment prior to arrival. Early notification of ED consultant on call, surgical and ICU teams. NRC/nurse TL organise ground transport from h/pad to ED
* Team performs focused primary survey while handover occurs simultaneously
* Difficulty removing transport bridge requires assessment / continuation of resuscitation by ED team prior to transfer to ED bed
* Identifies severe sepsis complicated by type 2 respiratory failure and DKA
* Delivers appropriate antibiotics (+ septic screen) for presumed necrotising fasciitis (mero, clinda, vanc) + instigates DKA therapy
* Provides update to Surg/ICU to escalate review
* Establishes appropriate CVC and arterial vascular access and titrates fluid and inotrope support followed by suitable RSI (in shocked patient) and ventilation; performs post-resuscitation care
* Commences fluid, blood glucose and acid-base monitoring
* Team confers on disposition (considers stability for CT assessment vs ICU v theatre for debridement)
* Liaison with family (debrief)