

جامعة ساوة الاهلية  
كلية التقنيات الصحية والطبية  
قسم التخدير - اللجنة العلمية

# Transport of critically ill patients



جامعة ساوة

كلية التقنيات الصحية والطبية

قسم تقنيات التخدير

المرحلة الثالثة عناية مركزة/الكورس الاول

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رقم المحاضرة: ( 3 )

# INTRODUCTION

- **Definition :**

A **Critically ill patient** is someone suffering from a life-threatening condition that significantly impairs their bodily functions. Their condition is so severe that they require intensive medical care to survive.

- Transport of critically ill patient put them in increased risk of morbidity and mortality.
- Decision must be made after careful assessment of potential benefits and risk.
- Careful planning can minimize the risk.

# Who is considered a critically ill patient ?

**Critical illness** is the medical condition in which a patient, because of major surgery or severe illness, requires immediate intensive medical support of vital organ functions in order to survive.

Here are some common conditions that require critical care:

- ❖ Heart problems
- ❖ Lung problems
- ❖ Organ failure
- ❖ Brain trauma
- ❖ Blood infections (sepsis)
- ❖ Drug-resistant infections
- ❖ Serious injury (car crash, burns)

# Types of transport

## ❖ **Primary transport:**

From the incident site to a medical facility.

## ❖ **Secondary transport (Inter-hospital):**

Patient moved between two hospitals, usually for an increased level of medical care not available locally.

## ❖ **Intrahospital transport:**

Movement of patients within the hospital or its departments for investigations or treatment not available at the ward or intensive care location. (e.g. CT scan, MRI)

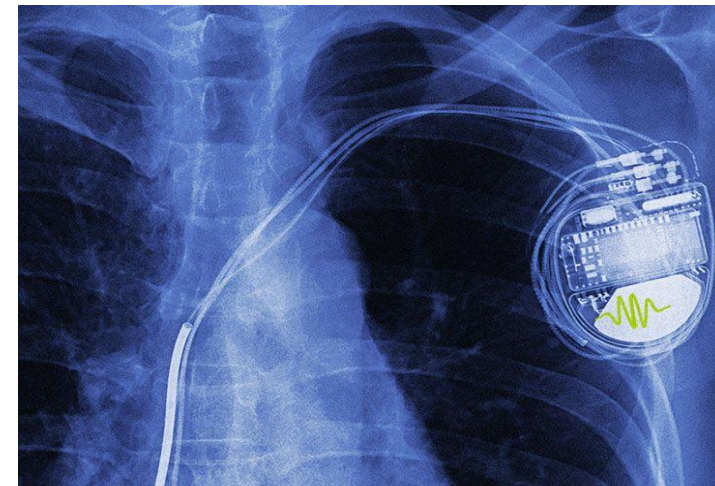
# Indication

1. Transfer out to ward.

2. Transfer to other hospital.

3. Diagnostic testing → CT scan, MRI, angiogram, endoscopy, ultrasound.

4. Operation → surgery, pacemaker, tracheostomy



# Contraindication

- ❖ Inability to maintain patient's airway during transport.
- ❖ Inability to provide adequate oxygenation and ventilation during transport.
- ❖ Inability to maintain hemodynamic stability during transport.
- ❖ All other condition in which transporting the patient is consider life-threatening.

# Before transport....

- ❖ Full assessment of the patient's condition
- ❖ Assessment of the perceived advantage of the transfer
- ❖ Initiation of appropriate support including the staff and resources, to achieve resuscitation and stabilization
- ❖ Checking of transport equipment.
- ❖ Communication with other department / hospital, doctor, patient's relatives.
- ❖ Mechanism of Transport.

# Information

- Reason for transport
- The patient's condition
- Equipment needed.
- Just before leaving notify the receiving department



# Preparing patient for transport

- **Secure intra venous access**
- **Airway stabilization**
- **Trauma victims → spinal mobilization**
- Nasogastric tube
- Foley's catheterization
- **Chest tube insertion**
- All drains → under water seal ,urinary ,wound drains
- Infusion pump & IV drips functioning properly
- Soft wrist and leg restraints
- **Vital signs displayed on monitors**
- **Patient is safely secured on a trolley**



# Adverse effects of transportation

- Adverse events during transport of critically ill patients fall into **two general categories:**

1. Mishaps related to intensive care (e.g.):
  - \*Leads disconnection.
  - \*Loss of battery power.
  - \*Loss of intravenous access.
  - \*Accidental extubation.
  - \*Occlusion of the endotracheal tube.
  - \*Exhaustion of O<sub>2</sub> supply.
2. Physiologic deteriorations related to critical illness (e.g) :
  - \*Worsening hypotension or hypoxemia
  - \*Cardiac arrhythmias
  - \*Airway obstruction
  - \*Cardiac arrest

# Essential elements For Transport

- Communication.
- Personnel.
- Equipment.
- Monitoring.
- Handing over (Documents, Information).
- Medico legal and ethical aspects.

# Communication

☐ Physician to physician



☐ Nurse to Nurse



# Accompanying personnel

- ❑ Two qualified personnel
- ❑ Vehicle operator
- ❑ Respiratory therapist



# Accompanying equipment

- Airway management equipment**

- Medication**

- Electronic devices**

- Trolley**

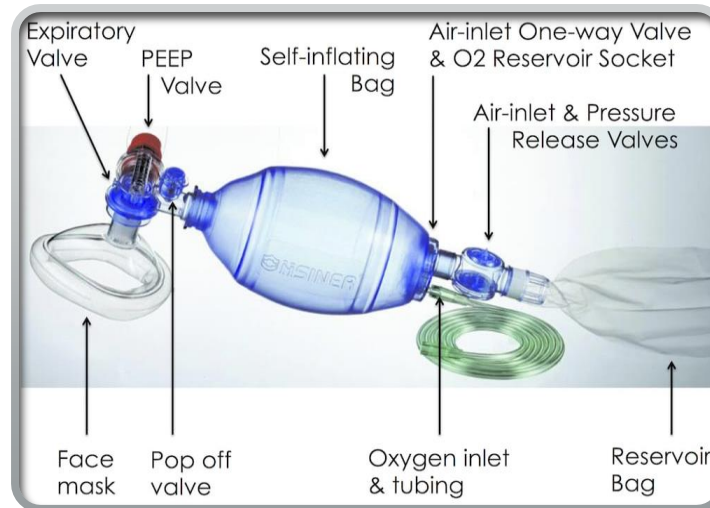
- Oxygen cylinder**

# Ideal basic ambulance equipment requirements

- Protective clothing and footwear
- Hard hats
- Robust gloves
- Safety glasses
- Simple tools and cutting equipment
- Communications
- Lighting and torches
- Oxygen masks
- Defibrillators
- Splints
- Oxygen
- Suction unit
- Secure stretcher
- Spinal board
- Neck collars
- Temperature control systems
- Dressings

# Equipment

- ❑ Resuscitation box → intubation kit, bag valve mask, IV cannula, emergency drug
- ❑ Portable ventilator
- ❑ Portable hemodynamic monitor
- ❑ Portable suction
- ❑ Oxygen tank
- ❑ Medication cardex





# Electronic Devices



**AKAS**  
INFUSIONS

# Trolley



# Standard resuscitation drugs



# Documentation

- ❖ Indication for transport
- ❖ Patient status during transport
  - .Vital signs ( Monitor )
  - .Level of consciousness (GCS)

# Monitoring

- ❖ Pulse, Rhythm
- ❖ Oxygen saturation
- ❖ BP,RR,Etco2



# Arrival procedure

- # Assessment
- # Shifted
- # Ventilators established
- # Complete handover
- # Documentation of patient status with time



# Conclusion

- **Systematic approach**
- **Careful planning**
- **Proper use of personnel**
- **Selection and availability of appropriate equipment**





THANK YOU

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