

CGP 145

POLICY AND PROCEDURE FOR THE CARE AND TRANSPORTATION OF THE COMATOSE PATIENT AND THE PATIENT ON LIFE SUPPORT

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1. POLICY INTRODUCTION

National Ambulance (NA) strives to deliver safe and quality services in accordance with international evidence based best practices, with the appropriate sections in Clinical Practice guidelines in use by National Ambulance, and other clinical policies, procedures and protocols approved and/or published by National Ambulance. The Care and Transportation of the Comatose Patient and the Patient on Life Support Policy and Procedure has been developed to ensure (and maintain) safe, quality care and transportation for National Ambulance patients in accordance to these internationally recognized guidelines and procedures.

National ambulance clinical staff must act in the best interests of the patient, any relatives or guardians accompanying the patients and within their specified scope of practice and must use relevant qualifications, training, skills and experience to provide optimal clinical care. National Ambulance clinical staff must also be fully aware of the special consent considerations required for this patient group.

This policy applies to all staff involved in patient care at NA. The care and transportation of the comatose patient and patients on life support will be monitored through routine clinical quality review and audit processes. The policy is also related to the management components of Leadership and Commitment, and Continuous Improvement.

2. SCOPE

Define what the policy covers, what it does not cover, and who it applies to and does not apply to.

Care and management of patients in a coma and/or on life support is only to be performed by National Ambulance Clinical personnel with suitable qualifications, skills and training and within their scope of practice.

This policy and procedure includes all elements of patient management for these patients in the Emergency medical services environment and in accordance with the definitions below to ensure best possible outcome for patients; it also includes guidance on documentation to ensure comprehensive and accurate recording of all patient related activity takes place.

Term	Definition
Life support	Pertaining to equipment or measures that sustains or artificially substitute for essential body functions, including but not limited to airway patency, breathing and circulation.
Coma	A state of deep and usually prolonged unconsciousness.

3. ROLES AND RESPONSIBILITIES

1. The Medical Director

Is responsible for development of this Policy and Clinical Procedure and any associated training, any review and revision and any Performance Indicators and should be available for advice and support for a Duty Manager.

2. The Chief Operations Officer

Is responsible for the implementation and monitoring of this Policy and Clinical Guidelines.

3. All Managers

Are responsible for ensuring that clinician have induction in alignment with this Policy and Procedures, for monitoring the applicability and ongoing implementation as well as raising any issues with the MD and reporting any incidents or near misses through the QHSE system. Reporting of any suspected or confirmed communicable disease must be completed in accordance with the DOH regulations and in accordance with the steps that are included in the NA Infection control policy.

4. All staff that provide care for patients

Are responsible for acting according to this policy and procedures in accordance with their scope of practice. They are also responsible for ensuring that they attend, or pursue, any relevant training recommended by their supervisors. (i.e. e-learning and face to face training)

4. POLICY STATEMENT

Coma and Life support management begins with establishing the ABC's of resuscitation in accordance with National Ambulance CGP134 – Patient Care Protocols and CGP 111 Clinical Guideline for Patient Resuscitation

Further to this life support may also include but is not limited to the following:

- Oxygen administration
- Intravenous fluids
- Drug therapy
- Pacing
- Defibrillation
- Mechanical ventilation
- Other machines to support brain, heart, or lung function.

All clinicians must work within their scope of practice and skill set when managing an unconscious patient or those requiring life supports. Clinician must maintain consideration for appropriate ethical standards and patient consent in accordance with National Ambulance Policy.

This policy must be used in conjunction with other relevant policies and procedures and protocols, approved/adopted and published by National Ambulance.

National Ambulance will ensure that all employees have access to suitable ongoing training to ensure they have the most relevant and up to date information.

National Ambulance will measure the application of this policy using agreed metrics, measurement of outcomes and will ensure that any necessary improvements are actioned to ensure continuous improvement in patient care and outcomes.

Other relevant policies and procedures are in place and available to support this policy and procedure including but not limited to:

- CGP 112 Clinical Policy for High-Risk Patients
- CGP 116 The Policy and Procedure for the Transport of Special Patient Populations
- CGP 129 Infection Prevention and Control Policy
- OPF271 – MOI Airwing Dispatch Process
- CGP 134 Patient Care Protocols
- HEMS Manual

5. CLINICAL POINTERS

- Adverse events resulting from mishaps during transfer:

System	Adverse event
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Airway	Loss of Airway Acute obstruction from kinks, mucous plugs
Breathing	Respiratory arrest Hypoxemia, decreased PaO ₂ / FiO ₂ ratio Ventilator- Associated Pneumonia Tension pneumothorax
Circulation	Cardiac Arrest Hemodynamic instability Bleeding Air embolus
Disability	Increased intracranial pressure Spinal cord injury destabilization

Monitoring requirements (depending on scope of practice) during transport

1. If changing equipment for transport, patient should have a brief trial on the new equipment before leaving the First location. Reassessment should occur after all equipment changes.
2. Alarms should be checked for patient appropriate settings with all equipment.
3. Minimal frequency of monitoring and documentation are the same as the intensive care unit. Frequency should be increased depending on the patients' acuity and/ or the risk f procedures.

Mandatory	Continuous	Oxygen saturation Cardiac monitoring Respiratory rate End-tidal carbon dioxide monitoring if patient is intubated Heart Rate
	Intermittent	Breath sounds Blood pressure
Recommended	Continuous	Body temperature (or monitor continuously with temperature probe)
	Intermittent	
Ideal – This is for critically unwell patients who should always be accompanied by an appropriate Physician	Continuous	Arterial blood pressure monitoring Intracranial pressure monitoring
	Intermittent	Central venous pressure monitoring

- Please refer to the following tables for general guidance:

Airway

- Establishment and maintenance of a patent airway is always the first priority of care
- Protect the airway in a considered, stepwise manner
- Endotracheal Tube (ET) is considered gold standard airway protection
 - A boogie should ideally be used to help facilitate intubation
 - Monitor patency by checking and documenting cm marker depth at teeth, listening for equal lung sounds and using capnography (ETCO₂)
 - Intubated patients should be adequately sedated and restrained for transport.
- Reassess patency of airway adjunct after each movement of the patient
- Suction the ET tube, and/ or oropharynx, as necessary. Observe for bradycardia during this procedure.
- Monitor airway regularly to avoid complications

Breathing

- Monitor and Oxygenate to maintain saturations >98%
- Respiratory Rate (RR) must be monitored
- Capnography is gold standard for monitoring ET and ventilation status
- Consider Bag Valve Mask to support ventilation in line with your clinical guideline
- Assessment of sudden respiratory deterioration in intubated patients complications using the DOPE acronym:
 - D – Displacement
 - O – Obstruction
 - P – Pneumothorax
 - E – Equipment failure
- Beware of complications in the ventilated patient e.g. Pneumothorax, Ventilator Associated Pneumonia

Ventilator Settings (initial settings)

	Tidal volume	RR	I/E ratio	PEEP	FIO ₂
Normal lungs	8 mL/kg	10-12	1:2	4	1.0
Asthma/COPD	6 mL/kg	5-8	1:4	4	1.0
ARDS	6 mL/kg	10-12	1:2	4-15	1.0
Hypovolemia	8 mL/kg	10-12	1:2	0-4	1.0

Circulation

- Maintain Heart Rate (HR) within normal physiological limits for patient age and condition
- ECG 3-lead is the 'minimum' HR monitoring requirement
- Monitoring and documentation should occur every 15, 10 or 5 minutes as is clinically indicated
- The use of inotropes must only be used in line with your specific scope of practice and NA approved guidelines
- Fluid resuscitation must be used in-line with NA approved guidelines and specific to the patient's condition

Disability

- Monitoring of GCS is an important measure but may be difficult or erroneous in the sedated patient, however it is mandatory.
- Monitoring of Blood Sugar, Pupils and Temperature must be performed in this subset of patients
- Sedation of patients and the maintenance of sedation must be in line with specific NA guidelines and HEMS Manual /SOP.

Temperature management

- Unless a specific targeted temperature therapy is being employed it is necessary to maintain normothermia in the comatose patient and/ or the patient on life support.
- The sedated and/or paralyzed patient will be at risk of hypothermia. Both general and regional anaesthesia markedly affects thermal homeostasis by influencing central thermoregulation

mechanisms, reducing the sympathetic tone with inhibition of peripheral vasoconstriction and consequent redistribution of body heat from core to the peripheral compartment. This is of critical importance in trauma victims as the risk of preventable coagulopathy exists; this increases the risk of mortality.

- Be mindful of ambulance temperature, adjust air condition appropriately and use blankets if necessary
- Monitoring should include regular temperature checks – continuous monitoring if possible, especially if the transfer is over a time greater than 30 minutes.

Skin integrity

- The comatose patient and/ or the patient on life support is at risk of developing pressure sores especially in the presence of hypo-perfused and hypoxic tissue
- The use of long boards, scoops and other extrication devices should be minimized if clinically possible, especially if transfer time is greater than 30 minutes.
- Care should be taken to ensure that the patient is lying on a soft, smooth surface, and that no hard objects or intrusions impinge upon the patient
- In the event of an inter facility transfer enquire if there are any existing pressure sores, document appropriately and tailor care in line with this

6. RELEVANT LEGISLATION

International, federal or local legislation and circulars relevant to this Policy. Full detail on this legislation can be found in QHP109 Legal Register.

Code, Name of Legislation	Jurisdiction
Code, Name of Legislation, Year here	Jurisdiction here

7. PROCEDURE

The following procedure is to be adhered to when dealing with a patient requiring life support.

- All skills and procedures must be in accordance with National Ambulance approved practice and within the relevant scope of practice.
- You must work within your specified scope of practice.
- Requirements around consent must be considered as per **CGP 105** Consent policy and procedure.
- **When the patient is comatose or unable to communicate, two separate patient identifiers must be used and documented prior to transportation, with identification being undertaken by National Ambulance Crew.**
- Where possible care and transportation must occur with the patient being accompanied designated responsible adult in order to protect and safeguard the welfare of the vulnerable patient.
- Consider treatment plans in line with other clinical policies, procedures and protocols approved and/or published by National Ambulance, including HEMS Manual / SOPs.

- Initiate when required clinical support for both anticipated and unanticipated emergencies in accordance with National Ambulance approved procedures (ALS & BLS) and in accordance with National Ambulance CGP 111 Clinical Policy and Procedure for Patient Resuscitation.
- In the event that a hospital based critical care team or similar such as technician, therapist or nurse accompanies the life support patient during transfer, provide assistance to this team, within your scope of practice, as required.
- Two Clinicians are required for procedural sedation. Where procedural sedation is initiated within scope of practice, the health care practitioner performing the procedure should not be responsible for providing continuous monitoring of the patient. A separate, qualified individual should assume responsibility for providing uninterrupted monitoring of the patient's physiological parameters and assistance in supportive or resuscitative measures. These roles are to be allocated in advance of sedation. The individual responsible for providing the monitoring must be competent in
 - monitoring requirements;
 - response to complications;
 - use of reversal agents; and
 - recovery criteria.
- Patient assessment and continual reassessment are not only vital but also mandatory. This must be done in accordance with National Ambulance Clinical Policy and Procedure **CGP110** for Patient Assessment and Reassessment and Triage.
- Familiarize yourself with equipment being used for life support. Some items may be foreign to you, for example, in the setting of an inter-facility patient transfer. Where possible, and within reason, gain a full understanding of the performance characteristics of the life support device through an available technician and/or by following the manufacturer's instructions.
- If not comfortable with a device and/or procedure and/ or it falls outside of your scope of practice let a senior clinician know as soon as is possible. Seek advice - consider the use of National Ambulance HEMS Manual / SOP , aeromedical alternatives or ALS if patient, geography and scope of practice dictate.
- All clinical staff have adequate age and size appropriate resources to enable them to provide optimum care such as equipment and vehicles.
- Clinician must utilize appropriate mechanisms to secure patient and equipment during transit.
- Transport patient to an appropriate care facility, or designated receiving facility, and in accordance with National Ambulance Clinical Policy and Procedure **CGP116** – Transport of High Risk .
- Vibration and vehicle movement may interfere with monitoring, equipment, and patient condition. Therefore, due consideration must be given to driving style and National Ambulance Policies PUP202 – Operation Driving Policy and Procedure and OPP128 – Radio and Transmission Policy and Procedure.
- Document and communicate all observations and actions in accordance with National Ambulance Clinical Guideline **CGP119** Patient Care Documentation and Patient Care Record Policy and Procedure.
- All equipment used or any soiled or contaminated equipment must be disposed of, or where applicable cleaned, in accordance with National Ambulance Policies **OPP120** Hazardous Materials and Infection Control Policy **CGP129**.

8. RELATED POLICIES AND FORMS

List related policies and procedures to the created/updated policy.

Policy & Procedure /Form
CGP129 Infection Control Program
CGP119 Patient Care Documentation and Patient Care Record Policy and Procedures
OPP120 Hazardous Materials Policy
CGP116 Transport of High Risk Patient
CGP110 for Patient Assessment and Reassessment and Triage
CGP 105 Consent policy and procedure
CGP 111 Clinical Policy and Procedure for Patient Resuscitation
OPF271 MOI Airwing Dispatch Process
HEMS Manual
CGP 134 Patient Care Protocols

9. FEEDBACK

Any feedback or suggestions for improvement to this Policy, Processes or Procedures can be submitted to qhse@nationalambulance.ae

10.DOCUMENT CONTROL AND OWNERSHIP

A review and update of this document will take place as necessary, when changes occur that identify the need to revise this Policy such as changes in roles and responsibilities, release of new legislative or technical guidance, or identification of a new policy area.

This document ownership for editing is identified as:

- Medical Director

Change Brief

Version No.	Date	Change
1	07 May 2014	New Policy to ensure comprehensive and best quality care for the patient group
2	16 February 2016 (uploaded in the system May 2016)	NA approved guidelines/protocols Appropriate Policies and Procedures listed Two patient identifiers Accompanied statement for vulnerable patient Scope of Practice Initiation of procedural sedation Fit for purpose equipment Parameters for continuous monitoring
3	20 August 2016	Risk Based Thinking statement added. Reference to CGP 134 Patient Care Protocols is also added as reference.
4	2 October 2018	"Medical Director" title. Word "Staff" changed and replaced with "Clinician"
5	July 2021	Delete "Directors and Supervisor" from the roles and responsibilities

		Add CGP134 – Patient Care Protocols in 1. Introduction Delete CGP108 & OPP116 Delete OPP118 & COP128 Add PUP202 – Operation Driving Policy and Procedure and OPP128 – Radio and Transmission Policy and Procedure Refer to HEMS SOP
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CEO Approval

Board Member Verification