



Inter-hospital transfer of the critically-ill patient in the Republic of Ireland

Guidelines for Anaesthetists in referring units

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1. SUMMARY OF RECOMMENDATIONS

1. A 7-day 24-hour inter-hospital retrieval service should be available for all critically ill patients.
2. Pending the establishment of a full retrieval team for all patients, extra arrangements for the continuation of the anaesthetic service need to be put in place in the event of a transfer.
3. Many hospitals caring for critically ill patients on a 24-hour basis do not have adequate resources to provide the modern standard of care initially required for these patients prior to transfer. The funding needs to be put in place to correct these inadequacies.
4. The need for anaesthetic care of a patient during the period of inter-hospital transfer is determined by the anaesthetic team attending the patient in the referring hospital.
5. The patient should be resuscitated and his clinical condition should be as stable as possible before transfer.
6. Any procedures which are reasonably likely to have to be performed on an emergency basis in the transfer vehicle should be performed electively in the referring hospital prior to transfer.
7. Interhospital communication between referring teams should be at an experienced level.
8. Care of the patient during transfer should not be compromised and should be to a standard as close as possible to that available in an intensive care unit.
9. Inter-hospital transfer should be undertaken calmly but with minimum delay. If requested, a police escort should be available to facilitate travel through traffic black spots or other delays. Decisions during transfer regarding speed, sirens and degree of urgency should be determined by the accompanying doctor, in consultation with the emergency medical technician (EMT) team.
10. Care of the anaesthetist-accompanied patient during transfer is the responsibility of the referring anaesthetic team. There should be excellent communication between the referring consultant anaesthetist and the transfer team *en route*.
11. The anaesthesia service at the base hospital may need to be curtailed as a result of losing staff to inter-hospital transfer duties.
12. Each referring and receiving hospital should have a set of guidelines available to doctors to minimise problems of patient transfer.
13. Each hospital should have a brief, formal review of each transfer within a few days of the transfer. This should be led by a consultant anaesthetist. The purpose of this review would be to discuss any issues of difficulty that arose during the transfer and to create policies to help prevent future clinical and organisational problems.

2. INTRODUCTION

Inter-hospital transfer of the critically ill patient in Ireland necessitates the accompaniment of a transfer team, usually led by the consultant anaesthetist at the base hospital. This absence of anaesthesia personnel from their base hospital has subsequent deleterious effects on the Department of Anaesthesia's ability to provide the usual breadth of service locally.

The purpose of this document is to provide a broad set of guidelines to consultant anaesthetists and their trainees in referring hospitals as to how to effect the patient transfer safely and efficiently and how to maintain the safest possible service at the base hospital in the absence of the resident non-consultant hospital doctor (NCHD) anaesthetist. The emphasis of this document is on quality care for all patients.

3. BACKGROUND

From an inter-hospital transport perspective there are three types of hospitals in Ireland.

1. Many hospitals in urban areas have tertiary speciality units such as Neurosurgery, Cardiothoracic surgery, Spinal Injuries units, Paediatric surgery, Haematology and Complex Intensive Care. These are specialties to which all hospitals may refer. In the main, the transfer of patients to these hospitals is inward. Occasionally, however, the transfer is outward to another hospital.
2. Other hospitals, currently described as regional, have varying degrees of capability to handle complex cases e.g. trauma, vascular, complex medical cases, complex paediatrics, and complex maternity on a 24-hour/ 7-day week basis. These hospitals may transfer patients to the tertiary centres as well as accepting patients from smaller acute hospitals.
3. The remaining acute units, over twenty in number in General Hospitals around the country, have large variations in their ability to deal with acute cases as a result of decentralised policy that may or may not have reflected local need. Some support acute adult general surgical, medical, paediatric and maternity services. Others only have a general adult medical service and a general surgical service.

Many of these hospitals have a 24-hour accident and emergency (A&E) service but do not have the staff and facilities to cater for more complex emergencies. For example, many of these hospitals do not have an A&E consultant available out-of-hours or even within the normal 9 to 5 working week, nor do they even all have experienced A&E doctors at non-consultant level at all times. Not all A&E departments have a CT scanner available to them on-site 24 hours a day. It is difficult to justify having an A&E department open for emergencies such as major head injuries or spontaneous brain haemorrhage without a CT scanner being made immediately

available, and without immediate transfer of the CT images to the nearest neurosurgical unit. The role for this third layer of hospitals in the management of critically ill patients is primarily triage, stabilisation, treatment and / or transfer for further management.

4. REASONS FOR TRANSFER IN THE REPUBLIC OF IRELAND

Patients are transferred because of their need for specific medical attention that is not available on-site in the relevant hospital. Examples of this directed referral include transfer of cardiac patients to one of the nation's five cardio-thoracic units (Mater Hospital, Crumlin Hospital, St. James' Hospital, Cork University Hospital, University College Hospital, Galway). Alternatively a patient with multiple injuries may require referral to a spinal or neurosurgical unit, or a critically ill child may need transfer to a paediatric ICU.

In addition, patients are also transferred within local HSE areas to more specialised units for further care, e.g. orthopaedics or intensive care. An anaesthetist is needed to provide care to those patients whose requirements include major resuscitation, including management of the airway and ventilation. This anaesthetic transfer may occur with further assistance from other disciplines as per national or local guidelines.

Sometimes the anaesthesia team that is responsible for complex resuscitative care may make the decision to transfer to another anaesthetic service rather than to a surgical or medical service elsewhere. This may be recognition of the existence of limited resources locally and to obtain more complex treatment elsewhere in the best interests of the patient.

5. SELECTION OF PATIENTS REQUIRING ANAESTHESIA CARE DURING TRANSFER

The anaesthetist on call is the person responsible for deciding whether a patient being transferred requires anaesthetic care during the transfer. While an intubated patient in hospital does not need a doctor in attendance at all times, the transfer of an intubated patient should involve a doctor capable of providing a definitive airway. Other specialty groups (e.g. A&E medicine) are developing skills in the area of intubation and ventilation. The Standing Committee is of the view that it is wholly appropriate for other doctors who possess these skills to accompany patients, and particularly if they initiate ventilation.

Many patients do not need anaesthetic support during inter-hospital transfer.

These patients include:

- patients who are not likely to need airway or ventilatory support
- patients who are not for resuscitation measures
- patients being transferred for acute definitive management for whom anaesthesia support will not affect their outcome
- when the request for anaesthetic care during transfer exceeds the Department of Anaesthesia's resources to do so safely at that time. Although the patient would benefit from anaesthesia management the issue may be one of either delaying transfer until such resources are available or alternatively sending the patient without an accompanying anaesthetist but with another doctor.

The Standing Committee is also of the view that, in patients for whom life-support measures have not been initiated but there exists a reasonable likelihood that they may become necessary *en route* to the receiving hospital, such life-support measures should be initiated electively prior to transfer. This is in order to avoid the complications of roadside procedures being performed under sub-optimal conditions. Such procedures include tracheal intubation, ventilation, peripheral and central venous cannulation and insertion of chest drains.

Critically ill children have special needs with regard to transfer. Special conditions attaching to the transfer of critically ill children are included in our previous document "Care of the critically ill child in Irish Hospitals" (Published by the AAGBI and Faculty of Paediatrics, RCPI, 2005).

6. THE TRANSFER ITSELF

The anaesthesia team transferring a patient must be confident that the accepting unit understands the patient's needs and has the resources to accept them. As a practical point, communication on as high a level as possible should take place prior to transfer, ideally Consultant anaesthetist to Consultant anaesthetist but certainly from one experienced anaesthetist to another. In addition, there should be senior communication between the referring team in the base hospital to the admitting team in the receiving hospital.

The principle behind safe transfer is that the patient should receive the same quality of care during transfer as in the base ICU. Care should be provided by experienced personnel, including a critical care nurse, an anaesthetist, and, when necessary, other experienced staff. Although the accompanying anaesthetist is usually in a training grade, nevertheless he should be sufficiently experienced to complete the transfer to a high standard of patient care, and with immediate advice available at all times from the consultant in the base hospital. The patient should be resuscitated and as stable as possible on departure.

Although inter-hospital transfer is usually urgent, The Standing Committee feels that there is little to be gained by speeding between hospitals. Transfer should take place in a calm manner to allow for the maximum comfort of the patient and team. Sirens and blue lights should only be used in the case of obstructing traffic. Garda escorts should be requested in areas of traffic black spots to facilitate calm and steady progress. The Standing Committee feels that the Emergency Medical Technician (EMT) ambulance crew should consult the anaesthetist in this regard.

The transfer team should be covered by insurance cover adequate to protect it from any claims arising from incidents *en route*. The insurance cover should also include cover for members of the transfer team itself for any injury or loss of employment which might arise following an accident *en route*.

Telephone communications from the ambulance to the consultant anaesthetist and the base hospital should always be available.

Key decision-making during transfer is the responsibility of the transferring anaesthetic team. This team should consult on patient management issues with the receiving team but the transferring team, being the team physically attending the patient, should make the key decisions.

7. THE BASE HOSPITAL DURING TRANSFER

Usually a member of the Department of Anaesthesia is in charge of the transfer of a critically ill patient both during normal hours and in the out-of-hours setting. This duty is usually carried out by an anaesthetic NCHD. In most referring hospitals there is only one anaesthetic NCHD on call out-of-hours so that the referring hospital is bereft of its only in-house anaesthetic doctor for long periods. The consultant on call from home is the only anaesthetist then available and he must prioritise his role and resources to balance clinical demands and personnel. This may leave key areas of the acute hospital service with anaesthetic cover that is less than optimal. For example, in many hospitals, when the anaesthetic NCHD on call has left the hospital on inter-hospital duties, the consultant anaesthetist is left alone to cover the competing needs of maternity, emergency general surgery, intensive care, resuscitation and accident/emergency. This is clearly an impossible task, resulting in the consultant anaesthetist reluctantly having to prioritise certain areas above others.

The Standing Committee feels that out-of-hours transfers should only take place when immediate active management of the patient will take place in the receiving hospital. If surgery, for example, will not take place until the following day then an early morning transfer should be arranged rather than conduct an unnecessary middle-of-the-night transfer with resultant loss of anaesthetic cover locally.

The recommendation of the Standing Committee is that, when an anaesthetist finds himself alone to cover competing units in the absence of his colleague on transfer duties, he should hold the obstetric unit, where present, as his clinical priority. Specifically the anaesthetist should keep himself free for emergency Caesarean sections. If there is an epidural service in the obstetric unit it should be temporarily suspended until the resident anaesthetist returns to base. Secondly, the single-handed anaesthetist should keep himself free for involvement in the management of ICU patients to whom he is already clinically committed.

With regard to provision of anaesthesia for theatre cases other than Caesarean sections, it is imperative to stress that the provision of anaesthesia by an anaesthetist to a patient means that he is fully occupied with that patient to an exclusive level for the duration of the anaesthetic and cannot become involved in the management of other patients during that time. The vast majority of non-Caesarean section cases must therefore be transferred to the nearest appropriate hospital if surgery is urgent or alternatively must wait until the transferring anaesthetist returns to base.

The primary recommendation of the Standing Committee is that when an anaesthetist finds himself single-handedly covering a number of areas simultaneously, he should contact hospital and nursing management on duty at that time, and outline the problem of inadequate anaesthetic cover to them. He should inform management of his recommendations, as follows:

1. That, until the resident anaesthetist returns, critically ill patients should not be delivered by ambulance to the A&E department, nor admitted to the wards. Instead, these cases should be transferred to the nearest appropriate unit.
2. That he, the anaesthetist on-call, will keep himself free for emergency Caesarean sections and will not bring any other cases to theatre. The Standing Committee recognises that, on a very rare occasion when there is an immediately life-threatening situation, such as massive haemorrhage or major airway problems, a patient will have to be brought to theatre immediately as an urgent life-saving measure. In this circumstance the anaesthetist should ensure that the grave state of the patient is carefully documented by the admitting consultant. The anaesthetist should then inform the consultant obstetrician and the labour ward that there will be no anaesthetic cover for Caesarean sections until this urgent patient has left the operating theatre or alternatively until the transfer team returns.
3. That the epidural service will be temporarily suspended until the resident anaesthetist returned.

4. No other anaesthesia-accompanied transfers can take place until the return of the first transfer team.

The above situation may pertain less in the normal working hours when there are more staff members available. In addition the national mobile Intensive Care Unit (M.I.C.A.S.) is available for planned inter-hospital transfer 9 to 5 Monday to Friday.

The members of the Department of Anaesthesia should discuss the problems at the base hospital during inter-hospital transfer:

- within their own department to ensure a consistent response from all anaesthetists
- at clinical directorate level to ensure hospital-wide plans are put in place to deal with transfer associated difficulties and
- at the hospital medical board to ensure that consultants in all specialties are aware of the difficulties.

8. POST-TRANSFER

After a transfer the return to base of the transfer team should be effected as comfortably and as rapidly as possible.

The Standing Committee wishes to stress that, when a transfer team returns to base, its members should not be expected to immediately dive straight into their work schedule without having had a significant rest break.

There should be a debriefing discussion after each inter-hospital transfer between the transfer team and the referring hospital consultants. Problems should be highlighted and policies established to prevent recurrence of similar problems. Organisational difficulties between referring and receiving hospitals should be discussed by the relevant consultants in both hospitals and policies implemented to prevent recurrence of these difficulties.

Each anaesthetic department should keep formal minutes of these debriefing sessions. The minutes should be available to inspection on request by teams from the College of Anaesthetists RCSI and the Irish Medical Council.

Both referring and receiving hospitals should have a broad set of guidelines available in their ICU and A&E departments so that doctors engaged in referring or receiving patient transfers can refer to these guidelines when confronted by transfer difficulties. These guidelines should be broad and should cover both clinical and organisational aspects of patient transfer. The guidelines should be reviewed annually.

9. THE FUTURE

The current limited retrieval service run by Dublin hospitals operates only from 9 to 5, five days a week. In addition the service is available only to ICU patients and excludes other patients.

A 7-day, 24-hour inter-hospital retrieval service should be available for all critically ill patients needing transfer. This would include trauma patients.

Pending this arrangement, all hospitals should have enough levels of anaesthetic cover to ensure that there is a continuous in-house anaesthetic presence even when inter-hospital transfers are taking place.

10. REFERENCES

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