Adult Critical and Specialist Care Inter-Hospital Transfer

Summary This Policy Directive provides guidance on the process for referring and transferring adult patients requiring access to; critical care services, specialist care services and clinical specialty networks.

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Applies to Ministry of Health, Local Health Districts, Board Governed Statutory Health Corporations, Specialty Network Governed Statutory Health Corporations, Affiliated Health Organisations, NSW Health Pathology, Public Health System Support Division, Government Medical Officers, Community Health Centres, NSW Ambulance Service, Public Hospitals

Distributed to Ministry of Health, Public Health System, Divisions of General Practice, Government Medical Officers, NSW Ambulance Service, Private Hospitals and Day Procedure Centres, Health Associations Unions

Audience Critical Care Staff, Intensive Care Units, Emergency Departments, Aeromedical Retrieval Services, NSW Ambulance, Patient Flow Units, Patient Flow Managers, After Hours Managers, Transport Staff;All Chief Executives;Hospital Executives;Nurses;Medical Officers

Secretary, NSW Health

NSW Health

Policy Directive

Adult Critical and Specialist Care Inter-Hospital Transfer

Policy Statement

NSW Health is committed to providing the right care, in the right place, at the right time, as close to home as possible. Many patients will be able to receive the clinical care they need at a local health service. If their needs are outside a service's capability and capacity to deliver the required care, an inter-hospital transfer must be arranged.

NSW Health services must have clear processes in place to efficiently facilitate transfers and ensure access to definitive care in an appropriate timeframe.

Summary of Policy Requirements

NSW Health organisations are to develop local policy on inter-hospital transfers in line with this Policy Directive. Local policy must outline local protocols and procedures for services to follow when undertaking inter-hospital transfers for patients requiring critical and specialist care and return transfers once higher acuity care has been completed. Local policy is to include advice on accessing clinical consultation to support care being delivered locally.

When an inter-hospital transfer is being considered, clinical decision-making must primarily match the patient's condition to the most appropriate service and consider:

- service capability and capacity of referring and receiving services
- capability and capacity of transport and retrieval services
- patient and the needs and preferences of families and carers
- logistics such as modes of transport
- the patient's legal status (for example under the *Mental Health Act 2007* [NSW]).

Referral Pathways

Local Health Districts (LHDs) are to ensure formalised referral arrangements exist for patients requiring critical or specialist care and include ongoing formal communication with review and feedback. These formalised arrangements must cover referrals within and between LHDs, as well as cross-jurisdictional referrals.

LHDs are to ensure the continued effective operation of the NSW Adult Critical Care Tertiary Referral Networks.

LHDs must follow the pathways detailed in the NSW Clinical Specialty Referral Networks for patients requiring specialist care for the management of:

- Burns

- Spinal cord injuries
- Extra Corporeal Membrane Oxygenation
- Trauma
- Endovascular Clot Retrieval
- Cardiac Catheterisation (rural referral pathways).

The recommended pathways should be followed unless the senior clinician's clinical judgment overrides the specialty pathway.

For the management of mental health patients requiring access to Intensive Care, please refer to NSW Health Policy Directive *Mental Health Intensive Care Networks* (PD2019_024).

Escalation

Delays in inter-hospital transfers must be escalated in accordance with the process detailed in section 2 of this Policy Directive. Local protocols and procedures must reflect this escalation pathway.

Patient access to critical care must not be delayed due to Intensive Care Unit (ICU) bed availability. For patients with a life or limb threatening condition, the NSW Ambulance Aeromedical Control Centre (ACC), or other local existing critical care consultant/retrieval service, should be contacted immediately. If necessary, the ACC can activate the Default Adult (ICU) Bed Procedure. When the default procedure is invoked, tertiary hospitals are responsible for providing critical care, irrespective of bed status, to the group of referral hospitals specified in the NSW Adult Critical Care Referral Networks. This responsibility includes assisting with patient placement to an appropriate alternative location for treatment and care when required.

For patients with a life or limb threatening condition where the required clinical care is outside the skillset or capabilities of the referring facility, the ACC has the authority to transport the patient directly to the linked tertiary hospital designated by the NSW Adult Critical Care Referral Network, regardless of bed availability. If there is a closer hospital that can provide critical care treatment, the ACC may elect to transport the patient there.

Revision History

Version	Approved By	Amendment Notes
PD2024_038 November-2024	Deputy Secretary, System Sustainability and Performance	Consolidates PD2018_011 and PD2011_031. Changes include: • Revised transfer priority categories. • Revised escalation pathways for delays in transfers. • Additional information on transfer providers. • Additional information on the Patient Flow Portal. • Updated information on Clinical Specialty Referral Networks. • Access to resources with information on booking and preparing for inter-hospital transfers.
PD2018_011 March-2018	Deputy Secretary, System Purchasing and Performance	Clearly defined processes for time and non-time urgent patients, responsibilities of designated tertiary hospitals and LHDs.
PD2011_031 June-2011	Deputy Director-General, Health System Quality Performance and Innovation	New Policy replacing GL2005_038.
PD2010_021 March-2010	Director-General	Complete revision of PD2006_046 and replaces PD2005_473 Helicopter Transport of Patients - Procedures to be Followed.
PD2006_046 July-2006	Director-General	
PD2005_473 February-2005	Director-General	
GL2005_038 January-2005	Director-General	Guidelines for the transfer of patients between hospitals originally issued as Circular 83/228.
GL2005_014 January-2005	Director-General	

Contents

1. Background

1.1. About this document

This Policy Directive provides guidance on the process for referring and transferring adult patients requiring access to:

- critical care services
- specialist care services
- clinical specialty networks.

The Policy Directive does not provide guidance on referral of paediatric, neonatal, and obstetric patients and does not override referral networks established within the following:

- NSW Health Policy Directive *NSW Paediatric Clinical Care and Inter-hospital Transfer Arrangements* (PD2023_019)
- NSW Health Policy Directive *Tiered Networking Arrangements for Perinatal Care in NSW* (PD2023_035)
- NSW Health Policy Directive *Adult Mental Health Intensive Care Networks* (PD2019_024)

In line with this Policy Directive, each Local Health District (LHD) must develop local protocols and procedures in collaboration with partner health services and transport, and retrieval services that outline local clinical care and inter-hospital transfer arrangements.

It is not the intention of this Policy Directive to specify each individual hospital's referral pathways. The referral pathways defined within this Policy Directive are the established links and the default patterns to be used when the default adult Intensive Care Unit (ICU) bed procedure is invoked. These are also the default network for private hospitals within LHDs.

1.2. Key definitions

NSW Adult Critical Care Tertiary Referral Networks	NSW Adult Critical Care Tertiary Referral Networks define the links between LHDs and tertiary referral hospitals. The networks consider established clinical referral relationships, which may include referral patterns across LHD and state boundaries. Refer to Appendix 1 (NSW Adult Critical Care Referral Networks) of this Policy Directive.
NSW Clinical Specialty Referral Networks	NSW Clinical Specialty Referral Networks operate in conjunction with the NSW Adult Critical Care Tertiary Referral Networks. They are designed to achieve an appropriate concentration of highly specialised services for patients requiring access to specialty networks for the management of: • Burns • Spinal cord injuries • Extra Corporeal Membrane Oxygenation • Trauma • Endovascular Clot Retrieval • Cardiac Catheterisation (Rural referral pathways). Refer to Appendix 2 (NSW Clinical Specialty Referral Networks) of this Policy Directive.
Priority Category 1	Patient with a life or limb threatening condition where the required clinical care is outside the skillset or capabilities of the referring facility. Immediate response required. Respond in accordance with Section 2.1 (Priority Category 1 Patients) of this Policy Directive.
Priority Category 2	Patient with an urgent but not immediately life or limb threatening condition where the referring facility can only provide temporary stabilisation and management. The timeframe by which the patient should receive higher acuity care is agreed between the referring and receiving clinicians. Respond in accordance with Section 2.2 (Priority Category 2 Patients) of this Policy Directive.

Priority Category 3	Patient with an acute but not urgent condition needing access to higher acuity care not available at the referring facility. The timeframe by which the patient should receive higher acuity care is agreed between the referring and receiving clinicians. Respond in accordance with Section 2.3 (Priority Category 3 and 4 Patients) of this Policy Directive.
Priority Category 4	Patient being transferred for a non-urgent planned procedure, treatment, or appointment. The timeframe is agreed between the referring and receiving clinicians. Respond in accordance with Section 2.3 (Priority Category 3 and 4 Patients) of this Policy Directive.
Priority Category 5	Patient being transferred to an equivalent or lower acuity service such as a return transfer to another hospital, transfer to a rehabilitation hospital, hospice. The timeframe for completion of the transfer should be within 24-hours in order to maintain system capacity. Respond in accordance with Section 2.4 (Priority Category 5 Patients) of this Policy Directive.

1.3. Related NSW Health documents

Relevant policies and guidance are referred to throughout this document. Table 1 identifies NSW Health policies and strategies to be read in conjunction with this Policy Directive.

Table 1. Related NSW Health Policy Directives

Reference	Document title
PD2019_020	*Clinical Handover*
PD2020_018	*Recognition and management of patients who are deteriorating*
PD2022_023	*Enterprise-wide Risk Management*
PD2022_043	*Clinical care of people who may be suicidal*
PD2019_024	*Adult Mental Health Intensive Care Networks*

2. Inter-Hospital Transfer Processes

2.1. Priority Category 1 Patients

Patient with a life or limb threatening condition where the required clinical care is outside the skillset or capabilities of the referring facility.

Immediate response required.

2.1.1. Priority Category 1 - Patients who require immediate critical care

Call the NSW Ambulance Aeromedical Control Centre (ACC) on 1800 650 004 or other local existing critical care consultant/retrieval service.

REFERRING CLINICIAN/ HOSPITAL RESPONSIBILITIES	NSW AMBULANCE AEROMEDICAL CONTROL CENTRE RESPONSIBILITIES	RECEIVING CLINICIAN/ HOSPITAL RESPONSIBILITIES
• Determine clinical transfer priority in consultation with the ACC or other local existing critical care consultant/ retrieval service, and the receiving hospital if required. • Notify the ACC on **1800 650 004** or other local existing critical care consultant/ retrieval service, and provide patient clinical status, management, special considerations, and logistical issues. • Update the ACC or other local existing critical care consultant/retrieval service immediately of any change to the patient's status. • Notify local Patient Flow Unit (PFU)/ hospital bed manager or after-hours manager of transfer. • Request an inter-hospital transfer in the Patient Flow Portal (PFP) if receiving hospital is known. • Communicate with patients, families, and carers.	• Provide referring clinician with critical care clinical advice from a critical care consultant. • Provide timely updates to support the stabilisation of the patient and notify receiving clinical groups at the receiving hospital of status changes. • Coordinate and mobilise a medical retrieval team. Transfer process to be initiated at the point the patient is classified as a Priority 1 transfer. • Identify appropriate receiving hospital and handover to the receiving departments in charge consultant, including the nature of the transfer and the estimated time of arrival. Coordinate a conference call or similar, where possible, between the referring clinician, retrieval consultant and the receiving departments in charge consultant. • Provide retrieval status updates to both the referring and receiving hospitals to optimise referring site expectations and medical/staffing requirements and help enhance receiving hospital preparation and coordination.	• Notify PFU/ hospital bed manager or after-hours manager of impending transfer. • Note: If the NSW Default Adult ICU Bed Procedure is activated as per Section 4.1 (NSW Default Adult Intensive Care Unit Bed Procedure) of this Policy Directive, the tertiary referral hospital designated by the NSW Adult Critical Care Referral Network will be responsible for providing critical care, irrespective of bed status, to the group of referral hospitals specified in Appendix 1 (NSW Adult Critical Care Referral Networks) of this Policy Directive. • Create bed capacity and accept the patient directly into a clinically suitable location. • Note: The emergency department should not be routinely used unless the patient's condition has deteriorated during transfer.

Escalate delays in accordance with the process in Section 2.5 of this Policy Directive.

2.1.2. Priority Category 1 - Patient who requires immediate transfer for specialist care

Call NSW Ambulance on 131 233 to request urgent transfer - this call must be made by a clinician. **(Note: If patient requires transport more than 250km or would usually be transported by air, call the NSW Ambulance Aeromedical Control Centre (ACC)** on **1800 650 004)**		
REFERRING CLINICIAN/ HOSPITAL RESPONSIBILITIES • Identify receiving hospital. • Determine clinical transfer priority in consultation with the receiving hospital. • Notify NSW Ambulance of the transfer and provide patient clinical status, management, special considerations, and logistical issues. • Update NSW Ambulance immediately of any change to the patient's status. • Notify local PFU/ hospital bed manager or after-hours manager of transfer. • Request an inter-hospital transfer in the PFP if receiving hospital known. • Communicate with patients, families, and carers.	**NSW AMBULANCE RESPONSIBILITIES** • Mobilise immediate response using all reasonable efforts. • Notify the requesting hospital of any delays in the transfer.	**RECEIVING CLINICIAN/ HOSPITAL RESPONSIBILITIES** • Notify PFU/ hospital bed manager or after-hours manager of impending transfer. • Create bed capacity and accept the patient directly into a clinically suitable location. • Note: The emergency department should not be routinely used unless the patient's condition has deteriorated during transfer.
Escalate any delays in accordance with the process in Section 2.5 of this Policy Directive.		

2.2. Priority Category 2 Patients

Patient with an urgent but not immediately life or limb threatening condition where the referring facility can only provide temporary stabilisation and management.

The timeframe by which the patient should receive higher acuity care is agreed between the referring and receiving clinicians.

2.2.1. Priority Category 2 - Patient who requires critical care within a medically agreed timeframe (MATF)

REFERRING CLINICIAN/ HOSPITAL/ RESPONSIBILITIES	NSW AMBULANCE CONTROL CENTRES / NSW AMBULANCE AEROMEDICAL CONTROL CENTRE RESPONSIBILITIES	RECEIVING CLINICIAN/ HOSPITAL RESPONSIBILITIES
• Contact the local health district (LHD) hospital nominated central point for critical care advice. • Contact linked tertiary ICU to confirm receiving hospital/clinical team. • Determine transfer priority category with receiving senior clinician (medically agreed timeframe). Document this in the patient's medical record. • Notify the ACC on **1800 650 004** once the patient has been accepted at the receiving hospital and provide patient clinical status, management, and any special considerations. • NSWA can also be contacted on **131 323 or 000** if required. • Notify local PFU/ hospital bed manager or after-hours manager of transfer. • Request an inter-hospital transfer in the PFP. • Communicate with patients, families and carers.	• Supplement clinical advice from LHD or hospital critical care contact. • Provide advice on the most suitable mode of transfer and task the appropriate team to effect the transfer. • Coordinate a conference call or similar, where required between the referring clinician, retrieval consultant and receiving clinician. • Provide retrieval status updates to both the referring and receiving hospitals to optimise referring site expectations and medical/ staffing requirements and enhance receiving hospital preparation and coordination including estimated time of arrival.	• Notify PFU/ hospital bed manager or after-hours manager of impending transfer. • Note: If the linked tertiary ICU does not have an available bed, they are responsible for finding an alternative. The tertiary ICU is to verify there are no available ICU beds within or outside the LHD. • Note: If the NSW Default Adult Intensive Care Unit Bed Procedure is activated as per Section 4.1 (NSW Default Adult Intensive Care Unit Bed Procedure), the tertiary referral hospital designated by the NSW Adult Critical Care Referral Network will be responsible for providing critical care, irrespective of bed status, to the group of referral hospitals specified in Appendix 1 (NSW Adult Critical Care Referral Networks). • Create bed capacity and accept the patient directly into a clinically suitable location. • Note: The emergency department should not be routinely used unless the patient's condition has deteriorated during transfer.
Escalate any delays in accordance with the process in Section 2.5 of this Policy Directive.		

2.2.2. Priority Category 2 - Patient who requires transfer for specialist care within a medically agreed timeframe

REFERRING CLINICIAN/ HOSPITAL RESPONSIBILITIES	NSW AMBULANCE RESPONSIBILITIES	RECEIVING CLINICIAN/ HOSPITAL RESPONSIBILITIES
• Identify receiving hospital/ clinical team. • Determine transfer priority category with receiving senior clinician (medically agreed timeframe). Document this in the patient's medical record. • Notify local (PFU)/ hospital bed manager or after-hours manager at receiving hospital. • Facilitate transfer to receiving hospital when bed confirmed and provide estimated time of arrival. • Determine transportation type and level of patient supervision with receiving senior clinician to ensure transport service capability is consistent with clinical requirements. • Provide copies of patient documentation, including clinical notes, medication chart, investigation results, referring and receiving doctor contact details. • Request an inter-hospital transfer in the PFP. • Communicate with patients, families, and carers.	• NSW Ambulance to review the clinical appropriateness of the timeframe requested and seek additional information if this timeframe is not clinically justified. • Make all reasonable efforts to transfer the patient within the requested timeframe. • Notify the requesting hospital of delays in the transfer.	• Monitor the PFP intra-hospital transfer list and confirm bed allocation to the PFU/ hospital bed manager or after-hours manager at the referring hospital. • Create bed capacity and accept the patient directly into a clinically suitable location. • Note: The emergency department should not be routinely used unless it is the most appropriate clinical location or the patient's condition has deteriorated during transfer.
Escalate any delays in accordance with the process in Section 2.5 of this Policy Directive.		

2.3. Priority Category 3 and 4 Patients

Priority 3 - Patient with an acute but not urgent condition needing access to higher acuity care not available at the referring facility.

Priority 4 - Patient being transferred for a non-urgent planned procedure, treatment, or appointment.

The timeframe by which the patient should receive higher acuity care is agreed between the referring and receiving clinicians.

REFERRING CLINICIAN/ HOSPITALRESPONSIBILITIES	NSW AMBULANCE/ PATIENT TRANSPORT SERVICE RESPONSIBILITIES	RECEIVING CLINICIAN/ HOSPITAL RESPONSIBILITIES
• Determine transfer priority category with receiving senior clinician (medically agreed timeframe). Document this in the patient's medical record. • Notify local PFU/ hospital bed manager or after-hours manager at receiving hospital. • Facilitate transfer to receiving hospital when bed confirmed and provide estimated time of arrival. • Determine transportation type and level of patient supervision with receiving senior clinician to ensure transport service capability is consistent with clinical requirements. • Provide copies of patient documentation, including clinical notes, medication chart, investigation results, referring and receiving doctor contact details. • Request an inter hospital transfer in the PFP. • Communicate with patients, families, and carers. • Note: If patient is critically ill, injured or transferring between ICUs, the transfer is to be coordinated by the ACC (call **1800 650 004**)	• Make reasonable efforts to transfer the patient within the requested timeframe. • NSW Ambulance to review the clinical appropriateness of the timeframe requested and seek additional information if this timeframe is not clinically justified. • Notify the requesting hospital of delays in the transfer.	• Monitor the PFP intra-hospital transfer list and confirm bed allocation to the PFU/ hospital bed manager or after-hours manager at the referring hospital. • Create bed capacity and accept the patient directly into a clinically suitable location. • Note: The emergency department should not be routinely used unless it is the most appropriate clinical location or the patient's condition has deteriorated during transfer. •

Escalate any delays in accordance with the process in Section 2.5 of this Policy Directive.

2.4. Priority Category 5

Patient transfer to an equivalent or lower acuity service such as return transfer to another hospital, transfer to a rehabilitation hospital or hospice.

The timeframe for completion of the transfer should be within 24-hours in order to maintain system capacity.

REFERRING CLINICIAN/ HOSPITAL RESPONSIBILITIES	NSW AMBULANCE/ PATIENT TRANSPORT SERVICE RESPONSIBILITIES	RECEIVING CLINICIAN/ HOSPITAL RESPONSIBILITIES
• Identify receiving hospital/ clinical team. • Notify local PFU/ hospital bed manager or after-hours manager at receiving hospital if required. • Facilitate transfer to receiving hospital when bed confirmed and provide estimated time of arrival if required. • Determine transportation type and level of patient supervision with receiving senior clinician to ensure transport service capability is consistent with clinical requirements. • Provide copies of patient documentation, including clinical notes, medication chart, investigation results, referring and receiving doctor contact details. • Request an inter hospital transfer in the PFP. • Communicate with patients, families, and carers. • Note: If patient is critically ill, injured or transferring between ICUs, the transfer is to be coordinated by the ACC (call **1800 650 004**).	• Make reasonable efforts to transfer the patient within the requested timeframe. • Notify the requesting hospital of delays in the transfer.	• Monitor the PFP intra-hospital transfer list and confirm bed allocation to the PFU/ hospital bed manager or after-hours manager at the referring hospital. • Create bed capacity and accept the patient directly into a clinically suitable location. • Note: The emergency department should not be routinely used unless it is the most appropriate clinical location or the patient's condition has deteriorated during transfer.

Escalate any delays in accordance with the process in Section 2.5 of this Policy Directive.

2.5. Escalation

Transport delays	• Critically ill or injured patients - contact NSW Ambulance Aeromedical Critical Care Consultant on **1800 650 004** (or other local existing critical care consultant/retrieval service). • Patients requiring specialist care - Contact Patient Transport Service (PTS) on **1300 233 500** (or your local transport provider) or NSW Ambulance on **131 233 or 000 if required**.
Issues related to acceptance at the receiving hospital	• Inter-LHD transfers - the referring clinician/ hospital is to contact their LHD Executive Director of Operations or equivalent or Executive on-call, who will escalate to their LHD Chief Executive, who will then discuss with the Chief Executive at the receiving LHD if necessary. • Intra-LHD transfers - The referring clinician/ hospital is to contact their local hospital General Manager, who will escalate to their local Executive Director of Operations, or Executive on-call or delegate, before escalation to the Chief Executive if necessary.
Default ICU Bed-Finding Procedure	• If there are no ICU available beds across NSW, ACC will activate the Adult ICU Bed Procedure as per Section 4.1 (NSW Default Adult Intensive Care Unit Bed Procedure) of this Policy Directive.
If unresolved, escalation is to the NSW Ministry of Health, System Sustainability and Performance Executive on call on 0459 897 716.	

3. Service Capability

Service capability refers to the scope of planned activity and clinical complexity that a service is capable of safely providing. Patients are more likely to receive care close to home when services operate at their designated service capability level, supported through effective local arrangements, timely transfer processes and active patient flow management, including repatriation.

Health services are responsible for determining and maintaining the capability of their services. NSW Health services are classified in line with the NSW Health *Guide to the Role Delineation of Clinical Services 2024*.

Intensive care service capability levels range from 4 to 6. The most specialised care is available at Level 6 services. Level 6 intensive care services have a supra-LHD function, which means they must provide specialist services for patients referred from anywhere in NSW.

Level 6 intensive care services also fulfil a leadership role within the Critical Care Referral Network and provide advice to lower-level network services. The State Spinal Cord Injury Service and the Statewide Burn Service described in Appendix 2 (NSW Clinical Specialty Referral Networks) of this Policy Directive are supra-LHD services.

In response to an emergency presentation or delay in transfer, services may need to provide urgent and essential care for patients outside their designated service capability level, including stabilisation and transfer of care to a suitable facility. Local Health Districts must ensure that local and network protocols and procedures include clinical escalation pathways to facilitate timely, safe and quality care across all services.

4. Patients Requiring Access to Critical Care

Patients require access to critical care at a higher-level hospital when the referring hospital does not have the critical care or specialist services available to facilitate ongoing care. These are patients whose illness, injuries or physiologic instability constitutes a significant and imminent threat to their life without appropriate definitive stabilisation and management. Examples include:

Airway	• All intubated patients • Patients potentially requiring airway intervention enroute (threatened airway obstruction, altered or decreasing level of consciousness (LOC), head/ neck trauma, head/ neck/ inhalation burns)
Breathing	• Significant respiratory distress or compromise after treatment • Respiratory Rate <8 or >30, $Sp0^2$ <90% on 15L oxygen • $Pa0^2$ <60 or $PaC0^2$ >60 or pH <7.2 or BE <-5 • Respiratory dependency on non-invasive ventilation (NIV)
Circulation	• Circulatory shock of any cause • Heart rate <40 or >140 beats per minute with compromise • Systolic blood pressure ≤90mmHg or requiring fluid, blood, or vasopressors to maintain • Complex or recurrent arrhythmias with compromise (e.g., recurrent VF, sustained VT, CHB) • Brady/tachy arrythmias with adverse signs or features. • Ongoing significant bleeding

Disability	• Significant altered LOC – GCS ≤13 or decreased GCS ≤2 from baseline GCS • Significant head injury • Severe burns • Acute spinal cord injuries • Recurrent or prolonged seizures • Intracerebral bleeding • Ischaemic stroke and large vessel occlusion (LVO) treatable within 24 hours of onset or time last known well • Note: for the management of mental health patients requiring access to intensive care, please refer to NSW Health Policy Directive *Adult Mental Health Intensive Care Networks* (PD2019_024).
Other	• Acute life-threatening electrolyte abnormality • Hypothermia

4.1. NSW Default Adult Intensive Care Unit Bed Procedure

Patient access to critical care must not be delayed due to a lack of intensive care unit (ICU) beds being available. The NSW Ambulance Aeromedical Control Centre (ACC) or other local existing critical care consultant/ retrieval service must be contacted immediately for such patients.

For patients with a life or limb threatening condition where the required clinical care is outside the skillset or capabilities of the referring facility, the ACC has the authority to transport the patient directly to the linked tertiary hospital designated by the NSW Adult Critical Care Referral Network (see Appendix 1 (NSW Adult Critical Care Referral Networks) of this Policy Directive), regardless of bed availability. If there is a closer hospital that can provide critical care treatment, the ACC may elect to transport the patient there.

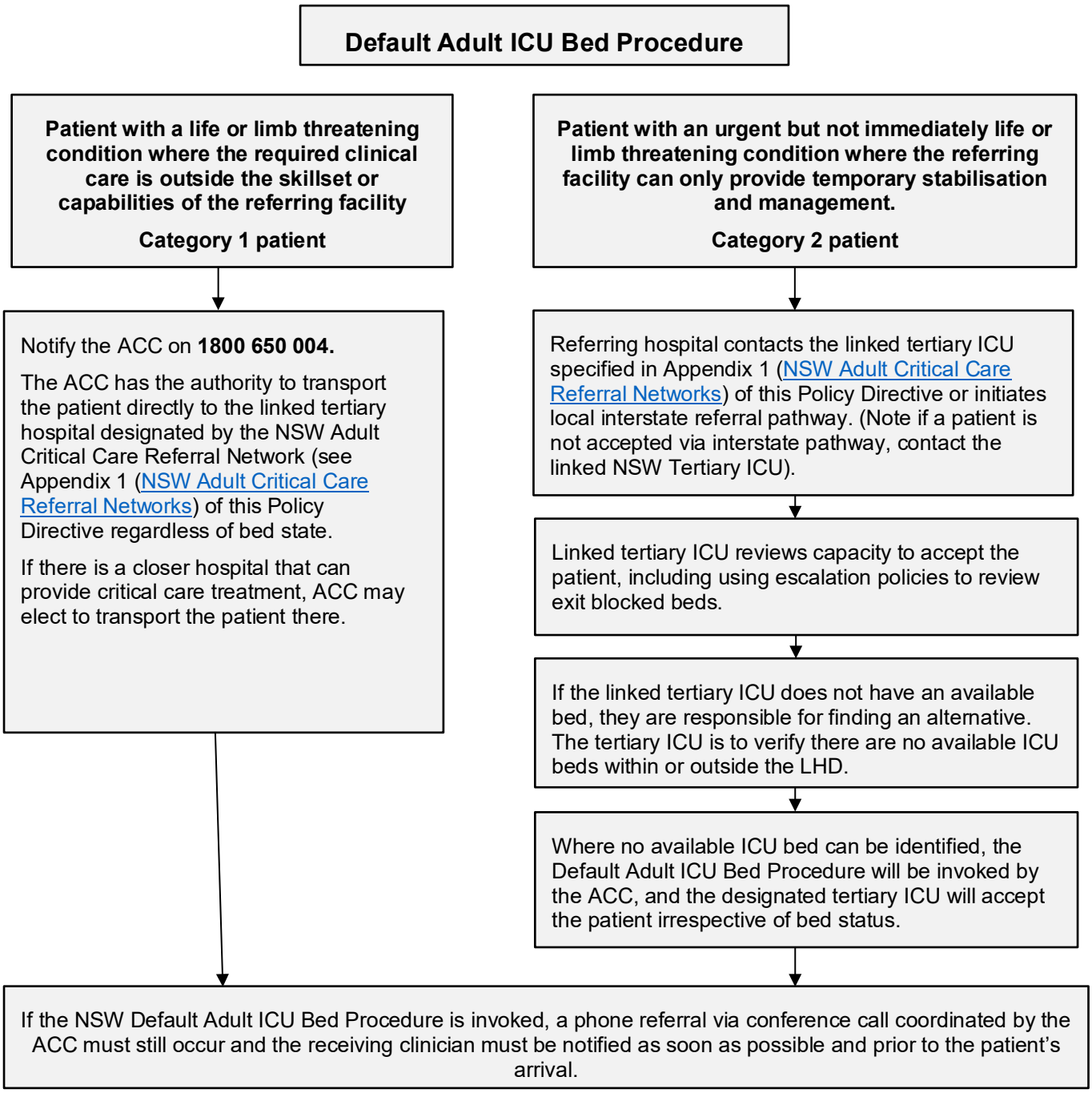
While Local Health Districts (LHDs) may have routine referral pathways with interstate facilities as per Section 7 (Interstate Transfers) of this Policy Directive, all facilities have been linked to an NSW tertiary hospital. This is to ensure the Default Adult Intensive Care Unit Bed Procedure can be activated where an interstate transfer cannot be accepted.

For patients with an urgent but not immediately life or limb threatening condition where the referring facility can only provide temporary stabilisation and management, the NSW Default Adult ICU Bed Procedure may be invoked by the ACC when there are no adult intensive care beds available across NSW. This must only occur after a thorough assessment of ICU capacity and critical care referral networks within and between LHDs by the linked tertiary ICU, to ensure all potential referral options have been exhausted.

If the NSW Default Adult ICU Bed Procedure is activated, the tertiary referral hospital designated by the NSW Adult Critical Care Referral Network will be responsible for providing critical care, irrespective of bed status, to the group of referral hospitals specified in Appendix 1 (NSW Adult Critical Care Referral Networks) of this Policy Directive. This responsibility includes assisting with patient placement to an appropriate alternative location for treatment and care.

In specific cases the referring clinician, retrieval consultant and the receiving clinician may decide to refer a patient to a different hospital that is considered more clinically appropriate for the patient's definitive care.

If the NSW Default Adult ICU Bed Procedure is invoked, a phone referral via conference call coordinated by the ACC must still occur and the receiving clinician must be notified as soon as possible and prior to the patient's arrival.



5. Transfer Providers*

*Note that this is not an exhaustive list and local transfer providers should be considered when appropriate.

Transfer provider	Description

NSW Ambulance Aeromedical Control Centre (ACC)
1800 650 004
	The ACC is a unit of NSW Ambulance which provides state-wide 24-hour coordination and support for:
	• patients with a life or limb threatening condition where the required clinical care is outside the skillset or capabilities of the referring facility, the ACC provides:
	  ○ critical care clinical advice from a critical care consultant
	  ○ the location of and referral to an appropriate receiving hospital
	  ○ mobilisation of a medical retrieval team.
	• patients with an urgent but not immediately life or limb threatening condition where the referring facility can only provide temporary stabilisation and management, the ACC organises and mobilises an appropriate clinical team.
	The ACC will coordinate and mobilise an appropriate medical retrieval team for all medical retrievals (from both public and private facilities to public facilities).
	Where clinically appropriate, the ACC may coordinate and mobilise a paramedic/ paramedic specialist ambulance where a medical team is not required. The ACC will continue to support these clinicians throughout the transfer.
	Where possible, the ACC will coordinate a one phone call referral via conference call to connect the referring clinician, retrieval consultant and receiving clinician.
	The ACC and regional Ambulance Control Centres monitor all triple zero (000) calls for mechanisms and injuries suggestive of severe trauma, and dispatches appropriate retrieval teams where indicated.
	The medical retrieval team can provide a variety of interventions including:
	• advanced airway management
	• chest trauma management
	• advanced vascular access

Transfer provider	Description
	• transfusions • compression of bleeding sites • some life or limb saving procedures where the benefits outweigh risks and cannot be deferred. Note that fixed wing aircraft and helicopters are not capable of safe flight in adverse weather conditions. The ACC uses the Aviation Risk Matrix to balance clinical priority and aviation risk. Factors such as fatigue, darkness and cold temperatures (such as fog, icing) increase aviation risk.
HealthShare - Patient Transport Service (PTS) or local providers **PTS Booking Number** **1300 233 500**	Local Health Districts (LHDs) and Specialty Health Networks (SHNs) have a range of transport services available for patients whose clinical condition is stable and who require a non-urgent transfer. The PTS works alongside NSW Ambulance to coordinate the booking and dispatch of non-urgent inter-hospital transport. The PTS are responsible for providing non-emergency patient transport in greater metropolitan Sydney and parts of regional and rural NSW for clinically stable patients who are at a low risk of deterioration during transport. Criteria for these transport services are outlined in the NSW Health Policy Directive *Service Specification for Non-Emergency Transport Providers* (PD2024_008). The PTS and other alternative transport services should be considered prior to NSW Ambulance being requested. Some LHDs and SHNs have a Health Transport Unit or identified role to assist in coordinating transport for these patients, either via a NSW Ambulance or PTS vehicle.

Transfer provider	Description
NSW Ambulance **131 233** **or 000 if required**	NSW Ambulance Control Centres coordinate and support all calls for assistance that are not received by the ACC. This includes all triple zero (000) calls, and all NSW Ambulance bookings received by the 131 233 number. NSW Ambulance provides: • A clinical response to triple zero (000) calls across the state, across the lifespan and across the spectrum of acuity. • Clinical support to all ambulance clinicians via a 24/7 Clinical Advice Line. • Secondary triage and referral for low/ lower acuity triple zero callers. • Clinical surveillance of the inter-hospital transfer workload. • A Clinical Emergency Response System (CERS) assist response for a rapidly deteriorating patient in a public health care facility.

5.1. Clinical Escorts

When additional clinical expertise is required during transport to support a patient, a clinical escort is to be provided where workforce capacity and capability exists. Clinical escorts may be medical or nursing staff who can manage the patient's current condition, anticipated changes, co-morbidities, and care or treatment during transfer.

Escorts will usually be clinical staff from the referring service and/or the transport service. If an appropriate clinical escort cannot be provided, local escalation plans are to be followed. Roles and responsibilities of local clinical staff escorts must be discussed with the partnering transport service.

Note: When using the PTS, providing additional clinical escorts does not allow the PTS service to transport Class A patients. The PTS is only able to transport class B-D patients as outlined in NSW Health Policy Directive *Service Specification for Non-Emergency Transport Providers* (PD2024_008).

6. Return Transfer or Transfer Closer to Home

All patients that require specialist or critical care are transferred with the understanding that when the critical or specialty care is no longer required, care of the patient will be transferred back to the originating hospital, or a hospital with an equivalent level of care capability close to the patient's geographical home location.

Where a patient has been admitted to a hospital (from the community) not near the patient's geographical home location, care of the patient should be transferred to a hospital with an

equivalent level of care capability close to the patient's geographical home location when it is clinically appropriate to do so.

Planned inter-hospital return transfers or transfers closer to home should occur within 24-hours or one working day of the request being received at the accepting hospital in order to maintain system capacity. Local escalation processes must be in place to monitor and escalate issues related to delays in back transfers when required.

The return transfer must not be refused on the basis that the receiving hospital does not have the same specialist service as the patient is admitted under. The most appropriate generalist service is to be chosen, and the patient transferred directly to an appropriate ward.

The treating specialist team is responsible for initiating return transfers of care and must liaise with the admitting team at the receiving hospital to negotiate the plan for transfer. The Patient Flow Unit must be included in the discussions and transfer information, including contact details of individuals logged in the Patient Flow Portal. Return or closer to home transfers must not transit through the Emergency Department unless it is the most appropriate clinical location or the patient's condition has deteriorated during transfer.

Refer to Appendix 3 (Key roles and responsibilities) of this Policy Directive.

7. Interstate Transfers

Due to proximity, some Local Health Districts (LHDs) have cross jurisdictional border networks with tertiary critical care services in other States and Territories.

According to the *2020-2025 National Health Reform Agreement*, cross-border hospital activities are governed by the principle that "States recognise their commitment under the Medicare principles, which require medical treatment to be prioritised on the basis of clinical need". States and Territories must best endeavour to facilitate urgent transfer of patients from other jurisdictions where clinically appropriate to do so, where appropriate treatment is unavailable at a closer hospital, and the transfer is acceptable in the context of the provider jurisdiction's hospital system capacity and other health priorities.

LHD referral pathways to other states are detailed in Appendix 1 (NSW Adult Critical Care Tertiary Referral Networks) of this Policy Directive. In instances where a proposed transfer cannot be accepted interstate, a NSW destination must be selected using existing referral pathways to a hospital in NSW.

8. Transfer of Patients with High Consequence Infectious Diseases

Infectious diseases, particularly high consequence infectious diseases, have the potential to significantly impact individual and population health and can in turn pose a risk to the delivery of healthcare services.

NSW Health coordinates a central, specialised response during the initial stage of high consequence infectious disease management, in order to mitigate the risk of public health emergencies and associated healthcare system impacts.

For further information, refer to NSW Health Policy Directive *Early Response to High Consequence Infectious Diseases* (PD2024_005).

9. Patient Flow

Active management of patient flow in accordance with the *NSW Ministry of Health Demand Escalation Framework 2016* supports patients needing clinical care to access the care they need, when and where they need it. Demand escalation includes strategic planning to manage expected demand as well as short-term strategies to manage immediate demand or capacity mismatches.

Local Health District (LHD) and Specialty Health Network (SHN) Patient Flow Units (PFUs) are responsible for managing patient flow within a given hospital or LHD/SHN. In some areas this function may be carried out by roles such as bed managers or after-hours managers in consultation with the unit manager/ in-charge.

The role of patient flow is essential where demand exceeds capacity and where escalation is required to ensure effective and efficient patient flow, such as in critical care referral situations. Established communication pathways and processes between PFUs within Critical Care Networks are required to ensure effective negotiation for inter-hospital transfers. When required, NSW Ambulance must be included in these communication pathways.

9.1. Patient Flow Portal

The Patient Flow Portal (PFP) provides NSW Health staff with knowledge and access to tools to minimise delays in patients moving through care and can assist with using resources efficiently to improve capacity.

Patient Flow Portal Tool	Description
Inter Hospital Transfer requests	An Inter Hospital Transfer (IHT) request must be made in the PFP each time a patient needs to be transferred to another hospital. This provides accurate information and transparency of the transfer status and reduces delays to patient care. A patient may need to be transferred for care in another hospital or may need to return to their home hospital after receiving care. In each case a doctor must accept care in the receiving hospital. Note, the IHT request in the PFP does not replace handover between medical officers, flow teams or nursing/ midwifery staff. Bookings for the Patient Transport Service (PTS) can be made from an IHT request, following confirmation of a bed at the receiving hospital. Note, bookings for NSW Ambulance, NSW Ambulance Aeromedical Retrieval or Newborn and Paediatric Emergency Transport Service (NETS) cannot be made from an IHT request. The timeframe requested for each transfer is decided by the referring and receiving clinicians caring for the patient. Communication and consultation with the transfer provider can facilitate safe and timely transfer.

Patient Flow Portal Tool	Description
	LHDs, SHNs and hospitals must have processes in place for regular reporting and review of completed IHT and Waiting for What (W4W) reports to improve service provision and patient care.
Intensive Care Unit Bed Status Reporting	The PFP Intensive Care Unit (ICU) bed status dashboard is used by clinicians and Aeromedical Retrieval Services to assist with timely ICU bed finding across NSW for critically ill patients. Each ICU must complete key fields in the PFP every 4 hours or as changes occur to provide a current overview of state-wide ICU capacity and reduce waits for patients. The key ICU fields are: • **ICU Bed Status:** ICU 1 and 2 beds staffed and available to receive an ICU admission within the next 4 hours • **Consultant name and phone:** Name and mobile number of the intensive care consultant on duty • **ICU Short Term Escalation Plan (STEP):** Entered to reflect the ICU ward escalation level • **Inter-ward transfer (IWT):** Requests for patients medically cleared to move from ICU to an inpatient ward • **IHT requests:** Requests for patients ready to transfer to another hospital.

10. Partnering with Patients and Families/ Carers

If a patient is identified as requiring care that is outside the service capability of the local health service, the treating team must discuss the recommended care with the patient and family/ carers (as appropriate). The patient and family/ carers must also be advised that once critical or specialised care is no longer required, the patient will usually be transferred back to a facility with the capability of providing appropriate ongoing care as close to home as possible.

Local Health Districts (LHDs) and Specialty Health Networks (SHNs) must provide patients and their families/ carers with timely, culturally appropriate, and accessible information about clinical care, decisions, and transfer arrangements (if inter-hospital transfer is involved). Consent is to be obtained (where appropriate), in line with the NSW Health Policy and Procedure Manual *Consent to Medical and Healthcare Treatment Manual* (Consent Manual).

Patients and their families/ carers are to be offered relevant services and supports including Aboriginal health workers, Aboriginal Health Practitioners, Aboriginal Maternal and Infant Health Service (AMIHS) staff, interpreters, cultural and diversity supports, social workers and other services as required.

The Isolated Patients Travel and Accommodation Assistance Scheme (IPTAAS) provides financial assistance to patients and their escorts, particularly in rural or isolated areas, who travel significant distances to access specialised health treatments not available locally. For

information about the scheme refer to NSW Health Policy Directive *Isolated Patients Travel and Accommodation Assistance Scheme* (PD2023_038).

Clinicians should effectively communicate with patients, carers, and families, and must engage other services and include members of the care team as appropriate. For patients and families/ carers who are not fluent in English or who have a hearing impairment, interpreter services must be offered in accordance with NSW Health Policy Directive *Interpreters – Standard Procedures for Working with Health Care Interpreters* (PD2017_044).

Bariatric Patients

Transporting bariatric patients may require different vehicles and stretchers. Limitations in weight capacity need to be considered including:

- weight the stretcher can support
- weight the loading and securing mechanisms and vehicle floor can support
- width of the stretcher to assess if the patient can physically fit and be safely restrained.

The transfer of bariatric patients by vehicle is usually slower than normal transfers and may occur in 2 separate stages:

- Rapid dispatch of clinical staff to aid in resuscitation
- Transport to definitive care.

In preparation for the transport of bariatric patients, accurate information must be provided to the NSW Ambulance Aeromedical Control Centre (ACC) or other local existing critical care consultant/ retrieval service, NSW Ambulance or Patient Transport Service (PTS) regarding the patient's weight and maximum width. Hospitals must ensure they can weigh patients, as an estimate is unacceptable and may result in delays as alternative vehicles, stretchers and restraint systems are sourced. Staff are required to complete:

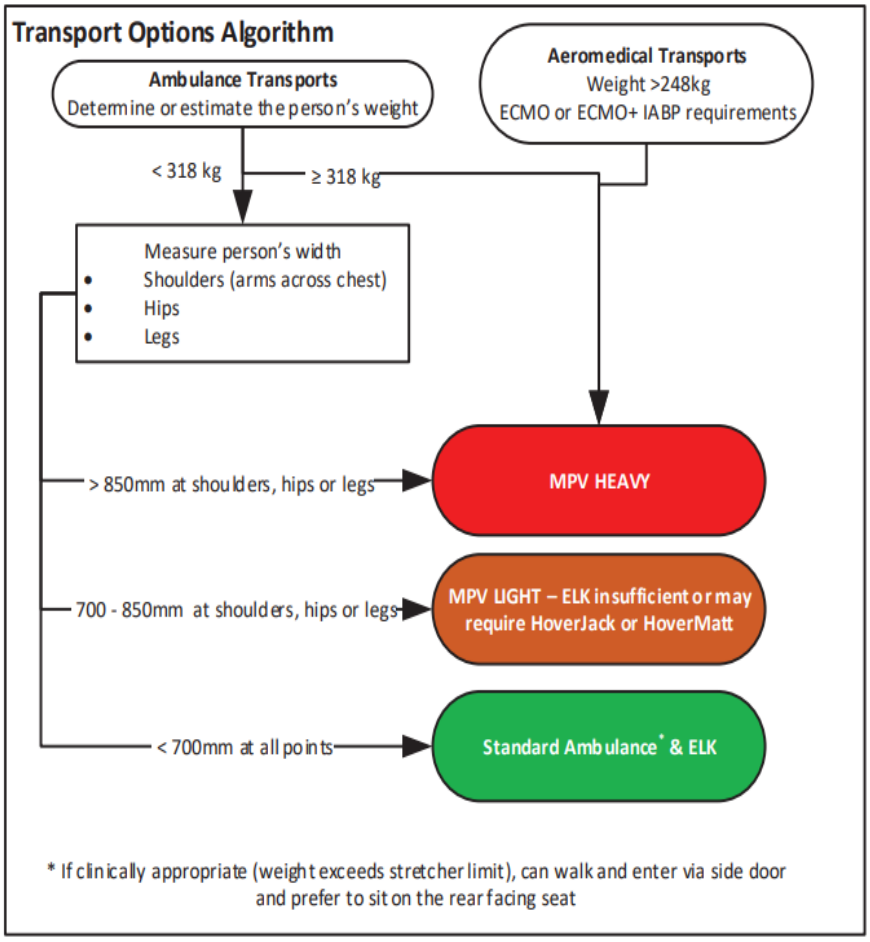
- the NSW Ambulance *Bariatric Sizing Chart* for patients over 100kg requiring retrieval; or
- the Patient Transport Service *Bariatric Measurement Guide* for patients over 120kg requiring transport by PTS.

Logistical and resource issues as per the below table also need to be considered.

Note, resourcing constraints, including sufficient personnel, equipment, and facilities to transport the patient to and into the vehicle, may delay or negate the possibility of transfer or necessitate road transfer irrespective of distance.

Refer to NSW Health Guideline *Management of Patients with Bariatric Needs* (GL2024_001) for the management of bariatric patients.

NSW Ambulance Transport options algorithm



10.1. NSW Ambulance retrieval transport modes and resource considerations

Vehicle type	Road	Road Multi-Purpose Vehicles (MPVs)	Fixed wing	Helicopter
Maximum weight	319kg	MPV light - 319kg MPV heavy - 450kg	140kg - normal stretcher 212kg - bariatric stretcher (not routinely carried, must be specially chosen for the transfer)	135kg - normal stretcher 260kg - bariatric stretcher (not routinely carried, must be specially chosen for the transfer)
Maximum width	75cm		57cm - normal stretcher 78cm - bariatric stretcher	57cm - normal stretcher No max width - bariatric stretcher

Considerations	Patient width	Limited number of vehicles May not be available in suitable timeframe, depending on patient location	Can the road legs of the transfer to/ from airports accommodate patient weight	Onsite concrete helipad Flat paved pathways into/ out of hospital
Resources	Sufficient personnel Equipment and facilities to transport patient to and into vehicle Manual handling aides Repositioning devices Height adjustable trolley (as per below)			
Hospital trolley	Minimum safe working load	300kg		
	Height adjustable	660mm to 1020mm above ground level		
	Patient platform length	2metres - with no raised edging at one end		
	Patient platform width	700mm		
	Patient platform surface	Smooth with raised edges on both sides and one end		
	Patient restraint system	Must have		
	Large wheels	Suitable for manoeuvring from hospital to helipad		
Bariatric chart	Complete and return to ACC or NSW Ambulance Control Centre as soon as possible			
Contact ACC	Provide weight, measurement, and logistical considerations as soon as possible to inform transport mode			

11. Appendices

1. NSW Adult Critical Care Referral Networks
2. NSW Clinical Specialty Referral Networks
3. Key roles and responsibilities
4. Resources

11.1. Appendix 1: NSW Adult Critical Care Referral Networks

LHD	Facilities	NSW Tertiary Hospitals	Interstate Pathway
Central Coast	Gosford, Long Jetty, Woy Woy, Wyong	Royal North Shore	N/A
Far West	Balranald, Broken Hill, Ivanhoe, Menindee, Tibooburra, Wentworth, White Cliffs, Wilcannia	Royal Prince Alfred* (* default arrangement if transfer to South Australia/Victoria not accepted).	Far West Local Health District (FWLHD) has referral pathways to South Australia, Victoria and within NSW. The *Guide to Retrievals and Bed-finding for Far West Local Health District Patients* provides advice about referral pathways for critical care and trauma patients from FWLHD.
Hunter New England	Armidale, Barraba, Belmont, Bingara, Boggabri, Bulahdelah, Cessnock, Denman, Dungog, Emmaville/ Vegetable Creek, Glen Innes, Gloucester, Gunnedah, Guyra, Inverell, Kurri Kurri, Maitland, Manilla, Merriwa, Moree, Murrurundi/Wilson, Muswellbrook, Narrabri, Nelson Bay, Newcastle, Newcastle Mater, Quirindi, Scone, Singleton, Tamworth, Taree/Manning, Tenterfield/Prince Albert, Tingha, Walcha, Warialda, Wee Waa, Werris Creek, Wingham	John Hunter	N/A
Illawarra Shoalhaven	Bulli, Coledale, David Berry, Kiama, Milton Ulladulla, Port Kembla, Shellharbour, Shoalhaven, Wollongong	St George	N/A
Mid North Coast	Bellingen, Coffs Harbour, Dorrigo, Kempsey, Macksville, Port Macquarie, Wauchope	John Hunter	
Murrumbidgee	Boorowa, Murrumburrah-Harden, Young	Prince of Wales	

LHD	Facilities	NSW Tertiary Hospitals	Interstate Pathway
	Lake Cargelligo	Royal Prince Alfred	Murrumbidgee Local Health District (MLHD) maintains referral pathways with Australian Capital Territory (ACT) Health including: • Canberra Hospital • Calvary John James Hospital Victoria Health including: • Royal Melbourne Hospital • Alfred Hospital • Bendigo Hospital • Austin Hospital.
	Barham Koondrook, Berrigan, Corowa, Culcairn, Deniliquin, Finley, Henty, Holbrook, Jerilderie, Tocumwal, Urana	St George	
	Batlow, Coolamon, Cootamundra, Griffith, Gundagai, Hay, Hillston, Junee, Leeton, Lockhart, Narrandera, Temora, Tumbarumba, Tumut, Wagga Wagga, West Wyalong	St Vincent's	
	Albury (overseen and managed by Victoria Health)	Victoria	Albury Wodonga Health Service is overseen and managed by Victoria Health
Nepean Blue Mountains	Blue Mountains, Hawkesbury, Lithgow, Portland, Springwood	Nepean	N/A
Northern NSW	Ballina, Bonalbo, Byron, Casino, Grafton, Kyogle, Lismore, Maclean, Murwillumbah, Nimbin, Tweed, Urbenville	John Hunter* (* default arrangement if transfer to Queensland not accepted).	Northern NSW Local Health District (NNSWLHD) maintains referral pathways with Queensland Health including the following hospitals: • Gold Coast University Hospital • Princess Alexandra Hospital • Mater Hospital Brisbane • Queensland Children's Hospital.
Northern Sydney	Hornsby Ku-ring-gai, Macquarie, Mona Vale, Northern Beaches Hospital, Ryde	Royal North Shore	N/A

LHD	Facilities	NSW Tertiary Hospitals	Interstate Pathway
South Eastern Sydney	Calvary Healthcare, Gower Wilson (Lord Howe Island), Royal Hospital for Women, Sutherland, St Vincent's, Sydney & Eye Hospital, War Memorial	Prince of Wales and St George	N/A
South Western Sydney	Bankstown, Braeside, Bowral, Camden, Campbelltown, Fairfield	Liverpool	N/A
Southern NSW	Batemans Bay, Bega (South East Regional) Bombala, Braidwood, Cooma, Crookwell, Delegate, Goulburn, Moruya, Pambula, Queanbeyan, Yass	* Prince of Wales (* default arrangement if transfer to ACT not accepted).	Southern NSW Local Health District (SNSWLHD) maintains referral pathways with ACT Health, including the following hospitals: • Canberra Hospital • North Canberra Hospital Centenary Hospital for Women and Children.
Sydney	Balmain, Canterbury, Concord	Royal Prince Alfred	N/A
St Vincent's		St Vincent's	N/A
Western NSW	Baradine, Bathurst, Blayney, Bourke, Brewarrina, Canowindra, Cobar, Collarenebri, Condobolin, Coolah, Coonabarabran, Coonamble, Cowra, Dubbo, Dunedoo, Forbes, Gilgandra, Grenfell, Gulgong Lightning Ridge, Molong, Mudgee, Narromine, Nyngan, Oberon, Orange/Bloomfield, Parkes, Peak Hill, Rylstone, Tottenham, Trangie, Trundle, Tullamore, Walgett, Warren, Wellington	Royal Prince Alfred	N/A
Western Sydney	Auburn, Blacktown, Cumberland, Mount Druitt, St Josephs	Westmead	N/A

11.2. Appendix 2: NSW Clinical Specialty Referral Networks

NSW Statewide Burn Injury Referral Network
Referral Criteria – please refer to the Agency for Clinical Innovation Clinical Guideline *NSW Burn transfer guidelines*

Time critical retrieval:

- head/neck burns
- intubated patient
- inhalation with cutaneous injury
- >20% Total Burns Surface Area (TBSA)
- burns with significant comorbidities
- associated trauma
- circumferential burn to limbs or chest
- significant electrical or chemical burns.

Referral, non-time critical transfer to a Statewide Burn Unit:

- >10% TBSA
- burns to special areas (hands, feet, perineum, major joints)
- suspected non-accidental injury
- extremes of age.

The following patients should be **transported directly to Royal North Shore Hospital:**

- Adult with burn injury and **actual or suspected severe trauma**
- Adult with burn injury and **acute spinal cord injury**
- Adult with burn injury during **2nd and 3rd trimester pregnancy.**

Note, patients requiring Extracorporeal membrane oxygenation (ECMO) and who have a burn injury should be transferred to Royal North Shore Hospital ICU (not to Royal Prince Alfred or St Vincent's Hospitals).

Referring LHD	Receiving Burn Hospital (including contact details)
Far West NSW LHD Illawarra Shoalhaven LHD Murrumbidgee LHD Nepean Blue Mountains LHD South Eastern Sydney LHD South Western Sydney LHD Southern NSW LHD Sydney LHD Western NSW LHD Western Sydney LHD St Vincent's Hospital Sydney Australian Capital Territory (ACT)	**Concord Repatriation General Hospital** • Burns Registrar/ Consultant on-call. Ph: **(02) 9767 5000** then ask to page registrar on-call for burns • Intensive Care Unit Ph: **(02) 9767 6404** • Burn Unit/ Ambulatory Care Ph: **(02) 9767 7775** (business hours) Ph: **(02) 9767 7776** (after hours) Fax: **(02) 9767 5835** • Burns Nurse Practitioner Ph: **0463 807 312**

Central Coast LHD Hunter New England LHD Mid North Coast LHD Northern NSW LHD Northern Sydney LHD	**Royal North Shore Hospital** • Burns Registrar/ Consultant on-call. Ph: **(02) 9926 7111** then ask to page Registrar on call for burns. • Intensive Care Unit Ph: **(02) 9463 2600** • Burns Unit/ Ambulatory Care Ph: **(02) 9463 2110** (business hours) Ph: **(02) 9463 2111** (after hours) leave a message. Fax: **9463 2006** • Burns/ Plastics CNC Ph: **(02) 9926 7111** then ask to page 41731. Office Ph: **(02) 9463 2102**

NSW State Spinal Cord Injury Service (SSCIS) Referral Network (Adults)

All multi trauma combined with spinal cord injury (SCI) patients must go to Royal North Shore Hospital.

Pre-hospital and initial hospital stabilisation and management following spinal cord injury

The acute assessment and management of trauma patients with suspected spinal cord injury is beyond the scope of this Policy Directive. The initial management of all trauma patients should follow Early Management of Severe Trauma (EMST) and Advanced Trauma Life Support (ATLS) guidelines (Royal Australasian College of Surgeons).

Preparing patient for transfer

Key elements for safe transfer involve the decision to transfer, communication, pre-transfer stabilisation and preparation, choosing the correct mode of transfer (such as land or air transport), monitoring during the transfer, and documentation and handover of the patient at the receiving facility.

Before a patient with a spinal cord injury is transported or transferred from one facility to another, it is useful to complete the following protocol to ensure the patient's condition is sufficiently stable:

Preparing an SCI patient for transfer	✓
Spine is adequately stabilised	
Airway is clear and able to be maintained during transport. If there is any potential for respiratory deterioration during transport (particularly in flight), consider intubation prior to departure. In patients with neurological deficit at or above C6, there is a particular risk of progressive ventilatory failure.	
A **chest tube is in place** for any pneumothorax/ haemothorax, especially if being transported by air in an un-pressurised aircraft.	
Supplemental oxygen is being administered and ventilation (spontaneous or assisted) is adequate to maintain tissue oxygenation.	
Large bore intravenous (IV) cannula(s) in place and IV fluids infusing at required rate.	
Patient is kept **nil by mouth** and when indicated, a nasogastric/ orogastric tube should be placed in situ for managing paralytic ileus.	
Indwelling urethral catheter (IDC) is in-situ and on free drainage. If IDC contraindicated (such as urethral injury), employ suprapubic drainage instead. Priapism is usually self-limiting and does not require treatment.	
Skin is protected from excess pressure, especially over bony prominences that come in contact with support surface, braces or collars, such as heels, sacrum and occiput.	
Neurological level and extent (completeness) of impairment determined by standardised motor and sensory examination [see ISNCSCI] **and Glasgow Coma Score (GCS) are documented** immediately prior to transfer of the patient.	
All imaging and other records with the patient.	

Delayed (> 24 hours) referral and inter-hospital transfer of patients to a Spinal Cord Injury Unit (SCIU)

Where presence of associated multiple injuries and medical instability delays early transfer to a designated hospital with specialised SCI services, the receiving Major Trauma Service (MTS) should consult with the spinal surgeon on-call, ICU specialist, or the spinal medical specialist on-call for the acute SCI Unit, for advice regarding appropriate management.

Consultation should occur at the earliest possible convenience, (but generally no later than 12 hours post-injury), to develop a collaborative multidisciplinary treatment plan until the patient is stable enough to be transferred to the specialist SCI service. Spinal surgery should occur optimally within 6-12 hours of injury.

Inter-hospital transfer for delayed (greater than 24 hours), time urgent patients requiring specialist spinal cord injury care, based on defined statewide catchments, will be coordinated between the referring clinician, accepting clinician and the Patient Flow Unit in consultation with NSW Ambulance.

Local policies reflect the statewide obligations inherent when providing specialist referral support and in general regardless of bed availability at the receiving site, transfer of acute traumatic spinal cord injured patients must not be unduly delayed.

Referring LHD	**Receiving Spinal Cord Injury Service**
Central Coast Far West Hunter New England Mid North Coast Nepean Blue Mountains Northern NSW Northern Sydney Western NSW Western Sydney	**Isolated or combined severe trauma and Spinal Cord Injury:** • **Royal North Shore Hospital PH: (02) 9926 7111** • For **acute** traumatic and non-traumatic SCI • **Ask for:** On-Call Spinal Surgical Consultant **For SCI Rehabilitation:** • **Royal Rehab PH: (02) 9808 9222**
Australian Capital Territory (ACT) Illawarra Shoalhaven Murrumbidgee South Eastern Sydney Southern NSW South Western Sydney Sydney St Vincent's Health Network	**Isolated Spinal Cord Injury:** • **Prince of Wales Hospital PH: (02) 9382 2222** • **ASK for:** On-Call Spinal Surgical Consultant **Note**, for referrals with an acute SCI, transfer arrangements within 24 hours of injury will be expedited through the Prince of Wales Hospital policy of non-refusal.
Cross Border Referrals For health facilities in close proximity to interstate borders, the flow of trauma patients requiring spinal cord injury services may be to a hospital situated in another State.	
Northern NSW	Queensland - Princess Alexandra Hospital - (07) 3176 2111

Murrumbidgee	Victoria: Austin Health – (03) 9496 5000 The Alfred Hospital - (03) 9076 2000
Far West	South Australia - Royal Adelaide Hospital - (08) 7074 0000

NSW Major Trauma Referral Networks (Adult)

Major trauma refers to complex, severe, or multisystem injuries that require specialist trauma service care. These include patients meeting any criteria listed in the Agency for Clinical Innovation Guide *NSW Inter-hospital major trauma transfer*.

Patients meeting criteria for time urgent transfers include those with abnormal findings on Airway, Breathing, Circulation, Disability (ABCD), abnormal vital signs, evidence of clinical deterioration or suspected or actual major injuries as listed in the guideline.

Referring LHD	Regional Trauma Service	Major Trauma Service
Central Coast	Gosford	Royal North Shore
Northern Sydney	N/A	Royal North Shore
Nepean Blue Mountain	Nepean	Westmead
Western Sydney	N/A	Westmead
Far West* * *Guide to Retrievals and Bed-finding for Far West Local Health District Patients* provides advice about referral pathways for trauma patients from FWLHD.	Orange	Royal Prince Alfred
Mid North Coast	Coffs Harbour Port Macquarie	John Hunter
Hunter New England	Tamworth	John Hunter
Northern NSW	Lismore Tweed	Gold Coast University
Illawarra Shoalhaven	Wollongong	St George
South Eastern Sydney	N/A	St George
Murrumbidgee	Wagga Wagga	St George Canberra Hospital
Southern NSW	Wagga Wagga	Canberra Hospital St George
South Western Sydney	N/A	Liverpool
Sydney	N/A	Royal Prince Alfred
Western NSW	Dubbo Orange	Royal Prince Alfred - Dubbo Westmead - Orange
N/A	N/A	St Vincent's

NSW Rural Cardiac Catheterisation Laboratory Referrals (Adults)

The table below outlines rural cardiac catheterisation services and receiving tertiary facilities. Conditions where a hospital may escalate a patient to higher acuity care include:

- Cardiogenic shock
- Symptomatic heart block
- Acute myocardial infarction requiring revascularisation (Percutaneous Coronary Intervention or surgery) where the referring hospital is unable to provide treatment in a timely fashion
- Any condition requiring urgent or semi-urgent cardiothoracic surgery.

The ACC should be contacted on **1800 650 004**, or other local existing critical care consultant/ retrieval service should be contacted, to facilitate the transfer of Priority 1 and Priority 2 patients as per Section 2 (Inter-Hospital Transfer Processes) of this Policy Directive.

Where an Intra-Aortic Balloon Pump (IABP) device is required for an aeromedical transfer, the ACC or other local existing critical care consultant/ retrieval service must provide their own IABP device (authorised for aeromedical transport) and team.

If an IABP is not absolutely required to manage an unstable patient, referring cardiologists should consider whether the presence of the IABP is more important than the necessary delay in transfer time it will incur. The ACC consultant can advise in individual cases what the time differential is likely to be.

The Cardiac Catheterisation Laboratory Referrals (Adults) defines services and networked LHDs.

Referring LHD	Rural Cardiac Catheterisation Service	Receiving Tertiary Hospital
Far West	N/A	South Australia
Hunter New England	Tamworth	John Hunter
Illawarra Shoalhaven	Wollongong	Prince of Wales
Mid North Coast	Coffs Harbour Port Macquarie	Prince of Wales
Northern NSW	Lismore	Queensland
Southern NSW	N/A	Canberra Hospital
Western NSW	Orange Dubbo	Royal Prince Alfred

Extra Corporeal Membrane Oxygenation

Extra Corporeal Membrane Oxygenation (ECMO) is a method of advanced, resource intensive, life support. It can support patients with refractory cardiac failure or refractory respiratory failure, as either a bridge to recovery or bridge to therapeutic decision making.

In NSW, ECMO services are provided by a number of tertiary intensive care units (ICUs) at Royal Prince Alfred, St Vincent's, Liverpool, Westmead, Prince of Wales, St George, Royal North Shore and John Hunter Hospitals.

The Royal Prince Alfred and St Vincent's Hospitals are the state ECMO referral hospitals and provide the adult ECMO retrieval service together with the ACC. There is a separate Kids ECMO Referral Service through the Sydney Children's Hospitals Network. Referrals should be made via the Newborn and Paediatric Emergency Transport Service (NETS) on **1300 362 500**.

NSW has a well-established adult ECMO retrieval service that has been operational for more than 10 years. It supports patients at hospitals that are not able to initiate and/or maintain ECMO, as well as providing support to lower volume ECMO centres.

There is a dedicated ECMO retrieval roster which provides advice as well as the expertise required to initiate ECMO at the referring centre. St Vincent's Hospital and Royal Prince Alfred Hospital then work in collaboration with medical retrieval services and NSW Ambulance to transport by helicopter, fixed wing, or road vehicle to the accepting centre.

St Vincent's Hospital and Royal Prince Alfred Hospital provide 24 hour coverage for the ECMO retrieval service. For consultation contact the ECMO centre via www.nsw-ecmo.net or **1800 650 004.**

Early notification is important, as timely referral will improve patient outcomes.

To initiate a referral and transfer, the following process is to be followed:

1. Check www.nsw-ecmo.net or call **1800 650 004** to determine which ECMO retrieval centre is on-call.
2. Complete the online referral form for that centre, or if not possible or clinical circumstances do not allow.
3. Call the on-call ECMO centre switchboard to connect the referring intensivist/ consultant (or most senior doctor) to the ECMO consultant.
4. The ECMO team then will determine suitability for ECMO based on a risk/ benefit assessment. Alternative treatment options may also be recommended, which may be undertaken at the referring hospital or an ECMO capable centre.
5. If ECMO is indicated, the call will determine the timing, type of transport, equipment requirements, team constitution and destination of the patient.

For additional information on ECMO services in NSW, refer to the Agency for Clinical Innovation Clinical Practice Guide *ECMO (extracorporeal membrane oxygenation) services in NSW* [Adult patients].

Transfers of patients with mechanical cardiac assistance devices, such as Intra-aortic balloon pumps or cardiac Impella, will generally require medical retrieval and potentially ECMO team escorts. Referral can be made via **1800 650 004**.

NSW ECMO Retrieval Referral

Please contact us for advice or urgent referral for ECMO retrieval

Patient Criteria

VV ECMO

Respiratory Failure >3hrs <10d
despite neuromuscular blocker IVI
PEEP optimisation, prone position
Hypoxaemia (P:F ratio <100mmHg)
OR
Hypercapnia ($PaCO_2$ >65mmHg+pH <7.25)
OR
Failure to maintain lung protective ventilation targets
V_T >8ml/kg or P_{plat} >30
Severe barotrauma
+ Potentially **reversible aetiology**

VA ECMO

Refractory Cardiogenic Shock
+ failure of **maximal medical support**
+ **reversible contributors** addressed, e.g. pericardial tamponade

Consider **early referral:**
- prior to **established MOF**
- for **massive PE**
- for **myocarditis**
- for beta blocker/calcium channel blocker overdose

+ Potentially **reversible aetiology** OR candidate for **VAD/HTx**

CONSIDER CONTRAINDICATIONS - each patient will be considered if referred

All forms of ECLS
Cardiac arrest without ROSC
Advanced age or active, terminal malignancy
Chronic end-stage organ system failure
Irreversible neurological condition or recent ICH

VV: mechanical ventilation >7d
severe pulmonary HTN (mean PAP >50)
VA: severe aortic valve regurgitation
aortic dissection

ECMO Referral Process

1 Confirm which ECMO centre is on-call
Check the on-call roster via **nsw-ecmo.net** or call the MRU on **1800 650 004**

2 Complete the online referral form
Access the **online referral form** for the **on-call ECMO centre** at: **nsw-ecmo.net**

3 Call the on-call ECMO centre switchboard
Inform the **on-call ECMO intensivist** that you have completed the referral form
SVH: (02) 8382 1111 RPAH: (02) 9515 6111

Endovascular Clot Retrieval Service

Referral for time critical Endovascular Clot Retrieval (ECR) services should follow the Agency for Clinical Innovation Clinical Practice Guide *Eligibility for endovascular clot retrieval* (NSW Referral Guide).

LHDs and SHNs that refer to Westmead Hospital in-hours should contact Royal North Shore service for after-hours service.

For John Hunter Hospital ECR service:

Clinicians within Hunter New England, Central Coast and Mid North Coast LHDs seeking assistance or referring to John Hunter Hospital should follow the pathway of contacting the 24/7 acute stroke service neurologist.

The on-call acute stroke service neurologist will triage the patient, if deemed appropriate, to the John Hunter Hospital Interventional Neurology Service.

For Metropolitan Sydney ECR services:

If LHD or SHN clinicians referring into one of the Metropolitan Sydney services experience any difficulties or delays in transferring a patient deemed clinically appropriate for ECR procedures, this should be escalated to the relevant ECR hospital Executive.

ECR Service	In hours referrals	After hours referrals
Prince of Wales 24/7 Call 1800 4 STROKE (1800 4 787 653)	South Eastern Sydney St Vincent's Hospitals Network Illawarra Shoalhaven	South Eastern Sydney St Vincent's Hospitals Network Illawarra Shoalhaven
Liverpool 24/7 Call 1800 4 STROKE (1800 4 787 653)	South Western Sydney	South Western Sydney
Royal Prince Alfred 24/7 Call 1300 ECR NOW (1300 327 669)	Sydney Western NSW	Sydney Western NSW
John Hunter 24/7 Call 1300 JHH ECR (1300 544 327)	Hunter New England Central Coast Mid North Coast	Hunter New England Central Coast Mid North Coast
Royal North Shore 24/7 Call 1300 251 284	Northern Sydney Western Sydney* (* when Westmead service is unavailable)	Northern Sydney Western Sydney Nepean Blue Mountains
Westmead In-hours only Call 1300 251 284	Western Sydney Nepean Blue Mountains	No after hours service available
Gold Coast	Northern NSW	Northern NSW
ACT	Southern NSW Murrumbidgee	Southern NSW Murrumbidgee

Victoria	Murrumbidgee	Murrumbidgee

11.3. Appendix 3: Key roles and responsibilities

Key Role	Responsibility
NSW Ambulance Aeromedical Control Centre **1800 650 004** **or other local existing critical care consultant/retrieval service**	For patients with a life or limb threatening condition where the required clinical care is outside the skillset or capabilities of the referring facility, the NSW Ambulance Aeromedical Control Centre (ACC) or other local existing critical care consultant/retrieval service must: • provide critical care clinical advice from a critical care consultant • coordinate and mobilise a medical retrieval team • initiate transfer process at the point the patient is classified as Priority Category 1 • identify appropriate receiving hospital and inform them of impending transfer • coordinate a referral conference call or similar, where possible, between the referring clinician, retrieval consultant and receiving clinician • provide staff at the referring and receiving hospitals with the estimated time of arrival of the retrieval team including any anticipated delays in the retrieval process • provide timely advice and updates to the referring clinician to support the stabilisation and resuscitation of the patient. For patients with an urgent but not immediately life or limb threatening condition where the referring facility can only provide temporary stabilisation and management, the ACC or other local existing critical care consultant/ retrieval service must: • supplement clinical advice from local health district/ specialty health network/ hospital critical care contact • task an appropriate clinical team to effect the transfer.
Referring clinician/ hospital or LHD/ SHN	For patients with a life or limb threatening condition where the required clinical care is outside the skillset or capabilities of the referring facility, the referring clinician/ hospital must: • immediately notify the ACC and provide patient clinical status, management, any special considerations, and logistical issues • immediately update the ACC on any changes to the patient's status • notify the Patient Flow Unit (PFU)/ hospital bed manager or after-hours manager of the transfer • record decisions relating to the transfer in the patient's electronic medical record (eMR). This includes documenting delays in transfers. For patients with an urgent but not immediately life or limb threatening condition where the referring facility can only provide temporary

Key Role	Responsibility
	stabilisation and management the referring clinician/ hospital must: • contact the local health district's/ specialty health network's/ hospital's nominated central point for critical care advice • determine clinical transfer priority and facilitate clinical referral (via conference call or similar with receiving clinician) • facilitate transfer to receiving hospital in consultation with NSW Ambulance • facilitate notification of ACC once the patient has been accepted at the receiving hospital and provide patient clinical status, management, and any special considerations • coordinate a conference call or similar, where possible, between the referring clinician, retrieval consultant and receiving clinician • notify the PFU/ hospital bed manager or after-hours manager of transfer • request the inter-hospital transfer in the Patient Flow Portal (when the receiving hospital is known) • Monitor the arrival time of the booked transport and escalate if timeframe is not appropriate to prevent patient deterioration. • record decisions relating to the transfer in the patient's eMR. This includes documenting delays in transfers. For transfer of patients with an acute but not urgent condition needing access to higher acuity care not available at the referring or patients being transferred for a non-urgent planned procedure, treatment or appointment, the clinician/ hospital must: • determine transfer urgency with the receiving senior clinician • contact the PFU/ hospital bed manager or after-hours manager at receiving hospital • determine appropriate form of clinical transportation and level of supervision for the patient with the receiving senior clinician and NSW Ambulance • facilitate transfer to receiving hospital within a timeframe appropriate to the patient's clinical condition and provide an estimated time of arrival • provide copies of patient documentation including but not limited to clinical notes, medication chart, current investigation results, referring and receiving doctor contact details • request the inter-hospital transfer in the Patient Flow Portal • monitor the arrival time of the booked transport and escalate if timeframe is not appropriate to prevent patient deterioration • record decisions relating to the transfer in the patient's electronic medical record. This includes documenting delays in transfers. For return transfers the clinician/ hospital must: • notify the relevant accepting clinical team at the receiving hospital that the patient is ready for return transfer and provide a clinical

Key Role	Responsibility
	handover informing them of the patient's clinical condition and management • request the inter-hospital transfer in the Patient Flow Portal • record decisions relating to transfer in the patient's eMR. This includes documenting delays in transfers • the receiving hospital should accept the patient within 24 hours of referral. Note: Local escalation pathways must be in place to address transfer delays outlining the person(s) responsible for managing the escalation and action to be taken.
Receiving clinician or hospital	For patients with a life or limb threatening condition where the required clinical care is outside the skillset or capabilities of the referring facility, the receiving clinician/ hospital must: • notify PFU/ hospital bed manager or after-hours manager of impending transfer • NOTE: PFU/ hospital bed manager or after-hours manager cannot refuse these patients. For patients with an urgent but not immediately life or limb threatening condition where the referring facility can only provide temporary stabilisation and management the receiving clinician/ hospital must: • notify PFU/ hospital bed manager or after-hours manager of impending transfer • NOTE: If the NSW Default Adult Intensive Care Unit Bed Procedure (see Section 4.1) is activated, the tertiary referral hospital designated by the NSW Adult Critical Care Referral Network (see Appendix 1) will be responsible for providing critical care, irrespective of bed status, to the group of referral hospitals specified in NSW Adult Critical Care Referral Network • create bed capacity and accept the patient directly into the intensive care unit bed • Note: The emergency department (ED) should only be used if a patient's condition has deteriorated during transfer or ED assessment is required. For transfer of patients with an acute but not urgent condition needing access to higher acuity care not available at the referring facility or patients being transferred for a non-urgent planned procedure, treatment, or appointment the clinician/ hospital must: • monitor the Patient Flow Portal (PFP) intra-hospital transfer list and confirm bed allocation to the PFU/ hospital bed manager or after-hours manager for all transfers for in-patient specialist care • create bed capacity and accept the patient directly into a clinically suitable location • Note: The ED should only be used if a patient's condition has deteriorated during transfer or ED assessment is required.

Key Role	Responsibility
	Local guidance must state location within hospital where the patient will be transferred for specialist assessment and management. Local guidance must outline the process for conducting the initial patient assessment and management of patients transferred outside of business hours. For return transfers the receiving clinician/ hospital must: • give the returning patient priority in bed allocation • avoid return transfer through the ED unless a patient's condition has deteriorated during transfer or ED assessment is required.
NSW Ambulance (NSWA)	For transfer of patients requiring access to specialist care or return transfer, NSWA must liaise with facilities in order to provide transfer of the patient within the requested timeframe or escalate inability to meet the requested timeframe as soon as possible.
HealthShare NSW Patient Transport Service (PTS) or local non-emergency transport provider	PTS provides non-emergency patient transport for patients who have been assessed by a Registered Nurse or Medical Practitioner as being stable, 'between the flags' or who have an altered calling criteria and a low risk of deterioration during transport. Priority category 2, 3 & 4: For transfer of patients requiring access to specialist care, PTS provides the next available pick-up time via the PFP. When making a PTS booking via the PFP, if the system returns a time that does not meet the medically agreed timeframe (MATF) the clinician must have the MATF reassessed for clinical suitability (and document) of the next available timeslot or book directly with NSWA. Where escalations are received from ACC to assist with clinically suitable patients, PTS will provide a resource where available. PTS will advise the referring clinician of the pick-up time, and this will also be displayed via the PFP. Priority category 5: For return transfers bookings PTS provides the closest available pick-up time to the requested time indicated in the PFP transport booking system.

11.4. Appendix 4: Resources

There are a number of resources available with information on booking and preparing for inter-hospital transfers for adults requiring critical care or specialist care, including:

	Resource	Description
Retrieval or urgent transfer preparation	*Retrieval or urgent inter-hospital transfer*	Tools and prompts to support referral, handover and clinical management of the adult patient requiring retrieval or urgent transfer.
Patient Flow Portal	*PFP eLearning Module - Inpatient Updates and Transfers*	Information on how to perform the most common updates to patient information in the Patient Flow Portal (PFP) and create transfers and other transactions for emergency department accessible wards.
	PFP eLearning Module on My Health Learning - ICU Bed Availability Reporting	This course is for Intensive Care Unit (ICU) ward staff and covers: • the importance of bed availability reporting • how to use the Electronic Patient Journey Board (EPJB) to report bed availability for their ward. • how to use the new PFP Dashboard to view bed availability • how to use the PFP to access reports.
	Mandatory EPJB Updates for Adult ICU - Reference Guide	Describes how to update the: • ICU bed status • Unit Short Term Escalation Plan (STEP) • Other columns in the EPJB.
	Information for Intensive Care Units - Mandatory Patient Flow Portal data entry	Outlines the data all ICUs are required to enter in the PFP.
	New PFP Reference Guide for ICU Directors	Guide to the PFP for ICU Directors.
Bariatric Patients	*Bariatric Sizing Chart*	Patient sizing chart for patients over 100kg requiring transport by NSW Ambulance.
	Patient Transport Service *Bariatric Measurement Guide*	Bariatric measure guide for patients over 120kg requiring transport by Patient Transport Service.

	Resource	Description
Virtual Care	*NSW Virtual Care Strategy 2021-2026*	Critical care and inter-hospital arrangements are to make optimal use of virtual care in accordance with the *NSW Virtual Care Strategy 2021-2026*. Virtual care or telehealth is the delivery of healthcare at a distance using information communications technology such as phone and video conferencing. It can be used to provide a range of services including clinical advice, consultation, monitoring, education and training, and administrative services. Local policy for the use of virtual care must align with pathways for seeking clinical advice and escalation described in this Policy Directive.
Non-emergency transport	NSW Health Policy Directive *Service Specification for Non-Emergency Transport Providers* (PD2024_008)	PD2024_008 outlines requirements for patient transport vehicles, equipment and staff, to provide safe service for patients using non-emergency patient transport services. The Policy Directive also provides information to ensure the correct non-emergency transport provider is booked to manage the patient's clinical needs.