Tertiary Transfers

The tertiary NICU for the DHB in which the infant resides is responsible for the safe transport to the tertiary facility.

Each tertiary facility has its own NICU transport team, responsible for responding to any clinical emergency within its catchment area. In Auckland, the out of hours transport is provided by the Unit at Auckland City Hospital, but the Middlemore Unit does provide tertiary road transport from 0800hrs – 1700hrs Monday-Friday.

If there are no neonatal beds available at the tertiary facility, it is the responsibility of the tertiary neonatal consultant to find a bed at another tertiary centre and arrange transportation for postnatal cases.

These infants will include:

- retrieval from a base hospital to a tertiary centre
- infants ventilated, on CPAP, high flow, or dependant on nasopharyngeal airway or tracheostomy
- infants having respiratory events such as apnoea, bradycardia and/or desaturation
- infants experiencing seizures and/or with a history of HIE
- infants with a congenital cardiac condition
- infants with surgical condition prior to surgery, such as bowel obstruction, TOF, diaphragmatic hernia, gastroschisis, exomphalos

There is an expectation that an infant with any of these conditions may deteriorate to some degree in transit due to the effects of altitude and movement. The transport team should be experienced enough to deal with any complications as they arise and when the transport is by air, they should have training in aviation physiology. Although assistance may be required from staff at the referring unit, it is expected that the visiting transport staff (with advice from their consultants) are primarily responsible for the patient from the time of their arrival at the referring unit.

It is expected that regional NICUs will provide mutual cover for transfers when adverse circumstances occur (e.g. staffing shortages, equipment problems, weather or other environmental problems).

ECMO Transfers

Babies who are being transferred to PICU in Auckland for ECMO services are to be discussed with the Auckland PICU consultant, and the transport system is to be agreed at that time. The solution will often be transport using the Auckland team, and in specific circumstances PICU may decide to mobilise a team to commence ECMO prior to transport.

Antenatal Transfers

It is a Neonatal Service responsibility to ensure that a neonatal bed-space is available at the planned destination of an in-utero transfer. If the local tertiary neonatal service is overloaded, it is the responsibility of the tertiary neonatal consultant at the regional centre to find an appropriate neonatal bed-space elsewhere, and to advise the referring service accordingly. An obstetric handover will be required in all cases.

Secondary Transfers

There are some infants that are suitable to be transported by a secondary hospital transport team. That team must have neonatal training as well as flight training (where applicable). Any infant flying must be transported lying down, with an NGT or OGT in situ open for venting, and SaO_2 monitoring as a minimum standard.

These infants could include:

- Any preterm infant returning to base hospital on low flow oxygen or no respiratory support, and is stable.
- A stable preterm >28 weeks infant on low-flow or no respiratory support travelling to tertiary hospital for ongoing care
- Any full-term infant returning to base hospital on low flow or no respiratory support, and is stable
- Any infant coming to, or returning from a) a diagnostic procedure b) a scan or c) elective surgery who is on low flow or no respiratory support, and is stable

At present not all secondary units have such a team. In these circumstances the tertiary unit should be available for their transfers but it is not the expectation that they will provide transfers between secondary centres.

Where relevant, the tertiary NICU should include transport training for personnel in their region responsible for transports and ensure appropriate statistics are collected.

Home Births or Emergencies in Birthing Units

There is a national agreement for St Johns Ambulance personnel (or Wellington Free Ambulance in the Wellington Subregion) to attend newborn emergencies related to home births or those in birthing units. It is expected that the nearest level 2 or 3 neonatal unit staff will be informed of these and be involved in the process.

Use of Commercial Airlines

In general babies to use commercial airlines to return to their region will be those NOT requiring a nursing escort.
These will be:

1) Where the road travel time exceeds 3 hours
2) The infants are over 37 week's gestation
3) Infants not on oxygen, IV fluids nor IV medications
4) No CYFS requirement for an escort
5) If returning to another hospital prior to going home, this is only to arrange follow-up and local service linkages

Infants not fulfilling these criteria should be transferred by a medical transport team.

Contact phone numbers for Regional NICU (Level III)

	Hospital Switchboard		
Auckland	09 3074949	Christchurch	03 3640640
Middlemore	09 2760000	Dunedin	03 4740999
Waikato	07 8398666	Wellington	04 3855999

Request the Neonatal Consultant

Glossary

CPAP	Continuous positive airway pressure
CYFS	Child, Youth and Family Service
DHB	District Health Board
ECMO	Extracorporeal oxygenation
HIE	Hypoxic ischaemic encephalopathy
IV	Intravenous
NGT	Nasogastric tube
NICU	Neonatal Intensive Care Unit
OGT	Oro-gastric tube
PICU	Paediatric Intensive Care Unit
SaO_2	Arterial oxygen saturation
TOF	Tracheo-oesophageal fistula

Public Domain Notice

This guideline is intended for use by secondary care practitioners involved in the care of newborns needing inter-hospital transport. It provides the best evidence currently available to assist informed decision making by parents/caregivers and their health care providers to improve their health outcomes.