

- If you are not confident that the seat is fitted correctly, ask an approved fitter for assistance. Most motoring organisations can provide a list of approved restraint fitters.
- Children grow quickly, so you need to regularly review whether your child is in the right seat.
- Always use the restraint, every single time, no matter how much a child protests.

Useful Links

www.belletoni.org.au this is the website for the advocacy organization set up by the parents of Isabelle Broadhead and Toni Perrin. Both children died in car accidents on the NSW South Coast. The website contains an excellent section on choosing restraints, including pictures.

www.isabelle-broadhead.memory-of.com is Isabelle's memorial website, containing her mother's moving story of the campaign for law reform and better resources for parents.

<http://www.vicroads.vic.gov.au/Home/RoadSafety/SeatbeltsChildRestraints/ChildRestraints/> there are similar websites from other state government transport departments offering useful advice.

http://www.mynrma.com.au/cps/rde/xchg/SID-3F5768EC-EB1A9ECA/mynrma/hs.xsl/child_and_infant_restraints.htm
This excellent piece includes some specific crash test data for certain brands of restraints.

<http://www.monash.edu.au/muarc/reports/muarc250.html> for those who wish to look at some leading Australian research in detail.

www.atsb.gov.au/pdfs/child_restraints.pdf is a simple guide to child restraints from the Australian Transport Safety Bureau.

Helicopter Rescue's Key Role in Reducing the Road Toll

by Geoff Horne

It has long been understood that providing medical care for road trauma victims within one hour of the crash can be critical in saving lives and highly beneficial in reducing the long term effects of injuries. This key period is sometimes referred to as "The Golden Hour". Considering the victims of major trauma who die, experience indicates that 2/3 will have suffered major head or other central nervous system injuries about which little could have been done to prevent the outcome. However, 2/3 of the remaining fatalities would be preventable if the casualty were to receive appropriate medical management in this "Golden Hour" (1). In recent years

improvements in response times by emergency medical personnel have been greatly assisted by the use of helicopters. As an example, for an ambulance to drive from Dunedin to Christchurch in New Zealand takes about 5 hours, whereas a helicopter, travelling at 120 nautical miles per hour can complete the journey in 1 hour 20 minutes. The typical modern rescue helicopter can be regarded as a fully equipped intensive care unit in the sky. It has everything you would find in the back of a well-equipped road ambulance, and more.

The aim of this article is to give an overview of the considerable extent of helicopter emergency medical and rescue services in

Australia and New Zealand. Some examples are given of the historical background, the current level of activities and the costs involved in this vital road safety service, in order to give the reader a feel for this comparatively new way of responding to road trauma and the beneficial impact it is having.



A Bell 412 Helicopter in service with
Emergency Management Queensland

Australia

The first Australian helicopter emergency medical and rescue service (HEMS) was started in Sydney in 1973 (2). Today helicopter rescue within the Golden Hour is available for most of the densely populated regions of Australia. Even where rescue response is necessarily longer due to Australia's vast distances between population centres, helicopters are playing a vital role in providing much faster medical attention than was previously possible by surface vehicles.

Unlike road ambulance services, no charge is levied from most recipients of the services provided by rescue helicopters.

Helicopter emergency services vary in their funding sources, which may be from government, corporate sponsorship, individual donations and community fundraising activities, but often a

combination of all these. Unlike road ambulance services, no charge is levied from most recipients of the services provided by rescue helicopters. There are a few instances of 'user pays', such as international tourists covered by travel insurance. Typical costs of providing a rescue helicopter are in the region of \$2,500 - \$4,000 per flying hour, so it is quite remarkable that the service is mainly free, and a tribute to the community-minded people whose campaigning for sponsors and fundraising efforts make this possible.

There are two categories of helicopter for HEMS operations. Category 1 helicopters are twin engine, have one pilot and are capable of night operations. Their minimum cruise speed is 120 knots and they can accommodate any type of patient and have the capacity to transport two stretcher patients with medical equipment, two medical attendants, a pilot and flight crew. Category 2 helicopters are smaller and generally operate in daylight hours only. They can carry one patient at a time plus a pilot, flight and medical crews. (3)

Gathering information on HEMS in order to obtain an overall picture of activities in Australia is difficult because there is no centralised compulsory reporting system for HEMS flying hours and the number of patients carried (2). In looking at helicopter rescue as a road safety issue, it should be noted that these services are not applied only to road trauma rescue, but to any kind of rescue or medical emergency. Although many of the HEMS activities were initiated for surf and remote bush area rescue, road trauma rescue is becoming an increasingly important part of their activities.

New South Wales

There are six helicopter services contracted by NSW Health to perform emergency services in the New South Wales community. In total there are 9 helicopters currently operating across the State, 6 Category 1 helicopters and 3 Category 2 helicopters (3)

Sydney - Orange

For many years HEMS work in and around Sydney was done by the NRMA Careflight team and the Westpac Surf Life Saver. Following a NSW Government decision in 2006 to upgrade the level of HEMS in the State, a contract was awarded by the NSW Government to CHC Australia, effectively taking over the roles of NRMA Careflight and Westpac Surf Life Saver in 2007. The contract called for AW139 and EC145 helicopters to be based in Sydney, Orange and Wollongong. Announcing the change (4), Health Minister John Hatzistergos said that the contract would mean a new direction for state-of-the-art medical helicopter retrieval services in NSW. Essential requirements of the new contract were that CHC would provide helicopters capable of carrying two patients or a patient heavier than 120kgs, improved poor weather performance, improved safety features and greater range at 30% faster flying speeds. In addition, a back-up helicopter would be available at all times. All helicopters provided by CHC under the new contract are twin-engine, with controlled flight ability in the event of one engine failure.

NRMA Careflight will continue to sponsor and support the HEMS service out of Sydney and Orange by providing doctors for the rescue and retrieval aircraft. (Under the previous arrangements doctors were part of the HEMS team, but this was not provided for under the CHC contract). (4)

NRMA CareFlight Media Release 10th May 2007

An NRMA CareFlight trauma team flew to Spit Junction, on the lower north shore, to treat a pedestrian who was hit by a car on Spit Road early this afternoon. Police blocked busy Spit Road to allow the NRMA CareFlight helicopter to land at the scene. The NRMA CareFlight doctor said the semi-conscious 61-year-old Mosman man suffered head injuries. After stabilisation by the doctor and ambulance paramedics the man was taken by Road to Royal North Shore Hospital.

Having doctors on board rescue helicopters will ensure the continuation of the Head Injury Retrieval Trial (HIRT). This medical trial is investigating the benefits of 'pre-hospital' trauma care at the scene of a crash in improving recovery outcomes for people with head injuries.

Australian Capital Territory and the Southeast Region of New South Wales

Snowy Hydro SouthCare helicopter rescue service operates throughout this region, providing retrieval and rescue services that are coordinated by the NSW Ambulance Service (5)

Media Release example by SnowyHydro SouthCare ACT & South-East NSW Aeromedical Service, 1 October 2004

Snowy Hydro SouthCare flew to Nerriga North of Braidwood today to airlift a thirteen year old male teenager injured in a motor vehicle accident. At 9am this morning Snowy Hydro

SouthCare was tasked to fly to Nerriga to airlift patients involved in a single vehicle motor vehicle accident. Due to severe weather conditions the helicopter had to fly along the power lines and arrived at the scene at 0945am. A 43 year old male driver, two thirteen year old male teenagers and a ten year old female had been in the vehicle when it hit a tree and rolled. One of the male teenagers managed to get out and raise the alarm for help. The other male teenager was trapped in the vehicle for over an hour. All four patients were treated by NSW Ambulance officers and stabilised. Snowy Hydro SouthCare airlifted one of the male teenagers who was suffering from abdominal injuries and compound leg fractures and was in a serious but stable condition upon arrival at the Canberra hospital, arriving at 11.35am. The other three patients suffering minor injuries were road transported by the NSW Ambulance Service to Braidwood Hospital.

Newcastle – Tamworth

Westpac Rescue Helicopter Service is a community owned and operated aeromedical search and rescue service, serving the Hunter, Mid North Coast, New England and North West regions. The Service's Bell 412 aircraft is based at Broadmeadow in Newcastle and is on call 24 hours per day with a Bell 407 as a backup aircraft during daylight hours for the Hunter & Mid North Coast areas of the State. For New England & the North West another Bell 407 operates 12 hours a day from Tamworth Airport. Over one million people are covered by this service (6).

Northern New South Wales

This region is serviced by a Westpac helicopter based in Lismore (7). Its operational area extends from the Queensland border in the north at Tweed Heads, south to Nambucca Heads and west to Glen Innes and Tenterfield in the ranges. The geography of this flight area consists of large and rugged mountains, long areas of coastline, inland waterways, rain and timber forests, farmlands and the infrastructure of roads, highways and rail links. The Rescue Helicopter Service commenced at Ballina in 1982, motivated by the need for surf rescue work. This was the fifth Surf Life Saving Australia (SLSA) service established in Australia. A twin-engine Aerospatiale Dauphin helicopter was brought into service in 1991, which greatly improved the quality of the service provided.

A second identical helicopter was purchased in 1996, facilitating the provision of a 24-hour aero medical service, every day of the year. More than half of the annual \$3 million budget comes from community fund raising and donations, while the remainder is provided by the NSW Government and 10 commercial sponsorships, with Westpac as the principal sponsor.

The Westpac Life Saver Rescue Helicopter was tasked to airlift a 19-year-old Ocean Shores male from Lismore to Gold Coast Hospital. The patient had a depressed skull fracture sustained in a motor vehicle accident on Rifle Range Road. (Source: *Westpac Lifesaver Rescue Helicopter Northern Region media release, 20th April 2007*)

Wollongong

Plans are in hand to open a new 24 hour HEMS based in Wollongong (4). The new helicopters provided by CHC are expected to extend the reach of HEMS to Kempsey, Tamworth, Condobolin, Cooma and Wagga Wagga. This will ease the pressure on existing HEMS operations out of Newcastle, Tamworth, Lismore and Canberra.

Northern Territory

The Northern Territory does not have a dedicated HEMS service. However, the police and emergency services often charter helicopters from local companies in Darwin and Alice Springs for rescue work., though there appear to be few reports of road trauma HEMS rescue. The RAAF Tindal Airbase also sometimes provides a helicopter for emergency rescue operations.

Article from News.com

Driver arrest after Ghan train crash

December 13, 2006

The truck driver involved in the derailment of the Ghan passenger train south of Darwin yesterday has been arrested. The truck driver, 57, who suffered suspected spinal injuries, was also taken to hospital by ambulance. A 50-year-old British woman remains in critical but stable condition in Darwin hospital today after she was removed unconscious from the wreckage by rescue workers. She suffered head injuries and had to be stabilised at the scene before being flown to Darwin in a RAAF search and rescue helicopter.

Queensland

Queensland has a number of separate organisations providing HEMS, but they are all coordinated by Queensland Clinical Coordination, a government department that also coordinates road ambulances across the State (8). The HEMS network includes:

- Emergency Management Queensland (EMQ) – a fully government funded service operating out of Brisbane, Townsville and Cairns.
- RACQ CareFlight – a charity based at the Gold Coast and covering north to Gympie, west to Goondiwindi/Roma and south to Lismore for road rescue.

- Energex Community Rescue – a charity based at Maroochydore covering the Sunshine Coast and Bundaberg.
- Central Queensland Rescue – a charity based at Mackay.
- Capricornia Rescue – a charity based at Rockhampton.

EMQ uses Bell 412 helicopters operated by a crew made up of the pilot, winch operator and down-the-wire rescue officer. In the case of medical missions, a doctor and paramedic are included. The following table shows how HEMS road trauma missions are on the increase in the area covered by EMQ.

Air Base	2003/2004		2004/2005		2005/2006	
	Tasks	Flying hours	Tasks	Flying hours	Tasks	Flying hours
Brisbane	13	13.26	40	32.33	51	50.92
Townsville	19	32.96	17	21.48	19	30.7
Cairns	10	14.5	9	16.1	29	40.77
Total	42	60.72	66	69.8	99	122.39

RACQ CareFlight performed around 40 Scene/Primary missions for road trauma in the 2005/06 year. In such situations the helicopter flies directly to the scene of the accident with a four-man crew made up of the pilot, crewman, doctor and paramedic, so that immediate treatment can be given, even if the injured are trapped in their vehicle. This greatly increases the chance of the patient's survival.



Palen Creek motor vehicle accident – the RACQ Careflight landed on site to assist a man injured when his car hit a tree. Photo courtesy RACQ Careflight.

This is a 24 hours, 7 days per week service. RACQ CareFlight has two helicopters: a twin-engine Bell 412 with a flying range of 3.5 hours, capable of carrying four crew and two critically ill patients; and a Squirrel that has a flying range of 3 hours and can carry four crew and one critically ill patient. Average mission costs are estimated at \$7,000. These costs are met from a number of sources: 20% from major commercial sponsors, 20% from the local and state government and the remaining 60% from fund-raising and donations from the local community.

South Australia

The Adelaide Bank has been sponsoring a State HEMS operation from Adelaide for the last four years, coordinated by the South Australia Ambulance Service (9). The SA HEMS operations were relaunched in December 2005, to provide twice the capacity to perform winch rescues, more capacity for medical retrievals, quieter helicopters for Police patrols and increased capacity to firebomb during bushfires. The new Adelaide Bank Rescue Helicopter Service contract is project

managed by the Department of Justice (10). It provides a helicopter platform for four vital services to South Australians - Hospitals, Police, Country Fire Service and Ambulance. Under the contract with Australian Helicopters, four helicopters are guaranteed to be available when needed. The Westpac Life Saver Rescue Helicopter in South Australia patrols beaches on weekends, public holidays and busy weekdays over summer from November through to March each year and may be called on for road trauma rescue.

Tasmania

The Tasmania Rescue Helicopter Service was established in September 2000 (11). Funding for the Air Rescue helicopter is provided by the State Government through the Department of Police and Emergency Management's recurrent budget. This arrangement is on the understanding that complementary funding sources through community ownership are sought to maintain the continual improvement to specialist equipment and training required by Police and Ambulance personnel and the pilots' night flying training. To this end, the Tasmanian Air Rescue Service was established as a sponsorship and fund-raising organisation to support the air rescue service. The helicopter is available for a wide and varied range of missions, including motor vehicle accidents. Known as the Westpac Rescue Helicopter under its current major sponsor, the aircraft is a twin-engine Kawasaki BK117 which operates 24-hours a day, seven days a week and is equipped with medical and emergency equipment enabling it to fly into almost any area in any conditions, day or night.

The helicopter has a three-person winch stretching 70m in length and contains a stretcher. The helicopter is capable of two-patient transport when required. It also contains intensive care medical equipment and a range of rescue equipment. It has a 30 million candle power 'Nitesun' searchlight for night

operations. The helicopter can carry ten people, including the pilot, and has a full payload range of 540 km and a flying time of 2 hours 50 minutes.

Tasmanian Air Rescue Trust - Newsletter Winter Edition

Late April and a woman died and six were left injured after a horrific pile-up on the Midlands Highway. The call-out came just after 2pm when seven people were injured in two cars including one towing a caravan. A woman was trapped and died at the scene while three others were transported by Westpac Rescue Helicopter to Royal Hobart Hospital and three others taken by ambulance. The highway was closed for several hours with traffic being diverted through paddocks.

Victoria

The helicopter emergency rescue service in Victoria is operated by Air Ambulance Victoria (AAV) under the organisation of the Metropolitan Ambulance Service (12). The AAV has both helicopters and fixed wing aircraft. There are three helicopters operating out of Essendon, Bendigo and the Latrobe Valley. Their primary focus is in responding to emergency calls, providing early Mobile Intensive Care Ambulance (MICA) care at the scene of an accident and rapid transport of critical patients to major hospitals. A Dauphine twin-engine helicopter with two-stretcher capability operates out of Essendon, with an operational range of 175km. It is crewed by a police pilot, observer and MICA flight paramedic. This helicopter is used for both ambulance and police duties. Both the Bendigo and Latrobe Valley helicopters are Bell 412 aircraft, which are used for ambulance and fire fighting duties.

The following table shows the number of responses made by the AAV to road traffic accident (RTA) calls between 2003 and 2006. RTA primaries are direct visits to attend to road trauma victims at the crash site. RTA secondaries are transfers of road trauma victims between hospitals.

Year	RTA primaries	RTA secondaries
2005-6	460	55
2004-5	409	57
2003-4	439	59

Supporting the work of AAV in Victoria is the LifeFlight organisation. This has two fully operational medical/rescue/fire fighting helicopters, which can be used for Air Ambulance, Rescue and Fire Fighting purposes.

The LifeFlight Helicopter Emergency Medical and Rescue Service (HEMS) is offered to medical retrieval teams and Air Ambulance Victoria as a backup, when the Air Ambulance helicopters are unable to meet the demand. It is available throughout Victoria. LifeFlight operates two BK117 B2 model twin-engine helicopters. Each of the helicopters in LifeFlight is fitted with multiple stretcher systems, medical oxygen, suction,



AAV helicopters (Photo: AAV)

medical quality lighting, backup power, as well as specialist coronary and neonatal medical equipment, rescue stretchers and rescue diver immersion equipment. LifeFlight is a Non Government Organisation that receives approximately 50% of its funding from government, relying upon sponsorship and donations from the community and philanthropic groups to make up the remainder.

Western Australia

There has only been a dedicated HEMS in Western Australia for the past 3 years, but it has already made a considerable impact on road trauma rescue operations. In 2004-05 the service undertook some 120 missions in response to motor vehicle and motorcycle accidents. Busiest times were on Saturday and Sunday, and the quietest, Wednesday and Thursday. WA HEMS, known as RAC Rescue 1 due to sponsorship support by the State motoring organisation, is the State's only dedicated emergency helicopter service (13). The

helicopter, pilot and rescue crewman for this service are supplied under contract by CHC Helicopters Australia, while the St John Ambulance organisation provides a critical care paramedic. The radius of operation is 200km from Jandakot Airport, Perth, thus providing HEMS coverage for approximately 90% of WA's population. The rescue helicopter operates 24 hours a day 7 days a week.

The Call Response time, that is, the time taken from the initial receipt of the emergency call to the time RAC Rescue 1 is airborne varied during 2005-06 between under 10 and 30 minutes, as shown in the table below.

Call Response Time	<10 min	10-20 min	21-30 min	>30 min
Flight numbers	103	68	21	22

Funding for the service is provided by the State Government and the Royal Automobile Club of WA and amounts to some \$4.5M p.a., most of which is incurred irrespective of the flying hours. The flying hours component is about \$450,000 p.a., giving an approximate cost per mission (not just road trauma cases) of \$2,250. The service is managed by the Fire and Emergency Service Authority (FESA) (13).

New Zealand

Helicopter rescue services in New Zealand can trace their origins back to 1970-71, when a helicopter operator offered his spare flying time to the Auckland Surf Lifesaving Association (ASLA). Operating a small Hiller 12B helicopter, pilot George Sobiecki made 11 rescues in the first year (14). By January 1985 the service had achieved 1000 rescues. Thus the motivation for establishing HEMS in New Zealand, as in Australia, was not a response to the needs of road trauma cases, but to surf life saving and other difficult rescue situations. However, road trauma now forms an important part of the HEMS work in New Zealand.

New Zealand now has some 15 rescue helicopter services spread throughout the country and supported mainly by commercial sponsors and community fund-raising efforts. As in Australia, the Westpac Bank has had a long association with HEMS and leads a number of other commercial businesses in sponsoring rescue helicopters in Auckland, Christchurch, Hamilton and Wellington.

North Island

Whangarei

HEMS in the Whangarei region is run by the Northland Emergency Services Trust, which was formed in 1988 (15). The trust uses a Sikorsky S76A helicopter that has an operating radius of 270kms from the base in Whangarei and is capable of operating in all weather conditions. Its maximum speed is 287 km/h and its long range capability allows the helicopter to provide coverage to all of Northland and most off shore rescue work. The Sikorsky S76A is designed to carry 2 pilots, 4 medical attendants and 2 stretcher patients comfortably. Usually only 2 medical attendants are required, therefore on most occasions, there is room for a relative/friend to travel with the patient. The Trust's base is at the St John Ambulance headquarters in Whangarei, which provides efficient liaison with the paramedics.

Two Cut From Car, Northern Advocate, 13th January 2005

Two people were trapped after a serious car crash in the Far North yesterday. Mangonui firefighter John McLaren said a car allegedly crossed the centerline of State Highway 10, outside

the Whangaroa Golf Club, before crashing into a culvert about 11.50am. The woman driver and male front seat passenger had to be cut from their car, Mr McLaren said. They were both wearing seatbelts. A St John spokesman said one of the pair received serious injuries while the other received moderate injuries. The man and woman were flown by a NEST rescue helicopter to Whangarei Hospital.

Auckland

In 1990 the ASLA handed over control of the rescue helicopter to the newly-formed Auckland Rescue Helicopter Trust (16) A Squirrel AS350B model became the main flying machine, replaced by a BK 117 model in 1993. In the year 2000 forward looking infrared (FLIR) systems were fitted to the Auckland-service BK117 for night flying and tracking victims using body heat. In 2002 this service was awarded ISO 9002 (an international system for establishing the quality level of service provided by a company or organisation). This was the first such award to an air rescue operation in Australasia. The Auckland Rescue Helicopter Trust relies on commercial sponsors, with Westpac as the helicopter naming sponsor, and community support. It does not receive direct government funding.

Auckland Westpac Rescue Helicopter Missions for May 2007

7 May 2007: The helicopter was tasked to Maramarua to a motor vehicle accident. Stood down enroute (2 deceased).

13 May 2007: After a motor vehicle accident at Tomorata a woman was transported to North Shore Hospital.

20 May 2007: After a car v car at Whitianga a woman was transported to Waikato Hospital.

26 May 2007: After a motor vehicle accident at Thames a male was transported to Waikato Hospital.



The Auckland Rescue Helicopter Trust Westpac HEMS in action. Photo: Geoff Mackley (June 2005).

Hamilton, Tauranga, Rotorua, Taupo and Palmerston North

The Philips Search and Rescue Trust, a non-profit charitable trust, operates and manages the air ambulance and rescue helicopter bases at these centres (17). The Trust was established in 1985 with a grant from Philips NZ Limited as a legacy to mark the loss of its Managing Director in a light plane crash. The rescue helicopter service is crewed by St John Ambulance paramedics, hospital doctors and flight nurses. The Hamilton-based helicopter, a Bell 222B, provides rapid response medical care to the Waikato, King Country and Bay of Plenty communities. The current principal Waikato sponsor is Westpac, hence the name Westpac Waikato Air Ambulance. A flight from Hamilton to Auckland takes about 35 minutes, and to Rotorua 25 minutes.

The Philips Search and Rescue Trust has had a rescue helicopter based in Tauranga since June 2000. The TrustPower TECT Rescue Helicopter, named after its major sponsors, covers an area from Waihi to Te Kaha and inland to Matamata. The base averages about three jobs a week. The majority of calls to the Tauranga base are for accidents involving motor vehicles, as well as incidents on farms and those related to recreational pursuits.

The Trust has operated the Rotorua Rescue Helicopter since 1994. The BayTrust Rescue Helicopter is a 24/7 rescue service (weather conditions permitting), situated in the grounds of Rotorua Hospital. The service provides medical and rescue services to the wider Bay of Plenty region.

The Taupo Rescue Helicopter began operations in February 1985. The current principal Funding Partner is the Lion Foundation. The Palmerston North region has had a HEMS since October 1991. The Square Trust Rescue Helicopter is situated on the Palmerston North Hospital grounds, resulting in only a short stretcher journey between the helipad and hospital. The hangar and office facility was built in 1992. A large number of local businesses contributed to the construction and building of the hangar. The Rescue Helicopter operates to all points throughout the Manawatu, Wanganui and Horowhenua regions.

Wellington

Helicopter rescue services from Wellington were launched in 1975 when a commercial helicopter company, Capital Helicopters made itself available for emergency rescues. In 1981 this developed into a dedicated rescue service using Capital Helicopter's Bell 206B. The Life Flight Trust (18) now uses a BK117-B2, a popular Emergency Medical Service helicopter around the world that has become the standard type of rescue helicopter for a number of centres in New Zealand. It has two engines for increased safety. Westpac is the principal sponsor of this service. The Trust provides air rescue services to the greater Wellington region including Wellington, Porirua, Kapiti, Lower Hutt, Upper Hutt, Wairarapa and the Marlborough region of the South Island.

Media Release: Two Motorcyclists Seriously Injured Near Paraparaumu, 29 July 2006

The Wellington based Westpac Rescue Helicopter has just flown two seriously injured patients from an accident in Kapiti. The two patients, we believe to be a husband and wife, from Hastings, were rider and pillion passenger on a motorcycle heading southbound on State Highway 1 when a car turned in front of them. The vehicles collided and the pair on the motorcycle are both suffering serious lower leg injuries, as well as other trauma. Police, fire and Wellington Free Ambulance personnel were all on the scene when the Westpac Rescue Helicopter arrived. St Hwy 1 was shut down so that the helicopter could land on the road, just outside of Lindale.

The two patients, treated by two WFA paramedics, were then flown to Wellington Hospital Emergency Department where they are currently being treated and assessed.

We understand that the driver of the other vehicle was transported by road ambulance, also to Wellington Hospital.

South Island

Christchurch

A Christchurch helicopter rescue service was established in 1986 as the Canterbury and West Coast Air Rescue Trust (19) assisted by a local company, Garden City Helicopters, which had previously provided limited rescue services. The Trusts helicopters include the Westpac Rescue Helicopter (based in Christchurch), the Solid Energy Rescue Helicopter (based in Greymouth) and the NZ Community Trust Nelson / Marlborough Rescue Helicopters. To give some idea of the investment involved in helicopter rescue, the Westpac Rescue Helicopter has a replacement cost of about \$6 million, plus a further \$1 million to cover the cost of the rescue, medical and avionics equipment it carries (20).

April missions flown by the Westpac Rescue Helicopter BK117-ZK-HJC based at Christchurch

10 April 2007: Mt Cook motor vehicle accident. Two patients were flown to Christchurch Hospital, one a 69 year old woman with a spinal injury and a 71 year old man also with a spinal injury.

17 April 2007: Marble Point, Hanmer, motor vehicle accident. Two patients were transferred to Christchurch Hospital, one a 23 year old woman with an arm injury and the other, a 47 year old woman with leg and rib injuries.

21 April 2007: Bus accident between Franz Josef and Fox Glacier. A 26 year old woman with a neck injury was flown to Christchurch Hospital.

24 April 2007: Rangiora motor vehicle accident involving a 21 year old male who had sustained multiple injuries. He was flown to Christchurch Hospital.

30 April 2007: Waiiau 4WD/motorbike accident where a 56 year old male with shoulder injuries was flown to Christchurch Hospital.

Conclusions

It is clear that rapid progress has been made in the last 20 years or so in developing helicopter road rescue services. The general community, together with commercial interests, have provided substantial support for these services. Without such support, it is unlikely that this progress would have been made, as in most instances government funding alone would be insufficient to provide an adequate service.

What of the future? Perhaps the immediate need is to make sure that there are no gaps in the availability of HEMS to all the major population areas. HEMS availability should be for 24 hours per day, seven days per week, using helicopters capable of operating in difficult terrain and weather conditions and with adequate carrying capability. The remote areas of Australia and perhaps also New Zealand are likely to remain a long term problem for HEMS operations, due to the sparseness of the population in these areas and therefore the lack of adequate funding and community support to justify the costs involved.

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