The ERHS conducts four types of missions:
1. Primary Care Retrievals
2. Search & Rescue (SAR)
3. Secondary Care Inter-Hospital Patient Transport (IHPT)
4. Other approved tasks

The ERHS conducts missions in accordance with the Department of Health Contract with RFDS for provision of aeromedical IHPT transfers from regional medical facilities to tertiary hospitals with specialist medical capabilities on the south coast of Western Australia, providing redundancy for each other. The helicopters operate as a network, providing redundancy for each other.

Mission Types
- The ERHS conducts four types of missions:
  1. Primary Care Retrievals
  2. Search & Rescue (SAR)
  3. Secondary Care Inter-Hospital Patient Transport
  4. Other approved tasks

Advanced Paramedical Intervention to Incidents / Primary Care Retrievals: These missions are a response to ambulance priority 1 incidents and patients that require Critical Care Paramedic capabilities on scene, or when aeromedical evacuation is required from otherwise remote or inaccessible locations – These tasks have priority over the other ERHS operations and are conducted in accordance with the Department of Health Ambulance Distribution Model (Health Operational Directive OD0608/15 of 23 February 2015).

Search & Rescue (SAR) is conducted on behalf of other Hazard Management Agencies such as the Australian Maritime Safety Authority in Canberra or the Western Australian Police. It includes sea and land searches for missing persons and if necessary vertical retrieval plus advanced medical treatment – SAR is conducted in accordance with agreements between DFES and the other agencies, and is the most heavily used rotary wing SAR asset in the State.

Secondary Care Inter-Hospital Patient Transport (IHPT) are time-critical adult and child patients transfers from regional medical facilities to tertiary hospitals with specialist medical capabilities on behalf of the Department of Health and the Royal Flying Doctor Service (RFDS). IHPT are conducted in accordance with the Department of Health Contract with RFDS for provision of aeromedical IHPT services and Department of Health Information Circular IC0014/07 of 7 June 2007. Separate policies and procedures cover Neo-Natal IHPT.

Other approved tasks include training for the above operations and those tasks necessary to enable the delivery of the Contracts between DFES and the ERHS Service Providers: CHC Helicopters Australia and St John Ambulance.

Note: Per current contract parameters, ERHS does not conduct firebombing or intelligence surveillance/reconnaissance tasks (eg. Law enforcement, searches for deceased persons, shark patrol, marine oil pollution, fire detection or mapping).

### Aircraft Information

<table>
<thead>
<tr>
<th>Operator</th>
<th>CHC Helicopters Australia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type</td>
<td>Bell 412EP Twin Huey</td>
</tr>
<tr>
<td>Engines</td>
<td>2 x PT6T-3DF turbine engines</td>
</tr>
</tbody>
</table>

**Performance**
- **Cruise Speed**: 120 knots (~230 km/hr) = 3.75 km/minute
- **Operational Radius**: Flight to incident, one tank of fuel, weather-dependent
- **Deployment Range (without refuelling)**: Maximum - 510 km

**Crew & Patients**
- **Standard Crew**: CHC Pilot, CHC Air Crewman, St John Ambulance Critical Care Paramedic / Rescue Crewman (CCP)
- **Critical Care Paramedical Capability**: Aeromedical critical care; Provide emergency land/sea search and rescue; Conduct helicopter winch operations and retrievals; Adult and paediatric anaesthetics, advance life support, and resuscitation; Administer blood and S8 medication; Graduate Diploma in Paramedical Science
- **Optional Crew**: Royal Flying Doctor Service Clinician, Department of Health Specialists; extra supplementary crew
- **Patients**: Maximum 2 unless SAR mercy mission

**Equipment**
- Image-intensifying Night Vision Imaging System (NVIS)
- Forward Looking Infrared (FLIR) Systems StarSafe 380HDLC
- Thermal Imaging Sensor
- HD TV & video management systems
- Churchill ARS (“augmented reality”) mapping system
- Multi-agency radio
- Two-person (272 kg) rescue winch
- Critical care medical equipment
- St John Ambulance Avicad
- CCTV camera system
- Air-deployable 6-10 man life rafts with associated survival equipment
- Air deployable Self-Locating Datum Marker Buoy
- Hand-held grappling hook and ring
- Aviation EPIRB direction finder
- Stroves, flares & sea dye marker

**Assumptions**
- ERHS operates with Bell 412EP aircraft
- Depart from Jandakot or Bunbury Base
- Maximum round trip from base = 400 km
- Max offshore = 110 km

### Hospital Readiness

<table>
<thead>
<tr>
<th>Type of Mission</th>
<th>Readiness (minutes from task order)</th>
<th>Helicopter Planning Ranges</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary Care Retrievals</td>
<td>15 minutes</td>
<td>400 km total distance from base to incident then to definitive care destination hospital</td>
</tr>
<tr>
<td>SAR</td>
<td>15 minutes</td>
<td>Land SAR; Variable ranges Sea Rescue: Up to 120 km off-shore</td>
</tr>
<tr>
<td>Secondary Care Aeromedical IHPT</td>
<td>60 minutes</td>
<td>Variable ranges, depending on time-criticality</td>
</tr>
</tbody>
</table>

### Typical Mission Scenario Area of Coverage

**Rescue or Retrieve; Return to Metropolitan Definitive Care (No Refuel)**
- Nominal operating range of each ERHS aircraft 365 days a year; 24x7 – returning patients to Perth metro trauma centre hospitals.
- Shapes represent aircraft flying range to depart base and return patient to Perth (RPH, FSH) then back to Jandakot base on one tank of fuel (full). Max total distance 400 km. Note: The 400 km total is slightly short of the Bell-412EP capability. The pilot retains a 30 to 40 minute fuel reserve to allow for variables such as weather, time spent searching, hovering, etc.