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**Submission On the Proposed Future Operating Model for Air Ambulance Services.**

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Kia ora Kate

Thank you for extending the opportunity to contribute to the Aeromedical Commissioning Teams work on the future operating model for air ambulance services.

The Hauora Taiwhenua Rural Health Network's vision of **Healthy and Thriving Rural Communities** is realized through the active participation of our members. Their interests and expertise span 194 rural general practices, 24 rural hospitals, midwifery and allied health services, and numerous rural community and agribusiness organizations.

We appreciate the opportunity to collaborate with our members to ensure a rural perspective is included in the Proposed Future Operating Model for the Air Ambulance Service. This service is crucial for rural health outcomes, and we value your engagement to ensure aeromedical services continue to provide high-quality, patient-centered care across New Zealand.

The impact of the future operating model must be evidenced by improvements in patient outcomes, with a reduction in morbidity and mortality of rural communities.

Our submission is premised upon an overarching principle:

> The centralisation of air ambulance services control and despatch; the systemisation of aircraft, equipment and personnel; and the rationalisation of depots to main bases must not take precedence over planning for, and working with, the realities of working in rural and remote areas.
>
> Challenging terrain, volatile extremes of weather, and competing with metropolitan volumes and specialist service demands, must not compromise crew safety and patient outcomes.

If you would like to discuss our submission with us, please don't hesitate to contact me.

Ngā mihi nui

**Dr Grant Davidson**
Chief Executive
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**Our responses to each question in the consultation document follows**.

**Service Model:**

*Question 1: How could we gather feedback from air ambulance service patients?*

Existing health system processes to gather feedback from service users and whānau should be applied to the air ambulance services. On the assumption that service providers receive formalised feedback, we do not see the need to develop a separate system or replicate existing processes.

*Question 2: How could we make the air ambulance experience better for patients' family, whānau and support people?*

Improving the air ambulance experience for patients' family, whānau, and support people involves better communication about patient status and transport logistics, providing support services at receiving hospitals, and ensuring family members are informed and involved throughout the process.

Additional consideration needs to be given for the ability for whānau to travel with their loved one given the tyranny of distance and travel from a rural location.

*Question 3: Do you have general feedback on the service model section of the proposed operating model?*

The service model may be appropriate for many rural areas, but less so for R2 and R3 areas, where geographic and weather constraints impact on aeromedical transport options. This can result in delays in the aeromedical service arriving at the hospital or retrieval site or not being deployed at all. The consequences for rural communities include delayed critical care treatment, long uncomfortable travel via road ambulance services and potential for loss of limited resource for longer periods of time.

e.g. Bad weather at a central base in Queenstown can either delay or prevent the helicopter landing on site in Te Anau, when a Te Anau based crew with pilots experienced in flying in the region, can depart promptly and navigate an IFR course to the receiving hospital. They can significantly reduce the time to critical care and save the patient and transfer team a long journey by road ambulance to the receiving hospital.

Oversight across the different available resources could have a drastic improvement in patient outcomes, especially for rural/remote patients. If there was a higher degree of oversight of all available resources, including cost-effective use of fixed wing assets.

**Funding and Investment:**

*Question 1: Do you have general feedback on the funding and investment section of the proposed operating model?*

We agree that centralized assets, supporting infrastructure, and core functions are crucial for operational consistency and cost efficiency. However, it is equally important to consider the

many years of operational evidence supporting region-specific solutions that account for geography, weather, and road distance to hospitals. Many of these rural and remote areas have proportionately higher populations of rural Māori, who are often negatively represented in many health indicators. These areas also experience significant population fluctuations in population related to holiday and tourist activity.

Regionally specific solutions must be resourced appropriately to ensure they are clinically and financially sustainable:

- Investment in IFR (Instrument Flight Rules) infrastructure and operational costs to improve service reliability in poor weather conditions
- Remote communities with road access and infrastructure vulnerable to weather or environmental disasters, must have IFR routes and helipad or landing infrastructure maintained to a high level for emergency aeromedical transfer.
- Replace funding on a 'skids off' basis, with time funded from dispatch to delivery at the receiving hospital. This will allow for funding for the time it takes to plan the mission which is particularly important when responding to remote or offshore tasks.
- Funding must be allocated to the time and costs incurred in situations where the retrieval is stood down.

**Assets and Infrastructure:**

*Question 1: Should there be one or multiple manufacturers of rotary-wing assets?*

The range of assets included in the national fixed wing and rotary fleet must be appropriate for the diversity experienced in responding to rural tasks:

- Short, or geographically challenging runways for fixed wing aircraft e.g. Rakiura fixed wing services are provided by a Britten-Norman Islander which is a world-renowned short take-off and landing aircraft that is still being manufactured. This capability is essential in transporting through many smaller, and more remote rural areas and must be retained in the future operating model.
- Landing in mountainous and often snow-covered terrain, sand, or variable lake or ocean conditions. We understand that the recommended Agusta Westland AW169 has landing gear rather than skids, which makes it unsuitable for certain backcountry terrain such as snow, or mountainous terrain where single-skid hover despatches for drop-off and pickups is required and can be constrained by size restrictions on landing zone. Distance from the base to remote or offshore sites and return to a receiving hospital needs to be factored into the selection of machine types.
- The reliability and resilience of the air ambulance operating model may be compromised if a single aircraft model approach is adopted. Unforeseen issues with a specific aircraft model that results in those aircraft being grounded will have an impact on air ambulance services across the country.

Therefore, we conclude that a single manufacturer will not be suitable for the realities of rural call outs.

*Question 2: What should determine where larger rotary-wing aircraft are located?*

The location of larger rotary-wing aircraft should be evidenced by known and forecast patient volume, national networks of specialist clinical care, and the realities of the unique weather conditions and geographical constraints experienced across the country. Factors such as the availability of IFR routes and the capacity to carry multiple patients, or patient carers, are particularly important in planning the transport of rural patients.

*Question 3: Should providers share access to training simulators?*

While on the one hand we question the merits of a single manufacturer of aircraft, on the other, we concur there are benefits to both the quality of training, and cost of doing so, if providers have shared access to training simulators, and other training resources.

*Question 4: Which procurement approach would be most effective for air ambulance equipment?*

The most effective procurement approach for air ambulance equipment would involve a centralised system that ensures standardisation while allowing for regional flexibility. All providers, regardless of whether they are central or regionally based, must have equitable access to procurement processes that improve efficiencies, and enable consistency of aircraft and medical equipment and consumables.

*Question 5: Do you have general feedback on the assets and infrastructure section of the proposed operating model?*

There is a need for flexibility in asset distribution and ensuring equipment meets the specific needs of each region.

**Workforce:**

*Opening Comment:*

The future aeromedical service should prioritise a fully integrated workforce model that spans the continuum of care—from pre-hospital response to inter-hospital transfers, across rotary-wing, fixed wing, and road ambulance services.

An adaptable, interprofessional team—comprising paramedics, dedicated PHRM doctors, and Flight Nurses should be available for all missions, regardless of where they are tasked from, or based. In rural remote areas, highly trained rural GP specialists or nurse practitioners should be considered an essential part of the team.

*Question 1: How many dedicated crew members should each rotary-wing air ambulance have?*

Each rotary-wing air ambulance should have at least two dedicated crew members to ensure adequate support and safety during missions. This includes having a mix of clinical and non-clinical staff to handle various aspects of patient care and aircraft operation. This also allows flexibility for specialist clinical skills e.g. maternity and neo nates. Specialist taskings may also require specific expertise in a crew e.g. avalanche rescue, cliff or swift water rescue.

*Question 2: In a three-crew rotary-wing model, what is the minimum clinical qualification that air crew officers should have?*

In a three-crew rotary-wing model, the minimum clinical qualification for air crew officers should be paramedic or nurse with specialized training in air ambulance operations. Crew members need to have the necessary skills and knowledge to provide high-quality care during transport.

Having helicopter crew dual trained to assist medical crew optimises the contribution of each person on board.

*Question 3: What would the optimal clinical crewing model be for rotary-wing air ambulances?*

The optimal clinical crewing model for rotary-wing air ambulances would involve a mix of paramedics, nurses, and doctors, allowing for flexibility based on the mission's needs. This ensures that the crew can handle a wide range of medical situations and provide the best possible care to patients.

*Question 4: Who should rotary-wing air ambulance clinical crew be employed by?*

Rotary-wing air ambulance clinical crew would predominantly be employed by the air ambulance service provider. However, in the case of a small number of regionally specific solutions, medical crew may be employed by approved locally based providers.

*Question 5: Should rotary-wing crewing models be consistent or variable across different bases?*

Rotary-wing crewing models should be variable across different bases to accommodate regional needs and resources. This flexibility means that each base can tailor its crewing model to best meet the needs of its community.

*Question 6: What should the minimum dedicated clinical crewing model be for fixed-wing air ambulances?*

The minimum dedicated clinical crewing model for fixed-wing air ambulances should be flexible depending on the clinical situation. Fixed-wing air ambulances are primarily used for interhospital transfers, which often involve clinically stable patients. Therefore, there is generally no need for a doctor or extra crew onboard. At least one nurse or paramedic should be present to ensure patients receive high-quality care during transport.

*Question 7: Who should fixed-wing air ambulance clinical crew be employed by?*

Fixed-wing air ambulance clinical crew should be employed by the air ambulance service provider. This approach maintains consistency in training and quality of care across all air ambulance services.

*Question 8: When should ICU clinicians join or replace dedicated crew on air ambulances?*

ICU clinicians should join or replace dedicated crew on air ambulances when the patient requires intensive care during transport. This ensures that patients receive the highest level of care during critical transport situations.

*Question 9: What skill, experience and qualifications in the air ambulance context would ICU staff who are non-dedicated crew need to undertake air ambulance transfers?*

ICU staff who are non-dedicated crew need specialized training in air ambulance operations, including safety protocols and patient management during transport. This training ensures that ICU staff are prepared to handle the unique challenges of air ambulance transport.

*Question 10: Should all doctors on air ambulances have PHRM training?*

It is recommended that permanent air ambulance crew members undergo mandatory Pre-Hospital and Retrieval Medicine (PHRM) training to ensure they are fully prepared for the demands of the role.

However, for rurally based doctors who are essential members of rural and remote based crews, a less prescriptive approach would be more appropriate. Practical training incorporating basic helicopter safety and scenario-based exercises, is essential, but mandating rural general practice or rural hospital-based doctors to complete a full PHRM course may not be feasible. A flexible, tiered training model for which adequate funding for the cost of participating in training, will contribute to balancing operational readiness with the practical constraints of clinical workloads.

*Question 11: Should training be provided at bases or training centres of excellence?*

Training should be provided at both bases and training centres of excellence to ensure training is accessible and of a consistently high-quality.

*Question 12: Do you have general feedback on the workforce section of the proposed operating model?*

- Within set guidelines, and in some cases, criteria, crewing models need to reflect the regional needs, while maintaining accessible training and support for all crew members.
- Access to the full ePRF system should be allowed to reduce delays and errors.
- Decision support is critical to avoid inhumane or futile transfers. Better recognition and documentation/communication of the frail patient's prior wishes and palliative/other care where transfer is medically inappropriate are necessary. Note, this is a further example in which the stand down of a retrieval must be funded.

**Dispatch and Coordination:**

*Question 1: Should the dispatch and coordination function include clinically escorted road based inter-hospital transfers?*

The dispatch and coordination function should include clinically escorted road-based inter-hospital transfers to ensure continuity of care. This is particularly important when a road transfer potentially means losing a first response vehicle from a rural community for a number of hours This will improve patients receiving consistent and high-quality care throughout their transport journey.

*Question 2: How should the dispatch and coordination function be delivered?*

Coordination is an essential function of an evolved aeromedical system; ensuring patients are moved in a timely manner, in the appropriate vehicle, by crew with the correct skillset and whilst also ensuring that precious aeromedical resources are utilised effectively. This would also minimize the complexity and stress of requesting and coordinating a patient transfer frequently experienced by clinicians, stream the dispatch process and improve response times.

A centralised system must have the ability to work with rural and remote providers when local knowledge and expertise will contribute to ensuring safe and effective patient transfers.

*Question 3: Do you have general feedback on the dispatch and coordination section of the proposed operating model?*

Having a single point of contact to streamline the dispatch process would allow for faster access regardless of whether patients are transported pre-hospital or from a rural hospital ED. It would reduce the complexity and stress involved in clinicians coordinating multiple components of a transfer and juggling numerous calls with providers to do so.

Additionally, the knowledge of rural context and wider resource availability is essential for a centralised dispatch process

**Data and Digital:**

*Question 1: Which technology functions would be required to support a new operating model?*

The technology functions required to support a new operating model include:

- Real-time tracking and monitoring of air ambulance assets.
- Integration with hospital and primary care PMS (Patient Management Systems) for seamless data transfer.
- Advanced communication systems for coordination between dispatch, crew, and medical facilities.
- Data analytics tools to assess performance and identify areas for improvement.
- Secure platforms for patient data management and sharing.

*Question 2: What data and information would we need to monitor and improve the air ambulance service?*

The data and information needed to monitor and improve the air ambulance service include:

- Patient outcomes and transport times.
- Dispatch decision making transparency
- Response times from first phone call matched with case acuity
- Utilization rates of air ambulance assets.
- Incident reports and feedback from patients and providers.
- Weather and flight conditions impacting service delivery.
- Cost and resource, (including crew configuration) allocation data.

*Question 3: Do you have general feedback on the data and digital section of the proposed operating model?*

Upon reviewing the data and digital section of the proposed operating model, it is apparent that there is a need for:

- Enhanced transparency in the dispatch process.
- Improved access to clinical notes and patient data for all involved parties.
- Standardized data collection and reporting across all regions.
- Investment in technology infrastructure to support reliable and efficient service delivery.

**System Governance:**

*Question 1: Do you agree with the proposal for system oversight?*

We agree with the proposal for system oversight, with emphasis on ensuring transparency, accountability, and continuous improvement. This includes having a centralised body to oversee operations, monitor performance, and implement best practices across all regions.

*Question 2: Do you have general feedback on the system governance section of the proposed operating model?*

General feedback on the system governance section of the proposed operating model includes:

- The need for clear communication channels between all stakeholders both regionally and nationally.
- Regular reviews and audits to ensure compliance and quality standards.
- Involvement of local providers in decision-making processes to address regional needs of finite resources.
- Mechanisms for feedback and continuous improvement based on real-world experiences.

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