NZNO coastn

COLLEGE of AIR & SURFACE TRANSPORT NURSES

E-Magazine

Online Publication

March 2020

Edition

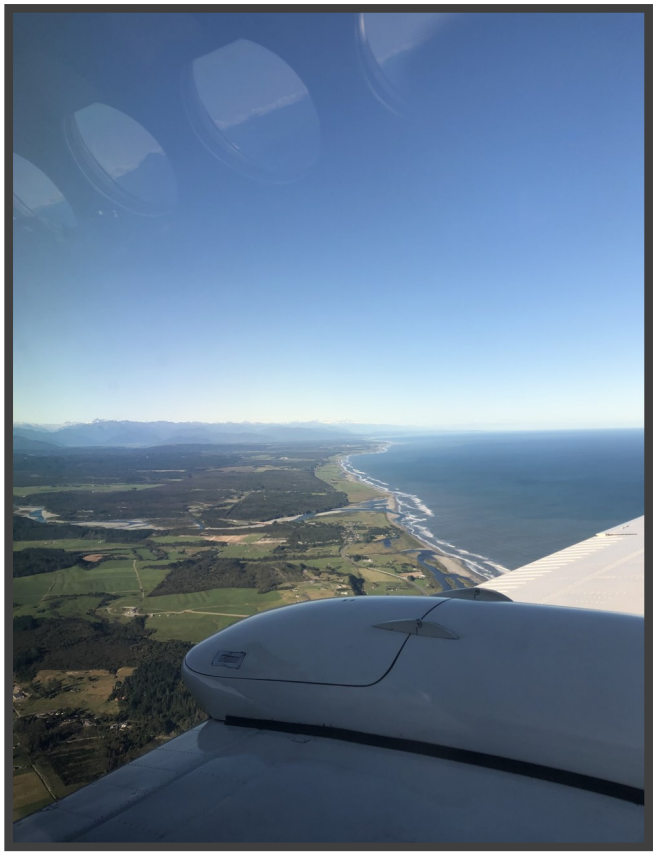

Photo supplied by Helen Poole, Christchurch

College of Air and Surface Transport Nurses Section of the New Zealand Nurses Organisation

www.nzno.org.nz/groups/sections/flightnurses

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Letter from the Editor

Hi Everyone,

I am not sure where to begin with this edition of the E-Mag, other than to say I hope that you, your colleagues, families and those close to you are keeping well in these unprecedented times of lockdown. Like everyone else I am hoping that all people living or travelling in New Zealand at this time are respecting and following the rules of lockdown in a bid to halt the spread of COVID-19.

This edition of the E-mag is a smaller version than usual as many of you are planning, researching, writing and reviewing policies and best practice guidelines for infection control, pandemic planning and the likes, as well as preparing work places for the what might we think this pandemic might look like at worst case scenario in NZ. The E-mag has understandably taken a back seat. Thanks to Ann Doran who has contributed a case study from a recent PICU retrieval.

Many of you will be aware that the COASTN aeromedical retrieval course for this year has been postponed. As a group we have decided to postpone it for a full 12 months. Those of you who had been successful for the course this year will have a place on the course next year. Details will follow at a later date.

The ASA/COASTN conference in Wellington has also been postponed and will now take place in 2021—see the flyer in the Emag.

Take care everyone, and let's hope that we have some good news stories by the time the next e-mag is due out in July. In the meantime this emag is more news letter than magazine.

Angela

Christchurch Round Up.

Hi from the NZFDS in Christchurch

Our flight team has seen many changes since January, namely the retirement of our amazing and long serving Clinical Director, Dr David Bowie, and our Flight Coordinator, Shane McKerrow. They have both been pivotal in the development and progression of this amazing service, from its infancy back in the 1990's to 2020!!! As a team, we would like to thank both David and Shane for their unwavering commitment and hard work and wish them both an amazing, well earned retirement. You'll both be missed immensely!

Shane first left, David second right.

Their shoes have been filled by Dr Neil Davidson as clinical director and Germaine Sandford as Associate Clinical Nurse Manager for Air Retrieval. Neil is currently working as an Intensivist in Christchurch ICU and Germaine has extensive experience in ICU as an ACNM and Nurse Educator. Germaine also worked as a flight nurse for the service and has a lot of experience with international retrievals. Welcome to you both from all the team!!

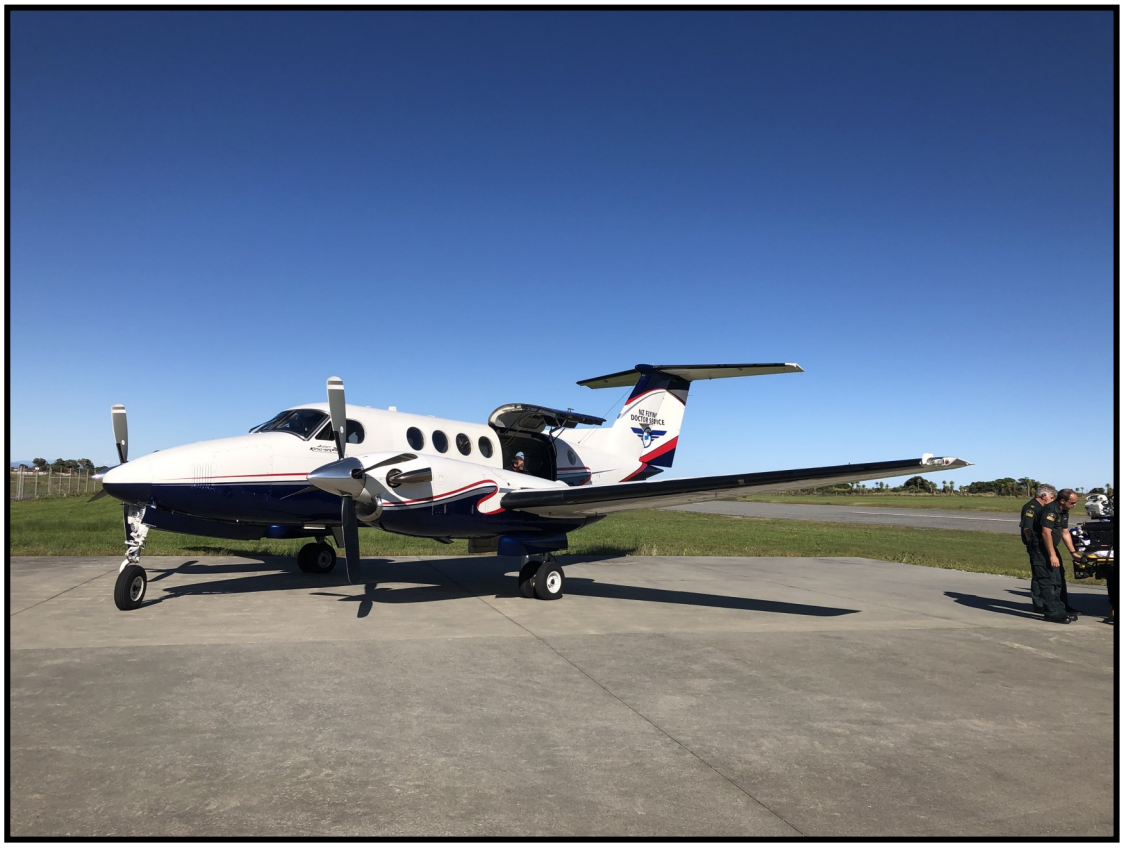
Here's a few stats for January and February.....

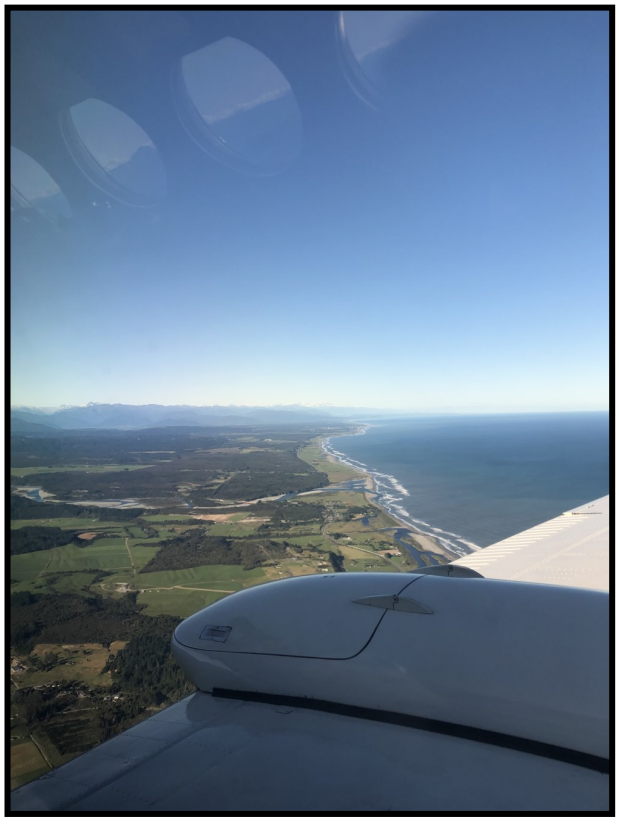
January saw 75 referrals of which 55 were transferred - 39 urgent and 16 elective.

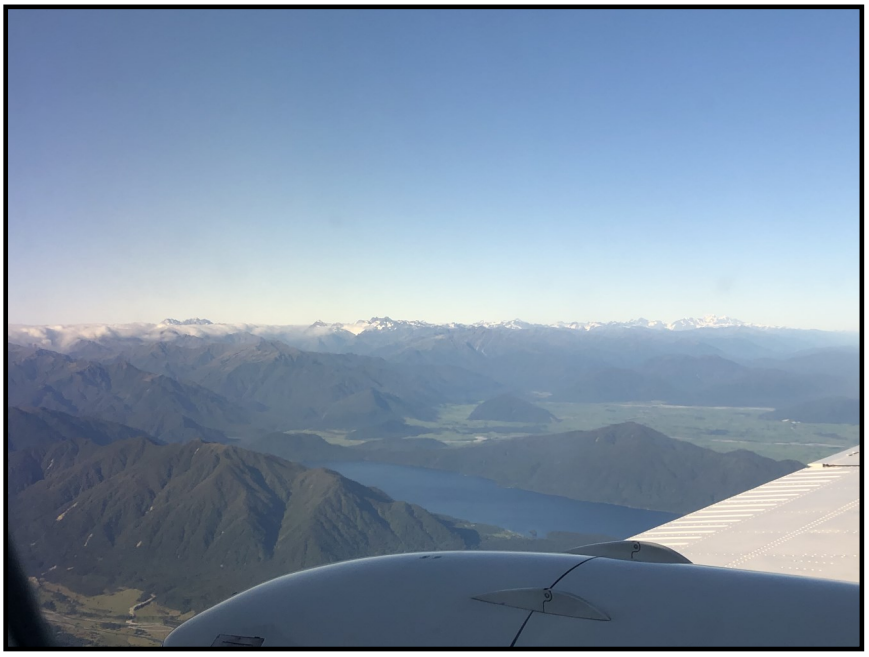
February was a little quieter with 74 referrals of which 46 were transferred - 27 urgent and 19 elective.

As with all health providers/services around New Zealand, COVID 19 is paving a potential path of destruction for the coming months and dominating all aspects of life. We're all in this together so be safe and stay healthy out there.

Christchurch flight to Greymouth—the regular flight path.







Auckland - NZAAS

NEW ZEALAND AIR AMBULANCE SERVICE | Saving Lives IN THE South Pacific

We hope that you and your loved ones are all staying safe in these uncertain times.

Our service continues to be fully operational with ICU teams available 24/7 to transport the sick and injured throughout New Zealand for any DHB. We understand that some flight teams might be stretched if the demand on ICU and ED increases over time and we have increased our capacity to support the national service. We have worked with the MoH and NHCC to ensure that our international service is also able to remain operational on case by case basis which means we can transport people home to their own country to free up NZ hospital beds. We can also to bring NZ patients home from overseas so that they can be with family. Our mission coordination teams are working tirelessly to find suitable commercial flight routings as country border rules and airline flight routes change almost by the day. We are still managing to complete these transfers, which makes all of the hard work and extra planning worthwhile.

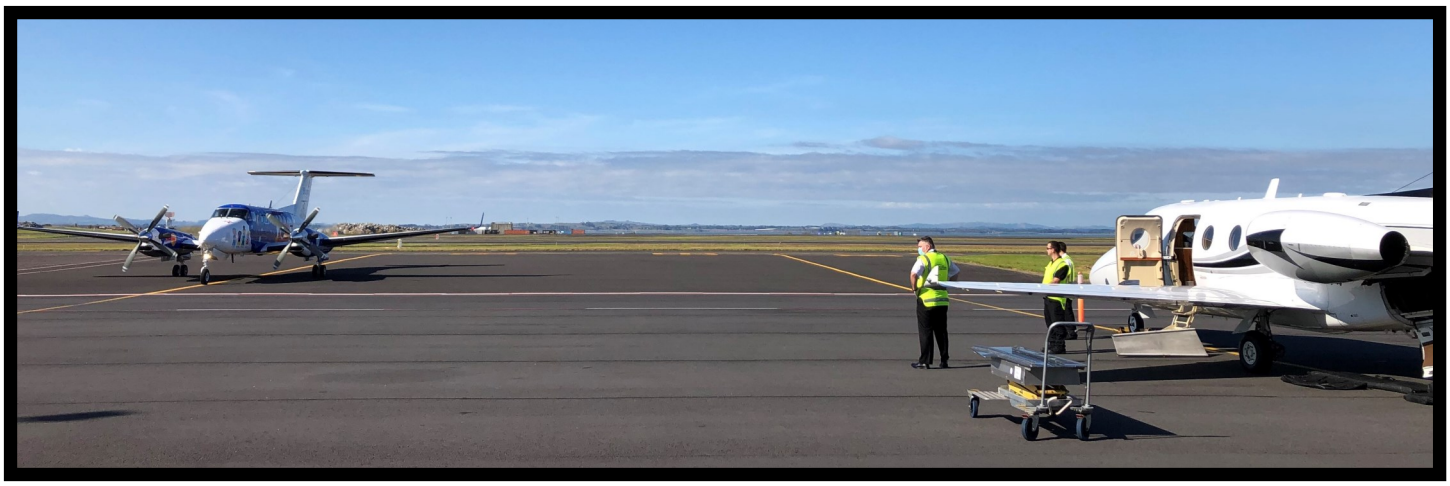
As a service we have found it helpful having Q&A forums around COVID—19 with our medical director, these have been open to all of our staff throughout NZ including logistics, our pilots, engineers and crewmen. Our ancillary staff have found these particularly informative and a good way of separating fact from fiction with so much information being available on social media that isn't always useful. The biggest concern most frontline staff and essential workers seem to have is how not to bring COVID –19 home with them. We have recently purchased fogging machines for all of our bases to allow for rapid and effective disinfection of all of our aircraft and office spaces as an extra step over and above our approved infection control policy.

On a brighter note we have recently welcomed Karla onto our team of flight nurses, Karla comes to us after many years in Intensive Care and is a great addition to our team, and we are looking forward to being able to properly welcome her once lockdown is over.

Take care, and remember now is as good a time as any to share information and pool resources with colleagues current, new and old.

Safe flying, the team at NZAAS and Skyline Aviation.

Check out our Facebook and Instagram pages online!



The NZAAS domestic King Air 350 team approaching to line up for a wing to wing transfer. The patient was repatriated from a NZ hospital to their home country for ongoing cares amidst the COVID lockdown.

Starship
PICU Transport Team

Starship PICU Transport Team: A Mystery Case Study

In the early hours of a Friday morning we received a transport referral from a regional hospital. A six week old male infant had presented to an emergency department in respiratory/cardiac arrest. The baby had been successfully resuscitated with bag mask ventilation and volume and had required only a few minutes of CPR.

The baby was the second child of a refugee family. There was no concerning antenatal or post-natal history other than poor feeding and lethargy over the past week. The mother had been discharged by her midwife. However, she continued to complain of very sore legs.

Post resuscitation the infant had been placed on high flow oxygen. He continued to have apnoeas and, following discussion with the PICU consultant, was now intubated and ventilated. Carbon dioxide clearance was not a problem, but he had become increasingly more difficult to oxygenate.

The PICU transport team was mobilised. Beginning a transport which is likely to last over 8 hours at 0300 is a daunting task! This is when I'm at my lowest ebb. The initial adrenaline rush helped me to organise equipment and medications I might need; this included Prostaglandin. When we get a call about an unwell neonate, Prostaglandin is a drug we always take as there is the possibility that a late Patent Ductus Arteriosus (PDA) closure has caused a congenital heart defect to make itself known. I also decided to take Nitric Oxide (NO) as this can be helpful when oxygenation is a problem.

As per our retrieval team protocol, just prior to leaving PICU I called the referring centre for an update. Their consultant was in the process of speaking to the PICU consultant who had in fact recommended commencing Prostaglandin as there were continuing problems maintaining oxygen saturations above 85%. The baby was haemodynamically stable and had 2 peripheral IVs. We elected to take central and arterial lines with us in case these were required prior to our transport back.

Fatigue management is an important aspect of retrieval medicine, especially on night shift. Having a rest on the flight to the referring centre meant I had got my second wind by the time we landed at 0630!

On arrival at the hospital it was clear the team had done a great job of stabilising the baby. The Prostaglandin had proved instantly effective and was infusing at 50 nanograms/kg/min. At this dose apnoeas are a significant side effect but as the baby was ventilated this wasn't a concern. The referring team had also inserted a central line and noradrenaline was infusing to maintain cuff mean arterial pressures (MAPs) greater than 50mmHg. Attempts at an arterial line had thus far been unsuccessful. After receiving handover and performing an assessment we decided that the baby was stable enough to transport without an arterial line. The baby had an oral ETT which we decided to re-tape. In babies, oral ETTs can be very precarious and the risk of accidental extubation is high. As per chest xray findings, it was also a prime opportunity to advance the ETT a centimetre. Prior to re-taping, I ensured I had my resuscitation equipment and drugs ready to go. This included our T piece bagging circuit. When we were almost finished re-taping the baby had a significant desaturation episode to 30% with associated hypotension. We 'bagged' the baby up and gave volume for the hypotension. We also called for an urgent chest xray which showed the ETT had now migrated to the carina so we pulled it back and re-taped. During this episode we noted that the lung compliance at the beginning of the episode was significantly higher than at the end when the O2 saturations were recovering. This is an advantage of using a T piece bagging circuit in that we can feel these changes. This change in compliance which impacted so dramatically on the O2 saturations made us consider pulmonary hypertension as a cause for the difficulties with oxygenation. As the infant had stabilised we chose not to commence NO at this point but we had it ready to use if necessary.

In light of this episode, we then tried for an arterial line as I felt this would be prudent for ongoing management. However, we were unsuccessful so decided to continue to closely monitor non-invasive pressures. We were now aiming for a quick but safe transfer back to Starship Child Health. The baby was ventilating well on our Crossvent ventilator so we transferred into the incubator and prepared for departure.

During the trip back we had one episode of desaturation requiring bagging. Otherwise it was a reasonably stable transport. We arrived back in PICU at 1130 hours; a 16 hour shift for me!

Starship
PICU Transport Team

The mother was continuing to experience significant pain in her legs and as we were coming into PICU experienced a tumble. We quickly facilitated getting her to the adult emergency department for full assessment. As the mother could not speak English an interpreter was organised.

In PICU, due to ongoing desaturations, the baby was commenced on NO. The cardiac echo showed no congenital heart defect and, although the Prostaglandin had seemed effective, the PDA was in fact totally closed. The Prostaglandin was therefore discontinued. As we had suspected, the echo showed significant pulmonary hypertension. Over the next week we struggled to identify a diagnosis for this baby. Every time we tried to come off the NO he would deteriorate. Every time we tried to commence naso-gastric feeding he would develop a significant lactic acidosis. He had a significant ongoing inotrope requirement.

After the baby had spent five days in PICU one of our consultants returned from conference leave. He immediately recognised a thiamine deficiency also known as Beriberi. The symptoms in neonates are lactic acidosis, cardiovascular impairment and pulmonary hypertension. In adults, one of the symptoms is peripheral neuropathy. It is seen in communities with a diet high in polished white rice.

The baby responded instantly to treatment with thiamine. Within three hours there was a reduction in lactate. Within 24 hours he was extubated, off all inotropic support and tolerating feeds. The mother was also treated though her symptoms will take longer to resolve.

We are fortunate in NZ to rarely see diseases such as this. However, with a growing refugee population, we need to be mindful of diseases caused by malnutrition. Of interest, while the mother was pregnant with her first child, she was in a refugee camp where she was given Vitamin B supplements. That child was born completely healthy.

I found this transport to be challenging, and also satisfying, as we eventually had a good outcome. Thiamine deficiency is something I will never overlook in the future!

Ann Doran

Staff Nurse Level IV

PICU Retrieval Nurse

Starship Children's Health

32nd ASA+COASTN Conference Rescheduled

NEW DATE

Dear Colleagues,

Our ASA+COASTN 2020 Organising Committee and Conference Managers have been closely monitoring the constantly evolving situation in relation to COVID-19. Our primary concern is for the safety, health and wellbeing of our participants, many who are currently working tirelessly on the front line in our health systems around the world. In the current climate, it would not be feasible to proceed as we had planned, therefore we have made the decision to reschedule this year's conference to the same time next year.

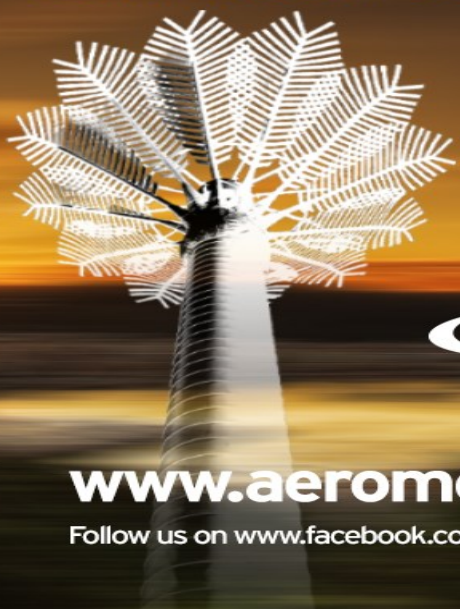
The ASA+COASTN Conference will now be held from **Monday 30 August - Wednesday 1 September 2021** at the Museum of New Zealand Te Papa Tongarewa, Wellington, New Zealand.

Many of you will be disappointed, as are we. The conference organising committee has put together a wonderful program and we very much look forward to sharing this with you in early 2021.

We thank you for your understanding during this challenging time, and we hope that you will consider being a part of our rescheduled conference in 2021.

David Waters
President | Aeromedical Society of Australasia

Critical Care in the Air



ASA + COASTN CONFERENCE
30 August - 1 September 2021

The Museum of New Zealand Te Papa Tongarewa
Wellington, New Zealand

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www.aeromedconference.com

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