

# Holistic CARE in the air

Taking a holistic approach to treating patients onboard air ambulance flights is a method to reduce stress in patients. **Denise Waye** explains the importance of treating the 'whole' patient

On any given day, there are dozens of life-saving medevac flights being performed as patients are transported throughout various destinations worldwide. The very nature of these flights, where time and speed are of the utmost essence, can be a contributing factor to the high stress levels seen in patients and their family members during their transport. Oftentimes, the stress the patient feels stems from their medical condition, the worry they feel about the need for a medical evacuation, as well as a lack of control over their environment. Patients experience a multitude of stressors related to the flight environment, including barometric pressure changes, a low humidity environment, and high noise levels, all of which can have a negative impact on an already medically compromised patient. While treating the medical condition of the patient is important, the flight team should also be attuned to the stress the patient might be experiencing. Utilising a holistic approach to patient care in the transport environment helps direct focus on the whole patient and their wellbeing and not just the medical diagnosis, which can make for a more successful mission as well as a more pleasant patient journey.

## A multi-faceted approach

In the aeromedical environment, the stress of an evacuation or repatriation for a child is commonly relieved – where possible – by providing the child with a toy or teddy bear. Many air ambulance providers have their own branded teddy bears or plastic helicopters or planes they give to the children they take on board. The act of providing these toys is purely to ease the stress of the situation for the child. But what of stress relief measures for adults? Thankfully, this is something that is increasingly being considered by a number of air ambulance operators.

Measures such as noise cancelling headsets, music therapy, hand massages and aromatherapy can all be effective ways to reduce the stressors of flight, while providing a calming environment for the transport of the patient during their medical >>







emergency. Taking a patient out of a controlled hospital environment into an outside environment can expose patients to a variety of noise, and such exposure can increase the sensitivity of cellular cortisol receptors in the body, which in turn increases the stress-related hormone of cortisol<sup>1</sup>. This triggering of the human stress response can subsequently lead to an elevated heart rate as well



as an increase in blood pressure<sup>2</sup>. As patients are unable to shut their ears to exclude unwanted sounds, it is prudent for the flight crew to mitigate

the noise levels for their patient in order to decrease this response. This can be done by placing noise cancelling headsets on the patient, a simple measure that offers relief from the cacophony of sounds present during transport. Interestingly, noise cancelling headsets could also be of benefit in terms of the patient communicating with the physician, according to research that shows improved intelligibility in inflight environments as a result of the headphones<sup>3</sup>.

**The power of music**

While noise cancelling headsets will significantly decrease noise levels, listening to music can provide a calming influence for the patient and aid recovery. Music is very powerful in such situations, and has far-reaching effects, on brain chemistry and has associated mental and physical health benefits. The positive effects of music are linked to the fact that music causes neurons in the brain stem to be activated, causing a cascade of chemical effects on the nervous system that evoke relaxation<sup>4</sup>. Additionally, music stimulates and alters brainwaves, bringing changes in the autonomic nervous system. Physically, these changes activate a relaxation response measured by slower respirations, slower heart rates and lower blood pressures<sup>5</sup>.

The *International Journal of Service Industry Management* published a research paper in 1999 entitled *Customer stress-relaxation: the impact of music in a hospital waiting room*, which found that ‘the use of music was related to decreased stress and increased relaxation in comparison to time when no music was utilised’.

Listening to music can also provide a diversion during a long transport, reducing anxiety and

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creating an overall sense of calm and wellbeing for the patient. Slower music tends to be more relaxing than faster music, but familiar music is more relaxing regardless of the type and tempo<sup>6</sup>. The utilisation of music can specifically be useful when attempting to medicate the patient for pain, sedation or anxiety. Used as an adjunct, music can enhance and amplify the effects of these medications. Studies have shown patients who listen to music had lower anxiety and stress levels and oftentimes required less medication than those who didn’t listen to music<sup>7</sup>. Overall, music can be more effective than prescription drugs in reducing stress and anxiety levels in the patient. The promise of music as medicine is that it is natural and cheap and doesn’t have the unwanted side effects that many pharmaceutical products do. Additional studies revealed a decrease in the stress hormone cortisol in patients after listening to relaxing music, indicating a reduction in stress<sup>8</sup>. Some naysayers will inevitably argue that music has no real effect on health, but in actual fact the two have a long history; the ancient Greeks

believed that music could heal body and soul, and the Native Americans used singing and chanting as part of healing rituals for many years. After World War II, US Veterans Administration hospitals used music to help treat shell shock, and in 1944, Michigan State University established the first music therapy degree programme in the world – there are now more than 70 such programmes approved by the American Music Therapy Association. Some music therapy services are even covered by health insurers.

### A human touch

Along with music, hand massages are another measure used to reduce stress for the patient in the aeromedical setting. Human touch is a missing element in modern medicine and performing a hand massage for the patient creates a bond between the patient and flight crew member. A hand massage provides comfort and can improve the overall flight experience for the patient. Additional benefits of hand massages include

reducing pain, improving circulation and increasing range of motion: effective hand massages increase autonomic nervous activity while improving parasympathetic nerve activity and reducing sympathetic nerve activity<sup>9</sup>.

The most effective hand massages utilise aromatherapy, which has been around for thousands of years and can easily be incorporated in the transport setting. Smell is an incredibly powerful sense. When an essential oil is inhaled, the molecules enter the nasal cavity and stimulate the limbic system of the brain. The limbic system is a region that influences emotions and memories and is directly linked to the adrenal and pituitary glands as well as the hypothalamus. These areas regulate heart rate, blood pressure, stress, memory, hormone balance and breathing.

Fragrances are incorporated in lotions used during hand massages on aeromedical flights. Common fragrances are lavender, eucalyptus and peppermint. Lavender and eucalyptus can ease stress and anxiety as well as induce relaxation.

Peppermint can help combat nausea. A variety of fragrances can be used, but it is important to pick the scent that is most pleasant for the patient. Scents can also evoke pleasant memories in patients<sup>10</sup> and enhance a sense of wellbeing. Used together, noise cancelling headsets, music, hand massages and aromatherapy in the flight environment provide a holistic approach to patient care that has far-reaching effects beyond just treating the patient's medical condition. These measures are simple to provide, taking up little time or room on the aircraft, and requiring little specialist training. Taking small steps to make a stressful patient experience more pleasant makes for a mutually beneficial journey for patient and air ambulance crew alike. ■

### Author



Denise Wayne is president and owner of AirCARE1 International. As a critical care nurse and former music major, Denise integrated music into the medical environment of air transport after seeing how music and a holistic approach to patient care dramatically decreased the stress levels in her patients. AirCARE1 International has been utilising holistic care for its patients to decrease the stressors of flight for the last 10 years and has seen dramatic results.

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