Features

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An old problem, with new solutions

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Introduction

ITIJ’s eighth annual Air Ambulance Review brings together the most relevant, current and newsworthy topics relating to the global aeromedical industry. Whether you are an air ambulance provider, medical crew, assistance provider or payer in the international travel and health insurance industry, the features in this publication will provide you with a valuable insight into the issues that matter most in today’s aeromedical marketplace.

This year’s Air Ambulance Review has an exciting mix of content that ranges from looking at the problem of unnecessary helicopter airlifts off Everest, to assessing some of the latest and best onboard technology and products that are available to aeromedical crews. It also examines the complexities of flying into war zones, and discusses the intricate business of assessing patients’ fitness to fly.

Elsewhere, case studies report on a recent multi-patient mission from Ukraine, where injured protestors were flown to Israel; and a long-range repatriation from Brazil to Switzerland. Spoilt for choice is a must-read article for anyone who’s ever felt overwhelmed by the wide range of air ambulance aircraft available, while the Accreditation wish list puts forward some bold ideas for accrediting organisations to consider as they move forward and develop their services.

With its comprehensive industry analysis and contributions from aeromedical professionals around the world, ITIJ’s 2014 Air Ambulance Review is essential reading!
It’s all about right and wrong...

When you contract with an air ambulance provider to transport your patient home, they always do it themselves, right?
Wrong.

When you contract with a provider who tells you they operate their own jets, that means they only ever use their own jets for your patients, right?
Wrong.

When you contract with a provider with their own medical personnel, then those are the personnel that always move your patients, right?
Wrong.

When brokers state that they will only use certain accredited companies to transport your patient, then that’s what they always do, right?
Wrong.

Operators never act as brokers. Brokers never pretend to be operators, right?
Wrong.

It’s either right or it’s wrong and most of the names in the air ambulance business don’t seem to know the difference.
We do.

How?
Because we move patients on behalf of brokers and accredited air ambulance providers all the time.

But wait…surely it’s better to know 100% that your patient is with the plane and medical crew that you actually hired, right?
Right.

And surely it would be cheaper to use us direct rather than pay a middle man, right?
Right.

It’s not what you say, it’s what you do.
Right!
Determining fitness to fly should be a mutual decision between a treating doctor and those carrying out a repatriation. But agreeing on a patient's fitness to fly is just the tip of the iceberg in terms of the complexities involved in reaching such a decision, the effects this decision might have, and what happens when the patient's condition changes. Tatum Anderson looks at this age-old issue and discovers some new solutions.

The plane is ready to go, the medical equipment prepped and the medical escort team is ready to ferry a seriously ill but stable patient on a flight. But when the team meets its charge, the patient turns out to be too ill to fly. It’s a fairly rare event, but everybody agrees it still happens.

Such a situation is not only distressing and disruptive for the patient, but can cause a number of headaches for the assistance company and medical escort team. Wasted journeys, emergency landings and changing patient conditions may, in many cases, be unavoidable or impossible to predetermine, but there are a number of systems and procedures that are being put in place to reduce the likelihood of sending out a medical escort team to meet a patient who turns out to be unfit to be moved, or indeed moved via air.

Singing from the same song sheet
Whether the treating doctor has made a poor judgement on a patient’s ability to safely undergo an aeromedical repatriation, or the assistance or medical escort team has erroneously made a call on a patient’s fitness to fly, or even if the patient’s condition changes due to unforeseen circumstances, whatever the reason behind a patient being - or becoming – unfit to fly, the consequences can be significant. The patient’s health is at risk if they are moved when unfit to do so or if they are repatriated using an unsuitable mode of transport; and the cost of unnecessarily moving medical escort crews and air ambulances, or diverting an air ambulance or commercial airline can be astronomical, while the reputation of those involved is not without consideration. Reputation is an especially important consideration in situations where patients found to be - or becoming – unfit to fly have meant that crucial time and availability of medical teams and air ambulance aircraft have been unnecessarily taken up and, resultantly, led to the air ambulance or escort team having to delay or turn down other missions.

whatever the reason behind a patient being – or becoming – unfit to fly, the consequences can be significant
But how does this happen? Medical escort teams say the most common reason that patients are found unfit to fly is that information about just how stable the patient really is can be inaccessible, insufficient or inaccurate. So, the assistance company or medical escort team makes a decision to retrieve or move a patient based on all the information they have managed to gather from the treating facility, but when the medical escort team arrives to meet the patient, they find that the condition of the patient is quite different to what they were expecting, and it turns out that the patient is not fit to be flown. This is frustrating to say the least, and happens for a number of reasons. Hospitals in different countries naturally keep patient records in their own language, and translations of these records can often be unclear. Furthermore, physicians – especially those not used to international repatriations – may not understand how modern aircraft cabin conditions, with oxygen partial pressure and low humidity, physiologically affect the patient. Thus, a patient could be relatively comfortable on the ground – at sea level – but may develop ventilation difficulties within 15 minutes of take-off.

Graham Williamson, CEO of Lifesupport Patient Transport, a Canadian ground and air ambulance company, says: “We commonly encounter situations where the sending physician does not understand the nuances and challenges of flight. To them, a patient may appear stable and suitable, whereas to us, we have a completely different picture.” After reviewing medical case notes, the company’s transport team always subjects the patient to a final medical assessment. Such staff are trained and experienced in flight physiology and the unique dynamics and challenges of medical evacuation.

Different cultural attitudes and approaches to medicine affect decisions on fitness to fly too. A treating doctor from one country may consider a patient fit to fly, but a repatriation doctor from a country where medical care is provided in a more defensive way, for example, and is exposed to potentially expensive liability claims, may not be prepared to take that risk. Treatments of the same injury can also differ from country to country, and thus potentially have a knock-on effect on the time it takes a patient to recover, ultimately impacting on his or her fitness to fly. Other cultural considerations to be taken into account relate to the personal needs of the patient, and the potential effect their religious beliefs could have on their medical needs.

There can also be occasions where the treating and repatriation doctors want to honour the wishes of a palliative care patient, insofar as the patient wishes to return home at the end of their life to be with their family, and in such situations fitness to fly may be determined a little differently. Furthermore, it is not unheard of for hospitals to hold on to patients for longer than is necessary in order to boost their revenue streams. So, rather than releasing a patient who is, in fact, fit to fly, the hospital will classify the patient as unfit for travel in order to continue receiving income related to that patient. Redstar Aviation, which evacuates patients from Turkey and the Middle East, routinely investigates situations in which patients have been declared unfit to fly, and says it has discovered some unfit-to-fly cases in surprisingly good health: “They were in the ICU reading newspapers or working on their laptops!”

Mustafa Atac, the company’s founder. But it’s not just the treating hospital team that can present issues. Assistance companies often want patients back home as soon as possible, especially if it is cheaper to treat them there. “Pressure from the assistance company to speed up the repatriation process could cause a too-fast repatriation plan,” says Danny Quaeyhaegens, head of the international insurance department at Bangkok Hospital Pattaya in Thailand. And sometimes this pressure comes from the patients themselves, in which case, albeit rarely, they may ‘forget’ to reveal all their symptoms in their urge to get home, because they fear being treated in a far-away country, are homesick, or want to be with their relatives, adds Quaeyhaegens.

When a plan comes together

Over the years, medical escort and assistance companies have put in place numerous procedures to help – as far as possible – transfers to go without a hitch. Information gathering, talking directly with the treating doctor, and meeting the patient at the hospital rather than the airport, where allowable, are some of the key processes that have helped smooth the repatriation process over time; but as the industry has evolved, so have...
the considerations that need to be made by the assistance and repatriation teams. To start with the basics, repatriation teams will screen the patient and routinely monitor them from well before the dispatch of the medical team, until shortly before the flight time, making sure that no change occurs in the patient’s condition, and that if it does the patient is still fit to fly. As Williamson explains, at Lifesupport Patient Transport, the flight nurse commanding the mission will always place a call to the hospital 15 minutes before ‘wheels up’ from base to verify that the patient remains stable.

It is also extremely important that in all repatriation cases, a doctor from the medical escort or assistance company speaks to the treating doctor directly – rather than relying on email communication, information from nurses or other medical staff, or a review of the patient’s notes. “Often, a medical report, even if well written, cannot exactly describe the overall picture of a patient. Phone contact between treating physician and physician of the repatriating company is important,” says Quaeyhaegens. Other procedures put in place by medical escort companies include guidelines that ensure patients are not met for the first time at the airport. Of course, this may not always be possible – especially when time is of the essence, and/or if the hospital is a long distance from the airport – but bed-to-bed transfers have become the preferred transfer method as they avoid the issue of removing a patient from hospital who is unfit to fly. So, generally, medical escort teams arrive in their destination the day before the repatriation flight, and visit the patient at the treating hospital. This allows a full examination of the patient to be carried out by the escort team, says Dr Atac, and for all the patient’s medical records to be reviewed in order to confirm fitness to fly. There is also the possibility of talking directly with the treating doctor at this time, and if there are any doubts as to the patient’s stability, he continues, there is enough time to order a battery of tests – from chest X-rays to blood gas analysis and haemoglobin values – before the patient is cleared for transport to the aircraft. This continuity of care means at least one member of the air medical transport team is accountable for the patient from the beginning to the end of the mission, thus reducing risk by allowing for a smoother medical repatriation.

Other checks that are put in place by some escort companies include determining the suitability of the receiving facility. US firm MedEscort International, for example, contacts the patient’s family members to see what type of care will be received on discharge to their care: “We won’t facilitate a transport until we are assured of proper care on the receiving end. We have sent our medical escorts to train the family members on the patient’s care, wound care and ambulatory care,” says the company’s president Craig Poliner. Some of these policies work better than others, however, which may explain why there are still problems. Not all medical equipment is allowed with them on a commercial aircraft. Escorts can sometimes take patients on stretchers, with their own oxygen and other vital tools, but the majority of commercial flights cannot carry with them on a commercial aircraft. Escorts can sometimes take patients on stretchers, with their own oxygen and other vital tools, but the majority of commercial flights cannot accommodate the full gamut of equipment available on an air ambulance. And these come down to the changing nature of the medical escort industry – namely, the mode of transport proposed for the journey. Today, an increasing number of medical escort firms use commercial flights to transport their patients, and there are plenty of advantages to taking a normal plane over an air ambulance.

Commercial evacuation normally costs around 10 per cent that of an air ambulance flight – which is good news for underwriters. They are quicker to organise too, and patients often arrive at their destination sooner than they would have done had they been flying on an air ambulance, as there are fewer, if any, stops for fuel. This means patients spend less time out of hospital. Importantly, commercial flights can also often be more comfortable for the patient. Unlike most air ambulances, commercial airlines offer regular meal service, in-flight entertainment, a stand-up washroom and first-class seating. Furthermore, the patient has probably flown on such an aircraft before and is therefore relatively comfortable in their surroundings. But using commercial airlines can present a raft of problems. Not all medical equipment is allowed on all flights. Treating physicians who decide a patient is fit to fly may not fully appreciate what limited equipment medical escorts can carry with them on a commercial aircraft. Escorts can sometimes take patients on stretchers, with their own oxygen and other vital tools, but the majority of commercial flights cannot accommodate the full gamut of equipment available on an air
Each case needs to be assessed on an individual basis, with the patient’s condition constantly monitored to ascertain their fitness to fly.

Rushed to reach a flight – perhaps the flights have been over-booked and seats are scarce. Crucially, if a commercial airline is used, locating tickets for the escort and patient during busy periods can be difficult and last-minute. This can impact on the bed-to-bed aspect of the mission, as if the escort is reliant on an airline’s timetable, this can mean less time to meet the patient at the hospital to establish their current medical status. The distance travelled by the patient to the airport could also be long, or difficult because of traffic congestion. And if the crew is reliant on medical reports received from the treating hospital, rather than carrying out a bed-to-bed transfer, things can go wrong very quickly, concludes Dr Atac.

Furthermore, different airline companies operate varying guidelines and may not use the IATA Medical Information for Fitness to Travel or Special Assistance (MEDIF) form. As a result, medical clearance with the airline company may not be timely or properly prepared. So the key now, say escort companies, is to embrace the increasing dependence on commercial airlines, whilst continuing to mitigate against fit-to-fly problems.

New solutions

New technologies, though, might improve the situation. Instead of relying solely on phone conversations with his patients’ doctors, MedEscort’s Poliner uses iPad technology to view patients and even talk to interpreters on different continents. Using technologies like this could decrease the chance that the first look at a patient will be at the airport, he said. Poliner added that while, so far, he has only taken this approach on an ad-hoc basis with patients and interpreters, he suggests it might become a bit more formalised as it is a great asset to be able to actually see his patient in their hospital bed and get an idea from them how they really feel.

Hospitals too are becoming more prepared. Quaeyhaegens explains that Bangkok Hospital now holds an electronic database of all commercial airlines flying to and from the regional international airports so that staff have 24/7 access to the correct MEDIF form for each airline. And even where there is no form, a telephone number and email address for the airline’s medical clearance department are available too. At MedEscort, as at many other such companies, if the patient is to travel by commercial aircraft, the airline is vetted to make sure that proper care can be implemented. Medical escort companies say both clinicians and providers must take more responsibility for the ongoing health of their patient. Hospitals need to be hyper-vigilant, but it’s also the medical escort’s job to fill gaps in the doctor’s information before the patient leaves the ground. “It is our responsibility to fish them out prior to transport through effective physician consultation to identify any concerns well in advance,” says Poliner. “Care is limited on commercial airlines and an escort company is responsible to let people know if a patient is appropriate for transfer. If they are not, then the escort must say so to all the people involved.”

But in the end, a patient may just become too ill to fly and the situation is unavoidable. A patient’s status can change very dramatically and medical escorts say they will not compromise patient care. In the event that a patient is found unfit to fly, all is not lost. They can almost always be kept comfortable where they are and commercial first-class flights can generally be refunded. The cost of an air ambulance sent out in error is more expensive and poses other difficulties for the company operating it, although there is the chance of offering an empty leg flight to the wider travel health insurance industry, so the aircraft can carry a patient back to their home country – even if it wasn’t the patient they flew out for!

“As a seasoned paramedic myself, I can tell you that from one moment to the next, patients can change in a blink of an eye. Patients in general are a dynamic bunch,” says LifeSupport’s Williamson. “We will always act in the interest of patient safety, and I have never encountered an assistance company or underwriter who is not fully supportive of this position.”
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CASE STUDY

German air ambulance provider FAI describes a mission to evacuate seriously injured protestors from Ukraine to Israel.

In March, FAI rent-a-jet AG received an inquiry from Ukraine to fly out several seriously injured patients for long-term treatment and rehabilitation to Israel. The mission involved complex logistics and advanced medical care in the face of violent uprisings in Ukraine.

Initial information about the mission described 10 severely injured persons, aged between 20 and 50. All of them had suffered gunshot wounds, affecting the thorax, abdomen, pelvic region, spinal cord or lower extremities. The immediately life-threatening wounds had been attended to already, and primary/follow-up operations had been carried out, but nonetheless, it seemed that there would be more stretcher patients than sitting ones on this flight. In addition, we received a request that four co-travellers were to fly on the same mission as well.

The FAI management, in agreement with the medical directors, decided to dispatch a CRJ 200 plane specifically configured for the mission at hand. Seats were partially removed and replaced by four stretchers. The medical team then prepared two complete sets of ICU equipment, two sets of general monitoring equipment and several medical bags to guarantee sufficient medical supplies onboard the aircraft.

The medical crew was carefully selected, with two doctors – one is an intensive care unit specialist, only four patients actually needed stretcher transportation in the end, the other five were able to sit up.
and the other a trauma surgeon and accident and emergency specialist, both of whom have many years of experience in the field of international air ambulance missions – and three flight paramedics, while two flight nurses provided medical backup. To comply with flight operation regulations, there were also the two necessary cabin attendants onboard, and with two pilots, the entire crew comprised 11 people. The linguistic skills of the crew allowed them to communicate in Russian, English, German, French and even Hungarian. This was a vital element of the team, considering all the possibilities that could meet them on the ground – for example, there is a significant Hungarian minority in Ukraine, and Russian is widely spoken not just in Ukraine, but in Israel too.

**Configuring the plane**
The afternoon before the mission day, maintenance staff prepared the aircraft’s interior configuration. Afterwards, the two chief paramedics prepared the medical equipment and installed it in the cabin, and the flight doctors made a detailed assessment and a risk analysis on the basis of the available medical reports. “According to the available data and without knowing the actual exact status of the patients, we prepared a ‘plan B’ as well, as initially it seemed that there could be minimum of six stretcher patients; so theoretically we prepared a two-round evacuation plan between Ukraine and Israel,” stated Dr Peter Turi, one of the two flight doctors onboard the aircraft. 

Early in the morning on the day of the mission, the complete crew performed a pre-flight briefing. All the tasks and major responsibilities were assigned to different crew members. As the weather wasn’t appropriate for landing at Kiev, the mission was initially delayed by an hour.

**Patient processing**
All of the patients’ vitals were stable during the flight, however the team had to administer painkillers to several patients, and change the dressings and urinary catheters of others. One patient had STEMI and PCI earlier, and he was diabetic beside his injury, so he needed additional monitoring and investigations before and during flight, such as a 12-lead ECG, blood sugar measurement, and ABG test during the flight due to oxygenation. The medical crew paid attention to nursing issues such as moving the patients on the stretchers to prevent pressure sores and make the flight more comfortable. Almost all of them were anaemic and hypovolaemic, and some required oxygen and additional fluid intake. It seemed there were shortages of the blood supply in Ukraine (which was no surprise), meaning that some patients had not received anticoagulants, so were given heparin, too. After a smooth flight and landing at Kiev, the two doctors and one paramedic started a triage system, and identification of the patients. The Ukrainian airport security forces had prepared the necessary process properly. Said Dr Turi: “We had enough and sufficient space for the on-site assessments, and the lined up ambulance cars were allowed to enter the airport one by one, step by step. It took a mere three hours to load the patients after arrival, triage, on-site assessment and evaluation. Luckily, only four patients actually needed stretcher transportation in the end; the other five were able to sit up already, so we could plan a single flight to Tel Aviv, flying everybody out at once.”

As one patient’s condition had worsened a few hours prior to our arrival, his transport was cancelled, so in the end, the crew only had to deal with nine patients. The patients had diverse backgrounds – one was a lawyer with a thoracic spinal cord injury and shot wound to the lung, another was a cook with pelvic, sacral and abdominal shot wounds; there was a chemistry teacher with a femoral injury, and a doctor who had been shot in his abdomen while providing first aid on the streets.

This particular evacuation brought with it a completely different emotional stress for the FAI crew than the usual air ambulance missions. “Patients and escorts showed short movies taken on smart phones on the most dramatic days of protests. It was shocking to see one of our paraplegic patients shot in his thorax and spine and lying face down on the street, waiting to be evacuated and taken to the hospital. It took more than an hour until he got first aid on the roadside,” Dr Turi reported in the de-briefing session.

Upon arrival in Israel after an uneventful flight, the ground ambulance forces were already at the airport. “Unfortunately, the crew had less space for the hand-over and unloading than in Kiev, plus the local media’s presence was more significant, so unloading was slightly more complicated. All in all, patient hand-over and the immigration documentation process took around 90 minutes, which was, all things considered, still pretty effective. When all the paperwork was dealt with, the patients went on their final transfer to two receiving hospitals. Thus completed the internationally co-ordinated humanitarian evacuation.

**Mission de-brief**
Communication, medical competencies, security issues, luggage, escorting people, media presence, saying farewell to or welcoming relatives, loading ramps, in-flight care versus actual treatment needs, disinfection of the normal passenger seats, ‘just in case’ passenger evacuation plans onboard – these issues were just a few amongst many, beside the actual medical part of the flight, that had to be considered by FAI when co-ordinating this mission. It needed careful evaluation, preparation and, of course, even some improvisation to finally carry out such a mission successfully and, what is even more important, safely.

**Author**

Peter Turi was the trailblazer of helicopter air ambulances in Hungary, and is now owner and CEO of TrustAir Ltd. He has worked for FAI rent-a-jet as a flight physician since June 2012.
The signals coming from Nepal are that all is not well in the local rescue helicopter industry. If commentators are to be believed, a slew of middlemen are colluding with trekking guides to put mountaineers on rescue flights they do not need and artificially inflating the bills charged to insurers, all in order to earn a commission. The helicopter operators, though, have begun to speak out. James Paul Wallis reports

In February, Nepal’s Department of Mountains restructured the fees it charges foreigners for licences to climb Mount Everest, the world’s highest peak. Discounted fees for groups have been scrapped in the hope that people will start to climb in smaller teams. The new flat fee per climber is just US$11,000, compared to a previous fee for individual climbers of $25,000; the previous group permit, which is no longer available, cost $70,000 for a team of seven climbers. Madhusan Burlakoti, head of the department, explained: “We hope to attract more climbers and also at the same time better manage the climbing teams. This will allow smaller teams and individuals more freedom when they climb Everest.”

Commentators have expressed concern over the environmental impact that an increase in climber numbers could have. Everest is already described as the world’s highest rubbish dump due to the amount of food wrappers, used oxygen cylinders and discarded climbing gear littering its slopes. This could be countered by rules recently put in place that require climbers to bring all of their own gear and litter off the mountain, along with a quantity of rubbish left by previous visitors.

Another worry, though, is that if climbing as an individual or in a small group becomes more affordable, a spike in demand for guides could result in climbers signing up with inexperienced – or worse, unscrupulous – guides. Simon Lowe, managing director of Jagged Globe, a company that runs mountaineering expeditions, commented: “This will open the flood gates for anyone to say ‘I’m an expert mountaineer’, get a client and away they go.”

The prospect of poor-quality guides romping up the slopes and getting clients into situations they can’t handle is a worry. There is also the possibility here that we could see an increase in the number of guides willing to engage in helicopter rescue fraud, an issue of growing concern.

Allegations made

Alpine Rescue Service, a Nepalese assistance company that partners with aircraft operators Mountain Helicopters and Air Dynasty, spoke out about the problem of unnecessary airlifts in November 2013, claiming then that a number of evacuations are ‘preposterous attempts to tap into the insurance policies of clients’. Emergency assistance company Global Rescue wrote in December of the same year that although only a small number of operators are involved, ‘unnecessary evacuations in Nepal have the potential to damage the climbing and trekking industry’. Earlier in 2013, an article published by the British Mountaineering Council’s (BMC) Summit Magazine presented details of the alleged misuse of rescue helicopters in Nepal. Although helicopters have ‘an important role to play in the inevitable rise in trekkers seeking medical evacuation’, wrote the BMC, ‘weak regulation and the chance to tap into insurance premiums have made the rescue business tempting to a new network of middlemen and agents’. According to the article, helicopter charter companies (i.e. brokers), trekking guides and agents are involved in playing helicopter operators off against each other in search of commissions.

The BMC quoted an unnamed Nepali helicopter...
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pilot, who said that if a client falls ill, trekking companies stand to make more money from the rescue helicopter kick-back than the original cost of the trek. Whereas a client might pay $1,500 for a trek in the Everest area, the company could earn twice that on the back of the ‘emergency’ medical flight. According to the pilot, thanks to good mobile phone signal coverage, a guide on the mountain can call up agents and charter companies, who will then haggle with a number of rescue helicopter providers to get the lowest price possible, while at the same time requesting inflated bills from the providers. Acting as middlemen, the

financial considerations aside, this makes flights where there is no expected medical benefit to the climber an ethical issue from the perspective of patient care

agents and charter firms can therefore make money off the back of the flights, said the pilot, whereas the helicopter providers themselves may struggle to make a profit thanks to low margins and high insurance costs.

Another commentator, David Hamilton, one of Jagged Globe’s guides, told the BMC: “Imagine you’re a local guide leading a trek of six people for a fairly low-budget outfit. The agent will only be making $500 out of the whole deal. You’ve got someone who’s going a bit slow and it’s a pain waiting for them, you tell them they’ve got altitude sickness (mountain sickness), you call in a helicopter and your company gets 10 or 15 per cent of, what, $10,000?”

Dr Kimberley Chawla said that her organisation, East West Rescue, an assistance provider based in India (which shares a border with Nepal), has seen thousands of dollars being added on to bills: “We have seen this when we have been asked by an insurance company to transfer payment for a mission which they gave a guarantee of payment (GOP) for. The bill is often inflated by US$2,000 to $4,000.” She concurred that some flights are made for the convenience of the trekking guide: “We have spoken to some patients once they land in Kathmandu and they are too chirpy to be labelled sick. Sometimes it is only constipation or someone is lagging behind the group and causing a delay, so the tour guide decides to have the person moved by helicopter, paid [for] by insurance.”

Another allegation was made by Richard Ferre, claims operations manager, travel and assistance international, of Ageas Insurance: “On several occasions rescue companies have tried to charge an amount equal to the rescue of one passenger, but upon investigation, it turns out there were several passengers rescued and the cost should have been spread [between them].”

Difficult diagnosis

Part of the problem here is that altitude sickness can be difficult to diagnose – especially after the client has been brought down from the mountain, given that the main remedy for the condition is to descend. A doctor working at a Kathmandu clinic told the BMC that three out of five trekkers arriving by helicopter fall into a grey area where no clear determination of altitude sickness is possible. The trekkers themselves may not be in a position to assess their own conditions, either, said the doctor, who added: “If someone comes to you because you feel a bit lousy and says you’ve got to get in the helicopter because you’re going to feel a lot worse, then you get in the helicopter.” It’s easy to see why a climber might be easy to persuade to climb onboard – speaking at ITIC Global in Vienna in 2013, Mark Rands, Managing director of assistance provider Specialty Group, reflected that for the amateur climber whose goal was to reach the summit, there may be little motivation for him to walk all the way back down again.

Dr Chawla also noted that the flight may be requested by an insurance company due to pressure from the patient or their family. She added: “It is often difficult to confirm the status of the patient, as the tour company apparently was contacted by the guide and is not contactable otherwise.” According to Alpine Rescue Service, in some cases, the climber may not be aware that a pre-arranged agreement is in place to involve them in an unnecessary and potentially fraudulent flight: “This agreement is set between the trip operator [and helicopter] charter companies to force the client to opt for evacuation, even at the slightest hint of mountain sickness. The victim is further convinced that the condition may worsen and thus is provoked to opt for the easy way out. Fearing the threat to their lives, the clients are then compelled to take the suggestion at hand. They are then requested to call upon their insurance/assistance companies for approval and guarantee of payment for the outrageously inflated quotes.” Such flights may also take place before insurance company approval is received, said Alpine Rescue Service, with the insurer being told afterwards that an urgent evacuation was needed to avoid risking the client’s life.

The company described a further scenario where a trip operator, a charter company and a client collude to enable the climber to knowingly partake in a ‘free helicopter tour’, under the pretence of it being a necessary rescue flight, all at the insurance company’s expense.

Impact

Where such fraud occurs, the impact on the insurers is obvious – higher or unnecessary spending on helicopter rescue flights. Alpine Rescue Service said: “These issues need to be addressed abruptly, as otherwise, the insurance
companies are bound to witness a sharp rise in their travel insurance policy claims in the near future." The costs are passed on to the trekkers, however, through increasing premiums. For example, the BMC’s trekking insurance is provided by ACE Group, which raised premiums for a policy covering a 17-day trek in Nepal from £68.03 to £84.56 in 2013. Alpine Rescue Service even stated in January 2014, shortly after it became an assistance partner of the International Assistance Group, that the level of helicopter rescue fraud in Nepal could ultimately lead to a fall in the number of trekkers heading for the country: “If such outrageous endeavours are not controlled and eliminated altogether, we will see the proliferation of such immoral institutions that will definitely create a large barrier for not only the insurance companies at large, but also to trekkers and climbers who want to explore and embrace the holy Himalayan peaks of Nepal.” Along with escalating insurance premiums and a surge of claims, Alpine Rescue Service reflected that the situation could begin to tarnish the image of honest service providers. Ram Nepal, the company’s executive director, told ITIJ; “Such instances of fraud can also hamper the reputation and credibility of honest companies. Retrospectively, these attempts are also responsible [for] making Nepal an expensive tourist destination as the policy prices increase, and altogether, this will lead to damage of the industry.”

It’s worth noting that a helicopter evacuation carries an element of risk – the risk of injury or death should an aircraft accident occur. As with any ‘medical’ intervention, the risk should be balanced by the potential benefit to the patient. Financial considerations aside, this makes flights where there is no expected medical benefit to the climber a moral issue from the perspective of patient care. Where a trekker is duped or coerced into taking a flight they don’t need, they are being exposed to risk without a compensating medical benefit.

Action
In terms of detecting when an ‘emergency’ flight was not really required, Dr Chawla reflected that one indication is when the patient refuses to go to hospital once they land in Kathmandu and instead go straight to their hotel from the airport, or to an outpatient department and then to their hotel. However, she reiterated that with mountain sickness, the patient may genuinely be significantly recovered once they reach the relatively oxygen-rich air of a lower altitude. The pilot quoted by the BMC suggested that one

Mark Rands explained that Specialty Group works with a medical provider in Nepal to evaluate evacuees after their arrival at a clinic. The climbers themselves can also play a part. Writing on this topic in December 2013, emergency assistance provider Global Rescue urged members heading to the Himalayas to educate themselves on the facts of altitude sickness, and to research tour operators and guide companies to understand their perspectives on helicopter evacuations in order to avoid being duped into taking a flight they don’t need. ITIJ spoke to Shree Airlines, a Nepalese owner and operator of a fleet of helicopters, about the issue. Anil Manandhar, corporate manager of the company, noted that although he has heard of the types of helicopter rescue fraud described in this article, Shree Airlines ‘is not involved in any such unscrupulous or fraudulent activities’. He added: “Which may be the reason why we are not called for medevac [missions] brought in by some intermediaries.” In terms of how fraud can be reduced, he said: ‘Such activity will reduce significantly if the insurers eliminated middlemen and entered into long-term contracts directly with reputed air service providers, especially ones with a strong emphasis on safety in operation.”

Ram Nepal further suggested that it might help if all operators were to insist that medevac missions be preapproved by an insurer, or be paid for upfront. This, he said, would give the climber a

...step insurers can take to combat fraud is to make thorough checks on the bills received for rescue flights – for example, by checking the number of hours quoted against the flight log of the helicopter involved. Richard Ferre told us: “[Ageas works] very closely with our agents on the ground who are mindful of [fraudulent] practices and therefore carefully research the information that is provided. Additionally, we request maintenance logs from the helicopter companies, as these can show the activity of the helicopter and contact is made directly with our customers in order to obtain information that may not be offered at the outset, such as the number of people in the aircraft.” Another course of action is to rigorously assess the climbers.

a number of evacuations are ‘preposterous attempts to tap into the insurance policies of clients’
good incentive to only fly when necessary. Suman Pandey, CEO of Nepal-based helicopter operator Fishtail Air, told us that his company is taking firm action to discourage fraud: “Some insurance companies have agreed to work with us together and solve this issue. In this, we are sending a doctor with every evacuation mission and if the doctor finds that client is in a safe condition, we have been told to drop the client and return with an empty helicopter.”

Dr Chawla gave this advice: “A few pointers that can help minimise unnecessary missions or inflated bills are: speak to the patient or tour guide directly; use a local service provider to give the GOP; avoid using a heli company that has a reputation of high rates (or increasing the flying time); always get a quote, ask another heli company for a quote and then decide; at the time the insurance company gives the GOP, they should name their local operator that will handle the case and make the payment.” Finally, she added: “Do not get pressurised by repeated phone calls from the tour company to make the ‘elevated’ payment.”

Sounding a positive note, Russell Dadson, director of UK-based activity travel specialist Snowcard Insurance, said: “I am confident that our underwriters will be able to contain costs, and we will monitor claims developments over the coming year. Although we have been involved in a small string of claims coming through one leading UK trekking operator, it has not caused a significant impact on our scheme.” He called for the tour companies to play their part in reducing the demand for rescue flights: “Trek leaders and tour operators need to ensure their clients have the experience and fitness to make the full round trip, and it needs to be made clear that insurance is not intended to be used as a taxi service payment.

one step insurers can take to combat fraud is to make thorough checks on the bills received for rescue flights

Insurance has always been intended to cover the sudden and unforeseen accidents of clients.”

Conclusion

Alpine Rescue Service has stated its goal is to ‘wipe out the contamination that has been persisting in the field of emergency medical evacuation in Nepal’. Ram Nepal emphasised that it is not the air rescue providers themselves, but rather the helicopter charter companies, tour operators, travel agencies and trekking guides, who are responsible for fraudulent evacuations: “The helicopter operators do not have any role to play in the fraud. [They] have no prior knowledge of a fraudulent evacuation and only charge their standard rates. However, these intermediaries are the ones to grab hold of a large margin which is not an honest income.” Suman Pandey reflected that although insurance companies are affected by being made to pay exorbitantly high prices, helicopter operators are the main victims in this scam, as the actions of the middlemen lower the income that they receive. He called for insurance companies, assistance companies and helicopter operators to work together, as the current situation is unsustainable. Russell Dadson concluded: “If trek leaders are using altitude sickness as an excuse to call out helicopters to recover exhausted walkers, then they will ultimately do their industry no service as insurers will tighten wordings and limit rescue payments to genuine accidents that threaten life and limb.”
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Spoilt for choice

When the call comes in saying that the only way to get your insured back home is via an air ambulance, the next decision that has to be made by the assistance company is: which aircraft can get the patient home with the best level of care in the optimum time? Mandy Langfield discusses the considerations to be made when an air ambulance is called for.

Getting what you want

Nobody wants to pay for what they don’t need, and it’s important that insurers and assistance companies are not bamboozled into paying for an aircraft that does not match the client’s requirements. An unscrupulous air ambulance provider or broker might seek to take advantage of the opportunity of an insurance company paying the bill to suggest that a bigger plane might be more suitable for the patient when, in fact, a smaller, cheaper aircraft might be adequate for the mission at hand.

For air ambulance companies, then, having a mixed fleet with different sizes of aircraft can be an advantage, meaning they can offer a suitable aircraft to the assistance company or insurer to cater to a wider range of illnesses/injuries and locations. While the cost of running a fleet of different aircraft types can be a more expensive option, as parts cannot be swapped between planes if needed, by giving the assistance company different options, the air ambulance operator makes sure that they are doing everything they can to secure the business.

There are several different elements that need to be considered by the payer – whether it is the insurer or the assistance company – before they decide to use a particular aircraft:

- patient profile;
- patient location;
- mission profile;
- finance.

Patient profile

The first priority should always be the patient’s condition and medical care needs. Does the aircraft on offer allow the patient and physicians the space they need? For example, with more bariatric patients being moved by air ambulance, ensuring that the patient and their larger-than-normal stretcher can fit through the door of the smaller aircraft is essential to avoid cancellation of the mission at the airport when the patient is stuck in the cabin door.

The Learjet 35 is known as a workhorse in the air ambulance industry, and is much praised, but it is not perfect. For instance, the height of the cabin – around 1.3 m (4 ft 3 in) can mean that the environment feels quite cramped, with the medical crew unable to stand up straight. This can be a problem in the event that a patient suffers a cardiac arrest. While CPR can be performed in the Learjet 35, said Patrick Schomaker of European Air Ambulance (EAA), it is not an ideal position for the medic – should CPR need to be carried out for a period of time longer than around 15 minutes, then an automatic chest compression device is used on the patient. There is also the lack of toilet facilities, which can affect the comfort of the medical crew, if not the patient! Luggage restrictions also mean that an insured could be separated from their belongings, causing more paperwork and headaches for the assistance company.

Considering larger patients and small aircraft, the patient’s height, width and weight must all be considered. EAA, for example, transports patients of significant weight (up to 130 kg) in the Learjet 35, but patients must not measure more than 60 cm in width, otherwise they cannot fit through the door. There have been occasions where this has happened, said Schomaker, because the assistance company did not obtain the patient’s height and width measurements before employing the services of the air ambulance – thus, when the patient was unable to fit through the door and the plane returned to base empty, the cost of the flight was borne by the assistance company. This raises another important issue that ITIJ has looked at on many occasions – that of the assistance company obtaining, and passing on up-to-date and accurate information about the patient.

The problem of flight medics arriving to collect a patient and finding their medical condition differs from what they had been expecting can be dealt with by medics carrying more kit in the expectation of using it. If the patient’s measurements have not been taken into account, though, there is no medical kit that will be able to force an obese patient into a Learjet 35. Heavyweight patients, and increasing numbers of requests to transport multiple patients, are part of the reasoning behind EAA’s decision to update its current fleet to Learjet 45XR aircraft.

The patient’s condition can also influence the aircraft choice. Seriously ill patients who are transported via air ambulance could need a larger aircraft to accommodate the equipment needed to maintain a high level of treatment throughout the transfer. For example, a patient who is undergoing ECMO (extra corporeal membrane oxygenation) in a small aircraft may not leave...
enough space for the necessary attendant medical crew. Similarly, transporting a patient with an infectious disease can necessitate a larger aircraft in order to accommodate the patient isolation bubble in which they are being transported – in French air ambulance provider Medic’Air’s case, a Falcon 50 jet is used to transport patients suffering from infectious diseases.

Pressurised versus non-pressurised aircraft choice should also be dependent on the patient’s status, as there are occasions where patients need to be moved at sea level, or just above. Terry Martin, medical director of Capital Air Ambulance in the UK, described in Waypoint AirMed & Rescue the pros and cons of using unpressurised aircraft:

“Undoubtedly, unpressurised aircraft are often noisier and may be subject to turbulence at lower levels. There may be a higher likelihood of route restrictions due to weather or terrain, and the patient’s oxygen status will require closer monitoring. However, on the plus side, such aircraft need much less runway for take-off and landing, can be flown from unpaved surfaces, and are ideal for small hops during which there is little time to climb to high altitude.” He further added: “Piston-powered unpressurised (PPUnp) aircraft certainly cost less to both lease and purchase, and also to operate over short distances. Although cost should never be the predominant factor in deciding on the mode of patient transport, when budgets are tight, the only choice might be unpressurised – take it or leave it. It goes without saying that if better care can be given in the air than is found on the ground, then there is no absolute contraindication to aeromedical transport. Similarly, in time-critical transfers, a transfer in a PPUnp aircraft is eminently superior to leaving the patient where he or she is, when the treatment needed is in a distant place.”

Patient location
Where is your patient, and what is the most efficient way to get them where they need to be? This situation is where the ‘horses for courses’ approach to air ambulance selection becomes clearest. If your patient is in the middle of the outback in Australia, for example, then your plan to get them out of the remote region and repatriate them to the UK via Learjet may not cut it. Instead, the assistance company should break down the journey into two parts – the first is evacuating them from the remote region, most likely with an aircraft used by the Royal Flying Doctor Service (RFDS) that can cope with the potentially uneven and shorter-distance landing terrain, and the second is moving the patient internationally from an airport with ‘proper’ runways. The RFDS makes used of Pilatus PC-12, Beechcraft King Air 200, Cessna Grand Caravan and Hawker 800XP2 models, with each aircraft considering larger patients and small aircraft, the patient’s height, width and weight must all be considered.
used for different mission profiles. For example, RFDS Western Operations medical director Dr Stephen Langford said of the Hawker: “The jet can fly non-stop from any location in Western Australia to Perth within three hours and it can undertake interstate transfers without refuelling stops in most circumstances. It can also undertake faster Flying Doctor retrievals from offshore locations, such as the Australian territories of Cocos and Christmas Islands, and has the advantage of a dedicated aeromedical layout to help us treat and care for almost any patient. Seriously ill babies also benefit as this jet can easily load and carry the specialised Mansell Neocots used by Princess Margaret Hospital and, when requested, we will be able to take babies to specialist medical care interstate.

Importantly, the addition of the Rio TintoLife Flight jet to the State’s disaster response resources enhances WA’s capacity to respond quickly and effectively to mass casualty incidents, of which we’ve had several in recent times.”

AMREF Flying Doctors, based in Kenya, makes use of smaller turboprop aircraft such as Cessna Caravans or Beechcraft King Airs, which are more flexible when it comes to landing on unpaved surfaces that can often be significantly different in length and width – not to mention full of wildlife. The patient is then taken to a larger airport where jets can land safely and the patient can continue that part of the journey in the most appropriate aircraft. It also, though, carries patients onboard Cessna Citation Excel and Bravo aircraft, allowing for longer-range missions to be undertaken. The AMREF Flying Doctors’ website states that the choice of aircraft is dependent on ‘the location, airstrip, time of day and the condition of the patient’. Both AMREF Flying Doctors and the RFDS are reliant on the local populace to maintain their remote airstrips.

Getting a patient out of a remote area can involve some out-of-the-box thinking. A case managed by FrontierMEDEX last year, for example, saw the
evacuation of a patient with a hip fracture from Antarctica. The transportation logistics were, for obvious reasons, complex. The choices were between a King Air 100 pressurised turboprop aircraft (small and cheap) or a BAE 146 jet (a 99-seater aircraft). The King Air was further away from the patient, and had a longer flight time, so FrontierMEDEX opted for the BAE 146 – despite the fact it was only one patient on an enormous plane, it reached the patient sooner and transported him more quickly, meaning that in this case, the more expensive option was selected for the patient’s wellbeing in terms of the speed of his evacuation.

Mission profile
Where there is more than one patient, it is often preferable to use a larger aircraft in order to make the air ambulance flight more efficient from a cost point of view. There are a variety of aircraft that can take more than one stretcher – from the Learjet 35 that can take two, to the Dornier 328 (up to 12 patients), which is often used for transporting large numbers of patients from popular winter sports destinations back to their home nations during ski season by ADAC Ambulance Service and Tyrol Air Ambulance. The ‘plaster flights’, as these flights filled with winter sports victims are known, are a common way for an insurer to benefit from the economy of scale that results from carrying multiple patients onboard a flight.

Conclusion
So, in answer to the question that was mooted at the start of this piece – why are there so many different air ambulance aircraft on the market? – it is quite simply because each case that is dealt with via the air ambulance, assistance and insurance company is unique, and the industry has responded by making sure that no matter what your patient needs or where they are, there is a plane and a medical crew waiting to be deployed. The next time you’re on the phone to the air ambulance company and they are offering to fly your client home onboard one of their aircraft, consider which aircraft will best fit the needs of the patient, the needs of the plane – for example, the runway length needed – and finally, of course, how much the whole thing is going to cost you. ITIJ is not expecting every assistance company claims handler to become an expert in aviation, but it would certainly mean a more educated decision could be made by the company if the significant differences between the aircraft on offer were more clearly understood.
Moving patients in 2014

While an air ambulance provider’s choice of aircraft may be an extremely important factor when considering the best fit for the work it carries out, the medical kit and technology carried in that plane could mean the difference between life and death. Aircraft interiors are compact, so very careful choices have to be made when deciding what equipment to carry onboard and what not to invest in. Here, we take a look at some of the new and innovative products being used by air ambulance providers in 2014, and consider what might be carried onboard in years to come.

**QuikClot Gauze**
Developed for use by the military and now increasingly finding its way into the commercial HEMS and even fixed-wing aeromedical arena, the QuikClot Gauze is a dressing impregnated with kaolin, which helps promote clot stabilisation to control bleeding. The product is useful in secondary and primary air transfers, and according to Bryan Pond, chief flight nurse at CALSTAR in the US, is of particular use in extreme cold or for patients using blood thinner medications. Raquel Sahs, transport nurse manager for Mayo One and Mayo Med Air at Mayo Clinic Medical Transport, meanwhile, told the *Air Ambulance Review*: “We carry the QuikClot on both our helicopter, Mayo One, and our fixed-wing aircraft, Mayo Med Air. It aids in bleeding cessation in cases where a tourniquet is not feasible and where direct pressure alone cannot mitigate bleeding.”

Another product that is extremely useful as a clot stabiliser is tranexamic acid (TXA), something that began appearing on civilian air ambulances a couple of years ago, and is now finding its way onto fixed-wing air ambulances. TXA is used to stop bleeding and is usually given as a bolus on an aeromedical flight and followed up by an infusion at the receiving medical facility. Both CALSTAR (on its fixed-wing and rotary craft) and Mayo Clinic Medical Transport (on Mayo One) carry TXA.

**Blood products**
A great deal of progress has been made in recent years with regards to the carrying of blood products by air ambulance crews. The Mayo Clinic Medical Transport aircraft, for example, currently carry packed red blood cells (PRBCs) and thawed plasma to aid in massive transfusion protocols and for patients with elevated INRs (International Normalised Ratio – a measurement of how long it takes blood to form a clot). This does, however, require blood bank support and arrangements for the product to be thawed before it is placed on the aircraft. Furthermore, says Raquel Sahs: “Once the plasma is thawed, we exchange it with the blood bank after three days to give the medical centre an opportunity to make use of the product before its expiration, thus minimising waste of this valued and limited resource. This plan we have put in place means we rarely experience waste.” Both PRBCs and thawed plasma need to be stored in refrigerators, but PRBCs have a longer shelf life of around 42 days.

**Platelets**, on the other hand, can be stored at room temperature (for five days), and this is also something Mayo Clinic Medical Transport is looking at carrying onboard its aircraft in future. As Raquel Sahs explains: “Carrying platelets really depends on blood regulations and having an active blood bank that is supportive of managing controls and products for our aircraft. This is in the works, but with no definitive date at this time.”

**Lyophilised (freeze dried) plasma** can also be stored at room temperature, but has a shelf life of two years. Made available to a civilian air ambulance operator – Medic’Air International in France – for the first time last year, it is easy to use and is reconstituted within minutes with just 200 cc of water. Said Dr Hervé Raffin, CEO of Medic’Air: “The
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concentration of fibrinogen is guaranteed at two grams per litre, and the level of coagulation factors is also guaranteed (factor VIII at more than 0.5 IU/ml). It is used by the company to prevent haemorrhagic shock, and in cases of severe anaemia.

Blood analyser
Blood analysers are handheld devices that offer blood testing by the patient’s bedside, producing lab-quality results in minutes. One such device is Abbott Point of Care’s i-STAT, which utilises cartridge technology and incorporates advanced biosensors to perform common diagnostic tests, including cardiac markers, blood gases, chemistries and electrolytes, lactate, coagulation and haematology.

As space is of the essence onboard many air ambulance aircraft, deciding which cartridges to carry may be an issue. Mayo Clinic Medical Transport, for example, began carrying INR cartridges in February 2014, and also carries lactate and complete blood count (CBC) cartridges. The benefits of such devices for the aeromedical industry are without doubt, however. CEGA Air Ambulance began using a blood analyser device 18 months ago and has been prompted to purchase a second device due to 'the benefits it brings to patient safety and management' across its operation. Stuart Cox, senior flight nurse for the company, told the Air Ambulance Review: "[The device] provides [us] with crucial information that improves clinical decision-making, patient safety and the overall quality of the critical care transfer. It changes the care and treatment of the critically ill at any altitude, in any country, at any time."

Vital signs monitors
Portable vital signs monitors are essential to the air ambulance industry. Some of the key products being used and trialled today include:

- Cheetah Medical’s non-invasive cardiac output monitor (NICOM). When AirMed UK started using this product in July last year, it became the first non-military organisation to do so for aeromedical transfers. Lightweight and easy to use, the system minimises patient discomfort and clinical data is displayed within two minutes, allowing users ‘to assess fluid responsiveness in the patient, fine tune fluid management, and titrate vasoactive drugs’. AirMed’s medical director Dr Jon Warwick said: “The NICOM is much easier to use than alternative systems and has the flexibility for use on any of our patients regardless of their consciousness level.”

- Remote Diagnostic Technologies’ Tempus Pro. This robust, portable vital signs monitor was tested at the end of 2013 in a six-week trial in Algeria and Nigeria by International SOS (ISOS), and combines the diagnostic capabilities found in standard hospital vital signs monitors with extensive two-way communications. It boasts 3G, GPS, wi-fi, Bluetooth and Ethernet connectivity, and various external devices can be connected to it, including electrocardiogram leads, contact temperature sensors and USB ultrasound probes. Talking about the recent ISOS trial, the company’s regional director EMEA Arnaud Derossi said: “Initially, participants were slightly sceptical of the idea of telemedicine. However, they were quickly won over by the Tempus Pro.” He praised its capabilities and usefulness in the field, especially its use in remote locations. "Often it is simply a matter of a medical practitioner in the field wanting to get a second opinion from a colleague. At times, a remote consult can even save an unnecessary medical evacuation.”

- Zoll's ProPaq MD. Brought to market for both military and civilian use in 2010, the ProPaq MD remains the vital signs monitor/defibrillator of choice for many in the aeromedical industry. The ultra-light device features defibrillator capabilities and can monitor all physiological parameters, including three invasive pressures and two temperature channels, for over six hours on a single battery charge. It is used by companies including AirMed in the UK, and Fox Flight, Angel MedFlight and CALSTAR in the US. Angel MedFlight said of the product: "It is one of the most essential and advanced pieces of medical equipment we have onboard.”

Looking to the future, Raquel Sahs at Mayo Clinic Medical Transport sees the use of ultrasound telemetry in the aeromedical industry to monitor vital signs: “Ultrasound would be helpful in arrest situations to check cardiac activity and also
potential haemorrhage sources, so interventions could be adjusted accordingly.”

Electronic patient loading devices
We’ve seen articulated stretchers and other electronic patient loading devices used widely in the aeromedical industry for some time, but March 2014 saw the launch of a new piece of equipment from Ferno – the iNX Integrated Patient Transport and Loading System, which is hailed by the company as a ‘game-changer’. Via its work with the US military over the last 10 years, Ferno has developed a new product set, the cornerstone of which is the iNX System. The system integrates a stretcher and loading device and allows a user to load a patient or incubator into a road or air ambulance at the appropriate load height without lifting. This is made possible via a single-touch, lightweight hydraulic lifting mechanism, with independently controlled legs and a stretcher that is fully adjustable. The unit also has an independent memory-free battery, programmable load height function, and lighting panels. (Air worthiness certification is pending, but a supplemental type certificate (STC) has been sought for the EC145. Further certifications will be sought in line with consumer requirements.)

Hypothermic treatments
Induced hypothermia is particularly useful for protecting the brain tissue of patients who have suffered a myocardial infarction. According to data published by the Advanced Life Support (ALS) Task Force of the International Liaison Committee on Resuscitation (ILCOR), October 2002, ‘unconscious adult patients with spontaneous circulation after out-of-hospital cardiac arrest should be cooled to 32°C to 34°C for 12 to 24 hours when the initial rhythm was ventricular fibrillation (VF).’ To this end, induced hypothermia has been used in the aeromedical industry for a number of years. In 2008, LifeFlight of Maine became one of the first helicopter air ambulance units to adopt the cooling protocol, but it has been slow to catch on. However, today, hypothermic treatments are advancing and are also being used in the fixed-wing sector. Acute Air Ambulance in Florida, for example, has recently implemented protocols and trained its medical crews to administer cooling agents in appropriate situations. As Lori Brown, the company’s director of medical services, told the Air Ambulance Review: “Because the majority of myocardial infarcts occur outside the hospital setting, the application of induced therapeutic hypothermia devices after cardiac resuscitation has presented us an option of delivering medical care with a positive outcome.” Following the administration of sedation medications, Acute Air Ambulance cools the patient by: infusing chilled IV fluids; applying cold packs to the patient’s neck, armpit and groin area; and using fan therapy, cooling helmets and blankets, and wet towels.

Neo Pod
Due out in the third quarter of 2014, Advanced Healthcare Technology’s sister-model of the Baby Pod is sure to stir interest within the aeromedical industry. Providing all the benefits of the Baby Pod II, but with further weight reduction and reduced internal volume due to its shorter size, the Neo Pod has been designed specifically for the transport of smaller neonates.

The Baby Pod II, since its launch over eight years ago, has been at the forefront of moving neonate patients. Its carbon fibre construction makes it light yet durable, and it can be secured to any stretcher or trolley with its versatile strapping system. It also features shock absorbent foam to reduce vibrations during transport, a vacuum mattress that conforms to the infant’s shape and a heated mattress insert to maintain a stable body temperature. It is used by air ambulance firms all over the world, including Angel MedFlight in the US, and CEGA Air Ambulance and AirMed in the UK.

CEGA’s Stuart Cox offered these thoughts: “The Baby Pod II is the expected standard for transporting neonates weighing between two and nine kilograms. It is the only product of its kind that safely transports infants in an airframe or road vehicle and that has been crash tested to 20g for up, side and forward directions.” Look out for the Baby Pod III in the not-too-distant future.
A young Swiss man was seriously injured in a paragliding accident in a rural area in the northeastern part of Brazil. Suffering from a comminuted fracture of the lumbar vertebrae, he was admitted to hospital, where he was stabilised but not able to undergo surgery. The risk of displacing the fractured bone by moving him and thereby possibly causing neurological complications was considerable – something that made transport more difficult, but by no means impossible.

Early in the morning on 31 October, the Operations Centre of Rega at Zurich Airport received an international alarm call via the Rega emergency app for smartphones. The four-hour time difference between Brazil and Switzerland meant that the alarm had been raised shortly after midnight. A young Swiss man, who was on a paragliding holiday in the vicinity of Quixada in northeast Brazil, had crashed on landing after a long flight and suffered a vertebral fracture (comminuted fracture of the LV 2 lumbar vertebrae). The emergency services came to his assistance and took him to a local clinic. The medical staff there managed to stabilise his condition, but due to lack of space, he had to spend his first night in the casualty department on a bed made of wooden planks. It was from here that he alerted Rega.

Immediately after receiving the emergency call, Rega’s medical consultants contacted the doctor on duty in Brazil. It emerged that a medical examination had already been carried out, during which the neurological functions had also been tested. A conventional X-ray examination and several CT images subsequently confirmed the diagnosis and helped the doctors assess the extent of the fracture. It was vital to avoid moving the patient in any way, as with an injury of this kind, this could cause serious complications. Any awkward movements might displace the

Rega describes the repatriation of an adventure sports enthusiast who sustained serious injuries in Brazil.
The patient being loaded into the ambulance-jet at Teresina airport

which in turn could potentially result in irreparable neurological damage as serious as paraplegia. Surgery was necessary to set the broken bone, but this could not be performed on location and there were no other fixation possibilities on a par with European standards. In view of the diagnosis and the substantial risks involved, the physician recommended that an operation should be performed within the next 72 hours. Thus the situation was clear – the patient needed to be flown back to Switzerland as soon as possible.

Rega operates independently of the State, and acts according to medical necessity, irrelevant of financial interests, in line with the Fundamental Principles of the Red Cross. Therefore, back at the Operations Centre, planning of the mission immediately got under way. The flight co-ordinator responsible informed the highly relieved patient by mobile phone about the intended repatriation and called out two crews, so as to comply with the rest period regulations for such a long journey. Meanwhile, the dispatcher started preparing the flight route and schedule. Less than two hours later, the flight plan was drawn up, the preparations completed, and all the crew members ready to go. Shortly afterwards, the ambulance jet took off on course for Brazil.

Aircraft choice

Rega operates a fleet of three Bombardier Challenger CL-604 jets, which are primarily employed to repatriate Swiss nationals or residents for medical reasons. Subject to availability, the aircraft are, however, also used for other medical transports and transfers. The CL-604 is essentially a flying intensive care unit. Its standard equipment includes a wide range of medical material, and 16,000 litres of oxygen, right through to blood analysers and defibrillators. The spacious cabin also allows the transport of severely injured patients, even those whose condition is unstable, who require additional high-tech equipment. It is possible to carry onboard a whole series of special devices, such as an intra-aortic balloon pump (IABP), extracorporeal membrane oxygenation (ECMO), an Impella ventricular assist device or haemofiltration equipment. In addition, the jets are fitted with a foldable ramp, specially designed for Rega, which allows patients lying on a stretcher to be loaded into the aircraft horizontally. This ramp, which is just over five metres long, weighs 38 kilos and has a 19-per-cent incline, and can be unfolded within a matter of minutes. The CL-604 aircraft has a range of 6,200 kilometres or 3,300 nautical miles. Consequently, for the journey to Teresina in Brazil, where the patient was waiting in hospital, stopovers were scheduled in Sal (Cape Verde) and Fortaleza (Brazil).

Time was steadily ticking on. Immediately after landing in Teresina, the crew made their way to the hospital to check on the patient. He was swiftly wrapped in a vacuum mattress to immobilise him properly and also to allow him to lie more comfortably – until then, he had spent the time lying on hard, wooden bed.

Home stretch

The ambulance jet took off again the next morning. The patient was transferred onto a vacuum mattress on a stretcher by two Rega flight nurses using a scoop and driven by ambulance to the airport, where the jet – which in the meantime had been refuelled – was ready and waiting to depart. The return journey took them once again via Fortaleza, and then via Gran Canaria back to Zurich. The return trip lasted a good 15 hours, including stopovers. During such long flights, patients normally need to be regularly repositioned to prevent pressure sores. In this particular case, however, this was not possible due to the serious nature of the injuries and the risk of displacing any bone fragments. Instead, now and again the valve was slightly opened to allow some air into the vacuum mattress and let out again, so that the small polystyrene balls inside rearranged themselves to make the patient was more comfortable. The ambulance jet landed in Zurich shortly before midnight on 2 November, around three days after the alarm had been raised. The patient’s relatives had been kept regularly up-to-date by the Rega Operations Centre, and were also informed of the expected arrival time. The patient’s girlfriend greeted him even before he left the aircraft. In the meantime, the patient’s condition had stabilised to such a degree that there was no medical indication for him to be flown to hospital by helicopter, so there was no need for a wing-to-wing transfer at the last moment. Instead, he was immediately driven by ambulance to the hospital, where shortly afterwards he underwent a double operation, which realigned the comminuted fracture with the aid of stabilisers. These stabilisers will remain in place until August 2014.

With a fracture of this kind, the healing process usually takes around three months. Four weeks after being discharged from hospital, the sports enthusiast started gentle but regular exercise by swimming backstroke. After vertebral body fractures, extreme movement or strain should be avoided, particularly during the healing phase, in order to prevent permanent damage. However, dispensing with sport altogether would also be counterproductive, as gentle exercise strengthens the muscular system and accelerates recovery.

The medical check on 30 December gave the young Swiss a clean bill of health. Just three months after his accident, he found himself once again gliding with his paraglider high above the clouds – fortunately, this time without incident.

Author

Philip Zumstein is a media spokesperson for Rega, the Swiss Air-Ambulance, a position he has held for the past year. He previously worked for Swissair for eight years, where he held various positions, ultimately in the area of marketing/sponsoring. Later, he took up a new challenge in the communications division of Holcim, the Swiss cement giant, where he remained for 10 years before joining Rega in 2013.
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In it for the long-haul

How did you first become involved in the air ambulance industry, and how did you progress to your current position at TAA?

I became involved in the air ambulance industry for the first time in 1979, when I started my career with Tyrolean Airways. At that time, TAA was part of Tyrolean Airways. I left Tyrolean Airways in 2010, having been managing director of the company since 2006, and joined Tyrol Air Ambulance in June the same year. Together with Dr Carolin Porcham, I was appointed joint managing director of Tyrol Air Ambulance in January 2013.

Although we appreciate that no two days are ever the same, could you describe a typical day in your current role?

You are right, no two days are the same; however, there is some routine in a typical day. Usually there are meetings scheduled each day, some of them on a regular basis, some ad-hoc. It is important for me to have the doors open at any time. And it is also important for me to keep an eye on the daily operations of the company in order to be aware what is going on at all times.

What do you find to be the most challenging aspect of your job?

It is a challenge to find a way that our clients get the prices they expect and we get the prices we have to have in order to be able to keep our high standards. Another challenge is the regulations the industry is confronted with, such as future flight duty time limitations, fatigue risk management, and the transition to EASA regulations.

The European air ambulance marketplace is a competitive business environment. What does TAA do to ensure that it stays ahead of the game?

The marketplace in Europe is a very competitive environment indeed. There is certainly overcapacity in the market. What makes us different to others is that our ambulance shuttle flights are guaranteed departures, which we operate with our Dorniers, and which can take up to six stretcher patients plus accompanying persons and baggage. We operate one to two such flights a week all year round from the Canary Islands via Spain to Central Europe or from Turkey/Greece to Central Europe. For 2014, we plan additional flights from the Canary Islands and Spain to the UK and for Palma to Cologne or Dusseldorf in Germany. In addition, we operate regular flights for injured skiers from Innsbruck, Austria and Grenoble, France in winter, and from Innsbruck to Rotterdam, Netherlands, there are usually between three and five flights a week. With our G100 aircraft, we can operate single and double stretchers nonstop from the Canary Island to Scandinavia when other, similar aircraft would usually need a fuel stop. Those aircraft are also a good and reasonable alternative for long-haul flights.

TAA’s focus on the safety of its pilots and crewmembers means that the company has received a platinum award for 40 years of operating without an accident. How has the company managed to achieve this goal?

We received the EBAA Platinum Safety of Flight Award in 2013, which honours 50 years of operating without an accident. Safety and quality have always been high priorities for Tyrol Air Ambulance. Quality assurance for the whole organisation is one
of the key factors to achieve this. This is measured by regular internal audits.

Congratulations on TAA winning the ITIJ Air Ambulance Provider of the Year award in 2013! What does the award mean to you personally, and to the business as a whole?

I am very proud that TAA won this award, but I have to say that this is an award for each single employee in our company, and it shows that our customers value our high standards and our products. It is also an order for us to work even harder in future.

Of the aircraft utilised by TAA, which are used the most frequently? Why is this? Is there a particular aircraft that insurers prefer to employ?

Well, our two G100 aircraft did more than 1,600 flight hours in 2013, showing how popular they are as air ambulance aircraft. One of our USPs, though, is certainly the Dornier 328 aircraft in our fleet. Our ambulance shuttle flights on the 328s have become more and more attractive for the insurers, as they can save money when groups of patients are transported on such flights.

Does TAA ever feel under pressure from a cost point of view to quote insurance company cases as low as possible in order to make sure you get a fair share of this business?

Yes, there is certainly some pressure, as I already said before, but we have to cope with this. That means that we have to keep our cost structure low in order to be able to offer competitive prices.

Many air ambulance companies now claim to provide ‘intensive care in the air’. What does this term mean to TAA?

This is no question at all for TAA this is not just a slogan, we really have the standards for intensive care and our customers are aware of this. We have the medical equipment needed, and we use intensive care doctors and intensive care nurses on our flights.

How important is accreditation to TAA? Do you think it is valuable to the industry to have a choice of accreditation bodies (such as the industry has now with EURAMI, CAMTS and NAAMTA)?

Accreditation is important for us and therefore we are EURAMI-accredited. We will definitely renew with EURAMI, which has to be done this year. Coming to your question about the choice, I personally think that there should be just one standard worldwide, as there is the IOSA standard for scheduled and charter airlines.

It is a challenge to find a way that our clients get the prices they expect and we get the prices we have to in order to keep our high standards.

What do you enjoy most about your role at TAA, and about being in the European air ambulance industry?

It is still a rather small company where almost all of us know each other. We have an extremely motivated team of employees, and we have high standards to keep. We also have good personal relationships with our customers, which is integral to the success of the business.

If you could do any other job in the world, what would it be?

As already said, I am in the aviation business since 1979. There is a saying, once you are in aviation you stay in aviation. Therefore I cannot think about a job outside aviation.
On first consideration, the nightmare scenario for an air ambulance plane flying into a conflict zone might seem to be an attack on the aircraft – either in the air or on the ground – by a terrorist organisation such as al Shabaab in the Horn of Africa or an al-Qaeda associate in the Middle East or Afghanistan. In practice, more mundane concerns such as extreme weather and a lack of airport infrastructure are more persistent worries for air ambulance operators in such areas.

Difficult target

In 2011, concerns were raised that SA-7 missiles from Libya could have fallen into the hands of al-Qaeda affiliates, but if so they have not been used against military or civilian aircraft. Sales of ‘manpad’ – man-portable air defence – equipment to Somalia were banned, even to government forces, for fear that they could leak into the hands of insurgents. As manpad equipment has become ever more sophisticated, it has also become more complicated to operate and much more expensive. Obsolete first-generation SA-7s are reportedly available on the black market for as little as US$2,000, but modern ‘manpad’ munitions cost up to $45,000. Many ragtag militias may lack either the budget to acquire them or the training to deploy them effectively. It is also possible that terrorists may prefer to use these costly, one-shot weapons against prestige military targets or to cause mass civilian casualties than to expend them against an air ambulance. That said, the avoidance of missiles is a real concern in some areas.

From its base in Kenya, AMREF Flying Doctors has carried out numerous missions from African conflict zones such as Somalia, often working on behalf of the African Union and United Nations (UN) to evacuate wounded members of military peacekeeping forces. Most are trauma cases. Evacuating patients from airfields where most infrastructure is lacking or has been destroyed, and which may be vulnerable to attack by local armed factions, requires very careful planning, including working with local peacekeepers to secure a wide perimeter around the airfield against small arms fire or surface-to-air missile attack against the medevac aircraft. In the case of Somalia’s capital, Mogadishu, this can even involve placing patrol boats out at sea – the safety cordon has to be wide enough to keep aircraft out of range of weapons such as the rocket-propelled grenades that are widely used by local fighters. To this end, planes often approach a runway from over the sea, where possible – as opposed to over land – in order to
remain as far out of range of land-based missiles for as long as possible. Once on the ground, turnaround time for an air ambulance in a conflict zone can be tightly limited. At Mogadishu, the AMREF medevac crew has just 30 minutes to stabilise patients before a very rapid take-off, so they need to be highly trained and well prepared. Kidnapping, too, is a consideration that needs to be weighed in some lawless areas – another factor that makes a fast turnaround desirable.

Secure landing
Different risks and threats are associated with different areas and types of unrest. Paul Brinkworth, operations co-ordinator at specialist medevac operator RMSI, defines a conflict zone as ‘an area where war or political instability is causing disruption to the essential infrastructure and services required by the community’. Some countries or regions may become conflict zones only temporarily before stability is restored by local security forces or international peacekeepers, allowing air ambulance and medical assistance operations to return to normal. Others – Somalia is the most infamous example – may degenerate into ‘failed states’.

“It is not usually a question of a whole country, as long as there is no ‘no-fly zone’ in place,” said Volker Lemke, director of sales and marketing at the German-based air ambulance company FAI, which operates in Iraq and Afghanistan. He makes a distinction between ‘conflict zones’ or ‘war zones’ and ‘combat zones’.

“‘Combat zone’ means ongoing fighting activity in a limited area or region. ‘War zone’ might be more the umbrella term for a larger area with combat zones and non-combat zones,” he explained. “If fighting is going on around an airport we won’t fly into the area. As we are operating in secure flight areas only, we need no special training. The selected airports we are using in so-called ‘hot areas’ can be approached using standard procedures.”

In any conflict zone there may be areas where air ambulance teams will not go, agrees Lynn Pima, vice-president of marketing at Europ Assistance USA. “Key to the mission is ensuring the landing area is secure. If the landing area is not secured you cannot land. A good example is Syria. In parts of Syria, such as Damascus, you can land at the moment, whereas some of the rebel-held areas are not secure and you cannot land due to potentially hostile action and not having airport infrastructure such as air traffic control or refueling facilities.”

As Brinkworth points out, away from military air bases and international airports in capital cities, airfields are often basic, presenting challenges for air ambulance pilots and co-ordinators even in peacetime. In conflict zones, landmines and unexploded ordnance increase risks to helicopter air ambulances operating in areas that fixed-wing aircraft cannot reach.

Air ambulance missions must sometimes operate in uncontrolled airspace where instrument landing systems, ground aviation radar and even basic infrastructure such as landing strip lighting has been destroyed. In some cases, local security forces may even use radio and binoculars to talk an aircraft down. In many conflict zones, rough terrain and extreme weather conditions are factors that must be planned for too. Where no air traffic control assistance is available, pilots must be prepared to use ‘see and avoid’ tactics, flying under visual meteorological conditions – not always possible in combat zones such as Somalia, where visibility may be impaired by dust storms or tropical downpours, or Afghanistan, where weather conditions veer between extreme heat and extreme cold. Rapid shifts in weather can strand crews and patients in places where harsh conditions add to the risks of operating in a conflict zone.

“Nothing is easy when operating in a war zone environment; it’s normally easier to be evacuated from a main military base as they have the runways and infrastructure of a regular airport,” says Lynn Pima. “Forward operating bases sometimes have a much shorter runway or no runway at all. This means that you need to use either helicopters to pick up patients and transfer them to a main base, or a turboprop aircraft able to perform short take-off and landing with the ultimate goal of meeting the international air ambulance at the main base so that the patient can be evacuated out of the country.”

Often in conflict zones or areas of civil unrest, poor roads are the norm too – especially following a natural disaster – and the use of road transport beyond major cities can be impossible because of
the risk of attack or hijack by insurgent militias or criminal gangs, so air ambulance evacuation is often the only option.

Air ambulances are also essential in almost all conflict zones, because in many such areas emergency medical infrastructure may have been rudimentary even before conflict broke out, according to Brinkworth. At the best of times, telecommunications may be an issue for air ambulance crews interfacing with the staff of small medical facilities in remote areas of developing countries, which may not have broadband Internet access, mobile phone coverage or even reliable landlines. At the same time, they are unlikely to have the equipment or the trained staff to enable them to deal with severe burns and combat trauma wounds. They may additionally be swamped by the sheer number of civilian refugees seeking treatment for relatively uncomplicated conditions that can be treated on the ground and do not necessarily require evacuation. They may also be commandeered or targeted by ill-disciplined armed factions involved in local conflicts. Meanwhile, international military hospitals in conflict areas may be well-equipped and well-protected, but unable or unwilling to cope with the demands of individual civilian expatriates as well as the needs of their own combatants. Reportedly, such facilities are increasingly denying admission and treatment to expatriates.

In some conflict zones, the armed forces of world powers such as NATO may be reasonably able to handle the emergency air ambulance role for their own combatants and in some cases for local civilians and expatriates too. Europ Assistance USA's patients are typically private civilian contractors supporting military forces, Pima says. "We also see journalists and aid workers, with a limited number of locals. It's actually a lot more challenging to evacuate a local national due to the patient's immigration status."

But the military forces of less wealthy countries, many of which are involved in peacekeeping operations under the aegis of the UN or organisations such as the African Union, are not as well equipped to support their troops using their own medevac aircraft. As a result, civilian air ambulance operators are in demand to fill the gap.

Real danger?
For air ambulances flying into conflict zones, the nightmare scenario is always a possibility – but in most cases, it is outweighed by routine practicalities. "Speedy aircraft are not easy to target [for missiles]," says Volker Lemke of FAI. "It remains a nightmare scenario, but I'm convinced that other factors like technical failures, weather and so on have to be considered as the real threats." Ensuring that the airport or landing area has been secured, and being prepared for difficult terrain and weather, are key.

An air ambulance plane being shot down while en route to pick up a patient, or on the return leg, is so far something the industry has not had to deal with. However, with employees and aid workers venturing into ever more dangerous areas of the world, it may only be a matter of time until this worst case scenario becomes a reality. What matters most is that the air ambulance company you employ to evacuate your clients from hazardous regions has the specialist knowledge and experience to manage the safe delivery of the patient.
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Starting any kind of business, anywhere in the world, is a daunting task, but plunging into the air ambulance business in South Florida is a challenge well beyond the usual start-up obstacle course. Lori Brown gives her personal and honest insights.

After the many challenges that our business faced in the start-up process, we had to confront the fact that maintaining the business is an even larger mountain to climb. That said, things are going well, and I’m happy to be sharing my thoughts on the obstacles faced by those wishing to enter the international air ambulance marketplace, and provide some considerations for how to overcome such challenges.

Feeling the fear and doing it anyway

What were we thinking getting into the air ambulance business? Will we have enough capital each month? How will we pay overheads and employees? How do we attract providers? Will they continue to use our services? What about the competition? Are we crazy? These feelings are all normal. Some days you might think you are crazy to have set up in the air ambulance industry, but the fear of quitting and giving up becomes bigger than fear itself. Success is your only option.

With a background in hospital and aeromedical care, the key staff at our company came together using their expertise to start a company in an industry in which we felt we could fulfill a real need and make a difference. Knowing your marketplace and having an understanding of the industry you wish to enter is vital. The main challenge here, as with any new start-up, was formulating a solid, well-organized business plan and making sure we had enough capital to cover expenses. Money management is imperative in any financial concern, but especially when you are the owner. Small businesses must meet payroll, execute marketing programmes, pay operational overheads and, in the case of air ambulance firms, plan for expansion of their fleet. It is sometimes difficult to grow a business, and running out of cash makes business growth and survival impossible. At the same time, investors and lending institutions are reluctant to invest in a small business that is not well established and that doesn’t have significant equity or resources (which a larger air ambulance corporation will likely have). Also, in South Florida, businesses can be very seasonal, which adds to lenders’ and banks’ fear of investing: companies are often here one season, and gone the next. Private investments are an option, but you lose control of decision-making capabilities; so we opted for keeping it simple and having a business plan that is reviewed each season by our owner and directors, and that can be adjusted and re-evaluated as and when needed.

Standing out from the crowd

Before starting any business, you need to have a good idea of your competition, but in the air ambulance industry in South Florida, competition is fierce. The region has enjoyed strong economic growth due to a thriving tourist industry over the last 50 years: snowbirds still flock here each year, and new, major ports have made it a mecca for the cruise industry. Meeting the needs of these tourists is a thriving air ambulance industry. Another reason why South Florida is a good place for an air ambulance business to find a home is its proximity to the Caribbean, Central and South America, from where tourists often need repatriating due to the lack of certain medical facilities.

Many of our competitors have been in the industry for many years and have long-standing relationships with hospitals, insurance companies, and medical travel providers. Competition can be intimidating, but that does not mean giving up: it is possible to

Know your marketplace and having an understanding of the industry you wish to enter is vital.
penetrate the domestic and international market by marketing and advertising to insurance companies, travel-related businesses, and hospital providers, reaching new clients even on a limited budget. Advertising is expensive, though. We have used free marketing where available – Internet resources such as social networking websites, blogs, and company websites. When starting out with a limited budget, it is difficult to reach industry providers via other forms of marketing, such as television and print; but attending events such as the International Travel Insurance Conference (ITIC), as we did in San Juan and Vienna in 2013, provides an excellent opportunity to network with your target audience. Furthermore, if you appoint an international marketing director who focuses your company’s marketing efforts and can come up with ideas to encourage providers to use your services, this can be invaluable. The marketing director should be instrumental in organising meetings with new and previous providers, talking up your business at every opportunity, and using their networking skills to make new contacts, always with a business card to hand. At the end of the day, though, patience is key. A slow start and slow growth is common in any small business. To start in any industry, let alone an already established industry, without expecting these growing pains would spell disaster.

Private investments are an option, but you lose control of decision-making capabilities

The right person for the job

It might seem like stating the obvious, but the people behind your company, as well as those working in it, need to be specialists with experience in their field. By bringing together key management staff who have years of experience in emergency medicine and critical care in a hospital and aeromedical setting, as well as pilots who have experience of flying within the aeromedical industry, you have a credible foundation for your company. Placing truly capable people in key roles and building your teams around them shows potential partners and clients that you know your business. So, despite having longstanding relationships with other, well-established air ambulance companies in your area, potential business partners may still be willing to work with you, as a new provider, if you show you have the skills and professionalism to deliver the results they – and their patients – need. Appropriate staffing can be a challenge for any business, but for a start-up air ambulance company staffing is complicated by the need to hire outstanding, trained medical personnel and experienced flight co-ordinators. It is a struggle to attract and keep talented medical personnel, who are so sought after by other concerns. My medical staff are all employed by hospitals and fire departments and work per diem. It is difficult to offer employment packages that include the health benefits, vacation and sick days, profit sharing, and higher salaries that larger established companies may offer to attract employees, but to reduce employee turnover our employees are offered competitive salaries within a safe and healthy working environment, and a real spirit of co-operation.

Accreditation considerations

Accreditation or no accreditation? This is a question I have discussed with members of our management team, many well-established air ambulance companies (accredited and non-accredited), and travel insurance and medical providers. Since we are a new air ambulance company, and since many travel and insurance providers request accreditation, the question we have had to answer is how do you gain the trust of these providers if you are not yet accredited? Gaining providers’ trust is problematic, but sometimes the first trip is all you need. If it goes well, with a positive patient outcome that is cost contained, trust is secured and you may just have a faithful customer. At the end of the day, we feel that excellence assures that your services will be utilised, whether you are accredited or not.

Maintaining integrity

When we first launched our air ambulance company, we were very desperate for work. But even in this situation, you should never lower your standards of care or your prices just to get a client or to provide short-term satisfaction to a provider! This leads to bad business practices, rapidly spread bad word-of-mouth, and a bad business reputation in the industry. If you have set up your business with a solid foundation, key personnel and sufficient initial investment, you need to believe in the services you offer and stand by them. When you believe in the excellence of your services, others will too.

By no means are these the only struggles we have faced. There have been many more and I’m sure there will be other obstacles to come in the years ahead. When going into any business endeavour, the worst mistake a business owner can make is to not anticipate the challenges ahead. What really matters, when all is said and done, is that the medical care given to the patient delivers a positive outcome at a fair price. It makes all these hurdles well worth the sweat and sacrifice. If you asked us if we’d do it all over again, the answer would be ‘Yes, in a heartbeat!’

Author

Lori Brown is a board certified adult nurse practitioner with the American Academy of Nurse Practitioners, director of medical services at Acute Air Ambulance, and in private practice. She has over 22 years of extensive training, certification, and experience related to cardiac and endovascular critical care patients.
SAY WHICH STANDARDS PROVIDERS HAVE MET
Publish the accreditation standards that were in force when the provider was accredited. Explain what is meant by ‘substantial compliance’. Where a provider did not meet one or more standards, but was accepted nonetheless, be open about and publish your reasoning.

PROVIDE INFORMATION ON ACCREDITED PROVIDERS
Along with the basic contact information, state which set of accreditation standards they were last judged against, list the aircraft they use and who owns and operates the aircraft. Give the locations of all bases they operate from, along with their headquarters; where there are different accreditation categories, state the type of accreditation the provider holds; if your standards include requirements relating to key personnel such as medical directors, provide their names.

BE AN ADVOCATE FOR QUALITY
Share your expertise with payers: be pro-active about advising them on the characteristics of a good air ambulance provider – and a bad one. In particular, give clear advice on how not to be taken in by false claims made online, such as the use of doctored images of aircraft to claim ownership. Explain the reasoning behind the standards you set, including the impact on the patients and the payers. Take a leading role by engaging with national governments and international organisations.

REACCREDIT IN A TIMELY MANNER
As a matter of course, complete the reaccreditation process so that providers can maintain their accredited status without extensions or gaps, lest providers find they are unwittingly using unaccredited providers. If reaccreditation cannot be completed in time, then backdate the new accreditation period to start from the end of the previous one.

PRO-ACTIVELY POLICE ACCREDITATION CLAIMS
Take the time to monitor providers’ claims of being accredited and their use of your logos online and in print. Where providers who have not been accredited (or whose accreditation has expired) suggest that they hold current accreditation, take steps to correct this, including warning payers and the press if needs be. Ensure that all accredited providers are using up-to-date logos and symbols to show their status – and display examples of the correct logos on your website, with advice on how to check whether a provider really has been accredited.

OPERATE CLEAR CHANNELS OF COMMUNICATION
Keep payers up to date by making news announcements when providers are accredited or reaccredited, or when your policies such as accreditation standards change. Be outspoken about your achievements and frank about bad news. Use social media to engage with the industry. Make it clear how anyone can contact you, and respond to enquiries in a timely and professional manner.

CARRY OUT SURPRISE INSPECTIONS
Make a number of unannounced inspections of accredited providers, so they – and their customers – know that standards have to be maintained all the time, not only during the inspection visit every ‘x’ years. Publish the results of such inspections.

EXPLAIN YOUR STRUCTURE AND DECISION MAKING
Clearly explain how your organisation is structured, how decisions are made and who makes them – what steps are taken by the executive board and what is decided by members with voting rights. Be up front about how the organisation is financed.
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