

# Post –Fellowship Study Day at British Airways' Flight Training

It seems a long time ago that I took a group of twelve post-fellowship anaesthetists to British Airways' (BA) flight training at Cranebank near Heathrow while an anaesthetic registrar. Cranebank has fourteen full flight simulators and four fixed base simulators for both Boeing and Airbus, and is the biggest Boeing training centre outside the US.

The aims of the study day were two-fold. I wanted us to gain some valuable ideas from the pilots and trainers at British Airways about how simulation training and Crew Resource Management (CRM) training (including human factors) has improved their safety record, and see if we could extend this into the theatre environment. However, it was also an opportunity to get anaesthetic friends and colleagues together from all over the Bristol area to have a day out to Heathrow and "fly a plane"!

I became interested in simulation and CRM when I attended a course on Anaesthesia Crisis Resource Management at the Barts and The London Simulation Centre<sup>1</sup>. I was fascinated by inter-personal

behaviours and how interactions can have a major influence on the outcome of critical incidents. This course was based on the airline programme and it was this that prompted me to organise the study day.

The programme started with an introductory talk by Captain Phil Dales, Chief Training Pilot, who explained how BA trains its pilots; in particular their compulsory attendance at Flight Training for two days every six months. This is a legal requirement to maintain their registration and licence. For most pilots, this is an opportunity to hone their skills and practice emergency procedures which they do not encounter when they are flying; however it is also an opportunity to pick up any problems a pilot may be having. As Captain Dales pointed out, the simulator sessions are taken very seriously and pilots who fail to show the required levels of competence can be failed.

He also produced the quarterly BA incident report, a document containing information on recent incidents and other

statistics. A tense few moments for the nervous flyer! However, it was reassuring to know that the majority of incidents were not serious and were mainly due to human factors, not equipment or aircraft failure. These are freely reported within a blame-free culture to enable system errors and personal issues to be picked up early and addressed. Some are used as training opportunities in the simulator.

BA stated in the 1990's: "All staff are expected to report any incident which may affect safety...It is not normally British Airways policy to institute disciplinary proceedings in response to the reporting of any incident affecting air safety...".

Before dividing into two groups for the rest of the day, First Officer (FO) Mathew Page briefed us all on the Boeing 777 simulator we would be "flying". How to fly a plane in 30 minutes - keep the box on the cross or let the autopilot to do it. They made it look so easy! Due to the size of the groups we had to fly the plane on a "fixed-base" simulator for safety reasons. However, the visual display really made

you feel like you were flying - although I was glad to not feel the bumps as I careered off the runway prior to take-off, or the thud when some of us landed!

Our pilots Mathew Page and Pete Nateraj showed us the pre-flight checklist and the emergency checklists for events like engine failure, which are displayed on the computer between the pilots. They discussed their views on simulator training and assessment, the procedures for briefing and debriefing with their captain, and how the crew work as a team under stress. They were also fascinated to hear how our training and experience of teamwork and emergencies compared.

Captain Martyn Townsend-Smith, a pilot and CRM instructor, explained the history and background to CRM. In the early days of aviation, accidents were often due to aircraft technical problems. However,

as technology rapidly improved during the 1960-80s and the aircraft became more reliable, accidents occurring were then attributed to "pilot error". With information from Flight Data and Voice Recorders, it became apparent that many accidents were not caused by aircraft malfunction or failure in aircraft handling skills, but by the "inability of crews to respond appropriately to the situation in which they find themselves"<sup>2</sup>. After a NASA workshop in 1979 on improving air safety, Crew or Cockpit Resource Management was born.

Crew Resource Management is "...a management system which makes optimum use of all available resources - equipment, procedures and people - to promote safety and enhance the efficiency of flight operations"<sup>3</sup>. However, it was not formalised into UK flight crew training until 1992.

Incidents were found to be caused by errors in professional judgement. For example, loss of situational awareness, poor decision making, ineffective communication and personal style issues (particularly involving the Captain). It is these four categories which now form the basis for Human Factor (HF) training programmes. This training aims to provide crew members with the appropriate knowledge, skills and attitudes to help manage and contain inadvertent errors by pooling resources and working together as a team.

However, in order to progress with CRM, there are a few assumptions that need to be challenged - the assumption of perfection, the assumption that experience avoids errors, the assumption that interpersonal skills occur naturally and the assumption that technology makes things easier. Sounds familiar? I

*FO Pete Nateraj with one of the groups at Cranbrook*





*Much scarier than a rapid sequence induction...!*

think the days of medics feeling they are God have long gone. However, medicine still has a strict hierarchy where juniors are not expected to question the decisions made by a senior colleague - but errors aren't only made by junior staff. Just because we may have the technical skills to do our job doesn't imply we are good communicators or team players; technology is only as good as the person using it.

Captain Townsend-Smith gave an example of how he uses his CRM training in the cockpit. Once all the formal pre-flight checks have taken place, he briefs and empowers his colleague by encouraging him or her to speak up if there is anything that he/she is not happy with, emphasising that they work together as a team. It is the core of CRM to have open communication between all team members and shared decision making processes. There may be many years of flying experience between them in the cockpit which should be pooled to help solve problems.

Dr Jan Shaw (a consultant anaesthetist from Manchester) talked about the Human Factor Training Course she runs and how we can use simulators in

anaesthetic training. The group had a lively discussion about how CRM could be introduced into anaesthetics and theatres and how to get the surgeons on board! Like Captain Townsend-Smith, Dr Shaw uses her knowledge of human factors to encourage team working in her theatre so the staff feel able to speak up if they are not happy. We are there to give the patient a safe anaesthetic and to look out for each other at the same time.

I had a great day at BA Flight Training and the feedback from my anaesthetic colleagues was very enthusiastic. I am trying to act upon what I learned that day by encouraging my anaesthetic team to speak up if there are problems and to look out for each other. I don't think this necessarily needs to be said openly all the time - having a friendly environment and making yourself approachable should do the trick. However, I think there is an art in speaking up if there is a problem, and care should be taken not to be rude or cause offence.

In my new consultant job I am now involved in setting up simulator training and I would like to get more experience in human factor training with a view to introducing it into the theatre

environment. There will be resistance, but I hope that it will improve the safety of patients and help form a more cohesive team.

**Kay Spooner**

Consultant Anaesthetist  
Royal Glamorgan Hospital

I would like to thank Andy Clubb, Cpt Townsend-Smith, Cpt Dale, FO Nateraj and FO Page of BA, and Dr Shaw from Manchester. The day was sponsored in part by Laerdal who sent along representative Neil Bradbury to demonstrate the features of SimMan, and Abbott. It was also subsidised by BA.

#### References:

1. <http://www.bartsandthelondon.org.uk/simulationcentre>
2. Civil Aviation Authority, Safety Regulation Group, CAP 737. Crew Resource Management (CRM) Training. Guidance for flight crew, CRM instructors (CRMs) and CRM instructor examiners (CRMIEs). Issue 2, 28 February 2006. Chapter 1, paragraph 1.1
3. [http://en.wikipedia.org/wiki/Crew\\_Resource\\_Management](http://en.wikipedia.org/wiki/Crew_Resource_Management)