Cardiothoracic critical care in Bordeaux: Impressions of a British nurse lecturer

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SUMMARY

- The French National Health Service is widely regarded as being the best in Europe
- This article describes the visit of an English nurse to a French hospital
- Similarities and differences between the provision of services and critical care nursing in the UK and France are outlined
- In response, a commentary is given by a French nurse

INTRODUCTION

The provision of cardiac and cancer services in the United Kingdom (UK) has taken top priority in the Government's attempts to modernise and restructure the National Health Service (NHS). Comparisons have been made at the highest levels between our services and those of our European neighbours, who do not seem as burdened by waiting lists and poor facilities. Yet links between nurses delivering services across Europe are underdeveloped. In particular, because of language problems, British nurses tend to look towards Anglophone countries to make international comparisons.

To fill this void, I decided, with the agreement of Edge Hill College, to visit two intensive care units (ICUs) in Bordeaux, France. This was the second of two trips I have made to critical care services in France. In 1995 I visited an intensive care unit in Paris at Hospital Lariboisiere. Critical care services here were very impressive, as was the ambience of the whole hospital, nestling between the Gare du Nord and Montmartre (Jones 1995a, Jones 1995b). Everyone in Paris assured me that, in the French provinces, things were not as well developed. This inspired me to organise a second visit to a provincial service.

Why France?

Apart from being our closest neighbour, France's health service is very highly regarded (Revill 2003). It is commonly said to have the best health service in Europe and, therefore, possibly the world. Yet the organisation of health services, and in particular nursing services, is all but unknown to nurses in the UK.

Why Bordeaux?

Several reasons brought me, now aged 48, back to a town where I spent nine months aged 23. This was a clinical visit but it also had a strong sentimental component.

Bordeaux is an ancient city, similar in some respects to Bristol with which it is twinned. It is in south west France and is surrounded by rural areas. The hospital I visited was Haut Leveque, which is in a suburb of Bordeaux called Pessac. It is one of three hospitals serving the population of Bordeaux. The three are united into a group called Centre Hospitalier Universitaire (CHU) Bordeaux.

Within Haut Leveque, my two weeks were divided between a thoracic unit and a cardiac unit. My trip was arranged by Professor Gerard Janvier, Director of Intensive Care and Anaesthesia.

It was not my intention to pick faults in either their services or our own, but rather to look at how the system as a whole operated or hung together. Perhaps, therefore, it is worth stating my overall impression before any details. I felt it was a first class service of which the French nursing and medical professions, and France as a whole, could be proud. Indeed, although I did not know this in advance, the hospitals in Bordeaux were voted best in France by Le Point, a glossy weekly magazine. The cardiac service was voted number one in the country and the thoracic service was voted sixth *(http://www.lepoint.fr/special_hopitaux2003/sommaire.html)*.

The following is a collection of impressions from my trip. I apologise in advance for any inaccuracies that may have crept in because of poor language or understanding.

THORACIC CRITICAL CARE

The thoracic unit was an ultra modern hospital, opened in 1996. The thoracic ICU was of the highest standard, catering for patients recovering from chest surgery, pneumonectomy, lobectomy, oesophageal surgery, lung transplants and so on. Out of the eight beds on the unit, six patients were looked after in private rooms. Each room had its own ventilator hanging from a gantry system.

One of the features of the French national health service is that, because there are so many more ICU beds (10% of the hospital as opposed to 1-2% in the UK), the criteria for admission are more liberal. For example, the patients who were sharing the only double room were washing themselves and talking about football! In other rooms, however, there were patients in multi system failure following transplants. In two of the rooms there was the option of maintaining the air pressure either higher or lower than the overall pressure to cater for infected or transplanted patients.

Patients on maximum therapy included those with haemolfil-

Maison Haut Leveque

tration, Picco lines, trans-oesophageal echoes, and full ventilatory support. Incidentally, I noticed they avoided volutrauma by maintaining minute volumes through low tidal volumes at a high respiratory rate, which I first noticed in Paris in 1995. I saw no pulmonary artery catheters and nobody measuring central venous pressure (CVP), but I did see bedside monitor-based measurement of blood gases.

Between the theatre department and the ICU was a recovery ward, in which there were seven beds, each with its own ventilator. Patients were brought here following anything from pneumonectomy to bronchoscopy. Many of the bronchoscopy patients had what looked like nasogastric tubes, which surprised me. When I asked, it emerged that they were tubes designed to sit above the vocal cords and deliver oxygen. This device was used instead of nasal spectacles and struck me as a much more reliable way of delivering oxygen, given the tendency of nasal spectacles to come adrift in the patient's nose.

For the provision of nursing services, things very much repeated the impression gained in Hospital Lariboisiere. For the eight

The reception and outpatients waiting area in Maison Haut Leveque

patients in ICU, there were usually three Infirmieres Diplome d'Etat [IDEs, the equivalent of registered general nurses (RGNs) in the UK]. Staffing levels are dictated by law in France, with a guaranteed standard of one nurse for every 2.5 patients. These nurses were assisted by three Aide Soignantes (AS). The AS did everything associated with patient comfort – turning, washing and oral hygiene etc. – while the IDEs looked after the technical aspects of care.

Bed 1	Pneumonectomy
Bed 2	Lobectomy
Bed 3	Oesophagogastrectomy and tracheostomy
Bed 4	Oesophagogastrectomy
Bed 5	Multi system failure following heart transplant
Bed 6	Oesophagogastrectomy
Bed 7	Man with large haemoptysis discovered to be due to a large tumour, now with low cardiac output.

Table 1. Snapshot of clinical cases in thoracic ICU

For the seven beds (for occupancy see Table 1); each equipped with a ventilator, there was a nurse, an AS and a nurse anaesthetist. The nurse anaesthetist would extubate patients as they woke up. Nurse anaesthetists undergo an extra three years' training for their qualification and are examined at the end of their course. Nurse anaesthetist is seen as a natural career progression for intensive care and theatre nurses.

Unit Organisation

The first thing of note about this unit was its cleanliness. It felt like I was visiting a computer chip factory! For instance, I was not allowed to enter the unit without putting on a uniform and overshoes. I was not allowed to go next door to the recovery areas without changing my overshoes and wearing a gown. Visitors had to do the same for their (very restricted) visits. Visitors were also invited to wash their hands on entry and exit. Computer keyboards were covered with cling film which was changed at least daily. Washbasins had knee operated taps. Anybody who used a telephone regularly had their own cordless handset. This was exceptionally clean, and led me to question a very basic assumption behind my own practice. In a world that sees the unrelenting progress of antibiotic resistant bacteria, is a policy of open visiting in ICU consistent with having a clean unit? Or do we think that the social, family and personal considerations in liberal visiting times in ICU outweigh the demands of hygiene? I wonder if we can have both.

I asked one family member if they minded being restricted in their visiting. She said that as her brother was asleep it didn't bother her. In any case, when the patients were discharged from ICU, there was plenty of time to be with their loved one as there was a very liberal attitude to visiting on the ward. This is because patients had their own room complete with en suite shower unit.

CARDIAC SURGICAL CRITICAL CARE

The cardiac hospital in Haut Leveque made me feel a little more at home. The unit was older, and looked as if it had seen a lot of active service. The units I visited were cardiac medical and surgical. I was very interested to see how they managed the activity of a cardiac surgical intensive care unit with one nurse per 2.5 patients. My own recollection of a cardiac unit was of heavy workloads with a ratio of one patient per nurse, so how two nurses managed five patients was very curious to me.

The theatre list was very familiar to any cardiac ICU nurse. Bypass grafts, valve replacements and aortic grafts were the staples. One thing that struck me as curious was that this was a shared unit between children and adults. Hearing a baby cry on an adult ICU was an unnerving experience, as was the sound of a three year old calling for 'Mama' in the bed next to a 65 year old.

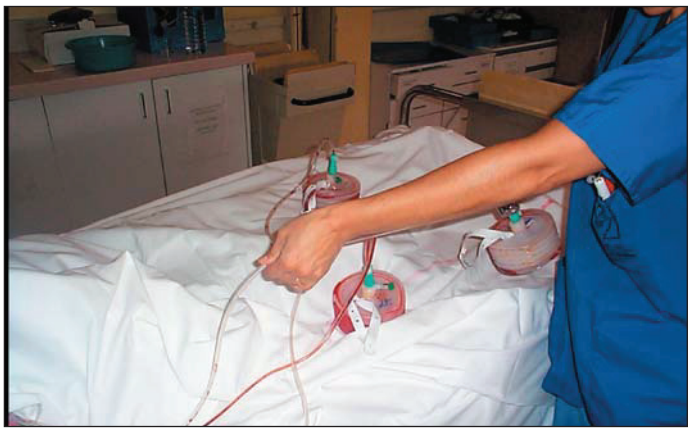
The cardiac ICU was broken up into a number of rooms. The

Cardiac hospital with dedicated heliport

main room took eight patients with no screens separating the beds. There was another room with four beds where any children were nursed. Again, there were no screens separating the beds. In another part of the ward, the more long term patients had their own room.

I found the lack of screening somewhat disturbing. In Paris I noticed a rather light-hearted attitude to patient's nudity. Here in Bordeaux, it was possible to see patients bed bathed in front of everyone. Not family members, to be sure, as they were kept out during any procedures like this, but patients could certainly see each other. That said, I put this down to cultural differences between the UK and France. For example, the local beaches were full of naked people, and the nurses' changing rooms were unisex, a situation I saw earlier on my trip to Paris. This did not make it any easier for me, either on the ward or in the changing rooms.

Post-operatively, all the patients I saw did well and were quickly discharged except for one. As for the workload, this was managed in large part by simply doing less for the patients. I did not see any CVP measured and the drainage was not measured every 15 minutes like I used to do. The routine observations were pulse, blood pressure, oxygen saturation ($Sp0_2$), and respiration rate. Mediastinal drainage was achieved by the use of a sort of 'redi vac' arrangement. I saw only one unit of blood transfused in the time I was there. There were no paper charts at the end of the bed because all the observations were retained in the computer system, including the blood results. Blood was taken for tests three hours after the last set done in theatre. This was minimalist intensive care and struck me as being comparable with that given after an uncomplicated aortic graft replacement in the UK, but everyone seemed to do well. Of the post-operative patients I saw, the lowest drainage was 250mls overnight and the highest was 500mls overnight.



Managing mediastinal drains

The other thing I noticed was that the patients were very warm. The lowest temperature of a patient was 33.6°C and the highest was 36°C. Although nurses would feel the patient's feet, there was no formal measurement of toe temperature. I was assured by M. Thierry Brugeat, the unit manager or surveillant, that even by French standards this unit tried to interfere with patients as little as possible. For example, each new catheter represents a new opportunity for infection and so, until its need was demonstrated, it was foregone.

Patients were allowed to warm fully and were extubated after a couple of hours if everything was going well. They were then discharged back to their room on the ward the following day, all things being equal. This equates precisely with practice in the UK. What differs is that when patients were ready to leave hospital, usually after seven days, they spent three weeks in a convalescence home in the up-market seaside resort of Arcachon. Here they were rested, re-educated about smoking and diet and gently exercised.

CARDIAC MEDICAL CRITICAL CARE

In the medical unit, patients were usually, but not exclusively, admitted after an infarctus myocardiale (myocardial infarction: MI). In effect this was the equivalent of a coronary care unit. It was separated into rooms with four monitored beds, and each room had a nurse and an AS. The unit also had an emergency area where patients were admitted. They were brought directly by the SAMU, a well-equipped ambulance staffed by a nurse and a doctor, and admitted straight to cardiac ICU (medical) without going through any Accident and Emergency process. In fact, the cardiac hospital had its own helicopter port to bring people from rural areas!

I was curious about whether France had followed our example in training nurse specialists to initiate thrombolysis as soon as they arrive in hospital. I was told that they preferred not to use thrombolytics and only used them for patients coming from a great distance. In the CHU Bordeaux, for patients with an established evidence of MI, the target was to offer an angioplasty within 20 minutes of arrival at hospital! This would be followed by an angiogram and, if the artery had not been reopened, the patient was kept in hospital for a week to prepare for bypass grafting. I felt embarrassed about our health service and the humble aims of the National Service Framework for heart disease in this field. There may well be arguments about whether primary angioplasty is the best approach to take in these cases, but the remarkable thing for me was the raw fact that this service was an option at all.

That said, there were things I saw which did not impress. For instance, ventilating and haemofiltering a patient in end stage heart failure seems to ignore the lessons of the hospice and palliative care movement in the UK. In fact, the acceptance of death did not seem as well developed in France. There are very few 'hospices' in France. Patients and their families seem to hope for a miracle cure till the very end. I was told that the majority of people

in France still die in hospital.

According to the teachers in the school of nursing I visited, an area of our service that the French admired was our efforts in public health and primary care. They were very impressed when I told them about the development of specialist nurses in primary care to deal with patients with heart failure, with a view to avoiding hospital admissions.

LIFE AS A NURSE IN FRANCE

The life of an ICU nurse in France looked similar in many respects to the life of a nurse in the UK, except for some very considerable differences. Nurses told me that their pay as a recently qualified nurse was 1,200 euro per month. I felt this was poor pay, even in comparison with nurses in the UK. Nurse teachers were paid only 1,600 euro per month. This pay follows three years' training during which the students are given little help from the state.

On the other hand, the nurses in Bordeaux were not expected to do night shifts, but could volunteer during periods of difficulty. This led me to question another assumption that I have made for many years. Part of the motivation for the introduction of night rotation was to even out standards of care between days and nights in ICU. But if rotation forces people to work nights and they leave critical care as a result, are standards improved?

When I asked the nurse in charge (surveillant) of the cardiac surgical ICU about turnover of staff he told me that it was very low in their unit. The nurses on the unit had a different opinion. One told me that in the five years she had been in the unit, 50% of the staff had changed. This did not strike me as a serious problem, compared with many ICUs in the UK. However, the surveillant also told me that sickness rates were running at 20%!

Nurses performed by and large some very similar roles to those in the UK and seemed to have a similar level of educational attainment. I tested this by asking nurses to read a set of blood gases and to read 12-lead electrocardiograms (ECGs). Their responses seemed very similar to responses I would expect in the UK.

Incidentally, one thing that truly impressed me was the quality of food given to the patients and the staff in French hospitals: tomatoes Provençale, roast pork, salad, yoghurt, and delicious French bread, for example. The staff self-service was equally impressive, including rabbit, spinach in white sauce, and a vast collection of salads, which were available everywhere including the hospital and in the school of nursing.

When I raised with colleagues the question of the French paradox, the fact that France has so little mortality from ischaemic heart disease despite having a large smoking population and an industrial society, I received a surprising reply. Although great emphasis was placed on what they called 'the Cretan diet' (salad, olives, garlic, etc.) and some emphasis on wine, there was a wide consensus from medical to ancillary staff that the key ingredient in cardio protection was paté de foie gras and confit de canard. Duck paté in other words.

The salad section in the school of nursing

OVERALL CONCLUSIONS

Since my return, many people have asked whether the French or the British service in critical care was better. This is a very hard judgement to make after two weeks. The question should be 'does the system in France work as a whole?' More specifically, I would apply the 'mum' test to the services I saw: would I let my mum have surgery in either of these units? To this I would give a resounding yes, with all the differences.

In terms of equipment, motivation, technical skill and environment, together with after care, this was a quality service. The personnel I met were proud of their service, and I could see why!

COMMENTARY

As the French representative on the International Advisory Board of Connect, I was asked to comment on this report about the visit of a British nurse lecturer to two ICUs. This external view is an interesting personal exercise to raise questions about the French Health Service (FHS), which is highly regarded as Chris Jones says in his article. The FHS may be considered as one of the best in the world but this general point of view has to be qualified. The following comments will try to clarify my opinion based on 20 years' nursing experience.

The vision of those two units is close to the reality. They can be presented as a showcase of the French ICU. The thoracic ICU is notably a specialist and newly built unit. However, I think it is a symbolic representation of the new vision of the policy about critical care nursing in France.

Since April 2002, the law has been defining clearly what critical care and intensive care exactly are. A critical care unit (CCU) is a service that receives patients who have or could have multi-organ failure. An ICU is a service that receives patients who have or could have a single organ failure in a specialised unit. The law is specific about the number of beds for each type of unit: six beds for an ICU (minimum) and eight beds for a CCU (minimum). This official text tackles different important questions (structure, specific equipment) but two points seem significant.

One talks about education. In France, there is no postgraduate education to work in a CCU. Most of the nurses are registered general nurses. Some anaesthetist nurses work in CCUs in some areas in the south west or south east of France but they prefer to care for patients in theatre. Anaesthetist nurses undergo an extra two-year course for their qualification (and not three years as Chris Jones says) and they are examined at the end to become a registered anaesthetist nurse (IADE = infirmièr(e) anesthésiste diplômé d'état). The new law only states that nurses have to benefit from a training of adaptation to the employment of enough duration. In my mind it's a first step but SFISI (French Intensive Care Nurse Society) is working hard to set up a vocational training with qualification.

The second point talks about staffing levels, which are dictated

by this law as a guaranteed standard of one nurse for every 2.5 patients and one auxiliary nurse for every four patients. This situation is improving the nursing at the bedside but we could reasonably expect one nurse for every two patients.

I would like now to write some remarks about the key questions raised. Chris Jones wonders whether a policy of open visiting in ICU is consistent with having a clean unit. The answer can be given in two parts. First of all, the policy of open visits is hardly discussed and there is a lot of opposition to open visits (the units usually have two or three hour visits: one hour at the beginning of the afternoon and one or two hours at the end of the afternoon. It's totally open in the paediatric and neonatology units). Secondly, most of the CCUs or ICUs have a less restrictive policy about hygiene than in the example given in the article, so we can't generalise it. I think we can look at the paediatric unit's functioning as a good model.

Regarding palliative care, France has been catching up after a delay since the end of the 80s. The movement is slowly broadening in two directions: a strong development of mobile palliative care units, and some palliative care units or sometimes reserved beds in general nursing wards. Finally, I agree with Chris Jones in that we have to look outside and certainly to the UK to learn more about palliative care. The acceptance of death in France is not developed and French people are not yet ready to accept this idea (80% of patients die in hospital).

Life as a nurse in France is not exactly as described in the article. Salaries in the public sector are often higher than in the private one. The pay for a recently qualified nurse starts at 1,500 euro per month, up to 2,200 at the end of the career (normal grade). 20% are on a 'superior grade' that goes up to 2,450 euro. To finish this point, the pay for an anaesthetist nurse is between 2,700 and 3,200 euro per month (public sector).

The last point I would like to mention is turnover, which is really important at the moment. I don't have an official statistic but I can give the Bicêtre university hospital example where I'm working. In the surgical CCU, the turnover approaches 10% per year and it looks similar in the two other CCUs in the hospital.

In conclusion, I think that this article offers quite an objective point of view of nursing in CCUs in France.

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