GIRFT

Getting It Right First Time Toolkit

The **Getting it Right First Time** report provides a positive overview of adult cardiothoracic surgery in England. Feedback about performance is an important stimulus to improve services. The report also highlights some innovative methods of service delivery that seem to improve our patient's experience of undergoing surgery.

In this Toolkit we describe in greater depth how some of these innovations in service delivery work in the units that developed them. We hope that this is useful to those who are looking to improve their own services. We recognise that there are many other innovative service developments happening in our specialty and if you would like to share your experience please let us know so that we can build upon this Toolkit.

Contents

Daily Consultant-Led Ward Rounds

Freeman Hospital, Newcastle

The Need to Change

We had become aware that our length of stay for patients following cardiac and thoracic surgery had lengthened. Patients were seen by their individual Consultants each day but in their absence for annual/study leave or other clinical commitments this was delegated to the on call Registrar who may not be familiar with the case. Trainees were often reluctant to make discharge decisions in the absence of a Consultant so prolonging patient stay sometimes unnecessarily. Each Consultant also had individual preferences for managing post operative issues, anticoagulation protocols and discharge medications leading to a high level of variability of practice and quality of care. These issues were most pronounced out of hours and at weekends when the Registrar on call traditionally undertook a ward round of all in patients, seeking Consultant advice only when needed.

Recognising the problem of variability and a lack of standardisation of practice we wrote a unit patient management protocol describing how to manage every possible post operative complication (for example atrial fibrillation) and standardising common practices such as anticoagulation for valve prostheses and discharge medication (e.g ACE inhibitors and diuretics). The content of the unit protocol was derived from national and international best practice guidelines and was entirely evidence based. It is reviewed and revised annually in the light of new guidance or scientific studies and agreed by every Consultant as the manner in which their patients will be managed. Consultants retain some latitude in managing patients and deviations from the agreed unit protocol is permitted when individual patient circumstances dictate ensuring that the document is not restrictive.

As delayed discharge at weekends was evident we introduced a system of Consultant ward rounds where the Consultant Surgeon on call for the weekend saw every single in-patient with the Registrar, Nurse Practitioner and Ward Sister. This allowed timely discharges to take place as well as early recognition and treatment of complications by a senior clinician. The improvements in quality of care were evident with several issues identified by Consultants during this out of hours period which might otherwise have been missed or delayed in treatment. The use of our agreed protocol ensured that there was no disagreement in how patients were managed.

After trialling this process for a number of months nursing staff quickly recognised that patients were being better looked after at weekends compared with during the week!

Daily Consultant Ward Rounds

The Consultant Surgeons were committed to delivering the highest possible quality of care on the wards recognising that this extended beyond the operating theatre and intensive care unit.

We devised a Consultant Ward Week Rota. Each week a Consultant Surgeon would be timetabled to look after the wards and largely relieved from operating theatre duties, their sessions being taken over by colleagues in the weeks that they were allocated to the wards. This occurs once every 6 weeks.

We wrote a unit patient management protocol describing how to manage every possible post operative complication and standardising common practices

Daily Consultant-Led Ward Rounds

How it works

The Ward Consultant Surgeon reviews every patient on the ward each day Monday to Thursday handing over to the weekend on call surgeon for the Friday, Saturday and Sunday ward rounds. This ensures a very high level of continuity of care and decision making and for the early recognition of patient deterioration and complications. Post operative problems are managed according to the protocols agreed by all surgeons so that there is no unnecessary variability in practice.

Every patient on the ward sees a Consultant Surgeon every day without fail and that Consultant is available to review investigations or on going ward problems during the day supported by the on call Registrar and Nurse Practitioner.

Patients being transferred into the unit from outside hospitals for urgent surgery are therefore also reviewed by a Consultant soon after arrival to ensure that all necessary investigations are addressed and increase the efficacy of patient preparations for surgery.

The patient's own Consultant is not excluded from the decision making process in any way. The patients assigned Consultant retains primacy over decision making but disagreements are minimised by the previously agreed patient management protocols to which every surgeon adheres. If the patients own Consultant visits the patient before the ward round those decisions are noted and if seen after the main ward round any changes from the decisions already made are implemented. These in practice have been exceptionally rare due to the uniformity of patient management strategy.

Once the ward round is concluded the surgeon on ward cover has time to undertake extra out patient clinics, CPD, appraisal, educational supervision and research which are often challenging to focus on during busy operating weeks. Afternoon session operating is also permitted when needed ensuring that mornings are free for the detailed ward round of every patient.

Advantages

The quality of care of each individual patient has improved immeasurably with the commitment of the Consultant Surgeons to improve the safety and quality of care delivered. It has had a significant positive impact on trust and teamwork both between colleagues and with the wider junior doctors, nurse practitioners and nursing staff. Daily access to senior decision making has broken down any reluctance to contact surgeons and the revision of agreed protocols each year ensures that patient management is at the cutting edge of contemporary evidence based practice.

Early identification of complications, review of incoming urgent patients and timely discharge decisions to reduce length of stay have combined to enhance patient satisfaction and offer the best quality of care. Several potential critical incidents have been avoided through identification of problems by Consultants and has driven up standards of patient safety. During the week the patients come to know the Ward Consultant and trust in their decisions providing a highly personalised and individualised standard of care.

We have measured a reduction in emergency readmission to ITU and length of stay.

	Jan-Dec 2014	*Jan-Dec 2017*
Number of ITU readmissions from the ward	4.4%	2.8%
Average post-operative stay in days	11 days	9 days

The protocol has had a significant positive impact on trust and teamwork both between colleagues and with the wider junior doctors, nurse practitioners and nursing staff.

Managing Cardiac In-House Urgent Referrals

Simon Kendall – Middlesborough

Historic problem

Our unit in Middlesbrough was set up in 1994 to meet the huge demand for revascularisation. At that time only around a quarter of our work was patients kept in house for their operation. But we were slow to adapt to the change in cardiology practice - more and more patients were kept in hospital for their surgery until 50% of our work was such patients. And yet we still put them second on the list so that they would be the ones that would be cancelled if there weren't enough ITU beds.

We would often have over 20 patients blocking ward beds - frustrated and upset including their families, the nurses looking after them as well as their Cardiology teams.

In 2013 we had a full process review of our service which included all members of the team. This was an organised RPIW (rapid process improvement workshop) - data collected in preparation, 4 consecutive days of work with all the key members of the team and finally a further day of review / conclusions.

We flipped the service on its head.

In-house patients were to be our priority - they would be first on the list. As soon as they were referred we would transfer them under our care. The registrars would admit them and check with the on call surgeon if they were fit for Surgery.
The SCPs allocate the patients to a list and the surgeons work as a team to get the right patient on the right list. If they are cancelled another surgeon will take them on to their list. Our KPI is no patient waits longer than 7 days, and if we start to exceed that then the elective programme is curtailed.

- This has transformed our service:
- No more upset and frustrated patients / relatives / staff
- Reduced length of stay (reduced by 4 days for IHU patients)
- Reduced our bed base (reduced by 12 beds)
- Associated reduction in mortality and reopening rate. (3.2% to 2.6% and 7.9% to 3.9%)
- Improved further the sense of Team in the department

We were anxious that we would attract even more In House patients but this didn't materialise. And the change did not have a negative impact on our elective programme. Our only regret? - why didn't we change sooner?

In 2013 we had a full process review, in a rapid process workshop lasting a total of 5 days.

We flipped the service onto its head.

Day of Surgery Admission for Cardiac Surgery

The Blackpool experience

Dr P Saravanan, Consultant Cardio-thoracic Anaesthetist,
Ms B McAlea, Lead Nurse for Same Day Admission
Mr J Zacharias, Consultant Cardio-thoracic Surgeon

Introduction

Traditionally patients have always been admitted for cardiac surgery the night before the date for their operation. In other specialities there has been a move towards admitting patients on the Day of surgery. This was initially trialled out for minor procedures but with increasing confidence in its safety this has been offered to patients with more complex heart operations. We at the Lancashire cardiac centre started the program of offering the option to patients to consider day of surgery admissions (DOSA) prior to cardiac surgery in 2010. We have been surprised at how popular it has been (see graph later) with patients and are now finding that nearly 80% of patients for elective cardiac surgery are being admitted on the morning of their cardiac operation. We would like to summarise what we have learnt along the way so that other centres planning to start this program can reproduce our success. For ease of reference we have divided into sections that will appeal to different health professionals and will finish with some frequently encountered problems that have been raised by teams from centres that have visited us in the past.

An Anaesthetist's perspective:

The DOSA service in our hospital was initiated in 2010 with anaesthetists at the forefront and has evolved over the years. It was important that we started this on a small scale involving only patients of a couple of surgeons. The most crucial thing in the process was incorporating the preoperative preparation including anaesthetic assessment as only the surgeons had seen the patients before scheduling them for surgery prior to DOSA service. Though we achieved our current results and success by incremental changes over the years most often by learning from mistakes and feedback, it is imperative to discuss the service as a whole to get an idea what in will involve for anyone to get to where we are now. The success of the service depends on success of the following aspects.

1. The selection criteria and setup for the service
2. Preoperative preparation in the clinic
3. Preparation for and on the day of surgery
4. Plans and actions to improve the service
5. Troubleshooting and dealing with expected and unexpected issues

Selection criteria and setting up the service:

Teamwork is vital and an efficient team overseeing the progress of DOSA is important for its success. Cardiac surgery is generally situated in a tertiary centre and often the catchment area is large. The patients at our centre were selected initially on the basis of their accessibility to the service and medical co-morbidities. During the initial setup, patients who need to travel longer distances, without help for transport, with type 1 diabetes and on anticoagulants were primarily excluded in addition to whoever the anaesthetist chose to exclude. As the service was established, these patients were included for DOSA with the only exception

Day of Surgery Admission for Cardiac Surgery

currently being, patients who are on warfarin, who live far away and need a repeat INR; the reason being to facilitate attempts to correct the INR prior to surgery.

The DOSA service like any other service requires identified facilities and personnel. We initially employed an Advanced Nurse Practitioner trained to do anaesthetic assessment to facilitate DOSA but this approach didn't make much progress because of its inherent problems. Our current model revolves around the cardiac liaison nurse who is also DOSA nurse lead. Pre-assessment clinic (PAC) is an essential requirement for the service. In addition to the nursing staff, the PAC in our unit is run with an Advanced Nurse Practitioner (ANP) or a Junior Doctor who clerks and consents the patients. We also obtained more physical space to accommodate the people involved.
The anaesthetic assessment is done by the anaesthetist intended to be looking after the patient during the procedure. The surgical secretaries liaise with the anaesthetist concerned and book the patient for PAC when the anaesthetist is available. In our unit, in addition to routine cardiac procedures, we perform, minimally invasive mitral (Thruport surgery) and minimally invasive aortic valve surgery (Hemisternotomy and Right Anterior Thoracotomy) and Major aortic surgery including arch and thoracoabdominal surgery. The anaesthetic care for these specialised procedures is provided by nominated teams. Seeing the same anaesthetist has advantages, as individualised plans for the patients can be made, which can minimise errors. This is the main reason for us choosing to run the service this way. It also helps the patient as they already have developed a rapport and reduces their anxiety of facing a different anaesthetist on the day of the procedure. Using a generic anaesthetist to do each of the clinic session can also work provided there is communication between the colleagues and transfer of patient information to the relevant team members.
We have a DOSA or a Same Day admission area where the patients are admitted in the morning. This area is staffed by Health Care Assistants (HCA) and supported by the ward nurses. There are no beds in this area, but there are sofas and televisions. Patients wait here after formal admission, with their relatives or friends who accompany them to the hospital till the time they are transferred to theatre for the procedure. We initially used a bay in the ward for this purpose and faced problems when beds were filled in with medical outliers. Having a separate DOSA area without beds has the advantage of being protected from bed pressures.

It is important to involve the haematology department from the initial stages as the second sample for blood transfusion is sent on the day of surgery.

Preoperative preparation in the clinic:

Patients usually attend the clinic between one to 2 weeks prior to the scheduled surgery. During their visit, they see the preoperative nurse, ANP or Junior Doctor and the anaesthetist. They usually also have bloods and other investigations done including Chest X-ray, ECG and occasionally Pulmonary function tests and Carotid Doppler on the same day. It helps the patients to plan their day and avoid further visits.
The nurses go through the same day admission procedure with the patients and their relatives. Any issues they come across will be communicated to the ANP and the anaesthetist. The ANP clerks the patients and consents them for the procedure. The anaesthetist assesses and discusses the anaesthetic plan and immediate postoperative course. The patients and relatives have ample time to ask any questions and clarifications. The blood results are e-mailed the next day by the nurses to the surgeon and the anaesthetist. Any medical or psychological issues that are identified and abnormal blood results are dealt with prior to surgery. If the patient needs further investigations or referral to another speciality, this will lead to postponement of the surgery. This means there is no cancellation on the day of surgery for medical reasons and there will unlikely be an empty slot in theatre as there is enough time to bring another patient forward.

The authors, Ms B McAlea, Mr J Zacharias, Dr P Saravanan,

Day of Surgery Admission for Cardiac Surgery

Patient with emotional issues such as severe anxiety is referred to a clinical psychologist. Nurses refer the patients to them and also get in touch with the patients' GP surgery if the patient needs sedatives on the night before surgery. Though this happens very rarely, patients are better prepared for the procedure. We do not routinely pre-medicate DOSA patients with sedatives before surgery. More often patients are less anxious in their home environment with family support. Advice is also given about continuing and discontinuing patients' regular medication by the nurses and anaesthetists using the policy we have developed. This is in addition to the advice provided by a letter patients will receive from the surgical secretaries specifically about stopping anti platelet or anticoagulant and certain antihypertensive drugs. We also run an enhanced recovery program for cardiac patients and these patients are seen by the enhanced recovery nurses. The research nurses see patients who are eligible to participate in certain trials.

Preparation for and on the day of surgery:

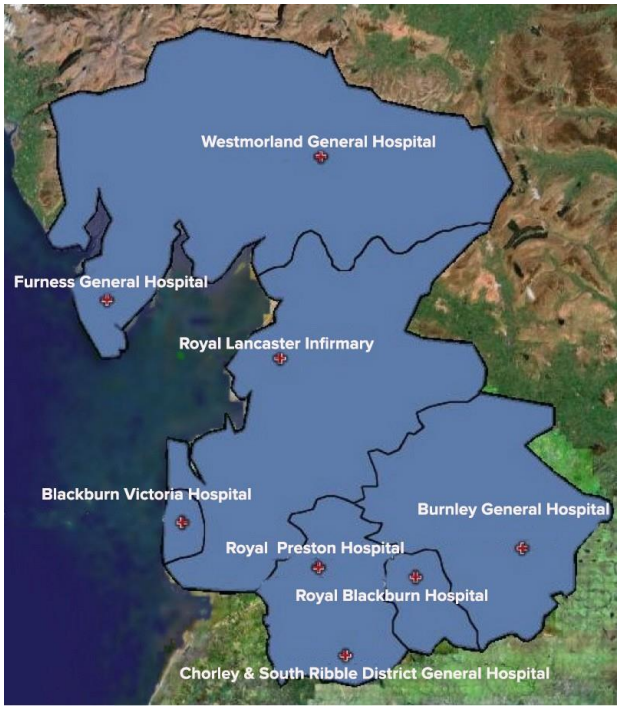
The patients are contacted by phone on the afternoon prior to admission by the PAC nurses. This is to make sure their general health is fine since their clinic visit and there are no new medical issues such as a chest infection that would warrant a delay in the procedure. They are also informed again about the place and time of arrival on the next day. Compliance with the advice given on their regular medications is discussed and any issues they may have with transport arrangements are discussed and dealt with. The patients who are first on the list are expected to arrive at 7 am on the day of surgery in the DOSA ward area. They are prepared for surgery, a second sample for cross matching and any other blood investigations required is sent at this stage. Other patients are required to arrive between 9 and 9.30am. Delays in the preparation can happen during the initial period of establishing the service but with modifications in the protocols to suit the local needs and better communication, this should become a rarity. In the unlikely event of the first patient being cancelled in the morning due to unexpected or medical reasons, the second patient should be ready to have the procedure by 10am. If any new medical issues are found on the day that warrants postponement, there is possibly ample time to look to fit an inpatient who is available for the procedure.

Plans and actions to improve the service:

Each hospital and the cardiac unit usually has an established pathway in place to allow the throughput of cases safely. It is important to make sure that neither the safety of patients nor the case flow is compromised while establishing the DOSA service. We obtained feedback from patients on their experience and used this to make changes to the service. The cardiac liaison nurse or the DOSA nurse lead and the anaesthetic lead play a vital role in this. We audited the patients' feedback in 3 cycles (see below). We made important changes which varied from simple things to restructuring the service.

We moved from using a ward bay for DOSA which had led to no bed availability and patient waiting for admission in the morning and obtained a specific DOSA area without beds. We also signposted the DOSA area and changed the free entry times through the cardiac unit entrance to improve the access to the patients. The time of admission of second patients was changed from 7 am to 9am. Taxis were arranged for transport of the patients who were unable to make their own arrangements. We developed a protocol to standardise the information given on regular medications to avoid confusion and error.

In addition, DOSA information was included in the information booklet that was given to the patients. Protocols were developed for patients found to have unexplained high APTT. As anaesthetists, we had to come to an agreement about how we managed the service when we were away on study or annual leave and how we could job plan this activity. Regular departmental meetings with input from DOSA nurse lead and PAC



Catchment area for the Lancashire cardiac centre

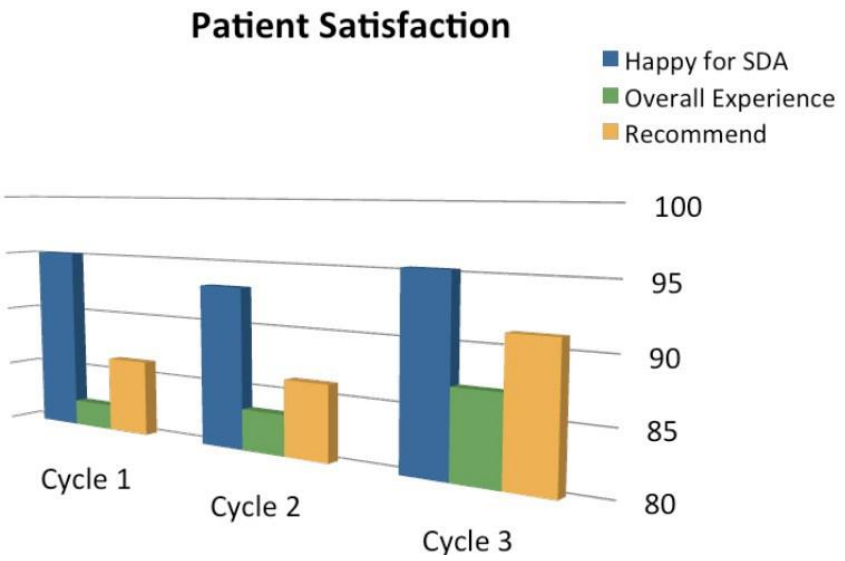
Day of Surgery Admission for Cardiac Surgery

nurses helped to achieve the success we have achieved.
We analysed outcomes of the patients who underwent surgery through the DOSA process using data from the Cardio-thoracic PATS database to determine the safety of this service. We used the hospital Ormis system and DOSA information to identify these patients and compared their outcomes with patients not admitted on the day of surgery. In this retrospective analysis of matched patient groups, we did not find any difference in outcomes between DOSA and other patients. The outcomes we looked at included mortality and length of stay. This was presented at the SCTS-ACTA meeting in Manchester in March 2015.

A Surgeon's perspective

As a heart surgeon a patients safety is always the main concern to me. I see a patient who has been referred to me either by a specialist cardiologist or a general practitioner with a special interest in cardiology. We review all the investigations done prior to the referral and arrange to see the patient in an out patient clinic. This is facilitated by a medical secretary and the administrative staff at the hospital. Once the patient and relatives are seen by the surgeon three paths often are pursued. The first and commonest is to put the patient onto a waiting list to come in for a surgical procedure. Some surgeons try and give a date for surgery at the out patient clinic. The second option is to plan to arrange further tests or spend a period of time trying to get the risks of the operation down and this may lead to a further review date in out patients. The final option is one where either the patient or the surgeon decides that the procedure is too much of a risk and decided to continue with medical treatment and is often discharged from follow up by the surgical team.

Once the patient has been listed for surgery the patient can have a period of waiting time. As patients are listed for their procedures a clock starts, to try and bring them in for surgery. We identify patients for our operating lists around two weeks before the procedure date. The medical secretary then arranges for the patients to come to a pre-admission unit on a day that the specific anaesthetist doing the list is available. The patient is seen at pre-admission clinic by our nurses who do the necessary blood tests and frequently the patients are consented for their procedure at this visit. The anaesthetist also uses this opportunity to discuss the procedure in some detail. Patients are then told that they are expected to come in on the morning of the procedure if all their blood results are within the acceptable range. Their are some relative contraindications to same day admission that will be covered later. The patients are given specific instructions of showering the night before and are asked to be nil by mouth from early morning.



Two initial concerns were the safety of changing the day of admission and secondly what patients themselves would think of this process. We were pleased to find that on review we were not able to find any obvious deleterious effects of DOSA on early outcomes after cardiac surgery and three cycles of patent feedback revealed very high patent satisfaction from the process. A surprise has been the lack of patients needing pre medication prior to coming to theatre. Hence patients do not need a bed and come to theatre in a wheelchair. They often walk into the anaesthetic room.

We hope that other centres will also look into adopting this as standard. It is widely applied in cardiac surgery centres in North America for quite sometime and as patients love to spend the night before a very serious operation in their own comfortable beds surrounded by their loved ones. DOSA is likely to be well accepted by most patients across the country.

Day of Surgery Admission for Cardiac Surgery

Frequently encountered concerns

1: Patients living faraway:

Patients, who are old, live on their own and faraway from the unit may decline to come on the day and need to be admitted on the day prior to surgery. In our experience, this is a rarity and most people are happy to come in on the morning. To our surprise, some patients were happy to spend the previous night with their relatives in the area or in a nearby hotel so that they didn't need to travel on the day of surgery and they preferred this to hospital admission. It is probably worth negotiating a deal with a local hotel as this would help some patients and their relatives. In Blackpool we have shortage of hotel options to suit every budget.

2: Patients with significant co-morbidities:

All cardiac patients have significant co-morbidities. After our initial experience, we have excluded patients from DOSA service only because of logistics and not because of co-morbidities. Type 1 Diabetic patients are also included and we found that patients were confident in managing their sugar levels during fasting for surgery.

3: Postponement and cancellations:

If the patient is found to have medical problems during PAC visit or on the telephone interview the day before surgery, they undergo further medical assessment, investigations and treatment as appropriate and are postponed. The relevant information is always communicated to the anaesthetists. When these patients are rescheduled, depending on the primary reason, they are expected to attend the PAC again. It is usually possible to find a replacement for cancellations during PAC visit as there is sufficient time. Following cancellations at short notice, we try to fit in an inpatient waiting for surgery.

It is also possible for a patient to be cancelled on the day of surgery because of non-medical reasons such as ITU or ward bed issues. Usually they are rescheduled in the next available slot and if it is a different anaesthetist, a note review will suffice when there is no change in their health condition.

4: Cover during Absence:

During our absence, we will request colleagues to undertake the assessment on our behalf and communicate the issues on our return. Working in nominated teams may help in deciding whom to approach to assess the patients. If we are not away, then we make every effort to see the patients ourselves. It is also possible to have a rota for the PAC so there is always someone to see all the patients as long as there is agreement between colleagues. Having a standardised peri-operative care protocols, if possible, will help to support this. We have not been able to achieve this but still have a very successful program.

5: Job planning:

This is a complex issue. This has to be discussed within the department and agreed upon. We job planned this activity together with preoperative visits with no significant difference to the total hours worked. It is difficult to prove or disprove whether this is additional work load. Seeing patients in the clinic will obviously free up some of the time spent on the evening before the surgery for the same purpose and this flexibility is required for the service to be successful. Some may perceive this as increased workload. But there are obvious gains such as decreased medical cancellation at short notice, improved communication between colleagues, better patient experience and better organisation of our work and work-life balance. It is preferable to see a complex patient with multiple co-morbidities in a PAC to seeing them for the first time the evening before there procedure

In summary, the success of the service relies on team working, effective communication, flexibility and a safety network built into the service. It is essential to have someone with the vision to lead on the service as it offers benefits not only to the patients but also to the staff in the long run.

Contact: mr.zacharias@bfwhospitals.nhs.uk

Day of Surgery Admission is widely applied in cardiac surgery centres in North America for quite sometime - patients love to spend the night before a very serious operation in their own comfortable beds surrounded by their loved ones.

In memory of the late Dr Carl Humphries who championed and implemented this idea during his time as Head of department of Cardio-thoracic anaesthesia.

Surgical Council - The Papworth Experience

Samer Nashef & David Jenkins

The Surgical Council has been run at Papworth for 10 years. It was established to achieve the best possible results in very high risk patients. To achieve the best results the following (amongst others) are required:

- Immaculate preoperative evaluation
- Wise decision-making (knowing where to find the right compromise between the feasible and the sensible)
- Obsessive attention to detail
- Good myocardial protection
- Excellence in surgical techniques
- Speed
- Perfect and proactive postoperative management

All of the above exist in the best centres in abundance, but they do not all coexist in any one surgeon. The results of highest risk surgery can therefore be improved further by providing an opportunity to share skills and transfer knowledge and experience between consultant surgeons.

At Papworth, the Surgical Council meets fortnightly with a minimum attendance of four consultant surgeons. The following patients could be referred to Council:

- All patients who have been referred to the unit for cardiac surgery after having been turned down by one or more centres
- All patients referred for transplantation in whom a conventional operation is being contemplated
- All patients with a logistic EuroSCORE over 25
- All patients referred to an individual surgeon who feels, for whatever reason, that they would benefit from "Council" care

The Surgical Council decides:

- Whether the patient should be offered an operation
- What the nature of the operation is and the strategy and approach to be adopted
- Which of the consultants will perform the procedure on behalf of the Chamber (minimum 2 consultants).

The patient is offered the operation and, and if willing after appropriate consent, is admitted under the care of the lead consultant. The operation is carried out by the consultants chosen in the name of the entire group and the unit. More than one consultant must be scrubbed for the case. One consultant is nominated as the lead and is the first call for postoperative care.

Council takes corporate responsibility for the outcome at internal audit and council is listed as an 'operator' for internal audit purposes. Council operations are subject to the same data collection, quality monitoring and local and national data publication as are all other operations. For NICOR national audit purposes the outcome is attributed to the operator with the lowest GMC number

The results of highest risk surgery can be improved further by providing an opportunity to share skills and transfer knowledge and experience between consultant surgeons.

Surgeon of the Week

Kulvinder Lall – St Bartholomew's Hospital

When we merged 3 units to form the current Barts Cardiothoracic Unit, we felt that the registrar ward round was too slow and not enough decisions were being made. To facilitate patient flow, **Surgeon of the Week** was introduced.
We have 14 consultants, therefore the rota is 1 week in 14. In that week operating lists and out-patient clinics are dropped.

The general plan for the day's work is:

08.00	Attendance at that day's specialist MDT (Mitral, Coronary, Aortic, Endocarditis, TAVI)
09.00	Ward Round until 12.00
12.00 onwards	Taking all referrals and troubleshooting

Surgeon of the Week is seen as a very positive development by the consultant surgeons and the wider surgical team. We have seen improvements inpatient flow and decreased length of stay by 0.5day. In addition every patient sees a consultant every day, in house referrals are seen by a consultant on the day of referral and outside referring hospitals talk to the consultant rather than a registrar for referrals.

We have seen improvements inpatient flow and decreased length of stay by 0.5 day.