

## **CARDIAC SURGERY** **FREQUENTLY ASKED QUESTIONS**

### **Specialty/Field Questions**

**1. A) What are the best things about your specialty?**

The gratification of knowing that you are directly altering the course of peoples disease process by surgically intervening on a patient population who otherwise would have significant mortality and/or morbidity. Acquiring the knowledge, experience and technical expertise to care for the most critically ill patients a physician will ever encounter. Professional autonomy, security, and the opportunity continually evolve as a surgeon with rapidly changing technology. Cardiac surgery epitomizes team-based care: we work closely with cardiologists, cardiac anesthesiologists, cardiac intensivists, perfusionists, and many of the allied health sciences.

**B) What are the worst things about your specialty?**

Caring for critically ill patients can at times not have ideal outcomes and this is always difficult to deal with. In addition our training can be, long ranging from 6 – 10 years following medical school.

**2. Why did you choose your specialty?**

I wanted to be able to directly impact patients' lives, manage critically ill patients, and make genuine contributions to clinical medicine.

**3. What types of clinical cases do you commonly see?**

We typically see patients with surgical cardiovascular disease. This includes patients with coronary artery disease, valvular heart disease, pericardial diseases, major vascular disease, cardiac arrhythmias and those being assessed for heart and/or lung transplantation. Paediatric cardiac surgeons encounter a myriad of congenital abnormalities ranging from intra-cardiac shunts to severely mal-developed cardiac structures.

**4. Briefly describe a typical day.**

Residents would typically begin the day by rounding on patients in our intensive care unit between six and six thirty. We then proceed to round on our patients on the ward, with enough time to allow us to be at the operating room by seven thirty. We then would review the relevant imaging studies for the case that morning including angiography, echocardiography and other modalities. Then we would proceed with the morning case. Upon conclusion of the first case we would escort the patient to the cardiovascular intensive care unit. We then round again on our patients in the ICU and the ward. We then would review the imaging studies for the next case, and then proceed with the afternoon case. Upon conclusion we would escort the patient to the ICU and round again on the ICU and ward.

Depending on the complexity of the cases the day would end between 4 pm and whenever you are done. The residents and fellows are responsible for in house call

throughout their training. The residents and fellows are also always available for assistance with transplantation.

**5. A) What are the varieties of lifestyles within your field?**

The question of lifestyle is not typically one we ask ourselves. To quote Dr. Norman Shumway, one of the pioneers of cardiac surgery, "there are lesser and greater things in life to do . . . ". Having said that the lifestyle is highly variable and depends on the institution one works at, the type of practice plan, the speed of the operating surgeon, and the complexity of the practice profile. Furthermore, the autonomy and independence one has as a staff surgeon provides for flexibility in one's lifestyle.

**B) Specifically, how able is your specialty to accommodate family life?**

There is no doubt that cardiac surgery is a demanding specialty. However, I don't know many physicians that have not at sometime had to miss a soccer practice, or a family dinner, That said, most cardiac surgeons work as part of medium-to-large group practices which allow them substantial opportunity for time away.

**6. Range of incomes?**

This again is variable depending on provincial location, practice profile, seniority, and complexity of one's practice. Typically the ranges for all comers would be from >400, 000 dollars per annum.

**7. How do you see your discipline changing over the next decade?**

Over the next decade there will ongoing evolution in the landscape of the cardiac surgical practice. Technology continues to evolve, especially in the field of catheter based surgical procedures, robotic surgery, and minimally invasive surgery. There will be increased demands for standard cardiac surgical procedures as well as the population ages and as our abilities to operate on older and sicker patients evolve. Moreover, recent large randomized trials have continued to demonstrate the superiority of coronary artery bypass grafting in patients with multi-vessel coronary artery disease. This will have significant impact on surgical services and the health care system.

## **Residency Program Questions**

### **1. A) What are you looking for specifically in an impressive candidate?**

Someone who is dedicated, committed, intelligent and driven. Technical ability is a bonus, but difficult to assess before one enters training.

### **B) What can a potential candidate do now in order to be an appealing applicant to your program?**

I would recommend making yourself known, contacting residents and arranging electives. Furthermore involving yourself in related research is also very impressive. I personally prior to medical school worked in a research laboratory, then during medical school did cardiac surgery electives every summer and at every opportunity; I also worked at a cardiac surgery research laboratory as well.

### **2. How is your residency program organized? (i.e. year by year breakdown and schedule of rotations)**

#### **PGY-1 and 2**

The residency program in cardiac surgery will be comprised of a six year period of training. The first two years will comply with a "core" curriculum required for all residents in surgical programs. The PGY-1 year will be comprised of 12 weeks general surgery, 12 weeks internal medicine/coronary care with an emphasis on surgical aspects, eight weeks emergency medicine, four weeks in pediatric surgery, eight weeks in cardiac surgery and four weeks in the CVICU. The PGY-2 year has usually been comprised of four, three month rotations in critical care, cardiology, vascular/thoracic surgery and cardiac surgery. The two year program is designed to prepare the resident for part II of the MCCQE examination and for the Principles of Surgery exam which is taken early in the PGY-3 year.

#### **PGY-3 to 6**

These years are designed to comply with Royal College requirements and will include an additional six months residency in general or vascular surgery, six months as a junior resident in adult cardiac surgery, six months as a resident in thoracic surgery, six months as a senior resident in pediatric cardiac surgery, and one year as a senior resident in adult cardiac surgery. One year is available for "academic enrichment" which can be extended to two or more years for those pursuing an academic career.

#### **Research**

Clinical research is highly stressed and it is expected that a resident will prepare several abstracts/publications during their residency. The year available for "academic enrichment" can be used as a clinical or basic science research year. Basic science areas of interest in our Division include xenotransplantation, overcoming senescence in transplantation, pulmonary vascular development, neonatal myocardial protection and fetal surgery and improving homograft valve preservation. A 2-year research period to obtain a Master of Science degree is highly recommended.

## Seminars

There are weekly scheduled conferences on the thoracic, pediatric and adult cardiac surgical services. In addition, Friday morning is set aside for resident half-day with topics covering the complete range of cardiovascular and thoracic surgery. Journal club meetings are held on a monthly basis. Oral and written practice examinations are held on a rotating basis.

### 3. What is your residency program's orientation and focus?

This program is dedicated to the technical, clinical and educational development of future cardiac surgeons. This is accomplished by didactic and operative education that is second to none, and genuine support for the educational and research development of its trainees. This is a heavily clinically oriented training program.

### 4. What is the availability of experiences in subspecialty areas during training?

Cardiac surgery is a sub-specialty training program. There is exposure to such surgical specialties as general surgery, vascular surgery and thoracic surgery as a part of the royal college training program requirements.

### 5. Are there sufficient elective opportunities during training to explore your special interests?

The department is very supportive of residents taking extra time for research or clinical special interests.

### 6. What is the on-call schedule during each year of residency?

PGY – 1 & 2: In house buddy call with senior resident covering cardiac surgical intensive care units, wards and surgical emergencies and transplants. Typically 1 in 4 to 1 in 6, however most of our junior residents take additional call to gain greater experience.

PGY – 3 – 6, 7, 8, 9: In house senior resident call.

### 7. What distinguishes the U of A program from other programs?

The clinical operative experience/training is second to none. Furthermore the patients encountered at this center represent those of a quaternary care center with full exposure to complex adult and pediatric cardiac surgery, pediatric cardiac transplantation, adult cardiac and lung transplantation, mechanical assist devices and major vascular surgery. There is also a dedicated cardiac intensive care unit offering experience in peri-operative cardiac surgical care.

**8. How competitive is it to get in, and then to succeed in your field?**

The application and selection process is highly competitive and applicants come from all over Canada. All trainees from this program have found successful employment in cardiac surgery or intensive care.

**9. A) Is there active and/or required research in your residency program?**

There is a protected year in our residency training that is dedicated to academic enrichment. For many residents this is utilized as a research year, and can be extended to continue graduate level research.

**B) What role does research play in your career?**

Research is increasingly important for cardiac surgeons. This ranges from clinical outcomes studies, quality of life assessment, and large multi-centered and basic science research.

**10. What local, national or international conferences would be of benefit to candidates interested in your residency program?**

The Canadian Cardiovascular Society