

# Resident Roles and Responsibilities ~ Cardiothoracic Surgery: Integrative 6-Year Thoracic Residency

Last Reviewed: January 2016

**SUBJECT** Division of Cardiothoracic Surgery Integrative 6-Year Resident Clinical Responsibilities

**PURPOSE** To provide a general overview of the resident roles, responsibilities and functions while serving as a resident in the Division of Cardiothoracic Surgery Residency Program at the UC Davis Medical Center. This is meant to address issues relating to degrees of independent clinical practice, interactions with and supervision by faculty, performance of procedures and interactions with or supervision of other housestaff or medical students. It is expected that residents will demonstrate ongoing maturity during each training year and will progressively transition into the next level by the end of prior academic year.

**POLICY** At no time will a junior resident not have immediate in-house back up coverage from a senior surgical resident. The in-house trauma 3rd year and 5th year residents will always be available for backup.

In general, the roles, responsibilities and functions of a Division of Cardiothoracic Surgery resident, per training year, are as follows:

## PGY-I and PGY-II

PG-I and PG-II clinical years is organized to introduce residents to basic general surgery problems. The objectives of these two years are to:

1. Expose the resident to the breadth of General Surgery and to some of the surgical specialties
2. Provide the fundamentals of basic science needed by the surgical resident
3. Master preoperative and postoperative patient care, in both the inpatient as well as the outpatient settings
4. Instill the basics of non-operative management of critically ill patients in the ICU and ED settings
5. Train the resident in basic surgical techniques and introduce more advanced skills

## PGY-III

The goal for the PG-III residents is to expose them to some of the more complex aspects of clinical surgery and to develop the clinical judgment necessary to decide who needs an operation, what operation, and the appropriate timing. PG-III residents are expected to master basic surgical techniques as well as more advanced techniques including laparoscopic skills with the exception of advanced skills such as vascular and advanced laparoscopic skills.

### Outpatient objectives

1. Able to evaluate and treat patients with most surgical diseases
2. Develop surgical skills in ambulatory procedures
3. Master outpatient postoperative follow-up

**Inpatient objectives**

1. Assume increased responsibility for surgical decision making
2. Perform moderately complex surgeries

**PGY-IV and PGY-V – General Thoracic**

The goals for the PGY-IV and PGY-V residents are to expose them to the complex general thoracic surgical procedures, and to develop the evidence and practice based clinical judgment necessary to determine why and when to perform an operation and the type of operation needed. Residents will be expected to master basic general thoracic surgical techniques, and to develop an understanding of chest wall disease, diseases of the lung and pleura, trachea and bronchi, mediastinum and pericardium, diaphragm, esophagus, thoracic trauma, and minor procedures such as tube thoracostomy, bronchoscopy and esophagoscopy, and central venous and arterial line placement.

**Outpatient Objectives**

1. Be able to evaluate and treat patients with most general thoracic diseases
2. Develop a skill set in ambulatory thoracic procedures
3. Master outpatient postoperative follow-up

**Clinical Objectives**

Understand the pathophysiology, evidenced based initial evaluation and perioperative management, and identification potential complications of chest wall disease, diseases of the lung and pleura, trachea and bronchi, mediastinum and pericardium, diaphragm, esophagus, thoracic trauma, and minor procedures such as tube thoracostomy, bronchoscopy and esophagoscopy, and central venous and arterial line placement.

**Technical Skills Objectives**

The resident will have a sound understanding of the surgical procedures and techniques required for the above disease processes.

**PGY-IV and PGY-V - Adult and Congenital**

The goals for the PGY-IV and PGY-V residents are to expose them to the complex adult and congenital cardiovascular surgical procedures, and to develop the evidence and practice based clinical judgment necessary to determine why and when to perform an operation and the type of operation needed. Residents will be expected to master basic cardiovascular techniques, and to develop an understanding of chest wall disease, diseases of the lung and pleura, trachea and bronchi, mediastinum and pericardium, diaphragm, esophagus, thoracic trauma, and minor procedures such as tube thoracostomy, bronchoscopy and esophagoscopy, and central venous and arterial line placement.

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## Outpatient Objectives

1. Be able to evaluate and treat patients with most cardiovascular diseases
2. Master outpatient postoperative follow-up
3. Be able to competently review recorded cardiac catherizations, cardiac transthoracic and esophageal echocardiograms, cardiac CT scans, cardiac MRIs and cardiac nuclear medicine studies.

## Clinical Objectives

Understand the pathophysiology and evidenced based application of postoperative critical care including: management of postoperative bleeding and coagulopathy, use of intra aortic balloon pumps, ventricular assist devices, inotropic support, pulmonary support, management of multiple system organ failure, and transitioning the patient to a step-down unit.

## Technical Skills Objectives

1. The resident will have a sound understanding of the proper technique for sternotomy and dissection of heart and great vessels.
2. Understand harvesting of arterial and venous conduits
3. Have a solid understanding of the principles and management of cardiopulmonary bypass.
4. Understand the techniques of cannulation both central and peripheral; conduct of cardiopulmonary bypass including the techniques of separation of bypass, circulatory arrest and the techniques of decannulation.
5. Understand the steps for obtaining hemostasis during chest closure.
6. Master the endovascular approaches to thoracic aortic pathology.
7. Have knowledge of the transportation of critically ill cardiac patients from the operating room.

## PGY-VI

The goals of the PGY-VI resident are to provide them with an extensive operative experience. The PGY-VI resident will have a 12 month chief resident experience, and under the supervision of the faculty, they will lead and supervise junior residents, allied health personnel and students, and make decisions about patient care. The goal of the chief resident year is to prepare the individual to be an independent practicing cardiothoracic surgeon.

## Outpatient Objectives

1. Be able to identify high-risk patients and anticipate perioperative complications
2. Recognize and understand the indications for surgery
3. Be able to effectively and efficiently manage and supervise an outpatient clinic, under the guidance of faculty.

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4. Understand the organizational structure and mechanics of private practice and academic practices

### Clinical Objectives

1. Understand, make recommendations and instruct on the evidenced based clinical management of diseases of the chest wall, lungs and pleura, trachea and bronchi, mediastinum and pericardium, diaphragm, esophagus, thoracic trauma, and heart and lung transplantation.
2. Demonstrate an understanding of the essential steps of the cardiothoracic research process by preparing and submitting a manuscript for publication in a peer-reviewed journal or give a presentation at a scientific meeting.

### Technical Skills Objectives

The resident will have a sound understanding of the surgical procedures and techniques required for the above disease processes, and by the completion of the PGY VII year be ready for independent surgical practice.