

## Surgery Volunteer

### **Introduction;**

Amani Hostel surgery elective is designed for students interested in surgery. It is an opportunity to get significant hands on experience in both minor and major surgery as well as more specialized surgical areas, depending on the student interest and the type of elective placement.

Given the integrated management in most hospitals in developing countries and the limited resources and health care staffing constraints, students will have a vast exposure to various surgical disciplines as they rotate through the hospital during their placement:

**General Surgery:** This offers students a supporting role in patient care including pre-operative evaluation, operative intervention and post-operative care and management.

While under supervision, the student will be involved in pre-operative decision making such as patient assessment and counseling, obtaining informed consent, pre-operative medication e.g. thrombophylaxis, prophylactic antibiotics, blood transfusions, anxiolytics and glyceamic control. Preoperative imaging and radiographic and sonographic interpretation is also an essential part of our program.

The student will also assist intra-operatively in major theatre surgical conditions that require general anaesthesia like resection and anastomosis, explorative laparatomies, partial bilroths gastrectomys and total gastrectomys, appendicectomy, total and subtotal hemicolecotomy, fashioning colostomys, peritoneal toilet. Thyroidectomy, Pancreatectomy, splenectomys and cholangiectomy, hernia repairs are also common. Skin grafts and flaps, surgical toilet

the student will also get minor theatre time and assist in procedures under local anaesthetic like simple wound management and debridement, primary and secondary skin closures, incision and drainage, ganglion removals, excisional and incisional biopsies, fine needle aspirations, chest tube placement and removal. They will also get to watch central nervous line placement and cantor tube placement, suprapubic and urethral catheterization and assist in nasogastric intubation.

Post operative participatory care will include fluid and electrolyte management in burns and stoma care. Surgical patient analgesia and pain management. Stoma care. Heamatology and pathology lab interpretations, Imaging and nutrition.

Reviewing of abdominal drains and management of donor/recipient sites in grafts. In addition to the above, our general surgery experience will expose students to other procedures or enhance skills such as history taking and physical examination. Participation in conferences, case based learning and rounds will be expected.

**Podiatric Surgery:** This gives a student the chance to observe and under a supervisor, may perform various procedures on foot, ankle and lower leg, administer procedures focusing on disorders of the lower extremities including damage caused by such chronic conditions as diabetes, and trauma to the feet and ankles, the student will also administer various procedures to congenital malformations

**Orthopedic Surgery:** Opportunity to participate in diagnosis and active treatment of patients, including case application, manipulation of simple fractures, closed and open reduction, management of orthopedic implants like external and internal fixation. Nail insertion, k-wire insertion and plate & screws are all common occurrences. The student will also get to participate in POP application, attend surgery and post-op management.

**Burn Surgery:** Participate in burn related critical care, fluid and electrolyte resuscitation, review of hematologic indices. Management of surgical wounds and surgical procedures related to burn care like skin harvesting and grafting, escharotomies, counseling, reconstructive surgery. Exposure will include care of both major and minor burns patients. Critically injured techniques will be invasive critical care, Swan-Ganz catheter insertion and monitoring, amongst others.

**Trauma & Emergency Surgery:** Opportunity to get involved with dealing with acute trauma patients. Students learn how to effectively manage patients during the resuscitative and evaluation phases of care. Application of the ATLS protocols, management of multiple trauma, and the management of shock. They will handle emergency intervention such as chest intubations, tracheostomy, and fluid management of shock. Participants will follow patients through treatment and their rehabilitation from acute trauma and help monitor some patients.

They will also take responsibility with the attending to develop appropriate treatment and rehabilitation plans for these patients. The students will work under the direct supervision of the attending and will be expected to attend any conferences and case based learning held.

**Surgical Critical Care:** Offers student opportunity to get involved in managing critically ill surgical patients in both the intensive care units and high dependency unit. This will be done both preoperatively and postoperatively. Students learn how to use invasive monitoring and support systems. They also get opportunity to perform procedures such as insertion of arterial lines, central lines, and intubations, perform history taking, physical examination, daily notes and orders, evaluation and treatment planning. Students will work under surgery department resident and attending and are expected to attend any bedside teachings and conferences.

**Surgical oncology:** Students get surgical experience focusing on the care of patients with malignant and benign disorders, both inpatient and in the surgical outpatient clinic. Their experience will span preoperative, operative and postoperative management and continued care.

**Oral and Maxillofacial Surgery:** Students participate in the surgical management of oral and head and neck pathology e.g. cystic hygromas, thyroid carcinomas, cleft palate & lips and the

correction of congenital and traumatic deformities like Le fort fractures and orbital blow-out fractures. Acute trauma care is a major component.

The student will have some responsibility for inpatient care. Students will have the opportunity to perform or assist in minor procedures in the clinic, as well as the emergency room, and operating room, under supervision.

**Rural Surgery:** Provide students with diverse and challenging aspects of the practice of rural surgery by participating in clinics as well as outpatient and inpatient surgical cases. Students will participate in evaluating patients presenting with emergency conditions and to perform or assist with invasive monitoring and treatment procedures.

**Pediatric Surgery:** The student will be an integral part of the surgical team and participate in evaluating and managing pre- and post-operative pediatric surgical conditions including neonatal intussusception, tracheo-esophageal fistulas, posterior urethral valves, spina bifida, umbilical hernias, trauma and will assist in operative care. Related opportunities to learn the essentials of pediatric enteral and parenteral nutritional support, invasive and non-invasive monitoring procedures and techniques, respiratory support techniques, and a variety of pediatric vascular access procedures are available depending on placement facility.

The surgery elective is targeted at medical students, residency doctors and students pursuing surgery as a specialty, and is a fulfilling way to pursuing an away elective or just to volunteer their skills to underserved communities while experiencing healthcare in a different setting.

#### Amani Hostel **Program Highlights**

A supervised, structured and safe elective program abroad

Program is designed in an established network of teaching hospitals and monitored by consultant doctors and registered nurses

We evaluate our participants during and at the end of the program (please see our information booklet for our evaluation form) to ensure that program objectives are met

Opportunity for hands-on experience is unmatched; depending on level of clinical exposure, our participants get extensive hands-on experience in a supervised setting. Participants also get a chance to see both different types of diseases and cases at advanced stages, that they rarely see in the developed world

We have strong relationships with hospitals in which we place our participants and the doctors that they work with, ensuring a very productive experience

Participants acquire an invaluable opportunity to work in a low resource setting which supports character development and benefits the local community

**Amani Hostel Program Objectives:**

Amani Hostel programs, whether for medical students, new doctors or resident doctors, are designed to provide participants with opportunity for immense hands on experience than they would get in their own health systems. Our program objectives adopt the Accredited Council for Graduate Medical Education (ACGME) competencies framework, focusing on the following areas:

1. patient care
2. medical knowledge
3. practice based learning
4. interpersonal and communication skills
5. professionalism
6. systems based practice

**Projects:**

The core of the project is the immense Hands-on clinical experience that gives medical students and volunteers a rare opportunity to practice their various skills. The program can either be rural or urban based depending on your preference

In addition to the core teaching and outreach project / component, all our programs have a volunteering component as a way to give back to the communities we work in; depending on the location / camp where your program is located, participants get involved in a wide range of volunteer projects, depending on their interests such as:

Community development, especially on healthcare and educational issues

Wildlife conservation

Environmental conservation

Marine conservation

Sports development

Some past volunteer projects have included orphanage visits, teaching kids how to swim, visiting

Elementary schools and making essential donations such as books and pencils. See gallery