

## Supplemental Digital Appendix 1

### American College of Surgeons

### General Surgery Residency Survey

Program Name:

Respondents' Names:

Respondents' Positions:

#### Question 1.

How many chief residents have graduated from your program in each of the past five years, by gender?

2005: Male  Female

2006: Male  Female

2007: Male  Female

2008: Male  Female

2009: Male  Female

#### Question 2.

What is the total number of categorical residents, by gender, that have entered your program over the past five academic years (2004/2005 through 2008/2009)?

Male  (total for 2004/2005 through 2008/2009)

Female  (total for 2004/2005 through 2008/2009)

#### Question 3.

How many chief residents graduating from your program in the past five years (2005-2009) have entered surgical clinical fellowships immediately following graduation from your program?

Total number (2005-2009)

Number in each sub-specialty:

Breast   
 Cardiothoracic   
 Colorectal   
 Critical Care   
 Endocrine   
 Hand   
 Hepato-Biliary-Pancreatic   
 Minimally invasive/laparoscopic

Oncology   
 Pediatric   
 Plastics   
 Transplant   
 Vascular   
 Other   
 (please specify)

#### Question 4.

How many categorical residents have left your program over the past five academic years (2004/2005 through 2008/2009), prior to completing five clinical years in your program, in order to enter other surgical sub-specialty residencies? (Do not include residents who transferred to another general surgery residency program.)

Total number (2004/2005 through 2008/2009)

Number in each sub-specialty:

Cardiothoracic   
 ENT   
 Neurosurgery   
 Ophthalmology   
 Orthopedic Surgery

Plastics   
 Urology   
 Vascular   
 Other   
 (please specify)

Question 5.

What is the total number of categorical residents, by gender, that have left your program over the past five academic years (2004/2005 through 2008/2009) prior to completing five clinical years, in order to enter a non-surgical specialty? (for example, family practice, anesthesia, internal medicine)

Male  (total for 2004/2005 through 2008/2009)

Female  (total for 2004/2005 through 2008/2009)

Question 6.

What is the total number of categorical residents currently enrolled in your program?

(Years 1 through 5)

Of these, how many are supported by GME Medicare?

(Your institution's graduate medical education director will have this information.)

Question 7.

How many faculty members are involved in resident education at your program, as reported to the Residency Review Committee (RRC) in your most recent Program Information Form (PIF)?

Number of faculty members

Question 8.

(Program Directors only)

ACGME requires that "each resident has at least 750 cases per resident across five years of training" and that programs seeking an increase in complement demonstrate "adequate clinical material and complex operative cases." ([http://www.acgme.org/acWebsite/downloads/RRC\\_progReq/440\\_general\\_surgery\\_01012008\\_u08102008.pdf](http://www.acgme.org/acWebsite/downloads/RRC_progReq/440_general_surgery_01012008_u08102008.pdf) p. 8 and p. 12)

Based only on this ACGME requirement (if funding were NOT an issue), do you currently have clinical and operative volume to accommodate an increase in resident complement?

☐ Yes

If Yes, how many additional residents per year could your program accommodate based on current clinical and operative volume?

☐ No

Question 9.

(Program Directors only)

Below is a list of procedures based on the Surgical Council on Resident Education (SCORE)'s list of "essential and common" procedures to be included in a curriculum for a five-year general surgery residency training program. These procedures are defined by the SCORE as "frequently performed operations in general surgery; specific procedure competency is required by end of training (and should be attainable primarily by case volume)."

Overall, how would you characterize the number of these "essential and common" procedures available to your residents during their training?

☐ We have the just the right amount of these procedures to meet resident training needs.

☐ The number of these procedures available exceeds resident training needs.

☐ It is a struggle to meet resident training needs for at least some of these procedures.

☐ Abdomen - General  
Open exploratory laparotomy  
Bowel resection

☐ Abdomen - Hernia  
Open and laparoscopic hernia repair (inguinal, femoral and ventral)

☐ Abdomen - Biliary  
Open and laparoscopic cholecystectomy with or without cholangiography

☐ Abdomen - Liver  
Open and laparoscopic liver biopsy

☐ Abdomen - Spleen

☐ Upper and lower endoscopy/bronchoscopy

☐ Breast, Skin and Soft Tissue  
Breast biopsy and mastectomy  
ALND and SLN

☐ Endocrine  
Partial or total thyroidectomy  
Parathyroidectomy

☐ Surgical Critical Care  
Pulmonary artery catheter placement  
Airway management/tracheostomy  
Measurement of compartment pressures (abdomen, extremity)

☐ Vascular - Venous

Open and laparoscopic splenectomy

- ☐ Alimentary Tract - Esophagus  
Laparoscopic antireflux procedure
- ☐ Alimentary Tract - Stomach  
Percutaneous endoscopic gastrostomy  
Open gastrostomy
- ☐ Alimentary Tract - Anorectal  
Hemorrhoidectomy  
Subcutaneous lateral internal sphincterotomy  
Drainage anorectal abscess  
Anal fistulotomy

Venous insufficiency and operation for varicose veins

- ☐ Vascular - Access  
Arteriovenous graft/fistula
- ☐ Thoracic Surgery  
Chest tube placement
- ☐ Pediatric Surgery  
Inguinal herniorrhaphy in children  
Umbilical hernia repair in children

Question 10.

(Program Directors only)

Below is a list of procedures based on the Surgical Council on Resident Education (SCORE)'s list of "essential and uncommon" procedures to be included in a curriculum for a five-year general surgery residency training program. These procedures are defined by SCORE as "rare, often urgent, operations seen in general surgery practice and not typically done in significant numbers by trainees; specific procedure competency required by end of training (but cannot be attained by case volume alone)."

Overall, how would you characterize the number of these "essential and uncommon" procedures available to your residents during their training?

- ☐ We have the just the right amount of these procedures to meet resident training needs.
- ☐ The number of these procedures available exceeds resident training needs.
- ☐ It is a struggle to meet resident training needs for these procedures.

- ☐ Abdomen - Biliary  
Open common bile duct exploration
- ☐ Abdomen - Spleen  
Splenectomy/splenorrhaphy
- ☐ Alimentary Tract - Esophagus  
Open antireflux procedure  
Laparoscopic repair of paraesophageal hernia
- ☐ Alimentary Tract - Stomach  
Partial/total gastrectomy  
Truncal vagotomy and drainage
- ☐ Alimentary Tract - Small Intestine  
Repair of duodenal perforation  
Superior mesenteric artery embolectomy/thrombectomy
- ☐ Alimentary Tract - Large Intestine  
Subtotal colectomy with ileorectal anastomosis/ileostomy
- ☐ Alimentary Tract - Anorectal  
Excision of anal cancer
- ☐ Alimentary Tract - Pancreas  
Whipple procedure

- ☐ Trauma  
Management of esophageal trauma  
Splenectomy/splenorrhaphy  
Repair hepatic lacerations  
Drainage pancreatic injury  
Repair bladder injury  
Repair vascular injury  
Fasciotomy for injury
- ☐ Vascular - Arterial Disease  
Embolectomy/thrombectomy artery  
Amputations
- ☐ Thoracic Surgery Exploratory  
thoracotomy Pericardial window  
for drainage
- ☐ Pediatric Surgery  
Pyloromyotomy  
Emergency operation for malrotation  
Emergency operation for intussusception
- ☐ Genitourinary  
Nephrectomy  
Orchiectomy  
Repair iatrogenic ureteral injury
- ☐ Head and Neck  
Cricothyroidotomy

Question 11.

Have you applied for an increase in resident complement from the Residency Review Committee (RRC) during the past five academic years (2004/2005 through 2008/2009)?

- ☐ Yes
- ☐ No

Question 12.

(Program Directors only)

With regard to the training of general surgeons in the U.S., do you believe:

- ☐ We are training too many surgeons nationally.  
☐ We are training the correct number of surgeons nationally.  
☐ We are not training enough surgeons nationally.

Question 13.

(Program Directors only)

Do you believe that there is currently a shortage of general surgeons in the U.S.?

- ☐ Yes, across the nation  
☐ Yes, in some places  
☐ No  
☐ Not sure

Question 14.

(Program Directors only)

Please provide additional comments about the current supply of general surgeons or general surgery training capacity.