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Quick Facts

- One-third of all surgeons are over the age of 55.
- Thoracic and urologic surgeons are older on average than other surgical sub-specialists.
- Dermatologic surgeons are younger on average than other surgical sub-specialists.
- Rural surgeons are older on average than their urban counterparts.

Mission Statement

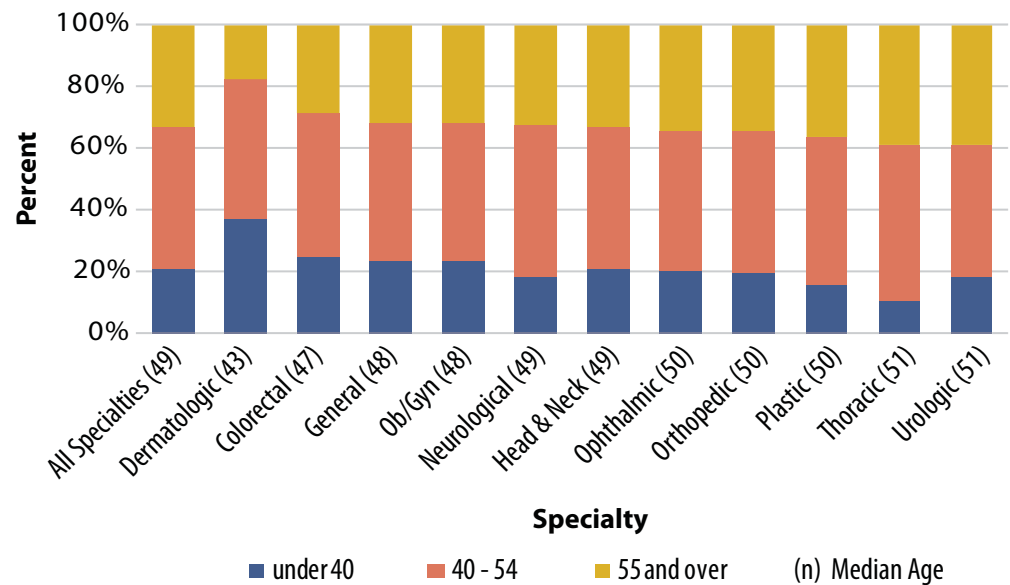
The mission of the ACS Health Policy Research Institute is to improve our understanding of surgical patient care from a policy perspective in order to educate the public, federal and state governments, health care consumers, and the policy community to enable advocacy for superior, efficient, and compassionate surgical patient care. The goal of the Institute is to create a data driven, knowledge based program for examining issues related to surgical services, the surgical workforce, and public policies affecting surgery.

Previous analysis by the ACS HPRI has found that growth in the surgical workforce over the past 25 years has been fueled by expansion in surgical sub-specialties, including orthopedic, plastic, thoracic, and obstetrics/gynecology. Despite this overall growth, the numbers of new surgeons entering may not be sufficient to replace surgeons nearing retirement. The training pathways and demographic makeup of each sub-specialty varies, calling for different strategies to address surgery workforce shortages.

Thoracic and Urologic Surgeons are Older than Other Specialists

Using data from the 2009 AMA Physician Masterfile and the American Board of Medical Specialties, we classified 137,426 physicians as surgeons. For the purpose of this analysis, only surgeons under age 70 working in direct patient care are included (see Data and Methodology). Approximately one-third of all surgeons are older than age 55, but differences across specialties are noteworthy (Figure 1).

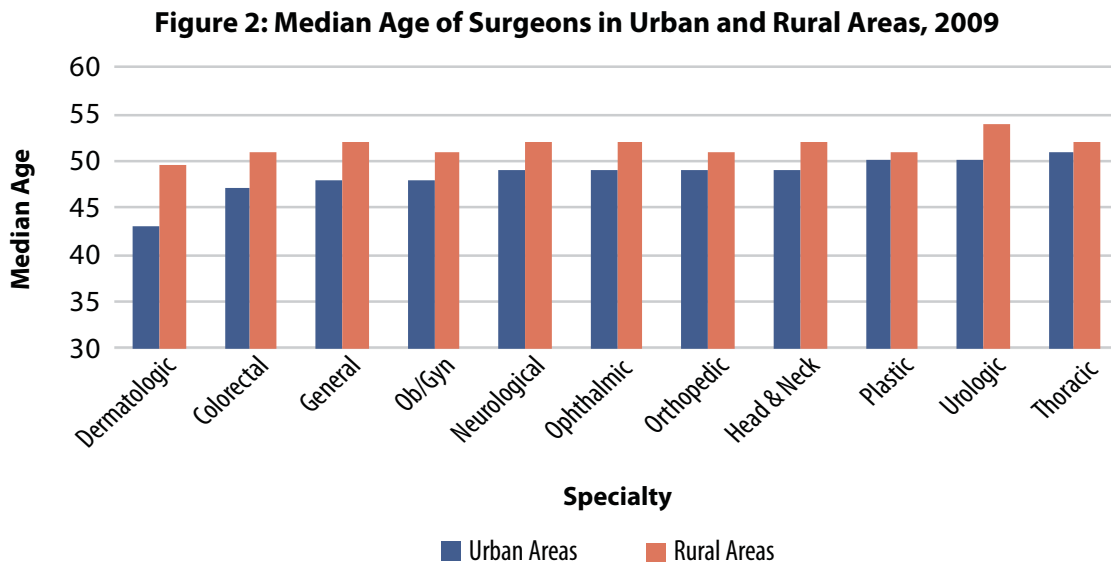
Figure 1: Age Groups By Surgical Specialty, 2009



Dermatologic surgeons are the youngest sub-specialty group, with a median age of 43 and just 18% over the age of 55. Thoracic and urologic surgery are the oldest sub-specialty groups, with median ages of 52 and 51, respectively. Thirty-nine percent of thoracic surgeons and urologic surgeons are over the age of 55. Orthopedic, ophthalmic and plastic surgery also have median ages of 50 years old or older, with 34% to 37% of surgeons in those groups over age 55.

Rural Surgeons are Older Across All Specialties

For all specialties, the median age of surgeons in rural areas is older than that of surgeons in urban areas (Figure 2). Rural urologic surgeons have the highest median age of any group. The greatest difference in median age between urban and rural surgeons is in dermatologic surgery, with a difference of 6.5 years. The smallest differences in median age between urban and rural areas are in plastic and thoracic surgery, with a difference of just one year between the median age of rural surgeons in these specialties and their urban counterparts.



The age distribution of surgeons in rural areas is uniform across all age groups. By contrast, in urban places there is a bolus of specialty surgeons between the ages of 35 and 54 and of general surgeons between the age of 35 and 44 (Figure 3). These patterns may reflect more recent efforts to increase the production of general surgeons, whereas an increase in the number of surgical specialists occurred earlier. Even with this group of younger surgeons, the number of new surgeons who are necessary for replacing those nearing retirement age appears disproportionate, particularly in rural areas and for general surgery.

Examining age patterns by Census region, only modest differences emerge in the age profile of surgeons (Figure 4). A slightly higher proportion of surgeons in the West are over age 55 (35%) than other regions; the Midwest has the lowest percentage of surgeons over age 55 (32%). Overall, a lower percentage of general surgeons are over 55 when compared to specialty surgeons.

Implications

An earlier ACS HPRI study of surgeon demographics over time concluded that the growth of general surgeons has failed to keep pace with population.¹ This analysis highlights the variations in age structure of the surgeon workforce by specialty, Census region and rural-urban status. The age structure of different surgeon groups may be influenced by many factors, including the relative lengths of training for each specialty group, placement opportunities, work schedule, and call hours. To best address the aging surgeon workforce and increase the number of new surgeons entering the workforce, the underlying sources of this age variation should be explored further.

Data and Methodology

This analysis is based on 2009 American Medical Association (AMA) Physician Masterfile data representing all licensed physicians and American Board of Medical Specialties (ABMS) data on board certifications. Physicians with a self-reported primary specialty of surgery were included in the analysis. Additional physicians were identified as surgeons and included in the analysis based their ABMS board certification information, with surgical specialty groups defined as in [Figure 5](#).

Only physicians who identified their practice type as direct patient care, were 69 years old or younger and who reported a practice location within a U.S. county or county-equivalent (e.g., Federal Information Processing Standard (FIPS) codes) were included.

Physicians were excluded from the analysis in a given year if they reported being in residency training, semi-retired, or if they reported their primary present employer was the U.S. Government, Locum Tenens, Medical School, or Other Non-Patient Care Employment.

Figure 3: Age Structure of Surgeons Urban and Rural Areas, 2009

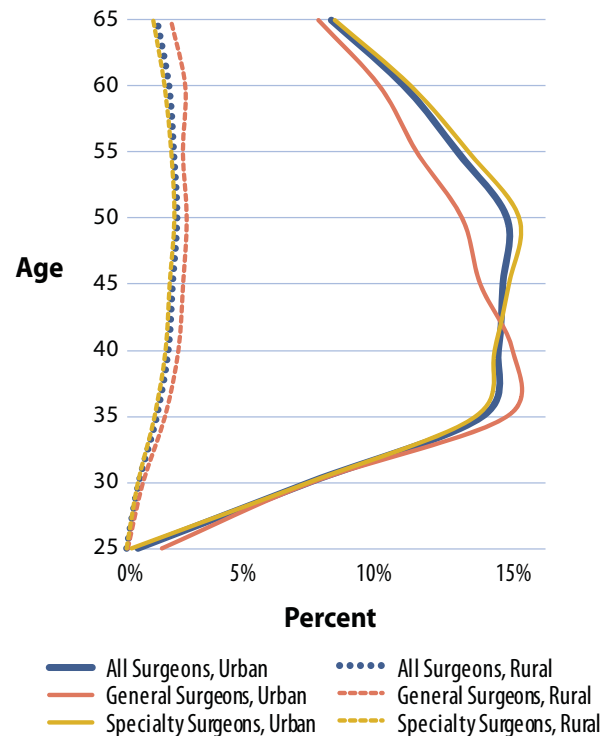
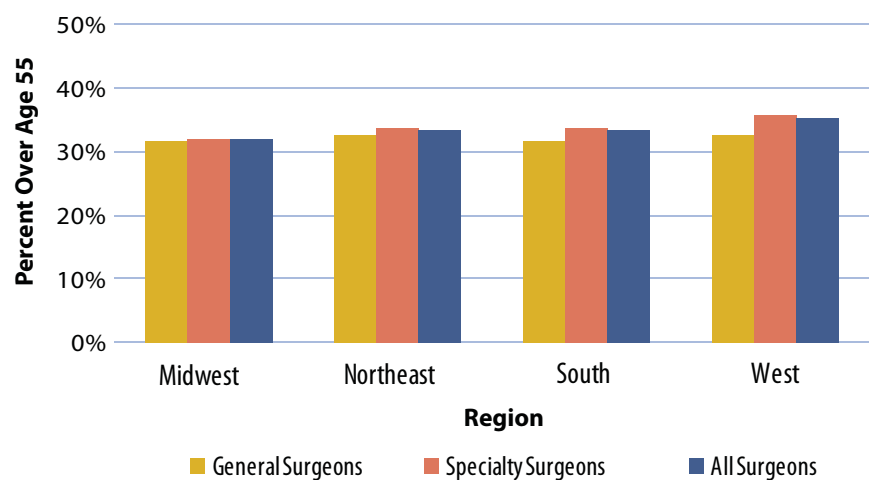


Figure 4: Percent of Surgeons Over Age 55 By Region, 2009



1 Poley S, Belsky D, Gaul K, Ricketts T, Fraher E, Sheldon G. "Longitudinal Trends in the U.S. Surgical Workforce, 1981-2006." Chapel Hill, North Carolina. American College of Surgeons Health Policy Research Institute, May 2009.

Counties and county equivalent areas were those identified by modified Federal Information Processing System (FIPS) codes and regions were those defined by the U.S. Census Bureau. The rural – urban classification was defined using the U.S. Office of Management and Budget’s 1996 Metropolitan area definitions. Surgeons with missing age data were excluded from age calculations and figures. ❖

Figure 5: Surgery Specialty Categories

Specialty Category	Included AMA Specialties	Included ABMS Certifications
General Surgery	General Surgery , Abdominal Surgery, Hand Surgery, Hand Surgery (Surgery), Oral and Maxillofacial Surgery, Pediatric Surgery, Trauma Surgery, Transplant Surgery, Cardiovascular Surgery, Vascular Surgery, Vascular Surgery (Integrated), Surgical Critical Care. Surgical Oncology	Surgery, Surgery of the Hand, Pediatric Surgery, Surgical Critical Care, Vascular Surgery, Congenital Cardiac Surgery
Colorectal Surgery	Colorectal Surgery, Proctology	Colon & Rectal Surgery
Dermatologic Surgery	Dermatologic Surgery, Procedural Dermatology	
Neurosurgery	Neurological Surgery, Pediatric Neurological Surgery, Endovascular Surgical Neuroradiology	Neurological Surgery
Obstetrical & Gynecological Surgery	Gynecology Oncology, Gynecology, Obstetrics & Gynecology, Obstetrics, Critical Care Medicine OB/GYN	Obstetrics & Gynecology, Gynecologic Oncology
Orthopedic Surgery	Hand Surgery - Orthopedics, Adult Reconstructive Orthopedics, Foot & Ankle Surgery, Musculoskeletal Medicine, Pediatric Orthopedics, Orthopedic Surgery, Sports Medicine, Orthopedic Spine Surgery, Orthopedic Trauma	Orthopedic Surgery
Ophthalmic Surgery	Ophthalmology, Pediatric Ophthalmology	Ophthalmology
Head & Neck Surgery	Head & Neck Surgery, Otolaryngology/Neurotology, Otolaryngology, Pediatric Otolaryngology	Otolaryngology, Pediatric Otolaryngology, Neurotology
Plastic Surgery	Craniofacial Surgery, Cosmetic Surgery, Facial Plastic Surgery, Hand Surgery (Plastics), Plastic Surgery, Plastic Surgery within the Head & Neck	Plastic Surgery, Plastic Surgery within the Head and Neck
Thoracic Surgery	Thoracic Surgery, Pediatric Cardiothoracic Surgery, Cardiothoracic Surgery, Thoracic Surgery (Integrated)	
Urologic Surgery	Urology, Pediatric Urology	Urology, Pediatric Urology

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