

**Promoting Health Equity:  
Responsible Involvement of  
Trainees in the Care of  
Vulnerable Populations**

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**UROLOGY**

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MEDICAL CENTER

Kelvin A. Moses, MD, PhD, FACS  
Department Of Urology, Nashville, TN

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## Disclosures

- None relevant



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## Agenda

- Landscape of US healthcare
- What we say matters
- Know your skill set
- Opportunities for improvement

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## Health Care Spending in the United States and Other High-Income Countries

Irene Papanicolas, PhD; Liana R. Woskie, MSc; Ashish K. Jha, MD, MPH

Figure 1. Spending

Rank (highest to lowest)	1	2	3	4	5	6	7	8	9	10	11	Mean
<b>General</b>												
Overall population (in millions)	US 323	Japan 127	Germany 83	UK 66	France 64	Canada 36	Australia 24	NLD 17	Sweden 10	CHE 8	Denmark 6	69
Poverty rate, % below poverty line of 60%	US 24	Japan 22	Canada 21	Australia 20	UK 18	Sweden 17	CHE 17	Germany 16	France 15	NLD 15	Denmark 12	18
Mean spending on health per capita, US \$	US 9403	Sweden 6808	CHE 6787	Denmark 6463	NLD 5202	Germany 5182	Canada 4641	Australia 4357	Japan 3727	France 3661	UK 3377	5419
Population with health care coverage, %	UK 100	Sweden 100	CHE 100	Denmark 100	Canada 100	Japan 100	Australia 100	France 99.9	NLD 99.9	Germany 99.8	US 90	99
<b>Equity</b>												
Horizontal inequity index, % <sup>a</sup>	US 6	Canada 1.90	France 1.30	Germany 1.00	UK 0.40	Sweden NA	NLD NA	CHE NA	Denmark NA	Japan NA	Australia NA	2.10

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### Health Care Spending in the United States and Other High-Income Countries

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**Table. Insurance System Characteristics**

Characteristics	United States	United Kingdom <sup>a</sup>	Germany	Sweden	France	The Netherlands	Switzerland	Denmark	Canada	Japan	Australia
<b>General</b>											
Main source of basic care coverages <sup>b</sup>	Private employer-based and individual insurance	National health care system	Statutory health insurance system	National health care system	Statutory health insurance system	Mandatory health insurance system	Mandatory health insurance system	National health care system	Regionally administered universal public insurance program	Statutory health insurance system	Regionally administered universal public insurance program
Enrollment process for basic care coverage <sup>c</sup>	Voluntary	Automatic	Compulsory	Automatic	Compulsory	Compulsory, universally mandated private insurance	Compulsory, universally mandated private insurance	Automatic	Automatic	Compulsory	Automatic
No. of insurers for insurance-type systems <sup>d</sup>	880 Firms; 5379 establishments	NA	118 Sickness Funds	NA	3 Noncompeting insurance schemes	60 Insurance plans	52 Insurance plans	NA	NA	>3400 Noncompeting public, quasi-public, and employer-based insurers	NA
Private by type, % of total population <sup>e</sup>											
Private as primary form of insurance	55.3	0	10.8	NA	0	0	0	0	NA	NA	0

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### Health Care Spending in the United States and Other High-Income Countries

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**Life expectancy**

Life expectancy in total population at birth, mean, y	Japan 83.9	CHE 83	Australia 82.5	France 82.4	Sweden 82.3	Canada 81.7	NLD 81.6	UK 81	Denmark 80.8	Germany 80.7	US 78.8	81.7
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**Maternal and infant health**

Maternal mortality, deaths per 100000 live births	US 26.4	UK 9.2	Germany 9	France 7.8	Canada 7.3	NLD 6.7	Japan 6.4	CHE 5.8	Australia 5.5	Sweden 4.4	Denmark 4.2	8.4
Infant mortality, deaths per 1000 live births	US 5.8	Canada 5.1	UK 3.9	CHE 3.9	France 3.8	Denmark 3.7	Germany 3.3	Australia 3.2	Sweden 2.5	NLD 2.5	Japan 2.1	3.6

**Workforce remuneration, US \$**

Generalist physicians	US 218 173	Germany 154 126	Canada 146 286	UK 134 671	Japan 124 558 <sup>a</sup>	France 111 769	NLD 109 586	Australia 108 564	Sweden 86 607	CHE NA	Denmark NA	133 723
Specialist physicians	US 316 000	Australia 202 291	NLD 191 995	Canada 188 260	Germany 181 243	UK 171 987	France 153 180	Denmark 140 505	Japan <sup>a</sup>	Sweden 98 452	CHE NA	182 657
Nurses	US 74 160	NLD 65 082	Australia 64 357	Denmark 58 891	Canada 55 349	Germany 53 668	UK 49 894	Japan 44 712	France 42 492	CHE NA	Sweden NA	51 795
Complete rebuild of health system needed	US 23	Sweden 10	Canada 9	UK 7	France 4	Australia 4	Germany 3	CHE 3	NLD NA	Denmark NA	Japan NA	8

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## Who Is “Vulnerable” in the US Medical System

- Uninsured or Medicaid/Medicare
- Veterans
- Racial/Ethnic Groups
- LGBTQ+
- Women and Children
- Non-English Speaking/English as Second Language
- Incarcerated
- Mental/Psychiatric Disorder




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## Urology Training in the US (2021-22)

- 148 accredited Urology programs
- 1,794 Urology residents
  - 30.4% Women (0.1% Non-Binary)
  - 4.7% Black
  - 9% Hispanic
- Mean number of core faculty- 12 (Range 3-38)
- 80.8% of all residency programs are at teaching hospitals or AMCs
  - 2.2% community hospital
  - 0.4% FQHC



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# Urologists Say The Darndest Things

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## What We Say Matters

- We learned how to do TURPs at the VA from this old guy who was the equipment rep. He used to just tell us what to do. We made a lot of guys incontinent.
- Our attendings never came in for “minor” cases
- Just do what you think is right and I’ll see them in the morning
- Good luck, I’m headed to Italy

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## What We Say Matters

- Noncompliant
- Typical VA/County patient
- Crackhead/Meth-head
- Ghetto/Gang-Banger
- VIP



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## What We Say Matters

Discussion of patients should be held in a manner respecting  
patient autonomy and humanity



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# Surgical Teaching with Vulnerable Patients

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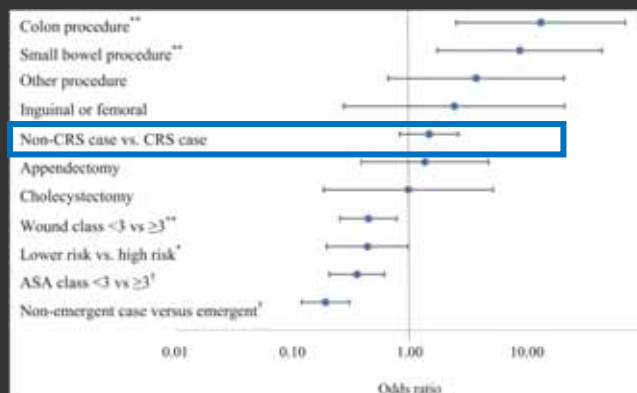
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## Is Chief Resident Autonomy Safe for Patients? An Analysis of Quality in Training Initiative (QITI) Data to Assess Chief Resident Performance

- NSQIP 2014-19 was queried to compare 30-day complications between chief resident service (CRS) vs non-CRS cases
- 1031 cases
  - 562 off CRS
  - 469 on CRS
- No difference in any complication, unplanned readmission, or mortality
- Adjusting for patient and operative risk factors and procedure type, complication rate on CRS vs off CRS was similar
  - (OR=1.46, 95%CI 0.82-2.60; p = 0.20)



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Seegmiller et al, J Surg Education 2020



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## Resident Participation as Co-Surgeon Does Not Adversely Impact Patient Outcomes in Pancreatic Surgery

- Single center retrospective review of 173 pancreatic resections from 2007-18
  - 87 staff co-surgeon
  - 86 with senior resident
- No difference in any complication rate (50.6% vs 53.5%,  $p=0.11$ )

**TABLE 4.** Surgical Outcomes

	Staff Co-Surgeon ( $n = 87$ ) Median (SD)	Resident Co-Surgeon ( $n = 86$ ) Median (SD)	p-Value
Surgery time (min)	295 (102.33)	309 (140.58)	0.42
Estimated blood loss (mL)	350 (501.41)	400 (306.39)	0.87
ICU LOS (days)	2 (2.04)	3.5 (4.43)	0.44
Postoperative hospital LOS (days)	8 (8.27)	8 (5.41)	0.69



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## Evaluation of Peri-operative Outcomes Associated With Resident Involvement on Tumor Resection and Renorrhaphy During Robotic-assisted Partial Nephrectomy

Amanda A. Myers, Laura E. Geldmaker, Daniela A. Haehn, Essa M. Bajalia, Colleen T. Ball, and David D. Thiel

- Supervised resident console involvement during RAPN is safe and does not increase rates of complications.
- Residents have longer median warm ischemia time compared to attending only cases, but this does not appear to impact post-operative renal function.

Urology 2021

## Impact of Urology Resident Involvement on intraoperative, Long-Term Oncologic and Functional Outcomes of Robotic Assisted Laparoscopic Radical Prostatectomy

Jacob Baber, Ilene Staff, Tara McLaughlin, Joseph Tortora, Alison Champagne, Akshay Gangakhedkar, Kevin Pinto, and Joseph Wagner

- Neither safety nor quality is diminished by resident involvement in robot assisted laparoscopic prostatectomy
- Median EBL and operative time was longer for resident cases, particularly in more recent years

Urology 2019



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## Resident Involvement in Urologic Procedures

- In general, resident training is associated with increased operative time, but similar complication rate
  - Penile Prosthesis (Wu et al, Int J Impot Res 2022)
  - URS/LL (Johans et al, J Endourol 2018)
  - MIS Abdominal Sacrocolpopexy (Int Urogynecol J 2018)
  - Male Infertility Procedures (Andrologia 2020)



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## Know Your Skills

- Be able to get yourself out of trouble first
- Be familiar with your trainees' skills and understanding of the procedure
- Make friends with Vascular, Trauma, Transplant, and Plastics
- If you leave/never show up in a case involving a vulnerable patient without an understanding with the resident, they may take your absence as an implied sign of the value of this patient



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# The Way Forward

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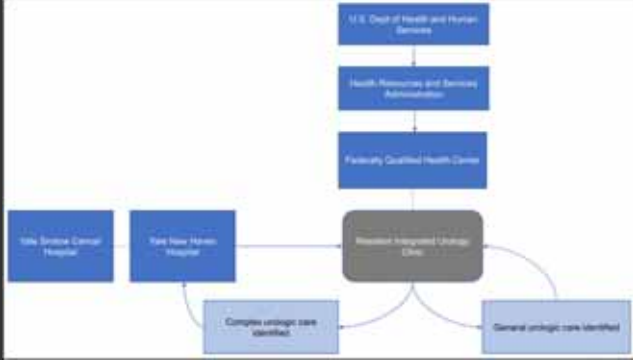
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## Residents and Patients Can Benefit from Training in Underserved Populations

- To address lack of Urology access in a Medically Underserved Area (MUA), Yale Urology developed a partnership with a Federally Qualified Health Center (FQHC) beginning in 2015
- The FQHC billed for the cystoscopy and medical visits. Cystoscopes were donated by Yale.
- 14 residents completed self-assessment questionnaires



U.S. Dept of Health and Human Services  
Health Resources and Services Administration  
Federally Qualified Health Center

Yale Smecton Cancer Hospital  
Yale New Haven Hospital  
Resident Integrated Urology Clinic

Complete urologic care identified  
General urologic care identified

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Javier-DesLoges et al, Urology 2021

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### Urology Residency Training in Medically Underserved Areas Through the Integration of a Federally Qualified Health Center Rotation

- 76.4% of patients had Medicaid or no insurance
- 281 (25.7%) were referred for surgery
- 100% of residents stated they had a better appreciation of treating patients in underserved areas
- 71.6% of residents said they were more likely to practice in an underserved area after residency
- 4 graduates were practicing in MUA or Health Professional Shortage Areas (HPSAs)



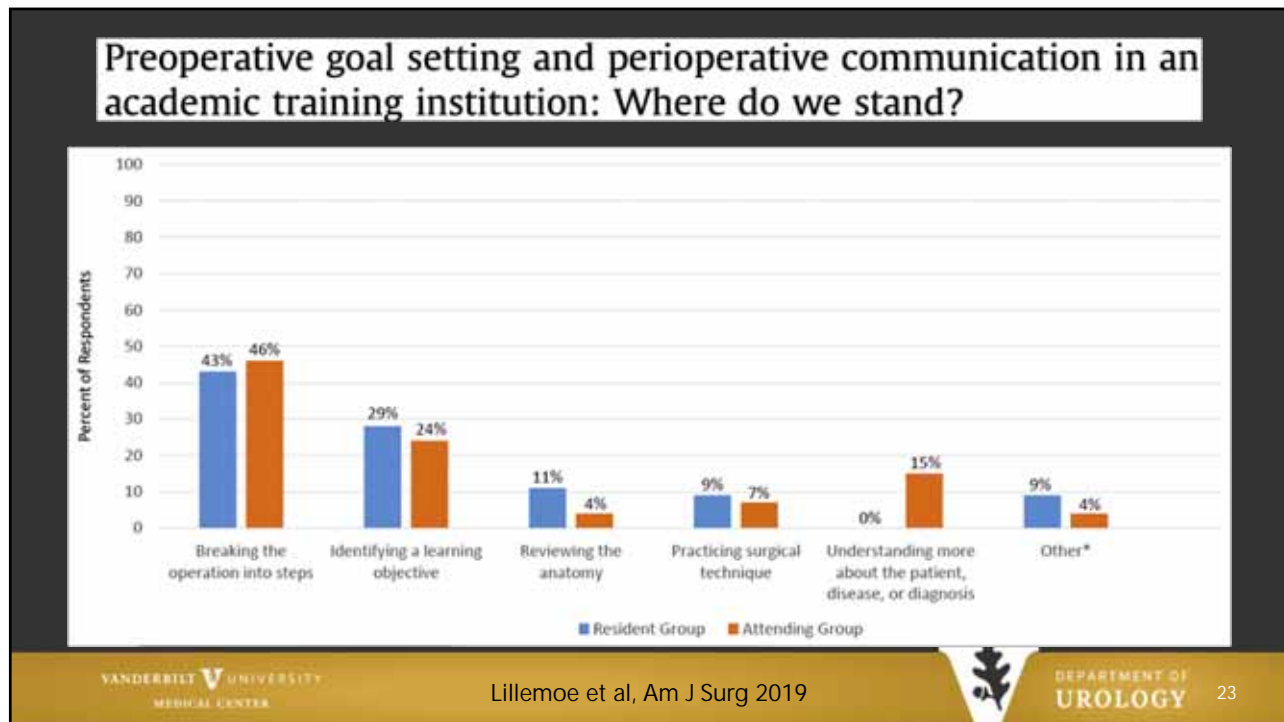
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### Teaching Debrief is Expected but Underutilized

- Current perception is that trainees are under-prepared for independent practice
  - Work hour restrictions
  - Financial pressures
  - Attending research and administrative time
- 18% of general surgery residents report discussion of preoperative educational goals
  - 37% report postoperative areas for improvement
- 35 (78%) of residents and 54 (83%) of attendings at VUMC completed five questions regarding participants' perceptions on resident preoperative preparation and perioperative communication, including postoperative debriefing



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## Opportunities for Improvement

- Guided exposure of trainees to vulnerable patients to improve communication, cultural awareness, and empathy
  - Includes an understanding of racial/ethnic/gender/socioeconomic disparities and the sources
- Demonstrate behaviors after which trainees can model themselves
- Have a good understanding of portions of the case are "passive learning", "active learning" and "active primary" for the resident
- Research on training in underserved populations (outcomes, patient satisfaction, trainee satisfaction and communication) is needed

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## Summary-Pearls of Surgical Teaching

- “See One, Do One, Teach One” is inadequate in the modern medical environment
- Know your skill level when assigning operative responsibility to residents
- Include teaching on risks to vulnerable populations as part of the surgical case
- Preoperative discussion, appropriate oversight, and postoperative debriefing should be a part of each case
- Recognize that there are no “small” cases



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## Thank You!

Questions?

[kelvin.a.moses@vumc.org](mailto:kelvin.a.moses@vumc.org)



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