Gender Gap in Urology

Data about Urology trainee experience

CanMEDS and Urology

The Generation Gap and Urology

Change and Urology
The Gender Gap In Urology

The Canadian Post-M.D. Education Registry (CAPER) is a database which tracks the education and training of physicians chosen for further medical specialization. The CAPER database is a comprehensive resource for the development of data on gender in urology.

The CAPER database includes detailed data on the education and training of physicians registered for post-M.D. training. The database includes information on all programs and training institutions, as well as the specific qualifications and experiences of the physicians registered.

The following tables present the data on the gender gap in urology. The tables show the number of male and female physicians registered in each program and specialty, as well as the number of physicians who have completed their training. The data is presented by region and specialty, and includes information on the number of physicians who have completed their training in each program and specialty.

For more information, visit www.CAPER.ca.
n = 8024 postgraduate training positions

www.CAPER.ca
Surgery as first choice: % female

www.carms.ca
Surgery as first choice: % female

% matching to all first choice surgical disciplines
### Probability of matching to first choice of Urology by Gender

<table>
<thead>
<tr>
<th>Year</th>
<th>♀ Applicants</th>
<th># Matched to Urology</th>
<th>♂ Applicants</th>
<th># Matched to Urology</th>
</tr>
</thead>
<tbody>
<tr>
<td>06</td>
<td>8</td>
<td>6</td>
<td>27</td>
<td>20</td>
</tr>
<tr>
<td>05</td>
<td>8</td>
<td>7</td>
<td>14</td>
<td>11</td>
</tr>
<tr>
<td>04</td>
<td>3</td>
<td>1</td>
<td>24</td>
<td>16</td>
</tr>
<tr>
<td>03</td>
<td>5</td>
<td>1</td>
<td>23</td>
<td>14</td>
</tr>
<tr>
<td>02</td>
<td>4</td>
<td>3</td>
<td>26</td>
<td>12</td>
</tr>
<tr>
<td>∑02-06</td>
<td>28</td>
<td>18 (64%)</td>
<td>114</td>
<td>73 (64%)</td>
</tr>
</tbody>
</table>

www.carms.ca

### % ♀ matching to first choice surgical discipline

- **Gen Sx**
- **Plastics**
- **All Sx**
- **Urology**

www.carms.ca
Gender Gap and Urology

- Gradual ↑ in ♀ choosing Surgery first
- Gradual ↑ in ♀ choosing Urology first
- ♀ Surgical applicants outnumbered 2:1
- ♀ Urology applicants outnumbered 4:1
- GenSx is only applicant gender neutral specialty
- Probability of matching to first choice of surgical discipline gender neutral
- Probability of matching to first choice of Urological discipline gender neutral

Baelocher MO, CMAJ 2005; 173(12):1439-1440
“Girls rule boys drool……”
“Girls go to college to get more knowledge
Boys go to Jupiter to get more stupider….”

JJ MacNeily

Parfait effect?
Couples match?

AUA: Status of ♀ in Urology
n= 121 respondents (61%)
• Practice patterns
• Work hours
• $Compensation
• Academic Promotion

J Urol 173 560-563 2005
60% > 50 hrs per week

Work hours independent of the fact that 2/3 were parents
1/3 expressed career dissatisfaction

- Poor reimbursement (60%)
- Poor mentoring (37%)
- Pigeonholing (25%)
Women in Urology comments:

- Female urologists work long hours like men
- Female urologists not contributing to a “work force shortage”
- Children don’t get in the way
- Career pigeonholing a concern (Female Urology)
- Financially underachieving by an average of 50%
- Lack of academic advancement

Urology Vs. Gen Sx

- Similar work hours
- Pigeonholing (Female)
- ↓ income
- Decreased work hours
- Pigeonholing (Breast)
- ↓ income (non fellowship)
Welcome to the Society of Women in Urology

The Society of Women in Urology (SWIU), formerly known just as "women in Urology," informally began at the 1990 AUA meeting in San Francisco, when five female urologists met for breakfast to discuss their experiences and frustrations. Such informal meetings continued until 1992, when the group created an executive board and introduced its name. SWIU now has more than 300 members, including most of the newly board-certified female urologist, as well as female urology residents, fellows, post-residency, pre-board-certified women. SWIU also has female members who are non-urology MDs and PhDs.

www.swiu.org
Data and Urology Trainees

What me worry?

I wonder what experience our residents are really getting, and how does it vary from rotation to rotation and program to program?

What me worry?
URAIS

Urology Resident Activity Information System

Operative Logs
Clinic Experience
Ward & ER Experience
Academic Activities

Can J Urol 10(2); 1885-90 2003

15 Specialties
16 Universities
70 Programs
100,000+ activities

Resilience Software Inc.
Timelines

- 2000 – 2002 URAIS developed at UBC
- Spring 02 Incorporation of Resilience Software
- 2002 – 2003 Internet enabled
- 2003 CUA funds national pilot for all Urology programs
- CUA 04 – 1st review & discussion of results
- CUA 05 – 1st comparison of national averages
  > Other specialties are jealous!
Urology Participation June 2005

Participation by Year

<table>
<thead>
<tr>
<th>PGY Year</th>
<th>% Active</th>
</tr>
</thead>
<tbody>
<tr>
<td>PGY1</td>
<td>18%</td>
</tr>
<tr>
<td>PGY2</td>
<td>15%</td>
</tr>
<tr>
<td>PGY3</td>
<td>68%</td>
</tr>
<tr>
<td>PGY4</td>
<td>52%</td>
</tr>
<tr>
<td>PGY5</td>
<td>67%</td>
</tr>
<tr>
<td>PGY6</td>
<td>100%</td>
</tr>
<tr>
<td>Overall</td>
<td>75%</td>
</tr>
<tr>
<td>PGY 3-6</td>
<td>64%</td>
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</tbody>
</table>
Where are we now?

- All Canadian programs are on board
  - Participation rates modest
- T-Res modifications
  - Multiple procedures in one activity
  - Flexibility in what fields you see
  - Web reports on experience gaps now available
  - July 06 changed to anatomic classification
  - MIS versus OPEN decision tree
- Core Urology template available
  - Gen Sx
  - Vascular
  - Plastics
  - Etc.
## Breadth of Experience

**05-06**

<table>
<thead>
<tr>
<th>Parent</th>
<th>Number</th>
<th>Percentage</th>
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</thead>
<tbody>
<tr>
<td>Oncology</td>
<td>4654</td>
<td>33.3%</td>
</tr>
<tr>
<td>LUTS</td>
<td>3436</td>
<td>24.5%</td>
</tr>
<tr>
<td>Urolithiasis</td>
<td>2668</td>
<td>19.1%</td>
</tr>
<tr>
<td>Congenital Anomalies</td>
<td>1399</td>
<td>10.0%</td>
</tr>
<tr>
<td>Transplant</td>
<td>582</td>
<td>4.2%</td>
</tr>
<tr>
<td>Andrology</td>
<td>448</td>
<td>3.2%</td>
</tr>
<tr>
<td>Trauma</td>
<td>217</td>
<td>1.6%</td>
</tr>
<tr>
<td>Infection</td>
<td>214</td>
<td>1.5%</td>
</tr>
<tr>
<td>Female Urology</td>
<td>212</td>
<td>1.5%</td>
</tr>
<tr>
<td>Other</td>
<td>166</td>
<td>1.2%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>13996</strong></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Total</th>
<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Academic</td>
<td>762</td>
<td>4.8%</td>
</tr>
<tr>
<td>Ambulatory Adult</td>
<td>1249</td>
<td>7.8%</td>
</tr>
<tr>
<td>Ambulatory Pediatric</td>
<td>95</td>
<td>0.6%</td>
</tr>
<tr>
<td>Operation Adult</td>
<td>11377</td>
<td>71.3%</td>
</tr>
<tr>
<td>Operation Pediatric</td>
<td>1284</td>
<td>8.0%</td>
</tr>
<tr>
<td>Ward/Clinic/Emerg</td>
<td>1200</td>
<td>7.5%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>15967</strong></td>
<td></td>
</tr>
</tbody>
</table>
T-Res challenges

How to improve participation?

- What is the value added?
- Sloth factor
- Residents must bring their data to semi-annual review
- Close the loop
  - Tell them to do it
  - Really Look at the data collected
  - Let residents know you really do look at the data
ACGME Case log
Case log only
No self evaluation
CPT codes cumbersome
No Urology specific core rotations
Gen Sx
Vascular
Plastics
etc.

www.acgme.net
thinResidency®

Palm and Pocket PC enabled
All things to all people?
Scheduler
Instant messenger
Information collection (case logs and M&M)
Administrator (evaluations)
Data entry somewhat cumbersome

www.thinResidency.com

Activities 6,128 UBC – 2005

WHAT HAVE WE FOUND?

Top 15 procedures UBC 2005
CanMEDS Roles
Medical Expert
Communicator
Collaborator
Manager
Health Advocate
Scholar
Professional

ACGME Core Competencies
Medical Knowledge
Communication skills
Systems based practice
Patient Care
Practice based learning
Professionalism

JUrol 170, 1312-1317:2003
Core Competencies in Surgery: Perceptions of Canadian Urologists

Target Population $n=418$

63% response

Kevin B. Morrison, Andrew E. MacNelly
Division (Dept!) of Urology
University of British Columbia

Can J Surg Vol 49;4 2006

Target Population $n=418$

63% response

- **Urban** = Local Health Area pop >100 000
  $(n=182)$

- **Rural** = Local Health Area pop <100 000
  $(n=102)$

- **Academic** = University teaching hospitals
  $(n=134)$

Can J Surg Vol 49;4 2006
Non-clinical elements

“How well do you feel Residency prepared you for the challenges of practice?”

- Office management
- Hospital administration
- Time management skills
- Appraisal of literature
- Ethical decision making
- Communication skills
- Accessing electronic medical info
- Accepting ultimate responsibility
- Practicing in a constrained system
- Building a referral base
- Gaining community’s confidence

Non clinical: Areas poorly prepared for by Residency
Comments: Challenges of practice

• (34%) Time management, time for administration, reading, running an office, leading a balanced life

• (30%) Practicing within resource constraints, Beds, OR time, diagnostic services, unrealistic patient demands

• (10%) Maintaining skills, New techniques, internet

• (10%) Balancing demands, work/family life, clinical/admin, education/family

• Dealing with politics & administration, and bureaucratic interference in delivery of optimal patient care, loss of control, loss of respect, disregard for doctors’ time

Can J Surg Vol 49;4 2006

Clinician (MD)
Clinician Scientist (MD PhD)
Clinician Educator (MEd)
Clinician Epidemiologist (MSc)
Clinician Manager (MBA)
**MD/MBA programs in the 142 Canadian & U.S. Med Schools**

![Bar chart showing trends in MD/MBA programs from 1993 to 2006.]

*Academic Med 2003:78:335-341
*AAMC [www.aamc.org](http://www.aamc.org) (Jan 2006)*

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**Physician MBA’s in Canada**

- Full time MBA programs
  - 25 universities
  - Approx 2500 graduates per year
  - <1% are medical doctors

- Executive MBA
  - 11 universities
  - Approx 400 graduates per year
  - 4% are medical doctors

*AnalysisWorks Inc. June 2003*
• Labour relations
• Change management
• Time management
• Hiring & Firing
• Negotiating
• Conflict resolution
• Budget management
• Resource allocation
• Business case preparation
• Impact analysis
• Strategic planning
• Annual reporting
• Marketing
• Public Relations
• Leadership in Medical organizations

The Generation Gap
Defining The Generations

| Traditionalists 1920 – 1940 (Senior Faculty – retired or soon to be) | Baby Boomers 1940 – 1960 (Department Heads & Senior Faculty) |

<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Career goals a high priority</td>
<td>Personal and family goals “Vacation deficit disorder”</td>
</tr>
<tr>
<td>Self-sacrifice a virtue</td>
<td></td>
</tr>
<tr>
<td>Pay your dues</td>
<td>Dues irrelevant</td>
</tr>
<tr>
<td>Value stability</td>
<td>3-4 careers in a lifetime</td>
</tr>
<tr>
<td>Medicine a calling</td>
<td>Medicine a job</td>
</tr>
<tr>
<td>Respect authority</td>
<td>Question authority</td>
</tr>
</tbody>
</table>

*Academic Med 2005;80:205-210*
Generation X - Strengths

Skilled in accessing and using data
More well rounded than previous generation
Varied interests and knowledge
Willing to challenge the status quo

Generation X Doctors - Challenges

Can expect to be sued by patients
Public perception that they are “only in it for the money”
Doctors no longer revered
Will have to work in an increasingly restrictive system
(Shared decision making!)
Financially vulnerable ($100 - $150K by MD graduation)
**Personal finances of Urology Residents in Canada**

n=40 senior Urology residents
70% educational debt - median $50,000 (now $100K+)
45% paying credit card interest
50% paying interest didn’t know the rate!
10% > $7500 outstanding monthly credit card balance
33% missed or fell behind payments (utilities, loans, etc)
50% do not budget expenses
34% cash reserves <$250
33% did not contribute to an RRSP

*Teichman, Can J Urol 7: 2000, 1149-1155*

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**Generation Y (why?) 1980-2000**

“echo boom” or “millennial generation”

Born 1980-2000
This years PGY-1’s!
5-6 Million strong in Canada
Most highly educated generation ever
Half raised by divorced parents
Sense of entitlement
Techno savvy

**Free agent mentality**
X’s and Y’s

It is no longer hockey and baseball players who are free agents – now everyone is expected to move from job to job, team to team. We are all ‘e-lancers’ now”.

Thomas L Friedman
The Lexus and the Olive Tree 2000
The World is Flat 2005

For decades physicians (surgeons especially) have provided their time and expertise…

- Sense of responsibility
- Status
- Ego gratification
- Money
Medicine is a service industry

Who takes call and how often?
Who teaches for free?
Who serves on national societies for free?
Who sets Royal College exams for free?

Medicine is a service industry

July 2003 ACGME mandate
80 hour work week
Max 1:3 call

Provincial Resident professional associations
Scheduled Protected time for academic half-days
Max 1:3 call
Effect of work hour reduction?

7 studies have assessed the effect of a reduction in resident work hours upon patient safety.

Some studies show an improvement in patient safety, some no change, and some show increased harm.

Evidence about patient safety is insufficient to inform the process of reducing resident work hours.

Annals of Internal Medicine Dec 2004 141(11) 851-857

Medicine is a service industry

Implications for faculty:

Decreased time for teaching
Decreased academic productivity
Fatigue and burnout
Inability to recruit and retain academic faculty

“Physician extenders”

Hospitalists
Fellows (or foes?)
Clinical Fellows Add to the Education of a Resident?  
P<0.001

The Division Could Support Additional Fellows?  
p < 0.001
Fellows "Steal" Cases from Residents in the OR?

<table>
<thead>
<tr>
<th></th>
<th>Faculty</th>
<th>Fellow</th>
<th>Resident</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Agree</td>
<td>2.7</td>
<td></td>
<td>3.9</td>
</tr>
<tr>
<td>Neutral</td>
<td>2.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strongly Disagree</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

$p < 0.001$

University of Toronto In Press 2006

Challenges In The Recruitment And Retention Of Academic Urologists In Canada

CAUS 2004
Academic Urologists are in the minority
Approximately 750 Canadian Urologists
"Involved in Residency training in a significant way?"
155 (21%)

CAUS 2004

Academic Urology

Half full
- Intellectual stimulation
- Not the chief resident for life
- Resident support
- "Cutting edge"
- "Opinion leader"
- Better places to live
- Tertiary cases
- Great CME

Half empty
- Extra training of 1-3 yrs
- Opportunity costs
- Educational debt
- Uncertainty of appointments
- Politics of academia
- Perceived lower incomes
- Tertiary cases
- Resident & student demands

CAUS 2004
“In your career, knowledge is like milk. It has a shelf life stamped on the carton….if you are not constantly replacing everything you know, your career is going to turn sour fast…..”

Louis Ross Chief Technology Officer
Ford Motor Company

Laparoscopic…

**Orchidopexy**

**Nephrectomy/Partial Nephrectomy**

**Pyeloplasty/Donor Nx**

**Prostatectomy**

**Brachytherapy**

**Continent Diversion for congenital anomalies**

**TIPS/ Dartos flaps for hypospadias**

**Active Surveillance……….Prostate Cancer**

- Incidental small RCC
- Antenatally detected UPJO
- Low Risk NSGCTT

Evidence Based Medicine
Randomized controlled trials
Appropriate powering of studies
Is it time to change the training of Urology Residents?

.....Training 100% of residents for surgeries that most urologists will not perform in practice represents an inefficient use of time and resources in our current economic environment....

A Schaeffer

J Urol 173:1541 May 2005
Two Streams?

- Germany
- England
- USA
- Canada

Two Streams?

- 1994 Canadian Academy
- 1996
  - AUA 1st suggested 2 tier training be examined
- 2000 RRC/ABU
- 2002 CSGUS
- 2003 AAGUS
- 2005 SUU and SUCPD
- 2005 WSAUA
ABU case logs 10 years out

- 16 major cases per yr
  (radical prostatectomy cystectomy nephrectomy)

- 400+ minor cases
  (cysto/cysto procedures, vasectomies, TRUS, hydrocelectomy)

Pediatrics amongst general urologists?
Vanished…… < 1 pyeloplasty per year

Howards, S Society of University Urologists AUA 2005
• 114 programs
• 235 R1 spots 2006
• 350 applicants 2006
• 1000 residents
• 18% female applicants
• 8000 urologists
• 300+ million population

• 12 programs
• 26 R1 spots 2006
• 35 applicants 2006
• 110 residents
• 24% female applicants
• 750 urologists
• 32 million population

www.carms.ca
www.auanet.org
Diminishing Surgery

• Image guided & targeted therapies
  » RFA
  » TRUS guided Cryotherapy
  » MRI guided Phototherapy & Microwave prostate ablation
  » Brachytherapy

• Active Surveillance
  » Stage I NSGCTT
  » Ca Prostate
  » Incidental renal masses
  » Antenatally detected UPJO
  » Vesicoureteral Reflux
  » Ureteroceles
  » Duplication anomalies

• Medical Rx
  » BPH
  » Erectile Dysfunction
  » Painful bladder syndrome

Obtaining “Operative Competence”

FIG. 1. Cognitive competence is achieved with a linear trajectory (diamonds); technical or motor skills competence is achieved in an exponential fashion with a negatively accelerating trajectory (squares); and operative competence is achieved in an exponential fashion with a positively accelerating trajectory (triangles) over the course of training.
Issues

- Choice—would anyone apply?
- Numbers of each type of Urologist?
- Turf – who does what?
- Call schedules
- Geographic realities
- Reimbursement

Carroll P, J Urol 175,811-812 2006
Gender gap and Urology
Data and Urology trainees
CanMEDS and Urology
The Generation Gap and Urology
Change and Urology
Neophyte
Or
Old Fart?