Variation in treatment of pelvic organ prolapse at the physician level

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What is treatment variability?
Why is it important?
Our research project
What we looked at
Preliminary findings
My role this summer
Treatment variability—why it matters who your doctor is...

- Atul Gawande

- Jack Wennberg: Variation in treatment for same conditions across cities
  - Gallbladder removal: 270 percent
  - Hip replacement: 450 percent
  - End-of-life ICU care: 880 percent

- The “second opinion” & the referral system
  - Medicine has many unknowns
  - Chocolate vs. Vanilla
... and what he had for lunch

- Docs make decisions based on recent patient outcomes, time of day, pharmaceutical affiliation, payer type

- “The mind overestimates vivid dangers and underestimates understated ones” (Klein, 2000)

- David Eddy, JAMA: Patient outcomes not correlated with doctor’s confidence
  - Data driven approach
Why docs should follow guidelines

- Guidelines and better outcomes
- Insurers and the data-driven approach
POP treatment

- Gynecologic condition, elective treatment

- ACOG guideline in 2007 – if you treat POP surgically, must treat with pexy
  - Should be 100%
  - Addresses symptoms and cause
  - Known before guideline

- The evidence for this has been known for a while
Our project’s aims

- Examine pelvic organ prolapse (POP) variation
  - Rhoads and Sokol (2007) – California
  - 35% pexy rate – 2002-2006
  - Physician treatment
  - Easy to find data

- What are the most accurate predictors of docs treating prolapse correctly?

- Is there such a thing as a physician “style”?
More about our data

- Can see if a pexy was performed for a given prolapse case or not

- Observe characteristics of patients (race, payer type, co-morbidities, etc.)

- Of doctors (years practicing, hospital market where the operation was performed)
Our data

- **Hospital discharge data**
  - 100% of hospitalizations

- \( n = 7383 \) docs and \( n = 168,419 \) cases
  - Treated at least one POP case surgically

- **FL, NY**

- 1992 – 2010
Analysis and Results
Trends in Pexy Use by State

Florida

New York
Patient characteristic variants

- By payer type
- Race
- Have more co-morbidities
- Age is a significant variant

- These are variants in healthcare in general
Pelvic organ prolapse total caseload/physician

In total

N = 7383 docs
Trends in Pexy Use by Prolapse Caseload

- 1-10
- 11-50
- 51+

Legend:
- 1-10
- 11-50
- 51+
Graphs by RECODE of tot_prolapse (total prolapse caseload)
Persistence/pexy styles

- Wanted to see if docs stuck to doing or not doing pexys

- Took subset of 531 docs who did a prolapse case every year
Correlations

A doctor’s pexy rate at year $t$ is very correlated with what was done in year $t-1$ (.50 correlation coefficient)

- Performed Kane and Staiger test of non-persistent variation
  - 90% of variation is random
Summary

- Pexy rate increases over time, but not 100%

- A lot of variation in case volume

- Docs who do more prolapse cases, do more pexy
  o Suggest specialization in the treatment of prolapse
  o There is still much variation between high volume docs

- Poses concerns for elective patients
Spoke with Dr. Lily Arya

Generalist vs. urogynecologist
- Not everyone can do pexy, hysterectomy easier
- Fellowship training: only a few qualify to do well
Next steps

- Focus on question of physician training

- Related questions to explore
  - Use of mesh and graft

- A co-authored manuscript
This summer for me

- Conceptualizing the research question
- On-the-ground research
- Statistical analysis