Title

MP17-04 TRENDS IN CHIEF RESIDENT CASE LOGS VERSUS SUBSEQUENT CASE LOG DATA IN CLINICAL PRACTICE

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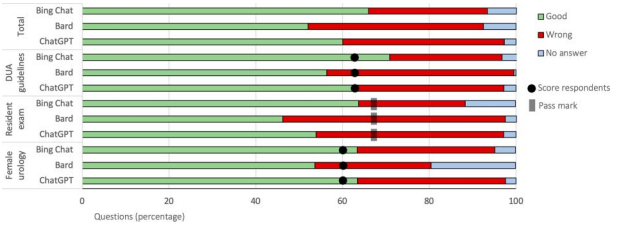

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MP17-03

WHAT HAVE I DONE?: TRENDS IN CPT LOGGING, A SINGLE-INSTITUTION STUDY

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INTRODUCTION AND OBJECTIVE: Accurate coding is a crucial measure of a resident's operative experience via case logs. It has been shown in other surgical specialties that the residents' Accreditation Council for Graduate Medical Education (ACGME) case logs may not accurately reflect their operative experience. This study aims to determine the accuracy of procedural coding by urology residents at a single institution.

METHODS: This was a retrospective review of case logs from July 1, 2019 to December 31, 2022 for all current residents in a single urology residency program. Cases were included if a medical record or case number could be correlated with the billing information submitted by an attending physician. Cases were categorized per ACGME Current Procedural Terminology (CPT) types: general, endourology, reconstructive or female urology, oncology, or pediatrics. The billing CPT code was taken to be the "true" CPT code and compared to the code logged by the resident. Data collection and analyses were performed via SPSS v29.0.0.0.

RESULTS: There were a total of 9,466 cases and 11,461 CPT codes logged by 15 residents during the study period. After application of inclusion criteria, 6484 cases were matched with attending billing information.PGY3 residents had the best match between resident logged and attending billed CPT code (71.2%), while PGY5 residents had the worst (35.7%) (Table 1). When separated by case category, endourology had the lowest CPT code match rate (44.2%) while oncology had the highest (78.3%).Using logistic regression, PGY3 (OR=2.1) and PGY4 (OR=1.3) residents were more likely to log the correct CPT code compared to PGY1s ($p<0.001$ and $p=0.026$). Analysis of CPT codes based on subspecialty category showed both pediatric (OR=0.72) and endourology (OR=0.38) were less likely to be logged correctly than general urology cases ($p=0.018$ and <0.001). Conversely, oncology cases were more likely to have correct CPT codes (OR=1.73, $p=0.005$).

CONCLUSIONS: We found that residents progressively improved with logging CPT codes, peaking at PGY3. There were differences in CPT code usage between urologic subspecialties. The low overall accuracy of resident CPT code logs from one institution suggest further education may be required about logging them accurately and should be investigated further. These findings should also be considered when evaluating resident case logs upon graduation.

	Total	Number Correct (%)	OR (95% CI)	p
Case Year				
PGY-1	819	444 (54.2%)	Reference	Reference
PGY-2	1152	641 (55.6%)	1.059 (0.885-1.268)	0.529
PGY-3	547	392 (71.7%)	2.136 (1.695-2.692)	<0.001
PGY-4	571	344 (60.2%)	1.280 (1.030-1.590)	0.026
PGY-5	14	5 (35.7%)	0.469 (0.156-1.412)	0.178
Surgery Type				
General Urology	1564	274 (67.7%)	Reference	Reference
Endourology	274	122 (44.2%)	0.378 (0.276-0.519)	<0.001
Reconstructive Urology/Female Pelvic Medicine and Reconstructive Surgery	93	69 (74.2%)	1.375 (0.826-2.287)	0.221
Urologic Oncology	217	170 (78.3%)	1.729 (1.178-2.540)	0.005
Pediatric Urology	550	331 (60.2%)	0.723 (0.552-0.946)	0.018

Table 1. Demographics of CPT Code Matches by Year and Surgical Type with Logistic Regression Analysis

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MP17-04

TRENDS IN CHIEF RESIDENT CASE LOGS VERSUS SUBSEQUENT CASE LOG DATA IN CLINICAL PRACTICE

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INTRODUCTION AND OBJECTIVE: There is limited information regarding the association between chief resident case logs with the case distribution of urology graduates once they begin independent practice. Therefore, we compare the case log distribution residents completed during their chief year to those completed by these graduates in their first two years in independent practice.

METHODS: Resident chief year case logs from 2012-2020 were obtained from 10 institutions. Four categories of index procedures were included for analysis: General Urology; Endourology; Reconstructive Urology; and Urologic Oncology. CPT codes for the associated index procedures were used to query case log data collected by the American Board of Urology during these residents' first two years in independent practice. Interactions were tested between the trends of chief year case logs relative to trends in practice case logs.

RESULTS: From a sample of 292 residents, a total of 104, 827 cases were logged during chief year and 77, 976 cases in the first two years as an attending. The majority of cases completed during chief year were in oncology followed by general urology, endourology, and reconstructive urology (Figure 1a). As attendings, the majority of cases completed were in general urology, followed by endourology, reconstructive urology, and oncology (Figure 1b). Chief year case logs showed significant decreasing trends in the median number of case logs in endourology and general urology while case logs in practice noted increasing trends in all index procedure categories over time (Table 1).

CONCLUSIONS: Urology residents perform nearly twice as many cases during their chief year compared to their first two years of independent practice. Case types completed as chief residents versus subsequent clinical practice also differ. Case log trends highlight increases across all domains for urologists entering clinical practice. More research is needed, including correlating these findings with the completion of a fellowship, to understand the impact of these trends in practice and implications for residency training.

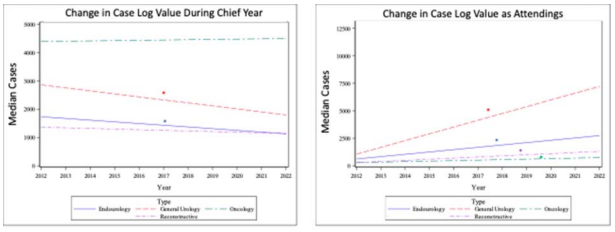

Figure 1: Chief Year versus Attending Median Case Log Trends. * Indicated statistically significant change in case log trends during study period

Table 1: Comparison of Chief Year and Attending Case Log Trends

	Chief Year Trends		Attending Trends	
Index Procedure	Slope	p-value	Slope	p-value
Endourology	-60.25 (-234.2, 113.72)	0.49	212.50 (116.80, 308.20)	<.001
General Urology	-106.3 (-381.6, 169.11)	0.44	617.00 (432.13, 801.87)	<.001
Oncology	10.50 (-286.2, 307.23)	0.94	45.67 (-13.34, 104.67)	0.13
Reconstructive Urology	-22.20 (-225.4, 180.98)	0.83	101.67 (-2.62, 205.96)	0.05

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MP17-05

GENDER DIFFERENCES IN GRADUATING UROLOGY RESIDENT CASE VOLUMES: A 10-YEAR NATIONAL COHORT STUDY FROM 2012 TO 2022

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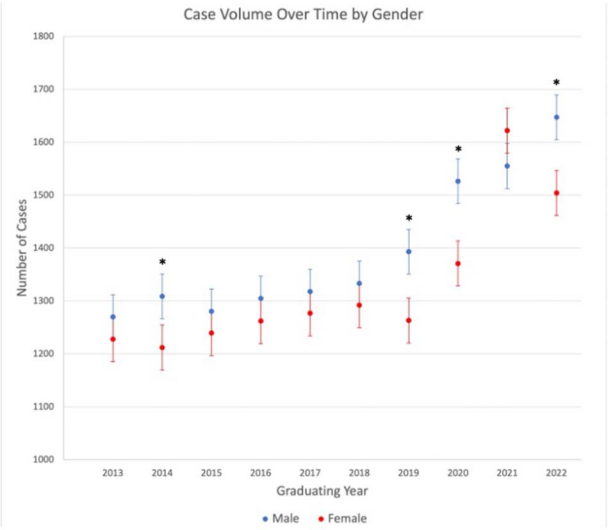
INTRODUCTION AND OBJECTIVE: Although studies in other specialties suggest gender differences in residency case log distribution, the relationship between gender and case volume in urology residency training has not been examinedon the national scale. We hypothesize male urology residents log more cases than female residents.

METHODS: We performed a ten-year national retrospective review of a novel database provided by the Accreditation Council for Graduate Medical Education (ACGME) of cases logged by all graduating residents from ACGME-accredited urology residencies from graduating year 2013 through 2022. This is the first study using an ACGME database integrating trainee characteristics from multiple national data systems. Trends were examined using descriptive statistics. Bivariate comparisons and longitudinal analyses were conducted using t-tests and mixed-effects regression models in Stata 18 (College Station, TX).

RESULTS: The analysis included 142 urology programs and 2,986 residents over the 10-year study period. The number of programs increased by 18% from 118 to 139. The number of residents increased by 28% from 264 to 339. The percentage of female residents ranged from 21-27% and showed no significant increase over time ($p=0.71$). Total cases reported per resident significantly increased over time from an average of 1,259 (SD=18) in 2013 to 1,608 (SD=22) in 2022 ($p<.001$). However, across ten-years, females logged significantly fewer total cases (Mean=1,341 [SD=12]) compared to males (Mean=1,401 [SD=7]), $p<.001$. Females logged significantly fewer cases in 4 out of the 10 years, with 3 of those occurring in the past 4 years. There were no years in which females logged statistically more cases than males. Males logged significantly more general urology, endoscopy, oncology, and robotic cases than females, depending on the year. Only pediatrics and reconstruction cases were logged more by females in any year.

CONCLUSIONS: Despite efforts to improve female representation in urology, the number of female graduates is statistically unchanged over the past 10 years. Females logged significantly fewer cases than males, and this discrepancy is more prevalent in recent years. Given the evidence that surgeons' case volumes correlate with patient outcomes, it is essential to understand this apparent gender gap.



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MP17-06

IMPACT OF SUBSEQUENT FELLOWSHIP ON CHIEF RESIDENT CASE LOG VOLUMES

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INTRODUCTION AND OBJECTIVE: Sub-specialties have increasingly evolved in Urology. As such, trainees may elect to pursue a fellowship to enhance expertise in these domains. The impact of this subsequent fellowship on resident case log experience throughout their residency and specifically chief year are incompletely defined. Therefore, we review a large multi-institutional experience to better characterize this relationship.

METHODS: Urology resident case logs from 2010-2022 were obtained from 13 different institutions for total residency and chief years. Five categorized index procedures were included for analysis: (1) General Urology; (2) Endourology; (3) Reconstructive Urology; (4) Urologic Oncology; and (5) Pediatric Urology. Subsequent fellowship data (yes/no and type) were available for 338 residents who formed the cohort of interest. Regression models on median number of cases per year analyzed the interaction of case log volumes and subsequent fellowship.

RESULTS: Of the 338 residents, 197 (58%) completed a fellowship including 53 oncology, 44 reconstruction, 43 endourology, 29 pediatric, and 28 other. A total of 419,353 cases were logged, including 125,319 (30%) during the chief resident year. Over the study years, the median number of total cases completed per resident increased irrespective of subsequent fellowship. Conversely, median number of total cases completed during chief year declined with the slope of decline being significant in those residents not completing a fellowship [slope = -2.44, CI: (-4.66, -0.23), p-value=0.031] (Figure 1). Additionally, as highlighted in Table 1, temporal trends demonstrate that absence of subsequent fellowship was associated with decrease in chief resident cases across all index domains. The specific type of fellowship, however, had no association with chief year trends.

CONCLUSIONS: The median number of chief resident cases has declined over time most significantly in those trainees not pursuing a fellowship. This may reflect a focus for these residents on non-