



Comparison of 2015 Medicare relative value units for gender-specific procedures: Gynecologic and gynecologic-oncologic versus urologic CPT coding. Has time healed gender-worth?



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HIGHLIGHTS

- Comparison of RVUs identified 72% of male procedures were weighted more for work and total RVU's.
- 84% of procedures were compensated at a higher rate for the male specific procedures.
- Unfortunately, time has not yet normalized procedural gender-worth.

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ABSTRACT

Background. In 1992, Congress implemented a relative value unit (RVU) payment system to set reimbursement for all procedures covered by Medicare. In 1997, data supported that a significant gender bias existed in reimbursement for gynecologic compared to urologic procedures. The present study was performed to compare work and total RVU's for gender specific procedures effective January 2015 and to evaluate if time has healed the gender-based RVU worth.

Methods. Using the 2015 CPT codes, we compared work and total RVU's for 50 pairs of gender specific procedures. We also evaluated 2015 procedure related provider compensation. The groups were matched so that the procedures were anatomically similar. We also compared 2015 to 1997 RVU and fee schedules.

Results. Evaluation of work RVU's for the paired procedures revealed that in 36 cases (72%), male vs female procedures had a higher wRVU and tRVU. For total fee/reimbursement, 42 (84%) male based procedures were compensated at a higher rate than the paired female procedures. On average, male specific surgeries were reimbursed at an amount that was 27.67% higher for male procedures than for female-specific surgeries. Female procedure based work RVU's have increased minimally from 1997 to 2015.

Conclusion. Time and effort have trended towards resolution of some gender-related procedure worth discrepancies but there are still significant RVU and compensation differences that should be further reviewed and modified as surgical time and effort highly correlate.

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1. Introduction

In 1992, Congress initiated a Medicare payment system for physician services based on relative value units (RVU). The RVU's for each service provided are supposed to reflect the resources involved in furnishing three components of a physicians service: 1-work, 2-practice expense,

and 3-malpractice cost. These three components are added to form the total RVU for each procedure listed in the CPT manual. The total RVU multiplied by a dollar conversion factor set the reimbursement for all procedures covered by Medicare and ensuing private insurance carriers. The dollar conversion factor is set by the Health Care Financing Administration (HCFA). The Geographic Practice Cost Index (GPCI) is then factored into the equation to equilibrate discrepancies in delivery regionally.

The Geographic Practice Cost Index is a payment adjustment made for 89 different geographic areas in the United States. Practice input prices can vary substantially within localities (payment areas) and the

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fee schedule is adjusted within each component of the total RVU. Prices geographically are malleable to account for local labor markets, office rent, staff, supply, overhead, amongst other contributing factors.

The formula for total RVU is as follows: [(Work RVUs × Work GPCI) + (Practice Expense RVUs × Practice Expense GPCI) + (Malpractice RVUs × Malpractice GPCI)] = Total RVU.

The Medicare allowable payment is then calculated by multiplying the tRVU by an annually adjusted conversion factor (CF). The CF is a scaling factor that converts the geographically adjusted number of RVU's for each service in the medical physician payment schedule into a dollar payment amount. The initial Medicare CF was set at \$31.001 in 1992. In 2015, the CF was set at \$35.8013 between January and March. As of April 1, 2015 CMS announced a conversion factor of \$28.2239 for this period, resulting in an average reduction of 21.2% from the CY 2014 rates. This was then retracted and the original CF for 2015 was extended through June 2015. CMS then allowed for a 0.5% update from July 1, 2015 to December 31, 2015 [1]. The 2016 CF was then set at \$35.8043 for January 1–December 31, 2016 [2,3], and increased in 2017 to \$35.8887.

The Sustainable Growth Rate was developed to account for factors that contribute to changes in Medicare Part B (hospital) spending. It includes services covered by physician fee schedule and “incident to” services. The SGR is then factored into the equation to account for annual incremental cost differences.

The original work to establish RVU's for most CPT codes was designated by the Harvard School of Public Health in cooperation with HCFA. To develop the 1992 HCFA RVU worth, each specialty developed estimates of work involved to perform procedures, but historically, only 400 of the 6000 CPT codes were measured. The total work for each CPT code was factored from components of time and intensity (technical skill, mental/physical effort, and psychosocial stress) necessary to complete that service. Work was calculated over three time periods (preservice, intraservice, and postservice) and then summed to form the total for a given CPT code. The most critical element for each service was the contribution provided in the face-to-face (or skin-to-skin) encounter. A cross-specialty comparison (linking) was then performed so that a common scale could be developed for all specialties. Procedures considered the same or equivalent between two specialties were compared and linked [4]. Only one cross-link between gynecology and general surgery was associated, and only two cross links were made between urology and gynecology: cystoscopy with stent to laparoscopic tubal ligation; E&M of recurrent renal calculi to E&M of new onset right lower quadrant pain [5]. Most public and private payors utilize the Medicare Resource-Based Relative Value Scale (RBRVS).

In 1996, and again in 1997, a group of gynecologic oncologists evaluated gender specific procedural RVU's and found significantly higher RVU assignment for male specific procedures [6]. Interspecialty time was compared from operative logs and found to be equitable. To be specific: in 79% of paired gynecologic/urology procedures, the male-specific procedures received higher RVU. Thus, female related procedures were found to be undervalued. We are then assessing current RVU's for gender based procedures and reviewing if a 20 year interval has mitigated the gender related procedure worth discrepancy. We are also documenting total compensation differences between gender related procedures.

2. Materials and methods

The resource based relative value units for all services were obtained from the United States Department of Labor FECA program for 2015. Fifty pairs of gender specific procedures were evaluated and compared for work and total RVUs, as well as physician reimbursement. We paired commonly performed procedures based on anatomical concordance in addition to those reported in 1997. We evaluated these gender specific procedures within the 2015 RVU data set. We also compared the 2015

data outcomes to the 1997 data outcomes. Finally, we compared total fee/compensation. We used the Washington State GPCI score of 1.00 for final calculation of tRVU [7]. Statistical analysis was performed using R software (www.r-project.org). We used the sign-test to compare percent difference RVU outcomes between gender based procedures. We used the *t*-test for multiple comparisons for the total fee percent difference between gender based procedures, as this is a new category in this paper. Percent difference was calculated using calculatorsoup.com. We used the same statistical design as the original paper for outcome consistency.

Of note: there is no CPT code for use of robotic platforms, these procedures are coded as laparoscopic. There is no CPT code for gynecologic anterior exenteration albeit there is a code for colorectal APR with removal of gynecologic organs, and a separate CPT code for urologic cystectomy and lymph node dissection. Thus, total exenteration was necessarily used for comparing some procedures.

3. Results

Comparison of the matched gender specific minor procedures is shown in Table 1, with major procedures shown in Table 2. The work and total RVUs are compared, as is the physician compensation. The percentage difference by which the male gender-specific procedure is either over or under valued is compared to the female gender specific procedure, with a (–) value set for the female procedure when weighted heavier. Comparison of the minor procedure 2015 data to the minor procedure 1997 data is shown in Table 3.

There were 17 minor paired procedures (Table 1): of these 14 (82.35%) had higher percent difference wRVU for male procedures (sign-test, *p* = 0.0064), 15 (88.24%) had higher percent difference for tRVU (sign-test, *p* = 0.0023). Fifteen (88.25%) had a higher percent difference for total fee for male procedures (*t*-test *p* = 0.0243, 95% CI 53.33–716.17). The wRVU range for percent difference was: –20.72–141.10%, with a median of 47.31, and a mean of 61.23. The tRVU range for percent difference was: –29.81–145.61 with a median of 60.89 and a mean of 60.35. The total fee percent difference ranged from –37.04–143.52, with a mean of 66.34, and a median of 53.53.

There were 33 paired major procedures (Table 2): of these 22 (66.67%) had a higher percent difference wRVU for male procedures, (sign-test, *p* = 0.04), 21 (63.63%) had a higher tRVU for male procedures (sign-test, *p* = 0.0814). Twenty seven (81.81%) had higher total fee percent difference for male procedures (*t*-test, *p* = 0.0438, 95% CI 17.65–1215.42). The wRVU range for percent difference was: –71.49–124.00%, with a mean of 12.84%, and a median of 8.62. The tRVU range for percent difference was: –46.09–112.67 with a median of 8.03 and a mean of 10.57. The total fee percent difference for major procedures ranged from –64.27–123.40, had a mean of 29.70, and a median of 23.58.

Of 50 procedures total, 36 procedures (72%) (sign-test, *p* = 0.0026) were assigned a higher level of wRVU for male specific procedures, 36 (72%) (sign-test, *p* = 0.0026) had a higher level of tRVU for male procedures, and 42 (84%) were reimbursed at a higher level for male specific procedures (*t*-test, *p* = 0.00325 95% CI 53.33–1215.42). (Tables 1 and 2).

For minor procedures: wRVU's were 53.91% higher, tRVU's were 57.81% higher, and total fee was 59.15% higher for male procedures. For major procedures: wRVU's were 6.33% higher, tRVU's were 11% lower, and total fees were 24.75% higher. For total procedures: wRVU's were 13.58% higher for male procedures, tRVU's were 12.55% lower for male procedures, and total fee was 27.67% higher for male procedures.

Comparing the original 1997 minor procedure CPT data to our 2015 minor procedure data, (Table 3) a 37.84% change in assigned wRVU was identified. A 49.37% change in tRVU was also identified, still favoring male procedures.

Table 1
Minor procedures codes and values for 2015.

Gender	Procedure	CPT	Work RVU	Total RVU	Physician MPFS (CF = 35.8013)	Percent difference wRVU	Percent difference tRVU	Percent difference total fee
Male	Biopsy penis	54,100	1.9	3.42	199.90	45.16%	99.34%	44.77%
Female	Biopsy vagina	57,100	1.2	1.15	126.77			
Male	Remove penis lesion	54,110	10.92	17.89	1227.84	120.71%	113.58%	108.68%
Female	Remove vaginal lesion	57,135	2.7	4.93	363.24			
Male	Biopsy scrotum	55,120	5.72	10.25	516.01	135.48%	142.24%	123.16%
Female	Biopsy vulva	56,605	1.1	1.73	122.69			
Male	Biopsy prostate	55,705	4.61	7.65	607.82	100.32%	101.78%	141.51%
Female	Biopsy endometrium	58,110	1.53	2.49	104.11			
Male	Removal of scrotal lesion	55,120	5.72	10.25	516.01	65.74%	65.54%	17.84%
Female	Removal of vulvar lesion	56,440	2.89	5.19	431.49			
Male	Excision penile lesion	54,115	6.95	12.2	771.16	141.10%	145.61%	143.52%
Female	Excision vaginal lesion	57,100	1.2	1.92	126.77			
Male	Laser penis	54,057	1.29	3.84	219.41	−20.21%	3.18%	45.71%
Female	Laser vulva	56,501	1.58	3.72	349.42			
Male	Distal hypospadias repair	54,328	16.89	26.97	1999.83	118.23%	101.59%	126.83%
Female	Revision of cervix	57,700	4.34	8.80	447.74			
Male	Destruction penile lesions simple	54,050	1.29	3.76	516.01	−20.21%	1.07%	105.29%
Female	Destruction vulvar lesions simple	56,501	1.58	3.72	160.08			
Male	Resection of scrotum	55,150	8.14	14.14	943.44	7.79%	−4.94%	−10.76%
Female	Simple complete vulvectomy	56,620	7.53	14.86	1050.70			
Male	Revision of scrotum	55,180	11.78	19.77	1326.19	−22.72%	−29.81%	−37.04%
Female	Extensive vulva surgery (partial radical)	56,630	14.80	26.6	1929.13			
Male	Drain prostate abscess	52,700	7.49	12.62	752.48	45.78%	25.23%	34.28%
Female	Drain ovarian abscess open	58,820	4.7	8.84	532.26			
Male	Excision hydrocele	55,040	5.45	9.70	784.98	11.04%	12.24%	41.65%
Female	Excision bartholins gland	56,740	4.88	8.58	514.38			
Male	Penis/scrotoplasty	54,360	12.78	20.68	1440.76	99.47%	94.59%	93.42%
Female	Perineoplasty	56,810	4.29	7.4	523.32			
Male	Excision of sperm cord lesion	55,520	6.66	13.05	698.03	30.85%	41.33%	30.29%
Female	Excision of Bartholins	56,740	4.88	8.58	514.38			
Male	Interstitial prostate	55,875	13.46	21.87	1437.49	47.31%	52.47%	53.53%
Female	Interstitial cervix	55,920	8.31	12.78	830.47			
Male	Insert tandem male	53,444	14.19	22.75	1446.68	89.74%	60.89%	65.09%
Female	Insert tandem female	57,155	5.4	12.13	736.26			

4. Discussion

Concerns have been raised over the past few decades, as Medicare billing has evolved, that RVU's for services furnished to women have been undervalued compared to similar services for men. In 1992, when the RBRVS was enacted, women's health services were significantly undervalued because ObGyns did not form a large part of the Medicare fee schedule [8]. A 1996 publication by Cherouny et al. compared RVU's for obstetrical and gynecologic procedures to urologic and general surgery procedures and concluded that a lower relative value was assigned to services performed on women only [9]. The data generated in 1997 by Cain et al. argued for increases in Work RVUs for 24 commonly performed gynecologic procedures.

We evaluated 50 paired procedures including the prior 24 pairs to look for persistent wRVU and tRVU gender based procedural differences with 2015 coding and reimbursement data. For minor procedures (Table 1), 82.35% were weighted higher for wRVUs, and 88.24% were weighted higher for both tRVU and total reimbursement fees for male procedures. For major procedures, 66.67% were given a higher wRVU for male procedures, 63.64% were weighted higher for tRVU for male

procedures, and 81.82% of male procedures were reimbursed for total fee at a higher rate (Table 2). We found evidence to support that there is persistent gender preference in both RVU and total compensation for male specific procedures.

In 1997, 79% of male procedures were weighted higher for RVUs. Work RVU's were 49% higher for urologic procedures than gynecologic procedures. Compared to 1997 data, this study has shown that there has not been the shift towards equalization of gender specific procedures as we had hoped. In 2015, 72% of all reviewed procedures were weighted more towards the male gender for wRVU and tRVU, and 84% of male procedures were reimbursed at higher rates. This 5% difference between 1997 and 2015 rates is not significant. In 1997, 37% of male specific surgeries were reimbursed higher than female specific surgeries. In this study 27.67% of male specific surgeries were reimbursed at higher rate, albeit with a larger and different set of paired procedures (Table 3). This shows we may be trending towards, but unfortunately have not yet normalized, more equanimous RVU and compensation for female procedures in the last 20 years.

Compensation resulting from CPT coded RVU worth affects amount of work, work environment (staffing, overhead, recruitable partners),

Table 2
Major procedures: codes and values for 2015.

Gender	Procedure	CPT Code	Work RVU	Total RVU	Physician MPFS (CF = 35.8013)	Percent difference wRVU	Percent difference tRVU	Percent difference total fee
Male	Reconstruction of male urethra	54,352	26.13	40.67	3124.48	39.95%	38.08%	54.85%
Female	Reconstruction of female urethra	53,430	17.43	27.66	1779.61			
Male	Revise remove sling male	53,448	23.44	36.74	2443.59	71.06%	61.91%	57.03%
Female	Revise remove sling female	57,287	11.15	19.37	1359.17			
Male	Male sling insert uro/neck sph	53,445	13	21.60	2347.62	90.83%	98.86%	123.49%
Female	Female insert mesh pelvic floor add on	57,267	4.88	7.31	555.21			
Male	Reconstruct urethra male	53,415	20.7	32.44	2373.64	124.07%	112.67%	112.99%
Female	Revise urethra female	57,220	4.85	9.06	659.84			
Male	Total urethrectomy male	53,215	16.85	26.64	1921.01	20.48%	18.36%	28.93%
Female	Total urethrectomy female	53,210	13.72	22.16	1435.88			
Male	Partial removal of penis	54,120	11.01	18.13	1227.04	37.93%	25.01%	63.74%
Female	Partial vaginectomy	57,106	7.5	14.1	633.94			
Male	Removal of penis	54,125	14.56	23.30	1902.31	-6.13%	-8.74%	11.04%
Female	Complete vaginectomy	57,110	15.48	25.43	1703.23			
Male	Exploratory laparotomy male	49,000	12.54	22.27	1257.12	-23%	-22.79%	-38.52%
Female	Exploratory laparotomy female	58,960	15.79	28	1856.8			
Male	Excise lesion testis	54,512	9.33	15.53	1032.93	28.49%	31.42%	0.22%
Female	Ovarian cystectomy	58,925	12.43	21.32	1035.25			
Male	Removal of testis	54,530	8.46	14.47	1200.22	2.88%	3.73%	14.37%
Female	Oophorectomy	58,940	8.22	15.02	1039.33			
Male	Suspension/relocation of testes	54,680	14.04	22.58	1540.72	17.51%	3.84%	15.12%
Female	Ovarian transposition	58,825	11.78	21.73	1323.22			
Male	Laparoscopic orchiectomy	54,690	11.7	18.86	1323.22	3.04%	1.61%	2.99%
Female	Laparoscopic BSO	58,661	11.35	18.5	1284.29			
Male	Laparoscopic orchiopexy	54,692	13.74	21.79	1362.42	15.53%	0.28%	55.23%
Female	Laparoscopic ovarian transposition	58,825	11.76	21.73	772.79			
Male	Removal of epididymis	54,861	9.7	16.23	1236.78	-28.69%	-31.55%	23.58%
Female	Removal of fallopian tubes	58,700	12.95	22.31	975.95			
Male	Vas deferens vasectomy	55,250	3.37	10.88	456.68	-71.49%	-12.01%	-64.27%
Female	Essure hysteroscopy	58,565	7.12	12.27	889.13			
Male	Orchiectomy with staging	54,530 + 38,770	22.52	37.73	3349.56	20.29%	15.17%	49.48%
Female	Oophorectomy with staging	58,950	18.37	32.41	2020.96			
Male	Extensive testis surgery	54,535	13.19	21.36	1565.89	-38.70%	-44.65%	-40.48%
Female	Removal of ovaries extensive	58,943	19.52	33.64	2360.64			
Male	Reduce testis torsion	54,600	7.64	12.97	876.8	-44%	-44.02%	-17.28%
Female	Reduce ovarian torsion	58,920–22	11.95	20.29	1042.59			
Male	Remove penis and LN	54,135	28.17	43.41	3341.44	-8.00%	-21.47%	18.29%
Female	Vaginectomy and LN	57,112	30.52	53.85	2781.45			
Male	Revise vas deferens/spermatic ducts	54,901	19.1	30.58	2311.88	24.71%	18.99%	79.95%
Female	Revise fallopian tubes	58,740	14.9	25.21	991.38			
Male	TURP	52,601	15.26	24.26	1823.49	41.74%	43.76%	51.00%
Female	Hysteroscopic myomectomy	58,561	9.99	15.55	1082.45			
Male	Remove prostate	55,801	19.8	31.36	2272.06	13.42%	8.03%	23.14%
Female	Hysterectomy	58,150	17.31	28.94	1800.75			
Male	Extensive prostate surgery	55,845	25.18	59.15	4043.53	7.41%	36.01%	54.07%
Female	Extensive TAH	58,285	23.38	41.1	2322.44			
Male	Subtotal prostatectomy	55,821	15.76	25.07	2074.58	99.76%	86.59%	105.57%
Female	Abdominal trachelectomy	57,530	5.27	9.92	641.15			
Male	Prostatectomy	55,840	21.36	33.63	2952.21	20.95%	14.99%	48.45%

(continued on next page)

Table 2 (continued)

Gender	Procedure	CPT Code	Work RVU	Total RVU	Physician MPFS (CF = 35.8013)	Percent difference wRVU	Percent difference tRVU	Percent difference total fee
Female	TAH	58,150	17.31	28.94	1800.75			
Male	Prostatectomy LND	55,845	25.18	39.15	4043.53	8.62%	−0.23%	41.08%
Female	TAH BSO LND	58,200	23.1	39.24	2665.61			
Male	Radical prostatectomy	55,865	24.57	38.31	3598.22	−22.86%	−31.97%	7.72%
Female	Radical hysterectomy	58,210	30.91	52.89	3330.88			
Male	Laparoscopic radical prostatectomy	55,866	32.06	49.77	3153.1	1.35%	9.07%	−4.51%
Female	Laparoscopic radical hysterectomy	58,548	31.63	54.5	3298.72			
Male	Perineal approach prostatectomy	55,815	32.95	50.63	4187.36	33.97%	20.72%	57.29%
Female	Radical vaginal hysterectomy	58,285	23.38	41.1	2322.44			
Male	Radical prostatectomy perineal approach	55,810	24.29	37.83	3052.16	3.82%	8.29%	27.15%
Female	Radical vaginal hysterectomy	58,285	23.38	41.1	2322.44			
Male	Exenteration for bladder/prostate cancer	51,597	42.86	65.91	5309.59	−14.03%	−23.71%	14.39%
Female	Exenteration total pelvic (cervical cancer)	58,240	49.33	83.64	4596.93			
Male	Removal of bladder and LN	51,575	34.18	52.31	3967.15	−36.28%	−46.09%	−14.71%
Female	Anterior exenteration (no code for anterior only)	58,240	49.33	83.64	4596.93			
Male	Cystectomy complete with conduit	51,596	44.26	67.49	5552.54	−10.83%	−21.37%	18.83%
Female	Pelvic exenteration	58,240	49.33	83.64	4596.93			

and quality of life. Gynecologic oncology, as its own specialty, has a designated CMS specialty number assignment, but does not have specific sub-specialty reimbursement rates at this time. Total compensation fee for specialty differs tremendously, reflecting the known reimbursement rates by specialty of 46.94\$/wRVU for obstetrics and gynecology compared to 57.05\$/wRVU for urology, and 82.89\$/wRVU for hematology oncology [10]. It was recently documented that, even intra-specialty, female physician salary at the same FTE was less than male physician's salary [11].

Compared to the Cain paper published 20 years ago, we have had a sea change of innovation in surgical care, with a large part focusing on technology to include laparoscopic procedures and robotic platform approaches. Both gynecology and urology procedures are becoming more bundled with shared savings practices. Because gender bias continues to be of concern, as seen in gender specialty and gender based procedural worth at the patient level, and has been documented in salary discrepancy seen at the provider level, we felt it was important to reevaluate work and total RVUs for this wide set of gender specific services. Both coding and RVU updates are thus necessary and comparable compensation for similar-but-different-gender procedures interspecialty should again be considered.

Gynecologic representation on the AMA's RUC (Relative Value Scale Update Committee) committee, which reports to CMS, is the current means of petitioning for suggested change. This is a 31 member committee, with 28 voting members. Of those voting members, 21 seats are appointed from major national medical specialty societies including both gynecology and urology. In 1997, CMS required all relative values to be reviewed at least every 5 years. At the 1997 First Five-Year Review, one topic, spurred by the Cain paper, was to try to equate gynecologic procedures to urology procedures [12].

The RUC survey is the process to appeal for RVU change to current CPT codes or to apply for new CPT codes. The RUC survey is sent out by the AMA to societies and associations. These organizations then distribute the survey to their members to obtain estimates of work, practice expense data, and professional liability insurance crosswalks. This forms the recommended work RVU. The recommendations are presented to the RUC by the stakeholder specialty society's RUC advisor. The

RUC, which meets three times per year, then provides recommendations to CMS. CMS makes final decisions and publishes CMS approved values in the Physician Fee Schedule Rule through the Federal Register in November of each year, and changes are enacted the following January. CMS has adopted over 90% of the RUC suggestions [12].

ACOG and SGO have lobbied for increases in wRVU's since the Cain article was written in 1997 [13]. Committees have been established to provide data collection and lobby for representation to the RUC. Within the SGO are the Coding and Reimbursement Taskforce and the Policy, Quality and Outcomes Taskforce, both under oversight and direction by the SGO Health Policy and Socioeconomic Committee (HPSC). ACOG also leads in policy reform through the division of Health Policy Advocacy with the SGR Task Force and the Payment Transitions Work Group, amongst others. This ACOG division provides recommendations and updates and has asked for sustainable and equal reimbursement via letter writing campaigns and has congressional representation in the House. ACOG has joined with the AMA and state medical associations to voice concerns and advocate for payment reform to help both providers and patients [14].

To equalize these discrepancies between gender based procedures, we support "adding value" back to gynecologic CPT codes, not detracting from urology. ACOG and SGO tried to recover RVU reductions for laparoscopic hysterectomy in 2016 through petitions to the RUC, but were unsuccessful [15]. Higher RVU value for vaginal hysterectomy was also attempted to incentivize providers and guide them towards greater patient safety, lower morbidity, and a lower resource use procedure—this was also unsuccessful [16]. The RUC opinion supports that no physician is paid at a level that is fair and appropriate. A shift to a value-based system, away from volume-based fee-for-service, may instead be beneficial to future reimbursement [9].

Although "value add" to wRVU is the main goal for obtaining gender neutral procedural worth, repeal of the SGR and incorporation of MACRA, can support the individual "value" of our work. MACRA (the Medicare Access and CHIP Reauthorization Act of 2015) is the new value based payment system that replaces traditional fee-for-service reimbursement [17]. With this law, the SGR was retracted and in its place the value based modifier program, The Quality Payment Program (QPP),

was incorporated; a specialty adjustment factor was also included; and the global surgical fee period was removed. MACRA will tie 30% of traditional Medicare payments to quality or value through alternative payment models or bundled arrangements by the end of 2016, with 50% tied to the QPP by the end of 2018. The QPP advances a policy goal of basing payment on value rather than volume. Within the QPP, there are 2 tracks for physician participation: the Merit Based Incentive Program (MIPS) and the Alternative Payment Models (APM) [14].

The MIPS pathway consists of four reportable components: Quality weighted at 50%, Resource use at 10%, Advancing Care information (ACI) at 25%, and Clinical Practice Improvement Activities (CPIA) at 15%. MIPS participants will be assigned a composite performance score based on performance in all 4 categories. The weighting of each category will change over the next few years. The quality component replaces the Physician Quality Reporting System (PQRS). Instead, physicians will report on 6 quality measures. One must be an outcome measure and another must be a cross-cutting measure. The second component is the Resource use component. This component replaces the value based modifier (VBM). CMS will complete the calculations for this component based on claims submitted calculations. The ACI component is the third within MIPS. This modifies and replaces the Electronic Health Record Incentive (meaningful use) program. There is an all or nothing threshold for this component, only after meeting requirement for the base score is the provider eligible to receive additional performance score credits. The fourth of the MIPS components is the CPIA component: This is a new component where providers will choose

from a list of 94 possible activities which are assigned two different weighted values, and providers will need only to attest that they have participated in a minimum of 3 and maximum of 6 of these, for 90 days. Based on provider score, they will receive an increase or a cut to their Medicare B payments. Negative adjustments can be no more than 4%, whereas positive adjustments can be up to 12% in 2019. In 2022 negative adjustments can range from 4 to 9% and positive adjustments can be up to 27%, with an additional 10% available through 2024 for exceptional performers.

As many as 50% of Obstetrician Gynecologists may be exempt from MIPS based on a low volume patient threshold (fewer than 100 Medicare based patients and have less than \$10,000 in submitted Medicare Part B charges). Gynecologic oncologists, though, will likely highly qualify for this program based on the age and acuity of their patient population.

The second option for participation in the QPP is the Alternative Payment Models. These include ACO's and demonstrations under the Medicare Health Care Quality Demonstration Program. Medical Home models qualify as Advanced APM's. This pathway incorporates episode groups (bundled payments), shared savings, or full capitation. Between 2019 and 2024 there is a 5% annual bonus and no MIPS requirement for participation. In 2026 onwards, there is a 0.75% annual update, compared to 0.25% for the MIPS pathway. Based on performance relative to a benchmark, high achievers can earn up to 3 times the negative adjustment limit and top performers may earn up to 10% additional upward adjustments [17].

Table 3
Comparison of Work RVUs for gender specific minor surgical procedures for 1997 and 2015 with direct procedural comparison to reference [6].

Gender	Procedure	CPT code	Work RVU 1997	Work RVU 2015	Percent difference wRVU 1997	Percent difference wRVU 2015	Percent difference 1997–2015 wRVU	Total RVU 1997	Total RVU 2015	Percent difference tRVU 1997	Percent difference tRVU 2015	Percent difference 1997–2015 tRVU
Male	Biopsy penis	54,100	1.90	1.90	53%	53%	0%	2.62	3.42	30.33%	37.5%	21.24%
Female	Biopsy vulva	56,605	1.10	1.10				1.93	2.34			
Male	Biopsy penis	54,100	1.90	1.90	64.8%	45.16%	35.72%	2.62	5.63	41.47%	75.64%	58.36%
Female	Biopsy vagina	57,100	0.97	1.20				1.72	2.54			
Male	Biopsy prostate	55,700	1.57	2.58	75.43%	51.09%	38.48%	3.22	6.18	72.30%	66.67%	8.10%
Female	Biopsy endometrium	58,100	0.71	1.53				1.51	3.09			
Male	Destruction penile lesions simple	54,050	1.19	1.29	−21.72%	−20.21%	7.20%	1.60	3.76	−28.42%	1.07%	185.49%
Female	Destruction vulvar lesions simple	56,501	1.48	1.58				2.13	3.72			
Male	Destruction penile lesions extensive	54,065	2.37	2.47	24.64%	−21.98%	11.41%	5.09	6.2	4.41%	−3.95%	11.01%
Female	Destruction vulvar lesions extensive	56,515	1.85	3.08				4.87	6.45			
Male	TURP	52,601	11.51	15.26	108.16%	123.65%	13.38%	24.54	24.26	89.98%	43.76%	69.12%
Female	Hysteroscopy	58,358	3.43	3.6				9.31	28.34			
Male	TURP	52,601	11.51	15.26	99.74%	41.74%	81.99%	24.54	24.26	83.54%	43.76%	62.49%
Female	Hysteroscopic myomectomy	58,561	3.85	9.99				10.08	15.55			
Male	Drain prostate abscess	55,720	7.54	7.73	62.26%	48.75%	24.34%	11.42	12.94	45.19%	37.65%	18.2%
Female	Drain ovarian abscess	58,820	3.96	4.70				7.21	8.84			
Male	Excision varicocele	55,530	5.45	5.75	40.88%	16.37%	85.62%	11.25	10.43	46.31%	19.46%	81.65%
Female	Excision Bartholins	56,740	3.60	4.88				7.02	8.58			
Male	Excision hydrocele	55,500	5.28	6.22	37.84%	24.14%	44.21%	10.10	11.36	35.98%	27.88%	25.37%
Female	Excision Bartholins	56,740	3.60	4.88				7.02	8.58			
Male	Scrotoplasty	55,175	4.93	5.87	21.57%	31.1%	36.19%	9.90	10.39	32.94%	33.61%	2.01%
Female	Perineoplasty	56,810	3.97	4.29				7.10	7.40			

Abbreviations: I&D: incision and drainage; TURP, transurethral resection of prostate.

Data entry can be through multiple portals to include Claims Registries, Qualified Clinical Data Registries, and health information technology developers called Certified Survey Vendors. Nonparticipation in the QPP will ensure a 4% cut in Medicare payments in 2019.

Limitations to this study include: we did not include a physician time component based on operative logs as previous studies have shown that actual (not estimated) surgical times for gender specific procedures were almost identical [6]. We had to use total exenteration code compared to cystectomy with LND as there was no anterior exenteration code and this may have skewed the results weighing gynecologic procedures higher. We recalculated for accuracy the data outcomes from the 1997 paper using online data programs. We used the January–March 2015 CMS data as 2016 data was just becoming available and being validated. CMS re-adjusted the CF for the time period of 2015 March–December. We realize that tRVU is a calculated value and is therefore affected by differing input factors over time. We used the same regional GCPI code as the 1997 paper.

In light of the new value based payment healthcare reform, and concordant with gender neutral high-quality patient care, we want to keep pace and more forward with change. To achieve these goals we need work to be done at a committee level, through evidence based discussion. We are presenting this data in continued support of these conversations. We submit that our quality can potentially be measured by MACRA and we will incorporate these changes, but we can still advocate for appropriate and equal procedural reimbursement. We can do this through proper value based CPT coding that reflects the equal worth, time, and intensity in the performance of gender based procedures. We can lobby for this through our specialty societies and the AMA's RUC, providing evidence based data documentation, and completing the RUC surveys when distributed. We need to have a seat at every table to define and improve the quality of care we provide to our patients.

Conflict of interest statement

The authors declare that there are no conflicts of interest.

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