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INTRODUCTION AND OBJECTIVES

- Over 500,000 vasectomies performed annually in U.S.¹
- Per current AUA guidelines, post-vasectomy semen analysis (PVSA) is required to confirm the success of vasectomy²
- However, patient compliance to PVSA is unknown
- Our objectives:**
 - determine the PVSA compliance rate
 - identify factors that predicted compliance

1. Barone et al, J Urol 2006;176(1):232-6.

2. Sharlip et al, Vasectomy: AUA guideline, 2012 (edited 2015)

MATERIALS AND METHODS

- Retrospective review of men who underwent vasectomy at San Diego VA Medical Center between January 2006 and December 2016
- All patients had at least on in-person pre-procedure consultation and counselling, with emphasis that PVSA was required for confirming the procedure's success
- Local anesthesia for outpatient vasectomies in clinic, monitored anesthesia for OR cases
- Pathologic confirmation of presence or absence of vas with lumen
- Post-vasectomy management: 2-4 weeks for wound check; PVSA in 2-3 months or after 15-20 post-procedural ejaculations
- Standard statistical analysis to assess for factors that predicted PVSA compliance.

RESULTS

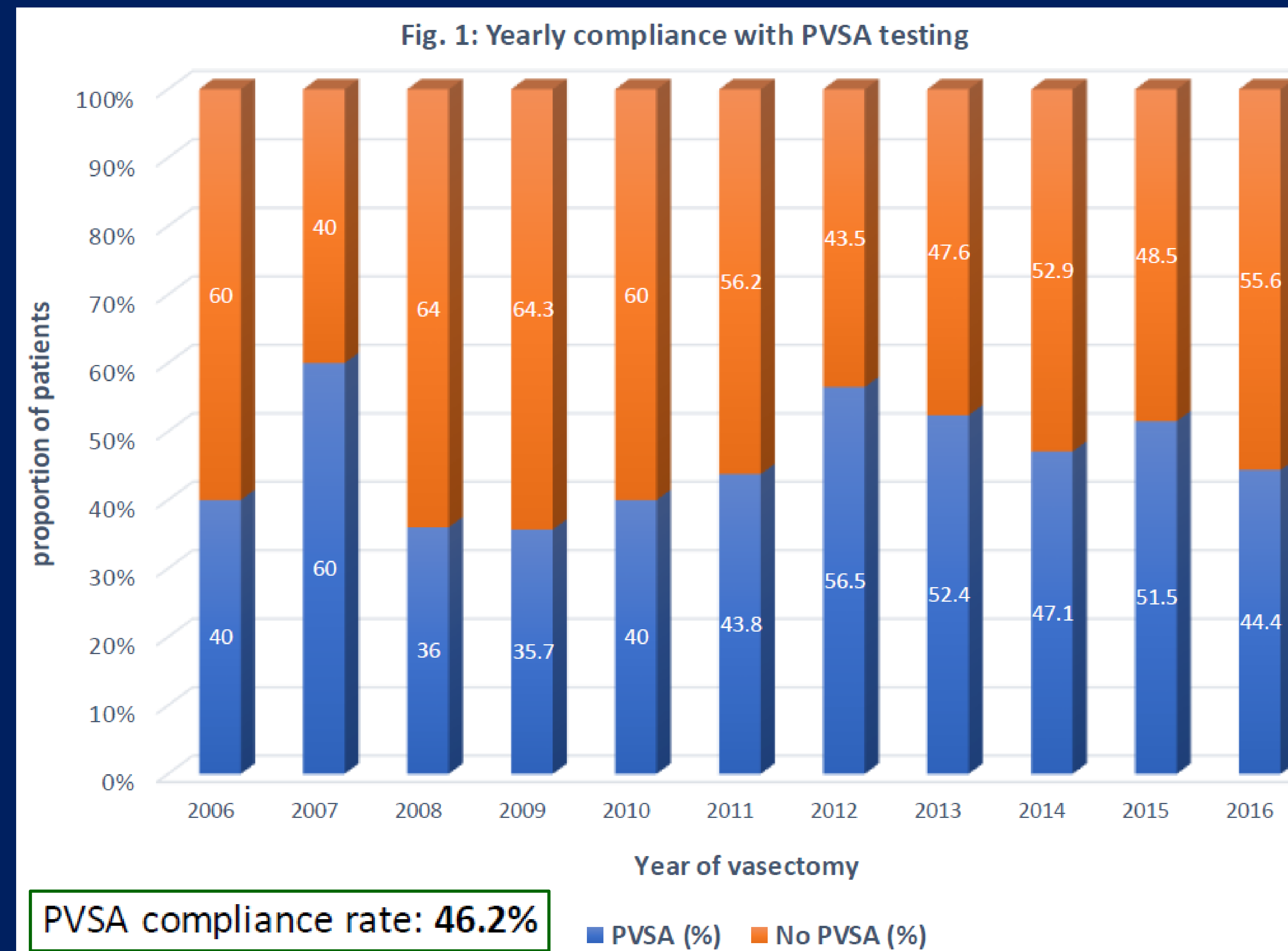


Table 1. Demographics and pre-procedure information

	Total (N=331)	PVSA (n=153)	No PVSA (n=178)	p-value
Mean age (SD)	38.0 (8.2)	37.7 (8.0)	38.3 (8.4)	0.4764
Race, n (%)				0.5448
White	200 (60.4)	94 (61.4)	106 (59.6)	
Black	67 (20.2)	24 (15.7)	43 (24.2)	
Hispanic	49 (14.8)	27 (17.6)	22 (12.4)	
Other	15 (4.5)	8 (5.2)	7 (3.9)	
BMI (SD)	31.2 (5.9)	31.0 (5.7)	31.4 (6.0)	0.4562
Married (%)	254 (83.8)	119 (82.6)	135 (84.9)	0.594
Children (%)	288 (88.3)	129 (84.3)	159 (91.9)	0.0330
Prior inguinal hernia surgery, n (%)	33 (10.0)	12 (7.8)	21 (11.8)	0.2324
Blood thinners, n (%)	87 (26.3)	39 (25.5)	48 (26.9)	0.7619
Genital Exam				0.4326
Unremarkable	287 (86.7)	134 (87.6)	153 (86.0)	
Difficult vas palpation	36 (10.9)	17 (11.1)	19 (10.7)	
Other exam abnormality	8 (2.4)	2 (1.3)	6 (3.4)	

Table 2: Procedure outcomes

	Total (N=331)	PVSA (n=153)	No PVSA (n=178)	p-value
Procedure location, n (%)				0.5609
Office	257 (77.6)	121 (79.1)	136 (76.4)	
OR	74 (22.4)	32 (20.9)	42 (23.6)	
Primary surgeon, n (%)				0.7118
Attending	19 (5.7)	8 (5.2)	11 (6.2)	
Resident	312 (94.3)	145 (94.8)	167 (93.8)	
Number of incisions, n (%)				0.2241
One (median raphe)	8 (2.4)	2 (1.3)	6 (3.4)	
Two	323 (97.6)	151 (98.7)	172 (96.6)	
Ligation				0.3729
Suture	53 (16.0)	22 (14.4)	31 (17.4)	
Clip	267 (80.7)	125 (81.7)	142 (79.8)	
Both	11 (3.3)	6 (3.9)	5 (2.8)	
Cautery, n (%)	265 (80.1)	120 (78.4)	145 (81.5)	0.4931
Interposition, n (%)	3 (0.9)	2 (1.3)	1 (0.6)	0.4771

RESULTS

Table 3: Post-procedure outcomes

	Total (N=331)	PVSA (n=153)	No PVSA (n=178)	p-value
Post-op follow-up, n (%)	255 (77.0)	132 (86.3)	123 (69.1)	0.00019
Time to follow-up, days (IQR)*	18 (7)	18 (7)	18 (7)	0.7015
Complication, n (%)	12 (3.6)	6 (3.9)	6 (3.4)	0.79
Type of complication				0.2897
Infection	6 (1.8)	2 (1.3)	4 (2.2)	
Hematoma	6 (1.8)	4 (2.6)	2 (1.1)	
Orchalgia	0 (0)	0 (0)	0 (0)	
Path, n (%)	329 (99.4)	152 (99.3)	177 (99.4)	0.9148
Vas lumen present				
Left	319 (96.4)	147 (96.1)	172 (96.6)	0.3593
Right	308 (93.1)	140 (91.5)	168 (96.6)	0.2074
Favorable path (both vas)	304 (91.8)	137 (86.7)	167 (93.8)	0.1509

*Median/IQR and corresponding Wilcoxon ranks sum used for data analysis given large variance and outliers

Table 4: Multivariable analysis of factors associated with compliance with PVSA

Factor	OR	95% CI	p-value
Attending post-vasectomy visit	2.84	1.46 – 5.49	0.0024
Fatherhood	0.37	0.17 – 0.83	0.01582

NB: Factors adjusted for in the multivariable linear regression model: age, race, marital status, location of procedure, year of procedure, primary surgeon level of training, favorable path and complication

CONCLUSIONS

- PVSA compliance under 50% among veterans
- No children and attending post-vasectomy visit increased PVSA compliance
- Presence or type of complication and physician level of experience did not impact compliance

FUTURE RESEARCH

- Compliance in non-VA setting (e.g academic institution, private practice)
- Home PVSA testing?
- Time to reassess guidelines?
- Ultimate research goal:** Can compliance be improved or novel method needed to confirm vasectomy success?