

Nurse and Parent, and Surgeon Assessment of Hypospadias Outcomes

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Background

- Hypospadias is the second most common congenital anomaly in males and is characterized by the urethral opening located on the ventral side of the penis.¹ One in 200 boys will be born with the urological defect.²
- While the etiology of hypospadias is not fully understood, the complication arises in the third and fourth months of gestation when improper folding of the urethral plate may occur.³
- Post-operative complications after hypospadias repair are common, and surgeons, nurses, and parents may interpret post-operative success differently.^{2,4,5,6}

Aims

To assess parental expectations and decisional regret, and to compare clinician versus parental satisfaction related to hypospadias repair outcomes.

Methods

Eligibility criteria -

- Inclusion:** Children with a diagnosis of hypospadias scheduled for a single-stage operative repair. Parents English or Spanish speaking.
- Exclusion:** history of previous operative repair of the hypospadias, diagnosis of disorder of sexual differentiation (DSD)

Procedures -

- Pre-operative:** photos are taken and parents complete a brief survey and the Pediatric Penile Perception Scale (PPPS) to assess expectations, desired outcomes, and pre-operative experiences.
- Post-operative:** photos and parental surveys are completed at 1-3 month and 12+ months
- Nursing completes post-operative assessments in person or via phone at 7-14 day & 1-3-month post-op intervals to evaluate healing, assess for presence of complications and answer questions/provide reassurance to families as indicated.
- Descriptive statistics (number and percentages) and hypothesis testing (Wilcoxon signed-rank test) were performed using SPSS.
- The electronic health record is monitored for additional post-op phone calls initiated by families, as well as ED visits and need for additional procedures.
- Urology physicians will blindly evaluate pre- and post-op images using the Hypospadias Objective Penile Evaluation (HOPE) score.

Results

Table 1. Characteristics of Recruited Hypospadias Patients & Parents (N=24)

	n (%)
Relationship to child	
Father	6 (25)
Mother	18 (75)
Race/Ethnicity of child	
White	5 (21)
Black or African American	4 (17)
Hispanic/Latino	9 (37)
Asian	4 (17)
Multiple	2 (8)
Language(s) spoken at home	
English	14 (59)
Spanish	8 (33)
Other	2 (8)
Previous surgeries	
Yes	2 (8)
No	22 (92)

- 75.0% of parents who completed the questionnaires were mothers (Table 1).
- 37.5% of included subjects were Hispanic/Latino (Table 1).
- 58.3% of patient families spoke English at home, but some of these spoke both English and another language (e.g. Spanish) (Table 1).

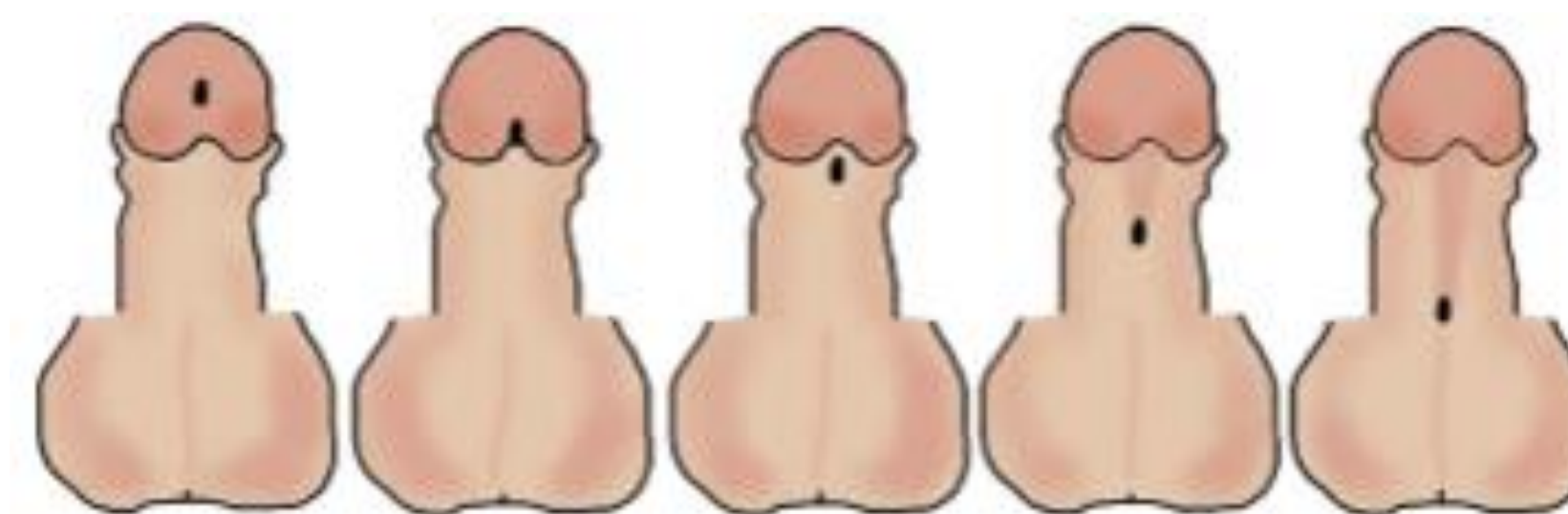
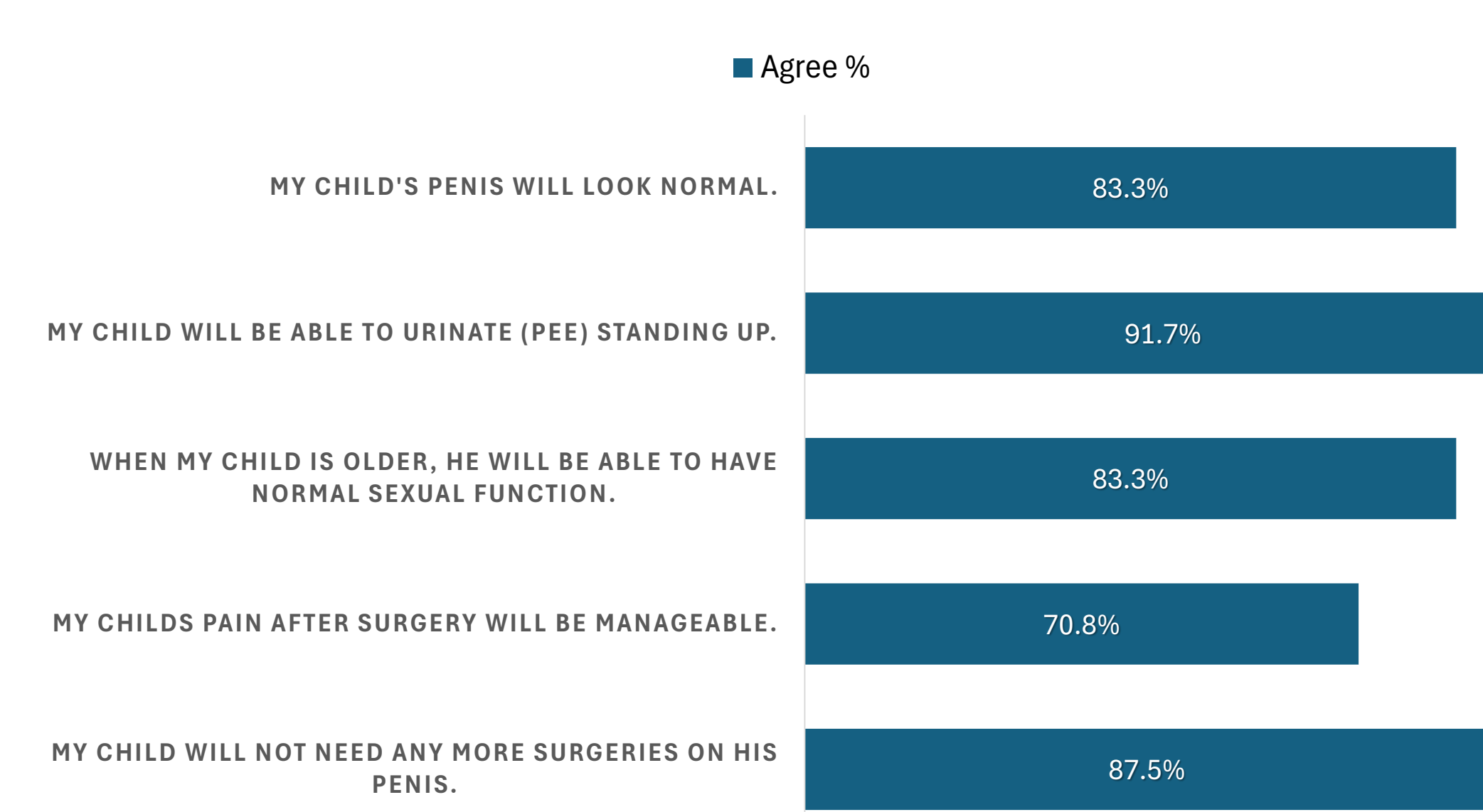


Figure 3. HOPE Score reference photo for determination of meatal position.⁷

Figure 1. Distribution of parent responses to pre-operative survey question, "What do you expect will happen after your child's hypospadias surgery?"



- Before surgery, most parents expected that their child's penis will look and function normally after hypospadias surgery, and that their child will not require further surgeries on his penis (Figure 1).
- Overall parental satisfaction with the general cosmetic appearance of the patient's penis increased from pre- to post-op (Figure 2).
- There was a statistically significant difference in pre- and post-op responses ($p=0.033$) (Table 2).

Table 2. Parental satisfaction of general cosmetic appearance of penis at pre-op and 1-3 months post-op.

	Parents' Penile Perception Score				p-value
	Pre-Op (N=24)		1-3 Month Post-Op (N=18)		
General Cosmetic Appearance	n	%	n	%	
Very Satisfied	2	8.3%	7	38.9%	0.033
Satisfied	12	50.0%	9	50.0%	
Dissatisfied	7	29.2%	2	11.1%	
Very Dissatisfied	3	12.5%	0	0.0%	

Figure 2. Distribution of parental satisfaction with general cosmetic appearance of patient's penis at pre- and post-op.

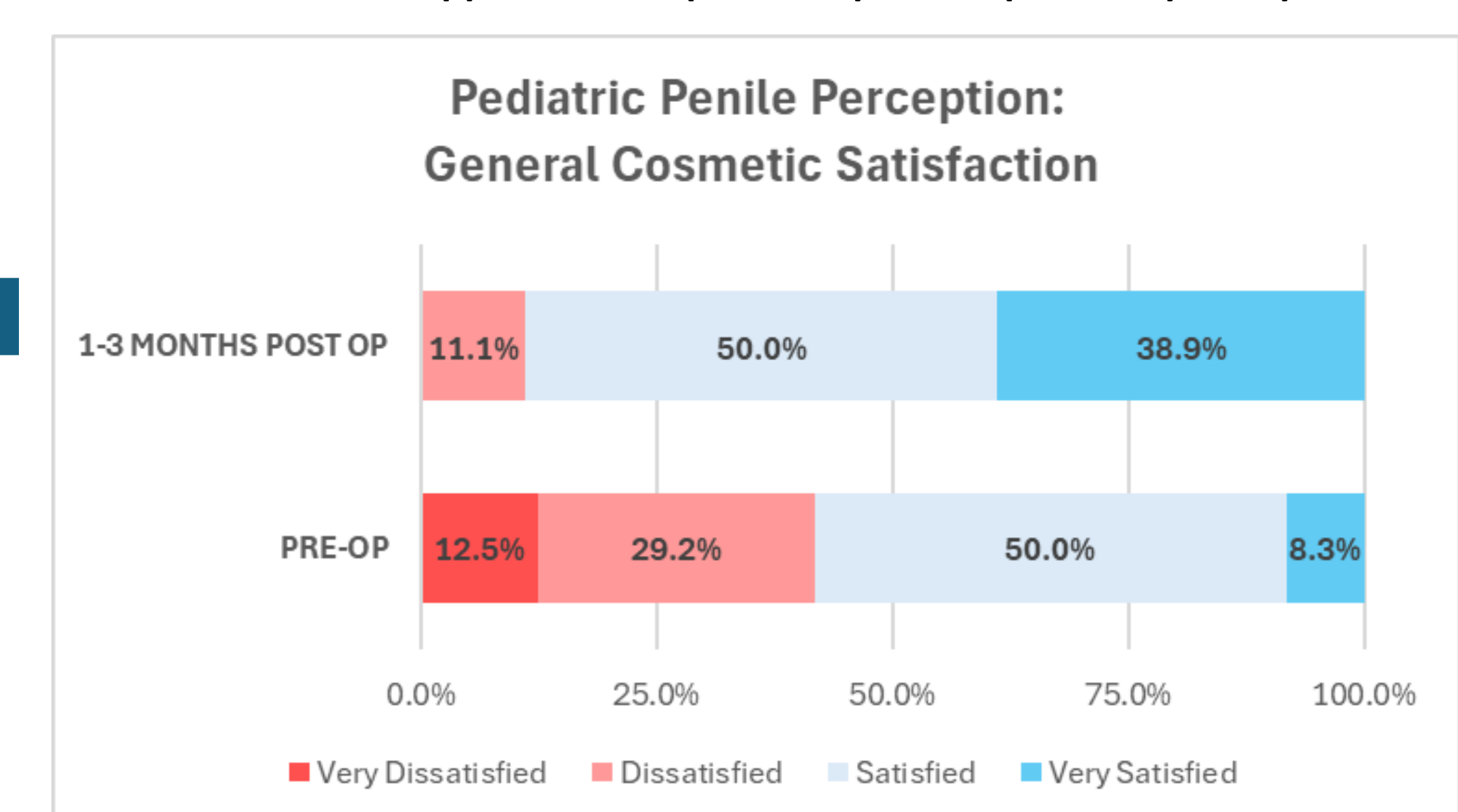


Table 3. Nurse evaluation of patient at 7-14 days and 1-3 months post-op.

	Nurse Evaluation			
	7-14 Days (N=22)		1-3 Months (N=19)	
Does child have to push to void?	n	%	n	%
Yes	0	0.0%	0	0.0%
No	10	45.5%	13	68.4%
Voiding not observed	12	54.5%	6	31.6%
Does child have discomfort with voiding?	n	%	n	%
Yes	4	18.2%	0	0.0%
No	9	40.9%	13	68.4%
Voiding not observed	9	40.9%	6	31.6%
Does child have a "spraying" stream?	n	%	n	%
Yes	1	4.5%	1	5.3%
No	8	36.4%	12	63.2%
Voiding not observed	13	59.1%	6	31.6%

Conclusions

- Preliminary data suggests that parents have high expectations regarding the outcome of their child's hypospadias surgery.
- Although there is a general increase in parental satisfaction with their child's penile cosmesis post-op, this finding is not statistically significant, likely due to sample size limitations.
- It is not yet known if all parental expectations will be met in the long-term and further recruitment is needed to achieve a sample size capable of yielding statistically significant results.
- Parents report improvement to comfort with voiding post-operatively during the 1-3month nurse assessment when compared with the 7-14 day interval.
- As the study continues, we will be able to assess parental satisfaction with the long-term outcomes of the surgery and compare this to surgeons' post-operative perceptions of surgical success.

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