

Compliance with Enuresis Alarm for Treatment of Primary Nocturnal Enuresis

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BACKGROUND

Primary nocturnal enuresis is one of the most common reasons for visits to pediatric urology, and results in significant patient and parent distress (1). An enuresis alarm can be a curative option for many patients, with a success rate reported as high as 80% (2) however, many of our patients report they did not have success with the alarm.

PURPOSE

This study aims to obtain more complete information on patients' and families' experience with the enuresis alarm. We hypothesize that many of the "nonresponders" do not use the alarm as directed, and that many families who have been counseled about the alarm do not actually purchase it.

METHODS

After obtaining IRB approval for a retrospective chart review, we were able to obtain the information for all patients seen in Mark Wallace Urology Clinic for the past 5 years for all diagnoses related to nocturnal enuresis. We excluded patients with significant comorbidities which affect enuresis, such as neurogenic bladder, diabetes, and significant daytime incontinence. We conducted a phone survey for the parents of our patients with questions regarding their usage and experience with the enuresis alarm, and the status of the patient's enuresis.

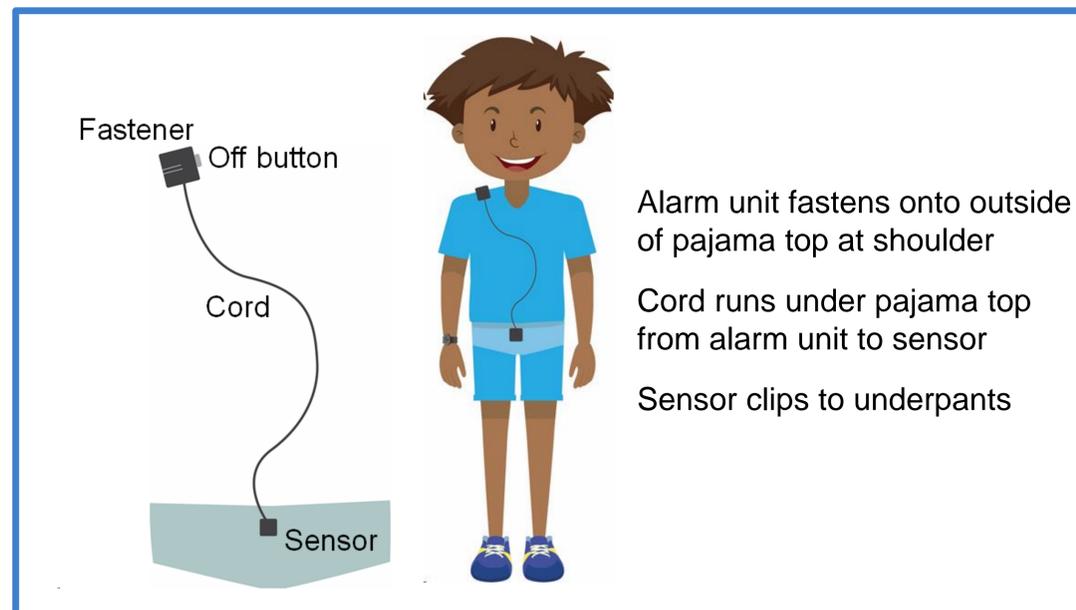


Fig 1: Depiction of Enuresis Alarm

Reasons for Not Purchasing Enuresis Alarm

Other treatment option preferred (medication most often)	67.16%
Cost	13.43%
Previously failed alarm therapy	3.98%
Other	15.42%

Fig 2: Family reported reasons for not purchasing alarm

Appropriate Usage of Alarm vs Bedwetting Status

Appropriate Usage?	Child still bedwetting?	
	No (23)	Yes (35)
No (34)	29%	71%
Yes (24)	54%	46%

Fig 3: Description

RESULTS

Of the 1,006 charts reviewed, 234 were excluded due to comorbid conditions or nonmonosymptomatic nocturnal enuresis. Of 774 included, 442 chose enuresis alarm as management after our consultation. Only 60 patients of those actually purchased the alarm (13.5%).

Of the patients who did purchase and use the alarm, 43.1% reported improvement, and 56.9% did not report improvement. Only 34 out of 58 patients (58.62%) used the alarm for at least 5 nights a week for at least 4 weeks.

Only 24 out of 58 patients (41.38%) used the alarm for the recommended 7 nights a week for at least 6 weeks. Of those who used the alarm for 5 nights a week at least 4 weeks, half still wet the bed and half did not (17 vs 17). Of the patients who used the alarm for 7 nights per week and at least 6 weeks, 54.17% were no longer wetting the bed vs 45.83% still wetting the bed (13 vs 11).

CONCLUSION

Our retrospective study found that a majority of patients who were interested in and counseled about the alarm during our office consultation didn't purchase it. Of those who purchased the alarm, a significant number did not use the alarm for the recommended length of time, which has been shown to lead to greater success rates. However, fewer of the patients who did not use the alarm for the recommended time achieved dryness overnight as compared to those patients who did use the alarm for the recommended time, though this did not reach statistical significance. To our knowledge, this is the first study looking at compliance with the enuresis alarm. The lower success rate we report may be related to shorter durations of use and lack of regular check-in appointments.

REFERENCES

- Alarm interventions for nocturnal enuresis in children. Cochrane Systematic Review – Intervention 20 April 2005 Cathryn MA Glazener et al
- The optimal duration of alarm therapy use in Children with primary monosymptomatic nocturnal enuresis. KV Kosilow et al. Journal of Pediatric Urology Volume 14, issue 5, October 2018 pages 447.e1-447.e6.
- Clinical Pediatric Urology SG Docimo 5th edition 2007 Page 829-833
- Family compliance with the use of alarm devices in the treatment of monosymptomatic nocturnal enuresis U Oguz et al. Turkish Journal of Urology 03/2014 Volume 40, Issue 1
- Traisman, Edward S. "Enuresis: evaluation and treatment." Pediatric annals 44 4 (2015): 133-7.