Peer reviewed article
Tasmanian children are the winners with Wetaway

Abstract
Family, Child and Youth Health Service (FCYHS), Tasmania, has provided services to children in the management of nocturnal enuresis since 1997. A quality improvement project, aimed at evaluating the statewide nocturnal enuresis program, was initially undertaken with a case study consisting of a cohort of children who attended the Wetaway program in Tasmania between February and July 2001. The study was completed in November 2002. The program reports a success rate of 85% for those children who completed the program. However, there still remains a significant drop-out rate for children, with 22% of children leaving the program, mainly during the bladder training stage of intervention. Nurses reported complex family issues and lack of parent or carer support for the child as reasons for children not continuing with the program. Relapse after completion of the program remains of concern with continued success at 1 month, 6 months and 12 months requiring further intervention and support. The evaluation of the project supported the importance of the continuation of a multi-modal approach to nocturnal enuresis, including fluid balance, bladder training and alarm management for children affected. Results also support early intervention, with children as young as 5 years experiencing positive outcomes in the management of nocturnal enuresis. Parents reported decreased family stress due to their child's success on the Wetaway program.

Key Words: nocturnal enuresis, early intervention, bladder training, alarm management, nurse coach, quality.

Introduction:
Enuresis is a common problem, with as many as 20% of children aged five, 7% of children aged seven and 5% of children aged 10 experiencing bedwetting. Blackwell \(^1\) states that 1-2% of adults are still waiting to outgrow bedwetting. Genetics has a strong correlation to nocturnal enuresis, however it is generally accepted that nocturnal enuresis has a multifactorial aetiology. The pathophysiology of nocturnal enuresis can include a variety of underlying components such as high nocturnal urine production, poor sleep arousal or decreased functional bladder capacity. Psychological factors also play a role in treatment of enuresis and children with nocturnal enuresis have been identified as having low self esteem\(^2\).

The impact on children as they grow older can be enormous resulting in loss of self esteem, feelings of worthlessness as well as affecting their peer relations, psychosocial development and school performance. Persistent enuresis may also lead to parents feeling anxious, helpless and guilty about their parenting abilities and difficulties in parent-child relationships. Families with children experiencing nocturnal enuresis perceive these issues as major disruptions to family life, both emotionally and financially \(^3\).

The need for a child enuresis program within the Family, Child and Youth Health Service (FCYHS), Tasmania, was first identified in 1993 by nurses working in the area of continence management in aged care. These continence nurses reported they were receiving telephone calls from distressed parents seeking help for their bedwetting children, however services to incontinent children were outside the nurses’ clinical brief. At the time, there were limited services for incontinent children.

In 1995 in response to this identified need for an enuresis program within the community, FCYHS Southern Tasmania, established a program to assist children experiencing nocturnal enuresis. This program was evaluated in 1997 and recommendations supported continuing the program.

In 1999, FCYHS undertook a statewide approach to child incontinence with the initiation of the Wetaway program and the development of a model of best practice for the management of children with enuresis. The three key components for the model were health promotion, early intervention and management, with an emphasis on the active participation of the child, and a strong nurse-as-coach approach. The program
developed as a sequential mixed modality program consisting of initial assessment, bladder training, alarm management and follow up. The target group for the program was children aged 5 to 18 years experiencing bedwetting problems.

In 2003, the service undertook an internal evaluation of the Wetaway: Nocturnal Enuresis Program provided for Tasmanian children. The aim of the evaluation was to ascertain the efficiency of the program, ensuring compliance with current best practice and consistency of nursing practice. Another aim was to identify how the program could be improved.

A search of the literature was conducted using databases, including Proquest, Medline and CINAHL. English language papers from 1998 to 2002 were reviewed.

Recent literature continues to support intervention for children experiencing nocturnal enuresis. However, there is some support for not intervening with these children until they are over 7 years, as Jalkut\(^4\) reported most children with enuresis at age 5 years spontaneously resolve their bedwetting by age 8 years.

Full assessment continues to be important, with evidence on the importance of family assessment. Assessment is required to determine contributing causal effects such as decreased bladder capacity, poor sleep arousal, or nocturnal polyuria, and the readiness of the child for treatment being prime factors in this process\(^5\).

Alarm management continues to have the highest success rate varying from 63%-74% with relapse rates continuing at 10%-30% from this mode of intervention\(^6\). However, there continues to be support for combined modalities for intervention particularly when including behavioural modification and fluid intake. Bladder capacity is also seen as important with most enuretic children having reduced capacity of up to 50% compared to non-enuretic children\(^7\).

Medication such as desmopressin has gained renewed popularity as a treatment for enuresis in those children unsuccessful with the alarm and in short-term intervention, assisting in socialisation activities and relieving family stress resulting from ongoing wet beds. However, there was no evidence to show whether drug intervention resulted in long-term dryness in children\(^8\). Drug intervention was excluded while participating in the Wetaway program.

Methodology

The evaluation was undertaken internally by the FCYHS. Approval for the evaluation was obtained from the Service Management Team FCYHS. An appointed project team considered a case study of a cohort of children who attended the Wetaway program for a 6 month period from February to July 2001. Ninety-seven clients (75%) of those attending were randomly selected from across Tasmania, 31 from north of the state, 22 from northwest and 44 from the south. The age range of this target group was 4-13 years (1 child was 4 years and 1 child was 13 years) and included all children regardless of gender, duration of symptoms or previous treatments.

The evaluation process considered both qualitative and quantitative data extracted from a client-satisfaction telephone survey, client record audit and a survey by questionnaire of nurses working in the program. A questionnaire was developed for the client-satisfaction survey for use during telephone interview. This questionnaire included questions relating to parental perceptions of their child’s bedwetting prior to commencing the program, the impact on their child, parental recall of feelings and program outcomes for their child.

Feedback was also sought on program accessibility and support provided by the nurses. The questionnaire was piloted with five parents of the client group prior to the client satisfaction survey being conducted. Sixty-two (64%) clients were contactable at the time of surveying and telephone interviews were completed with these parents. Two unsuccessful attempts were made to contact the remaining 35 (11%) parents.

A client record audit tool was developed and applied to the target group 97 (75%) records of clients who accessed the program between February 2001 and July 2001. The audit tool measured age of the child entering the program, length of time for each mode of the program and drop out rates during each mode and success rates of the program. Relapse rates at 1 month, 6 months and 12 months were also recorded.

The staff questionnaire sought feedback from the 13 nurses working in the Wetaway program. Questions related to staff support and training and suggestions for program improvement. The response rate from the nurses was 100%.

Results

Client satisfaction survey

Survey responses indicated that most parents had no difficulty in accessing the program, however some parents commented on a long waiting time for their initial assessment.

Emotional responses of parents to their child’s bedwetting before commencing the program ranged from ‘unhappy’ to ‘desperate’ with one parent saying they ‘hated their child’. Parents also expressed concern about the negative impact bedwetting had on their child’s emotional, social development and that their child was exhibiting feelings of worry, embarrassment, apprehension and unhappiness. These finding were consistent with statements from the literature\(^9\).

The impact of the program as reported by the parents, revealed 40 children were said to have reached ‘all dry nights’, 8 children having ‘many dry nights’, 7 children some dry nights and for 4 children there was ‘no change’.

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Six families who accessed the program had more than one child participating in the program. A further six families interviewed did not commence the program. One parent stated their child had become worse following the initial interview, and did not continue with the program. All families reported significant value in the support and encouragement provided by the nurse coaches. There was consistent feedback that the ability of the nurse to inform and motivate the child and family and to provide information at a level that could be understood by all parties, was very helpful. Parent responses to how they felt about the initial assessment were positive and parents stated the information provided by the nurses was useful.

Thirty-two parents (51%) surveyed indicated they received weekly telephone support from the nurse-coach. Parents stated they considered the telephone contact to be very useful as it provided both child and parent with positive reinforcement as well as providing an opportunity to discuss progress and problems.

Where the parent and child were not contacted weekly by telephone, other methods of support were employed and this usually included a mix of face-to-face consultation with telephone contact based on need. The majority of parents stated that their child had a positive reaction to the program. A small number of children found the program stressful initially, but in time responded with the support from the nurse-coach.

Record audit tool
Of the 97 client records audited, 22 clients had dropped out. Nurse documentation indicated that clients dropped out for reasons such as – parents had gained enough information for that time, parents or children not compliant with program or they indicated that the program was too hard to do. The audit revealed the highest client drop out rate occurred during the bladder training period. The age range of children on the program was 4-13 years with the median age peaking at 8 years. The highest uptake of children was in the 5-year old age group.

The majority of clients completed bladder training by 10 weeks, most children being managed to attain dry night from 2 and 4 weeks, with a few continuing to 26 weeks. Two clients did not require bladder training management as they had attained dry nights with successful fluid management, and 5 clients became dry during the bladder training process.

Sixty-four clients (85%) were managed with an alarm: the majority requiring between 4 to 10 weeks to attain dry nights. Nine clients exceeded the time on the eight-week program.

Initial success on completion of the Wetaway program, including clients who dropped out during the program, was 66%. For those who completed the program, excluding dropouts, the success rate increased to 85%.

The documented level of success following completion of the program, either using bladder training or alarm management strategies, showed that, at 1 month, 59 clients (78%) were dry, at 6 months, 50 clients (66%) were still dry and at 12 months, 39 clients (52%) were still dry. There was a gradual reduction of completed evaluation forms from the one-month follow up contact until the 12 month period. Factors affecting the reporting of results were clients who were unable to be contacted, information not recorded by nurses and some clients had re-contacted the program as their child had relapsed and re-entered the program.

The medical record audit revealed there were delays and waiting times for some clients prior to initial assessment as well as delays between bladder training and alarm treatment

Documentation revealed some clients found the bladder-training phase of the program stressful and dropout occurred at this stage. Predominately, dropout occurred following initial assessment or during the bladder training stage.

Staff questionnaire
Responses from the nurses working in the program indicated they generally felt supported in their role and, in particular, found peer review through reflective practice a useful mechanism for support.

Nurses identified issues such as commitment to the program by the child or parent as the issue needing the most support. Overall, the nurses’ responses indicated satisfaction with the orientation and training program, however some of the more recent clinicians to the program reported it was a ‘steep learning curve’. Suggestions for improvement proposed by the nurses included; improved accessibility to the program for clients of working parents by providing appointments outside normal business hours; and improving forms and information for clients who have limited literacy skills, including clients from culturally diverse backgrounds. The nurses also identified a need for an improved marketing strategy to include health promotional opportunities for early intervention, particularly in relation to fluid intake and bladder training in young children.

Discussion
Results indicate that a mixed modality of management of the Wetaway program provided an initial success rate of 85% for clients completing the program. For some children (5%), improved fluid intake and bladder training alleviated the need for alarm management. For those children who did not achieve dryness, parents reported improvements in understanding the issues and improved communication between the parent and child.

There have been extended discussions within the program about entry age to the program. Currently, entry age is from 5 years. Although the literature supports the earliest age for alarm therapy as 7-8 years, there is no clear indication that mixed modality, in particular fluid management and bladder training, is
not advantageous at an earlier age. Parent comments regarding stressful issues related to bedwetting, support the need for much earlier intervention as stress within the family dynamic has been shown to exacerbate nocturnal enuresis. Jalkut 4 reports that 5-year-old bedwetters may have spontaneous resolution of enuresis by the time they are 8 years. Waiting until the child is aged 8 years does not address either the social or the emotional impacts on the child, or the family functioning as reported by the parent survey.

There is much support in the literature for early intervention strategies and the positive effects these can have on childhood development 1. Literature available on age appropriate intervention with nocturnal enuresis relates to the physiological development of the child, rather than social and emotional development and improved family functioning.

The experiences reported by the nurses working in the program support the earlier entry age to the program, particularly for fluid management and bladder training programs. The provision of educational material on child development and support for families of a child who wets the bed is encouraged at a much earlier age than even 5 years.

It is clear that one strength of the program was the ability of the nurse-coach to engage with the child and their family. Families surveyed reported both the encouragement and the communication with the nurse-coaches had a positive effect on the child's self-esteem and parent and child interactions. Those who received the weekly phone contact, reported they found the contact to be very valuable. Both Klein 10 and Rogers 7 identified the importance of the collaborative approach and the establishment of a therapeutic relationship between the nurse-coach and child as key factors in success. In the evaluation questionnaires, parents and nurses reported these same benefits.

Relapse for enuresis is a concern, with literature reporting a 10 %-30% relapse rate for children post-program 4. Follow up of participants in the Wetaway Program, post-program, indicated that there continued to be a significant relapse rate, although accurate data was difficult to collect because post-program contact was inconsistent. A survey of those participants available at 12 months post-commencement of the Wetaway Program reported the relapse rate as 25%. Nurses report that children easily fall back into less healthy lifestyles and benefit from ongoing motivation, healthy lifestyle messages and further alarm therapy, when indicated – especially at the key contact times of 1 month, 6 months and 12 months.

The drop-out rates for children is also significant and predominately occurred during the fluid and bladder training stages. Parents reported other family issues prevented commitment to the program effecting decisions to withdraw from the program with nurses noting that complex family dynamics was a major contributing factor.

Conclusion

Evaluation of the Wetaway project supports the continuation of a multi-modal approach to working with children and families experiencing nocturnal enuresis. The success rate compares favourably with other programs. The effectiveness of the program can be linked to the role of the nurse-coach to motivate, encourage and support children, especially through weekly contacts. There is also support for early intervention with children experiencing family stress from nocturnal enuresis. Recommendations were made to continue the early entry age of 5 years; to strengthen approaches for pre-school aged children to encourage improved diet and fluid intake to prevent poor bladder capacity; and to provide opportunities to improve community awareness of healthy lifestyles.

It is recommended that supervision and reflective practice for nurses working on the program is continued in line with quality practice.

The children who drop-out from the program usually do so in the early stages with family issues being named as the major contributor. These children continue to be of concern because family complexities such as family breakdown and family violence have detrimental effects on child development.

The individualised approach of the program that provides thorough assessment of both child and family, followed by goal setting, planning and review clearly fits with evidence based nursing care.

The role of the nurse in the Wetaway program is crucial to the program success. Strengthening the nurse’s role in collaborative partnerships with parents while maintaining their skills in encouraging and motivating children, can only improve Wetaway success rates.

References