

## INDIVIDUAL STUDY

### *Enuresis—a study in general practice*

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The practice is in a suburb of London, and is mainly urban in character. There are 16,000 patients and the group practice has eight general practitioners, as well as fully attached health visitors, midwives and nurses. The construction of the age-sex register on a computer file has been described (Hodes, 1968). It was from this register that a sub-file of all children aged 5–15 years was printed. The total number of children in this file was 2,440.

Nocturnal enuresis is a common problem in general practice and a review by Meadow (1970) states that between 10 and 15 per cent of five-year-olds wet their beds at night and by 15 years the figure is down to one per cent.

#### **Method**

The parents of all children between 5 and 15 years in the practice were sent a questionnaire (Appendix 1) with an explanatory letter indicating that treatment would be available if their child did wet the bed. Fraser (1972) notes the wide differences between accounts of enuresis and that the aetiology is still patchily understood. The questions asked were intended to give some indication of the importance of early toilet training and separation in the aetiology. The position of the child in the family and the parental history were also asked. The first postal enquiry to 2,440 parents resulted in 1,152 replies, a response rate of 47 per cent. The second postal enquiry to non-responders was sent out two months later and had a response rate of 36 per cent. Some replies were incomplete but the total number available for analysis was 1,541 (Table 1).

TABLE 1  
POSTAL ENQUIRY AND RESULTS

	<i>Letters</i>	<i>Replies</i>	Forms returned, 'incorrect age' or 'out of area' deducted. Available for analysis 1541 (67%)
First	2440	1152	
Second	1181	431	
	TOTAL	1583	

The data were then punched and entered into a computer for analysis by a special programme. There were 87 positive replies—5.7 per cent. Details of this analysis are shown in Table 2 and the profile of the enuretic child is shown: the youngest male child of a family in the lowest socio-economic group, about six years old, breast fed but no toilet training in the first two months and possibly separated from his mother when he was under five years and having one parent who was also an enuretic.

An approximate ten per cent random sample of the non-responders were then visited at home by a health visitor who completed a questionnaire (Appendix 2). Parents were given another copy of the original questionnaire and asked to complete it. There were three positive cases in this sample—four per cent. More than one reason for non-completion was given by some parents; the most frequent being 'forgot' followed by 'did not want treatment.' An analysis of the health visitor's questionnaire is given in Table 3.

The affected children were then offered appointments at the practice where they were seen by a health visitor who took a detailed history. A mid-stream specimen of urine was collected and sent for examination. The child was then seen by the general practitioner and 74 accepted

TABLE 2  
ANALYSIS OF DATA FROM ENURESIS QUESTIONNAIRE

(s) Sex		<i>Female</i>		<i>Male</i>									
Per cent of positives		42		57									
(b) Age	5	6	7	8	9	10	11	12	13	14	15+		
Per cent of positives	3.5	17.2	11.5	11.5	10.3	16.0	9.2	5.8	6.9	4.6	3.5		
Per cent positive at age	19	11	7	7	6	10	5	3	4	2	2		
(c) Socio-economic group		1	2	3	4	5	<i>Unknown</i>						
Per cent of positive in category		3.5	4.6	24.1	14.9	49.4	3.5						
(d) Toilet training, starting age in months		<i>0-2 months</i>											
		Positive 14.9%											
		Negative 39.2%											
(e) Breast feeding													
(i) Average length of time fed		13.5 weeks											
(ii)		<i>Not breast fed</i>					<i>Breast fed</i>						
Positive		37%					63%						
Negative		50%					50%						
(iii) Length of time breast fed in weeks		<i>8 weeks</i>					<i>12 weeks</i>						
Positive		4.6%					12.6%						
Negative		4.1%					6.6%						
(f) Position in family		<i>only</i>		<i>eldest</i>		<i>middle</i>		<i>youngest</i>					
Per cent of positive		2.3		23.0		32.2		42.5					
(g) Separation from mother when under 5 years													
Per cent positives		39											
Per cent negatives		24											
(h) Length of separation from mother in weeks		<i>2 weeks</i>					<i>6 weeks</i>						
Per cent positive		12.6					4.6						
Per cent negative		9.0					2.9						
(i) Parents—one or more positive													
Per cent of positives		36.8											
Per cent of negatives		9.2											

appointments for treatment and on first attendance were randomly selected to be given tablet A or B. The child was asked to keep a chart of wet and dry nights, the mother was encouraged and the next appointment was given for four weeks later.

At this second appointment children aged five to seven years were given one tablet and children aged 7-15 years, two tablets to be taken at bed time and a 30-day supply given. The children continued to be seen monthly. The tablets were either imipramine 25 mg or a placebo—the identification was unknown to the general practitioner until the end of the study. Treatment was offered until cure resulted or treatment was stopped by the patient. The results are shown in Table 4 and the average time of attending for treatment in Table 5.

Only one case of urinary tract infection (*Proteus mirabilis*) was found. One child developed a fine macular rash which disappeared in a few days but there were no other signs of possible toxic effects.

#### Discussion

Shaffer, Costello and Hill (1968) noted that studies of enuresis have been carried out on children in institutions, service recruits, disabled children and outpatient clinics. This study carried out in general practice has provided information from children living in the community and receiving care from their own family doctor in his practice. In this setting, offering encourage-

TABLE 3  
ENURESIS  
HEALTH VISITOR'S QUESTIONNAIRE

<i>Analysis of health visitor's questionnaire</i>						
Total questionnaires analysed: 75						
	YES		NO		DON'T KNOW	
	Number	Per cent	Number	Per cent	Number	Per cent
First letter received	46	61.3	7	9.3	22	29.3
Second letter received	36	48.0	16	21.3	23	30.7
Willing to complete questionnaire	46	61.3	6	8.0	23	30.7
Of those 46 willing to complete questionnaire:						
	Number	Per cent of total (75)	Per cent of willing (46)			
Complete now	22	29.3	47.8			
Complete later and post	24	32.0	52.0			
Reasons given for not completing the enuresis questionnaire:						
	Number	Per cent of total (75)				
1. "Forgot"	21	28.0				
2. "Did not want treatment"	14	18.7				
3. Out when health visitor called	14	18.7				
4. Moved home	7	9.3				
5. "Did not receive it"	7	9.3				
6. "Could not complete it entirely"	6	8.0				
7. "You did not want to"	5	6.7				
8. Had already replied	4	5.3				
9. On holiday	2	2.7				
10. "Husband did not want to"	2	2.7				
11. "Objected to receiving it"	1	1.3				

TABLE 4  
NUMBERS RECEIVING EACH TREATMENT, AND RESULT

<i>Treatment</i>	<i>Imipramine</i>	<i>Placebo</i>
<i>Number</i>	36	38
<i>Result</i>		
Cured	7	6
Improved	14	11
Unchanged	14	20
Worse	1	1

TABLE 5  
AVERAGE TIME (MONTHS) ATTENDED FOR TREATMENT

	<i>Imipramine</i>	<i>Placebo</i>
Cured	5	4.5
Improved	5.5	4.5
Unchanged	4.0	4.0

ment to the child and dealing with parental attitudes, the results of treatment with imipramine and a placebo have been similar. The use of a computer file offers a facility for research in family practice and makes a considerable amount of information readily available.

#### Summary

Using an age-sex register of 16,000 patients in a computer file, parents of all children 5-15 years were sent a letter and questionnaire on enuresis. 2,440 letters were sent out on the first occasion,

and a second series sent to 1,181 non-responders. The total number of responders was 1,541 and the results of the questionnaire were analysed by computer.

Random samples of non-responders were visited by a health visitor, who completed a questionnaire to determine the patients' attitude to the study and the results analysed.

Positive cases of enuresis have been seen, detailed history taken and the children examined. Treatment was given with imipramine ('Tofranil') and a placebo. The results are analysed and discussed.

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**APPENDIX 1**

**QUESTIONNAIRE** (Private and confidential)

Child's surname and address	Forenames
.....	.....
.....	.....
.....	Tel. No. ....
Date of birth..... Sex M/F	NHS No.....
Does your child wet the bed now? .....	YES/NO
At what age did your child begin toilet training?.....	..... months
At what age did your child become dry at night?.....	..... years
Did your child become wet again at any time?.....	YES/NO
When under 5 years was child separated from mother at anytime?.....	YES/NO (For..... weeks)
Was child breast fed? .....	YES/NO (For..... weeks)
Number of brothers.....	
Number of sisters.....	
Position in family (1st, 2nd, 3rd child) .....	
Father's occupation .....	
Father: Date of birth .....	.....(day) .....(month) .....(year)
Did he wet the bed after 5 years?.....	YES/NO
Mother: Date of birth.....	.....(day) .....(month) .....(year)
Did she wet the bed after 5 years?.....	YES/NO
Why do you think children wet the bed?.....	
.....	
.....	
Any remarks?.....	
.....	
.....	<i>Signature</i>
.....	Mother/Father/Guardian.
.....	
.....	
.....	
.....	

APPENDIX 2

ENURESIS

HEALTH VISITOR'S QUESTIONNAIRE

Surname of child.....

Christian name(s) ..... Sex M/F

Address .....

Date of birth..... NHS No.....

Did you receive our first letter? YES/NO

Did you receive our second letter? YES/NO

Does your child wet the bed? YES/NO

Would you care to complete this questionnaire now? YES/NO

Would you care to complete it and then post it? YES/NO

Did you not complete the questionnaire because—

- you did not want to 1
- husband did not want to 2
- did not receive it 3
- forgot 4
- could not complete it entirely 5
- objected to receiving it 6
- did not want treatment 7

COMMENT: .....  
.....  
.....  
.....