

# Adolescent incontinence

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# Background

- Urinary incontinence is a common urological symptom in both children and adolescents
- Prevalence decreases with increasing age
- Adolescents with urinary incontinence have more frequent and severe wetting
- Cause significant impact on quality of life



# Aim

To understand more about adolescent incontinence by comparing the differences in initial presentation with younger children seen in a tertiary urinary continence clinic at the Children's Hospital at Westmead.

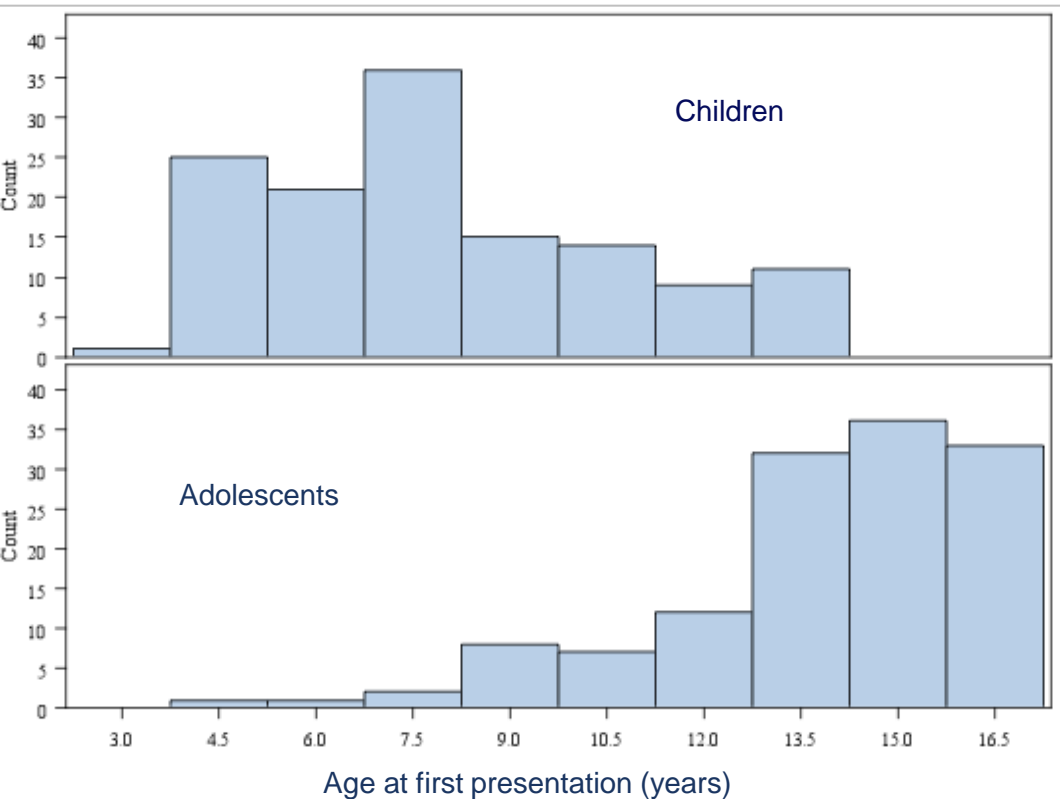


# Methods

- A retrospective medical record review of patients from 2005-2014
- Adolescents aged 15 and above at the last visit were compared with younger children matched for gender and year of presentation.
- Data collected from standardized assessment forms, which clinicians filled in at the initial visit
- Binary logistic regression analyses were used to examine associations between clinical and demographic characteristics and the clinical outcome between the two groups



# Age at first presentation



Median age at first presentation was 15 years (13-15.5) for adolescents and 8 years (6-10) for younger children with P value of  $<0.0001$



# Attainment of day time continence

	Adolescents (N=118)	Children (N=123)	P value
<3 years	65 (55.1)	66 (53.7)	0.18
3-5 years	42 (35.6)	53 (43.1)	
>5 years	8 (7)	1 (1)	
Never	3 (3)	3 (2)	



# Attainment of faecal continence

	Adolescents (N=110)	Children (N=111)	P value
<3 years	63 (57.3)	59 (53.2)	0.23
3-5 years	42 (38.2)	50 (45.1)	
>5 years	5 (4)	1 (1)	
Never	0 (0)	1 (1)	



# Concurrent illnesses

	Adolescents (N=132)	Children (N=132)	P value
<b>Developmental delay</b>	23 (17.4)	12 (9.1)	0.04
<b>Other chronic illnesses</b>	30 (22.7)	12 (9.1)	0.003
•Cystic fibrosis	0	0	
•Lax Ligament	1	0	
•OSA	6	3	
•DM	5	0	
•Neurological condition	8	6	
•ADHD	10	3	





# Types of Nocturnal Enuresis

	Adolescents (N=132)	Children (N=132)	P value
Monosymptomatic	52 (39.6)	39 (29.5)	0.12
Nonmonosymptomatic	62 (46.6)	71 (53.8)	
Primary	88 (66.7)	95 (71.6)	0.10
Secondary	22 (16.7)	13 (9.6)	



# Types of daytime urinary incontinence

	Adolescents (N=76)	Children (N=90)	P value
Voiding postponement	43 (56.6)	45 (50.0)	0.73
Urge incontinence	33 (43.4)	41 (46.1)	0.44
Stress incontinence	5 (6.6)	2 (2.2)	N/A
Giggle incontinence	0	3 (3.3)	N/A
Dysfunctional voiding	2 (2.6)	1 (1.1)	N/A



# Severity of nocturnal enuresis

Severity classification	Adolescents (N=107)	Children (N=104)	P value
Frequent	90 (84.1)	91 (87.5)	0.48
Infrequent	17 (15.7)	13 (12.5)	

## ICCS 2014

Significant condition if occurs > 1 episode per month and a frequency of 3 episodes over 3 months

Further classified into frequent ( $\geq 4$  per week) or infrequent ( $< 4$  per week).

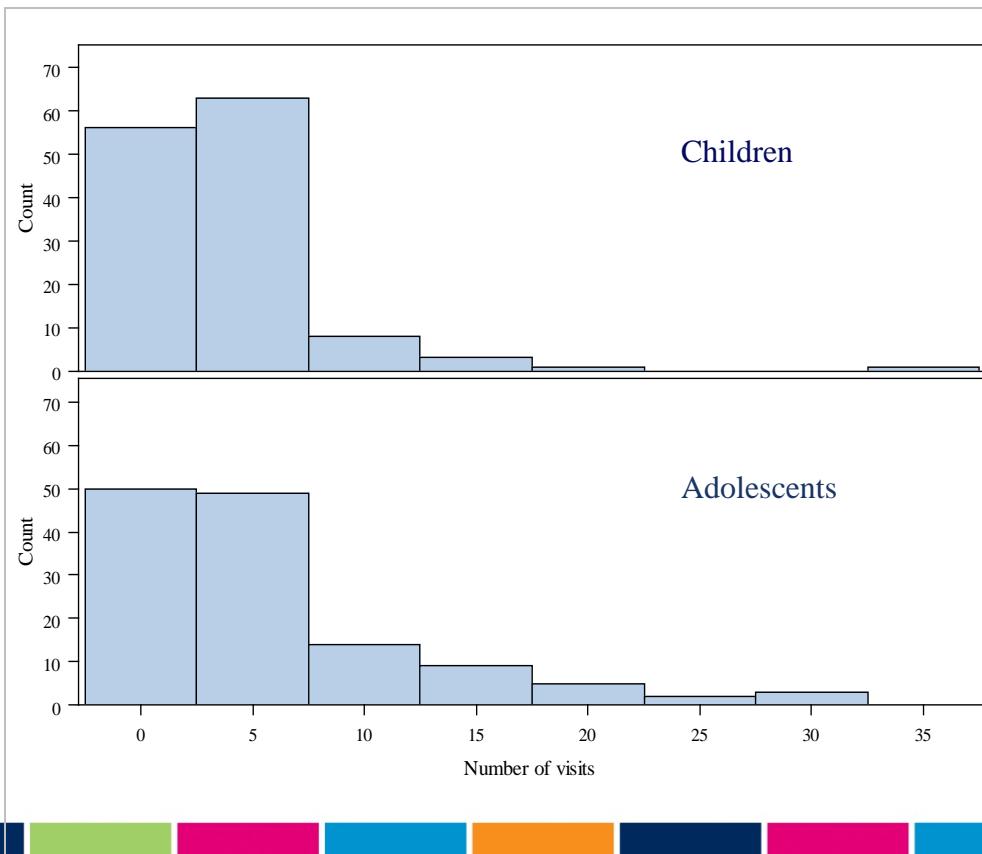


# Severity of daytime incontinence

Severity classification	Adolescents (N=72)	Children (N=88)	P value
Frequent	43 (59.7)	58 (65.9)	0.58
Infrequent	25 (34.7)	24 (27.3)	
Insignificant	4 (6)	6 (7)	



# Number of visits



Mean number of visit is 5.9 for adolescents and 4.1 for younger children with P value of 0.01.



## Status at last visit

Dry at last visit	Adolescents (N=132)	Children (N=132)	P value
Dry	54 (40.9)	42 (31.8)	0.12

Discharge from care	Adolescents (N=132)	Children (N=132)	P value
Discharge	42 (31.8)	35 (26.5)	0.21

Transfer of care	Adolescents	Children
Transfer	9 (7)	1 (1)



# Effect of developmental delay on dryness between Adolescents and younger children

	Adolescents (N=23)	Children (N=12)	P value
Dry at last visit	7	4	0.49

No interaction between developmental delay and case/control status on the outcome of dryness at final visit



# Summary

Adolescents:

- Present later
- More have developmental delay and chronic illnesses
- Doing well similar to younger children (41% becomes dry compared to 32% in younger children)
- Should be encouraged to seek medical treatment earlier.





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