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PERSONAL AND TREATMENT COSTS OF CHILDBIRTH RELATED INCONTINENCE

Hypothesis / aims of study

Although the prevalence of urinary incontinence (UI) rises with age, many women first experience leakage during /after pregnancy. This UI may become a lifelong complaint. At present we have little longitudinal clinical or economic data about childbirth-related incontinence. The aim of this two-part study was to follow a cohort of women with post-childbirth incontinence, who attended a Continence Unit approximately 10 years ago, to determine their treatment costs whilst in the Unit and personal/ treatment costs after discharge.

Study design, materials and methods

Women with onset of UI within one year of childbirth, with a main complaint of stress or mixed incontinence who attended the Unit from 1992 - 1999 were identified (with local ethics committee approval). Women with proven bacterial cystitis or incomplete emptying (residual > 100ml) were excluded.

Firstly, the treatment carried out in the Unit was costed using estimates from previous studies, Pharmaceutical Benefits Scheme and State Hospital data (in AUD, 2004). Primary therapy for stress incontinence was pelvic floor muscle training. Oxybutynin, Imipramine or Tolterodine were available for urge incontinence. Surgery was offered to women who failed conservative therapy (but had resolved urge, if mixed symptoms). Cure was defined as >90% reduction in leakage on frequency volume chart with resumption of normal life-style. Failure was <50% benefit.

Secondly, costs incurred by patients after separation from the Unit (both personal and treatment) were obtained from a postal questionnaire regarding the previous 12 months. This comprised Incontinence Impact Questionnaire (IIQ), International Consultation on Incontinence Questionnaire (ICIQ) and a modified Dowel Bryant Incontinence Cost Index[1]. Data is given as median, InterQuartile Range, (IQR).

Results **Part One:** The 150 patients with childbirth-onset stress or mixed incontinence were seen between 1992 and 1999. Median age was 54 (IQR, 36-76); 96 (64%) had pure stress incontinence and 54 (36%) had mixed incontinence. Median duration of UI at time of first visit was 9 yrs (IQR 3-20). Older patients had longer duration of symptoms (r = 0.632, p = <0.001). Median number of treatment modalities was 3 (IQR 1-4). Median number of visits per patient was 3 (IQR 2-7).

127 patients (85%) underwent conservative treatment only; 23 (15%) had conservative then surgical management. In the conservative group, 66 patients (52%) were "separated" from the Unit by failing to attend ("DNA") versus 2 (9%) of the surgical group. Nineteen patients separated from the Unit by referral to other specialists (eg colorectal). For our analysis, the "DNA" and out-referral patients were "treatment failures".

In the conservative group, 32 (25%) were cured; 18 (78%) cured in the surgical group. In 12 (9%) "conservative" patients, failure occurred but surgical management was declined.

Table 1 shows median treatment costs by diagnostic group and treatment duration, with total costs incurred to successfully treat one patient ("cost per patient cured"). [NB. Surgical group costs include the additional cost of failed conservative treatment].

Table; Median per capita treatment costs (IQR)

	PURE STRESS INCONT.	MIXED INCONT.	TREATMENT DURATION (Days)
CONSERVATIVE TREATMENT COSTS	**Median = $658.42 (IQR = $715.14) n = 84**	**Median = $721.57 (IQR = 453.28) n = 43**	**Median = 156 (IQR 69-367)**
SURGICAL TREATMENT COSTS	**Median = $6,870.04 (IQR = $1187.9) n = 12**	**Median = $6,893.99 (IQR = $473.6) n = 11**	**Median = 902 (IQR 408-1552) (P<0.001)**
CONSERVATIVE: COST / PATIENT CURED	**$4,073.00 n = 18**	**$2,414.66 n = 14**	
SURGICAL: COST / PATIENT CURED	**$9,415.15 n = 9**	**$8,586.85 n = 9**	

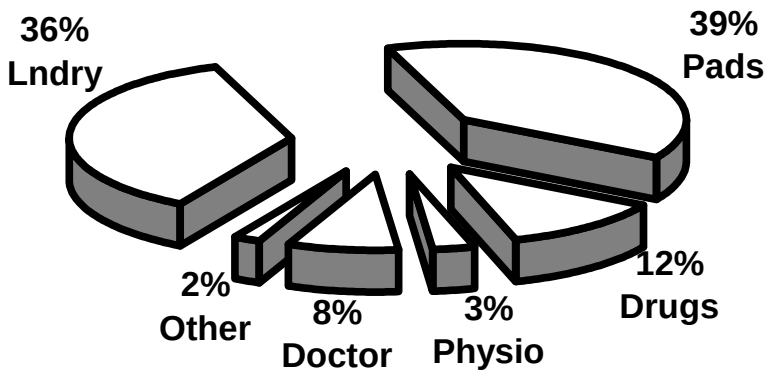
Results **Part Two:** Questionnaires and explanation letters were posted to 150, of whom 68 (45%) were no longer at their original address. Of 82 available respondents, 43 (52%) questionnaires were returned. The responders did not differ from the non-responders for age, parity, symptom duration, type of incontinence or cure rate, but non-responders had significantly fewer visits (p=0.045) and were less likely to have had surgery (p=0.034).

Of the 43, 20 (46%) were still cured, 5 (12%) remained improved, 9 (21%) were unchanged, 5 (12%) were worse; 4 (9%) had undergone surgery since separation.

In the year before the questionnaire date, 4 (9%) patients still took medication, 19 (44%) still used incontinence pads. 14 (33%) patients sought treatment elsewhere. Overall, at 6-13 years after separation, the median

personal / treatment cost incurred in total was $105 per annum per capita **(**excluding the 'one- off' post-separation surgical costs per patient of
$5,767 (DRG)).

Expenditure Items in 12 months prior to survey



Median per capita $105.26, (IQR Q3-517

Interpretation of results
The data herein represent a "real-life "picture of postnatal incontinence, in that many women chose not to pursue a surgical cure [despite the wider economic implications of such a decision].

Concluding message
To our knowledge, this is the first attempted report of the longitudinal costs for childbirth-related incontinence. Using a "bottom up" approach, linked to detailed clinical information, it provides accurate cost estimates for this debilitating condition.

1. (1999) '*British Journal of Urology International*, **83,** 596-606.

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