

A simple 'tally sheet' system for collecting information on the paediatric utilisation of a western Cape day hospital

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Abstract

This paper describes a simple 'tally sheet' system for collecting information on the paediatric utilisation of Bishop Lavis Day Hospital. Of 2 053 children seen over a 7-week period in August and September 1988, the details of 1 971 (96%) were entered on the tally sheets; age and weight were documented in 1 915 (97%) cases.

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worker assisted with dressings, weighing of patients and initial evaluation. A further 3 sisters and 2 staff nurses were employed mainly at a treatment room in nearby Belhar or in the district.

The study was carried out over a 7-week period in August and September 1988. In order that data collection interfere as little as possible with other activities of the already hard-pressed staff, a relatively simple 'tally sheet' was designed similar to that recommended by Morley (Fig. 1A).

Each staff member was provided with a tally sheet for each day and a similar sheet (Fig. 1B) was used in the treatment room to record procedures carried out there.

The Day Hospitals Organisation was established in 1969 to relieve the overworked outpatient departments of tertiary care institutions of the burden of treating patients whose ailments could easily be dealt with at a general practice level.

Although more than 20 years have passed since the first day hospital opened there is still very little information available on the different types of patient making use of these hospitals and the extent to which the original objectives have been met.

In this report we describe the use of a simple 'tally sheet' system to obtain information on the paediatric utilisation of the Bishop Lavis Day Hospital.

Methods

Bishop Lavis is a suburb of the municipality of Parow and has a population of approximately 35 000 people living in relatively poor socio-economic conditions.

DAILY TALLY SHEET PATIENTS SEEN & ACTION TAKEN (FOR ALL CHILDREN TWELVE & UNDER) DATE: 19/9/88 SEEN BY: [Signature] SUBTOT. TOTAL

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FIG. 1A. Daily tally sheet for patients seen.

DAILY TALLY SHEET  
TREATMENT ROOMS  
PROCEDURES CARRIED OUT

DATE: 17.1.88  
ROOM NO: 2

1) INHALATIONS:-  
a) Budesonide 00000 00000 00000 00000 00000 00000  
b) Adrenaline 00000 00000 00000 00000 00000 00000

2) INJECTIONS:-  
a) Penicillin 00000 00000 00000 00000 00000 00000  
b) Other 00000 00000 00000 00000 00000 00000

3) DRESSINGS:- 00000 00000 00000 00000 00000 00000

4) STITCHES:- 00000 00000 00000 00000 00000 00000

5) DRIP INSERTED:- 00000 00000 00000 00000 00000 00000

6) RESUSCITATION:- 00000 00000 00000 00000 00000 00000

7) BLOODS DRAWN:- 00000 00000 00000 00000 00000 00000

8) Oral Rehydration 00000 00000 00000 00000 00000 00000

9) HCB 00000 00000 00000 00000 00000 00000

10) HA 00000 00000 00000 00000 00000 00000

11) For 00000 00000 00000 00000 00000 00000

TOTAL: \_\_\_\_\_

*Fluores*

FIG. 1B. Daily tally sheet for procedures carried out in treatment room.

checked against the receipts at the hospital admission office.

**Results**

During the period of the study a total of 2 053 children were seen, of whom 1 971 (96%) appeared on the tally sheets. Of the children entered on the tally sheets, either age or weight was not entered in 51 cases (2,5%). Of the remainder, 370 (19%) were under 1 year of age, 1 092 (57%) 1 - 6 years and 453 (24%) 6 - 13 years. Only 19 neonates (1%) were seen. The weight for age of the children in these categories is summarised in Table I. Although the percentage of children with a weight for age below the 3rd percentile is fairly constant in each of the age categories (7,8%, 12,1% and 8,2% respectively), the percentage of children with a weight for age below the 50th percentile falls from 41,1% at an age under 1 year to 20,1% in the 6 - 13-year age group.

The percentage of children presenting in the eight commonest diagnostic categories is illustrated in Fig. 2. In all age groups upper respiratory tract infections (31% of all patients) were the commonest conditions seen. In a further 7% of children, otitis media was diagnosed. The second commonest diagnostic category was that of skin conditions, both infective and non-infective, which accounted for 18% of all patients. The relatively small number of children with gastro-enteritis seen can possibly be ascribed to the time of year when the study was undertaken.

Fifty-two per cent of the children were seen, treated and discharged by the nursing personnel and 73% of these children were seen by the paediatrically trained

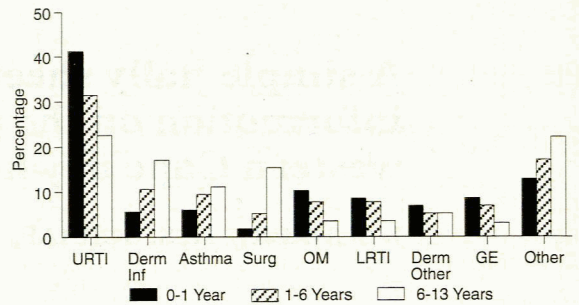


FIG. 2. Diagnostic categories and age incidence in children presenting to the Bishop Lavis Day Hospital (URT I = upper respiratory tract infection; Derm. inf. = infectious dermatological conditions; Surg. = surgical condition; OM = otitis media; LRTI = lower respiratory tract infection; Derm. other = other dermatological conditions; GE = gastro-enteritis).

sister. Eighty-five per cent of the children received a prescription and 15% were seen in the procedure room for dressings, bronchodilator nebulisation, oral rehydration or an intramuscular injection. Three per cent of patients had a chest radiograph taken and only 5% were referred to adjacent tertiary care hospitals. Only 29% of children under the age of 5 years had a 'Road to Health' card.

**Discussion**

The collection of statistics is a necessary evil in the sound administration of any hospital system. However, when confronted by an enormous patient load, the collection of appropriate data is frequently not a priority for staff.

By making use of relatively simple 'tally sheets' we have been able to collect a considerable amount of information in respect of the paediatric utilisation of a western Cape day hospital. This unsophisticated system was well accepted by the personnel and only 4% of the children were not documented. A similar system could be used to evaluate other important aspects of hospital management.

Our results confirm the important role of the day hospitals in handling simple conditions not requiring sophisticated treatment and the importance of primary care nursing personnel to the fulfilment of this role. In the paediatric training of primary health care nursing personnel, emphasis should be laid on both upper and lower respiratory tract diseases, common dermatological problems and gastro-enteritis. The small number of neonates seen is possibly due to the fact that district midwife nursing services are responsible for dealing with the majority of such problems.

The fall in the percentage of children with a weight for age below the 50th percentile from 41% in those aged under 1 year to 20% in the 6 - 13-year age group reflects a common pattern in nutritional surveys in developing countries.<sup>3</sup>

TABLE I. Weight for age of children attending the Bishop Lavis Day Hospital

Percentile of weight for age	Age							
	< 1 year		1 - 6 years		6 - 13 years		Total	
	No.	%	No.	%	No.	%	No.	%
< 3rd	29	7,8	132	12,1	37	8,2	198	10,3
3rd - 25th	95	25,7	359	32,9	192	42,4	646	33,7
25th - 50th	94	25,4	278	25,5	133	29,3	505	26,4
< 50th	152	41,1	323	29,5	91	20,1	566	29,6

It was disappointing that only 29% of children were accompanied by a 'Road to Health' card, compared with more than 50% of those attending the paediatric outpatient department of nearby Tygerberg Hospital.<sup>4</sup> An awareness on the part of hospital staff of the potential value of this document in promoting child health could increase the number of children with cards.

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## The cost of neonatal care

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### Abstract

**A medical and financial assessment of the Neonatal Unit at Groote Schuur Hospital showed that the emphasis was on high care provided at a cost of R265 per patient per day. Intensive care cost R530 and low care R88 per day. The average was R172 per day.**

**Infants of very low birth weight (< 1 500 g) accounted for 58% of expenditure. Half of this amount was spent on infants of below 1 000 g; the cost was R14 621 per survivor and R344 per quality-adjusted life-year. The cost declined progressively for infants of greater birth weight. There are a paucity of comparable local data, but the cost of the care was very reasonable.**

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Neonatal medicine faces the challenge of a growing expectation of improved neonatal survival on the one hand and escalating costs of medical care on the other. This dilemma is particularly acute in the case of very immature infants, where the cost-effectiveness of interventions is increasingly being questioned.<sup>1-3</sup>

In South Africa the relative costs of neonatal care have not been reported. This article examines the findings of a medical and financial audit of the Neonatal Unit at Groote Schuur Hospital.

### Patients and methods

The Neonatal Unit comprises 72 beds and forms part of the Groote Schuur Maternity Centre, which is the

referral centre for the southern Cape Peninsula. The mothers therefore present with a wide range of obstetric and medical problems. High percentages of caesarean sections (30%) and infants of low birth weight (25%) are recorded. In addition to ill infants born in the unit, other babies are admitted from the regional service. Normal healthy infants born at or near term are kept with their mothers in the wards.

Two aspects were evaluated: the level of care and length of hospital stay of infants, and the cost of such care. The former was done over a 3-month period (September - November 1990), while the latter was determined for the month of November 1990 only.

### Levels of care

The study included 482 admissions over the 3-month period. Each infant was assigned on a daily basis, until discharged to one of four levels of care. The levels were defined as:

1. **Intensive care.** This level included infants who required mechanical ventilatory support, total parenteral nutrition, indwelling pleural or arterial catheters, continuous blood pressure monitoring for cardiovascular problems, and/or management of convulsions.

2. **High care.** Infants who required oxygen therapy, cardiorespiratory monitoring, intravenous infusions, constant observation for apnoea, hypoglycaemia, hypothermia or respiratory distress, and/or all babies under 1 200 g in weight were included in this group.

3. **Low care.** Infants in this group required nasogastric or oral feeds, incubator or bassinet care, and/or phototherapy.

4. **General care.** This level included infants awaiting adoption or collection by parents after discharge, or boarders in cases where the mother was ill.

Most infants, including those for observation, received high care. Intensive care was not given to all infants but was initiated selectively on the basis of the criteria of birth weight, gestational age, perinatal events and the availability of personnel. The approach was thus generally conservative. A few infants received neither intensive nor high care.

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