ORIGINAL ARTICLE

Child Care Monitoring For a Better Child Health Service

by

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Abstract

Three hundred under five years of age patients admitted to Dr. Pirngadi General Hospital Child Health Deparment during a two months period (October-November, 1981) were studied, using child care monitoring form.

The age group with highest morbidity (86.7%) was found in the age group of 0—2 years

Only 54.3% of the children got breast feeding until the age of 6 months. Supplemontary food was already given at the age of 0 - 4 months.

Undernutrition was still high (41.7%) particularly under the age of 2 years (32.7%).

BCG and DPT immunization were still low respectively 22.7% and 10%. Gastrointestinal disease and Respiratory Tract Infection were the two leading diseases; Tetanus Neonatorum was also frequent.

The percentage of discharge on parents request was high (31%) which might be related to low level parental education and low socio economic condition.

Received 10th April 1982.

Introduction

The Ministry of Health in achieving "Health for All by the Year 2000" had been active in developing the Indonesian Health System and Program.

Mother and Child Health as one of the main progress in Primary Care is developed as a leading program.

To meet this objective Medical Record standardization as a mean of data resources is absolutely needed.

All Medical Centre in Indonesia should record its medical data uniformly which will be very useful for evaluation and in making intervention programs for the improvement of health services (Ariawan Soejoenoes, 1981).

Both Maternal Care Monitoring (MCM and Child Care Monitoring (CCM) are a continuous system of data collecting, which is very useful to develop mother and child health services (Sambas Wiradisuria, 1981).

The success or failure of the program will also be reflected in those data. Based on those data a Health Officer is able to make improvement in the program for a better child health service.

The CCM model had been created as questionaire form, known as RP2A (Registrasi Pencatatan Perawatan Anak) (Ariawan Soejoenoes, 1981).

In RP2A form there were 45 items in the questionaire which include data on parents and their siblings.

The purpose of this study in to evaluate various data on child health such as morbidity and other possible influencing factors.

Material and Methods

During a two months period (October-November, 1981) there were 300 patients under five years of age admitted to Dr. Pirngadi General Hospital. In this study we excluded babies who were treated in the nursery rooms, who were normal term babies and patients who died before six hours of admission.

Data were collected by questionaire method, using RP2A form. The patient's mother preferably were questioned by the doctors in charge while patient's father was applied when the mother was not present. These data collecting should be performed six hours after patient's admission to the ward, for practical reason only

If the data collected were incomplete, home visits were done later on. All collected data in RP2A were tabulated for further evaluation.

Results

The three hundred under five years of age patiants investigated consisted of 176 males and 124 females. The highest mor bidity among these patients was in the age group of 0 - 2 years namely 260 patients (86.7%). (Table 1).

TABLE 1: *Age and sex distribution*

Age	Sex			
	Male	%	Female	%
1 month	55	18.3	41	13.7
1 month — 1 years	67	22.3	41	13.7
1 — 2 years	36	12.0	20	6.7
2 — 3 years	6	2.0	11	3.7
3 — 4 years	6	2.0	7	2.3
4 — 5 years	6	2.0	4	1.3
Total	176	58.7	124	41.3

More than a half (54%) of them got breast feeding until 6 months of age, but decreased very much when reaching the age of 12 months or more.

Breast feeding together with bottle feeding and bottle feeding alone were only found in small numbers, respectively 127% and 10.3% (Table 2).

TABLE 2: *Type and duration of feeding*

Type and duration of feeding	Cases	%
Breast feeding till 6 months	162	54.0
„ „ „ 12 months	41	13.7
„ „ „ 1 year	28	9.3
Breast and bottle feeding	38	12.7
Bottle feeding	31	10.3
Total	300	100.0

Supplementary food was given already at the age 0-4 months (36.3%) and 22.3% got it there after (Table 3).

Only 22.7% were actively immunized against Tuberculosis (BCG) and 10% got DPT vaccine (Table 4).

TABLE 3 : *Age distribution when introducing supplementary food*

Age when getting first supplemantary food	Number of Cases	%
Not yet	124	41.3
0 - 4 months	109	36.3
4 - 6 months	51	17.0
6 months	16	5.3
T o t a l	300	100.0

TABLE 4 : *Immunization against communicable disease le disease*

Type of Immunization	No.		Y e s	
	Cases	%	Cases	%
B C G	68	22.7	232	77.3
D P T	30	10.0	270	90.0

Diarrheal diseases had been found in 32% of the patients with an average diarrheal episode more than three times a year for each age group (Table 5).

TABLE 5 : *Age distribution of diarrheal attack during the last 12 months*

A g e	No		Yes		
	Cases	%	Cases	%	Avarage Frequency
— 1 month	91	30.3	5	1.7	4.0 X
1 month — 1 years	70	23.3	38	12.7	4.5 X
1 — 2 years	27	9.0	29	9.7	3.6 X
2 — 3 years	6	2.0	11	3.7	4.5 X
3 — 4 years	4	1.3	9	3.0	3.8 X
4 — 5 years	6	2.0	4	1.3	5.0 X
T o t a l	204	68.0	96	32.0	4.2 X

Undernutrition (mild, moderate and severe malnutrition) were found in 41.7% of the patients, prevailing in the age group of 1 month to 2 years (32.7%) (Table 6).

TABLE 6 : *Distribution of Nutritional Status*

A g e	Nutritional Status		
	Good	Mild/Mo-rate	Severe
— 1 month	93	2	1
1 month — 1 year	45	59	4
1 — 2 years	21	34	1
2 — 3 years	5	11	1
3 — 4 years	8	5	—
4 — 5 years	3	7	—
T o t a l	175 (58.3%)	118 (39.3%)	7 (2.4%)

There Diphtheric patients were in the age group of 3-5 years while 7 (70%) of the 10 Tetanus patients were newborns. Six cases (2%) of Measles patients were of the age group of 1-2 years. There was only one case of Tuberculosis (0.3%) (Tabla 7).

TABLE 7 : *Age distribution of patients suffering from communicable diseases*

A g e	D i s e a s e s					
	None	Diphtheria	Tetanus	Mumps	Tuberculosis	Measles
1 month	89	—	7	—	—	—
1 month - 1 year	107	—	—	—	—	—
1 month - 2 years	49	—	1	—	—	6
2 month - 3 years	16	—	1	—	—	—
3 month - 4 years	12	1	—	—	—	—
4 month - 5 years	6	2	1	—	1	—
T o t a l	280 (93.4%)	3 (1%)	10 (3.3%)	—	1 (0.3%)	6 (2%)

Gastointestinal diseases were found in 37% of cases and Respiratory Tract Infection in 30% (Table 8). Both were leading diseases in this study.

TABLE 8 : *Distribution of main diseases*

Diseases	Cases	%
Gastrointestinal diseases	111	37.0
Respiratory Tract Infection	90	30.0
Asphyxia	36	12.0
CNS disorders	21	7.0
Infection and parasites	20	6.7
Nutritional disorders and deficiency	8	2.7
Prematurity	7	2.3
Skin diseases	5	1.7
Hematogenic diseases	2	0.7
T o t a l	300	100.0

Forty four percents of the patients went home with recovery, 31% were discharged on parents request and 16% died during treatment (Table 9).

TABLE 9 : *Health status when discharge*

Condition	Cases	%
Recovered	132	44.0
Discharge on request	93	31.0
Died	48	16.0
Improved	25	8.3
Referred	2	0.7
T o t a l	300	100.0

Parental educational level were as follows : Primary school 91%, secondary school 6.5% and 2.5% never had had formal education (Table 10).

Most fathers were unskilled or intermediate skilled worker (34.1%) and 39.2% were unemployed (Table 11).

TABLE 10 : *Parents' level of education*

Parents	Educational status		
	Primary School	Secondary School	None
Fathers	267	29	4
Mothers	278	11	11
T o t a l	545 (91.0%)	40 (6.5%)	15 (2.5%)

TABLE 11 : *Distribution of parents' qualification*

Parents	0	1	2	3	4	5	6
Fathers	5	14	78	25	53	123	4
Mothers	230	3	22	12	—	29	2
Total	235 (39.2%)	17 (2.0%)	100 (16.2%)	37 (6.2%)	53 (8.8%)	152 (25.3%)	6 (1%)

N o t e :

0 : unemployed
1 : administration personnel
2 : merchant
3 : skilled worker
4 : intermediate skilled worker
5 : unskilled worker
6 : passed away

Discussion

Preschool period in childhood, especially the second year of life, is notoriously fraught with risk. The young child is "transitional" as regards to diet, immunity to infections and psychological dependence. This is a period of rapid growth with high nutrient needs, particularly protein for swiftly increasing muscle tissues

(Jelliffe, 1966). This age group is sensitive against nutritional deficiency (Kho et al, 1975).

In this study we found the highest morbidity (86.7%) in the age group of 0-2 year. Parents ignorance of the importance of nutrition for the growth and development of a child will indirectly decrease body resistance of children.

In 1875, FAO reported that breast feeding decreased in developing countries. Early weaning will cause "infant malnutrition" and may have any relationship with an increased incidence of marasmus and diarrheal diseases.

Early weaning of breast feeding (till six months of age) were found in more than half (54%) of our patients. This condition might be supportive to our finding of high diarrheal diseases.

Breast feeding should be encouraged till the age of two years and at the age of 5-6 months breast feeding should be added with supplementary food (Suharyono, 1977).

In our study early supplemantary food had been given in 36.3% patients namely in the age group of 0-4 months. Similar results had been reported by Manoeroeng (1978). He found that weaning of breast feeding until the age of 6 months was 71.3% and supplementary food was already given at the age of 0-4 months (83%).

This study reported a low percentage of immunizatcn: BCG immunization in 22.7% and DPT in 10%. Similar results was also reported by Helena Siregar (1981; 1981) in her study in two villages in North Sumatra namely in Desa Perdagangan Seberang only 29.9% of children got BCG immunization and DPT 2.18%, and in Desa Tambunan no child had ever had BCG or DPT immunization (Helena Siregar 1981). The target of the Ministry of Health target on immunization in 1980 was 40% and in the year 2000 80% (Hapsoro, 1981). All these findings were far below the target and very disappointing. Incidence of diarrheal diseases as reported by the Ministry of Health was in 1980 400/1000 population/year and hope that in 2000 it will decrease to 200/1000 population/year. It is estimated that the incidence of gastroenteritis in developing countries to be 40-50/100 population/year of which 70-80% occurs in under five years of age, particularly under the two years of age

This study recorded, a more than 3 times/year attack of diarrheal diseases on each age group. Parents were particularly of low education and were mostly unskilled workers. We assumed that the families in this study were from low social economic class. This low social economic condition reflected also the high incidence of malnutrition (41.7%) especially among the under 2 years of age (32.7%). It is already known that this younger age group were more sensitive against nutritional deficiency.

Among 10 patients who were suffering from Tetanus, 7 (70%) were newborns (Tetanus Neonatorum). Tetanus Neonatorum can be prevented or its prevalence

decreased by aseptic delivery and by active immunization of pregnant women with Tetanus Toxoid. Eighty percent of delivery occured outside the hospital and handled by midwifes or traditional midwifes (Agoestina, 1981). The incidence of communicable diseases such as Tuberculosis, Diphtheria, Pertusis and Tetanus can actually be prevented or decreased by active immunization. This study also recorded that gastrontestinal diseases (37%) and respiratory tract infection (30%) were still two leading diseases. These two leading diseases were also found in other developing countries (Sunoto et al, 1977).

Patient discharge on parent's request were still high (31%). It might have relationship with low level of parental education, low social economic condition or other factors.

Further investigation and study on this attitude of the parents should be done and it will be of great value.

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