ORIGINAL ARTICLE

Underfive KMS Utilization In Marunda North Jakarta

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ABSTRACT A prospective study was carried out on 102 underfives by home visits in Marunda, North Jakarta to obtain data on identification, and the underfive mortality in the family. The KMSs were reviewed in terms of, among others, its utilization and the immunization state. It revealed that the KMSs were over distributed (in 70.6% of children), but underutilized (83.3%), in a sense that only in 16.7% were the growth curves (weight curve) graphically plotted on the growth charts, and only in 21.6% were the KMS kept by the child/family. A proper utilization of the KMS was considered crucial as it was significantly related to improvement of the underfive immunization coverage ($p<0.05$) and very significantly related ($p<0.01$) to reduction in underfive mortality. **[Paediatr Indones 1999; 39:8-13]**

Introduction

One of the pioneers in utilizing the growth chart prospectively in daily child health practice, especially for developing countries, was Morley. He then even called the weight chart the Road-to-Health Chart.[1-3] The WHO also recommends to use the growth chart for the use of child health monitoring.[4] This strategy was then even more strengthened and justified by Grant,[5] then director of the Unicef, who declared the so called child survival revolution, a strategy to reduce significantly the child mortality (especially the infant mortality rate or IMR) by appropriate technology while staying to keep sustaining a good quality of life, in order the reach the generally desired goal of "Health for All by the Year 2000".[4,5]

One of the components of this child survival is growth monitoring by the prospective application of the underfive weight curve in the weight or growth chart. Thus all acknowledged the importance of visualizing the weight curve, plotting it graphically on the growth chart, in a sense that actually the weight curve of an underfive simply

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reflects his/her growth and health and thus should be used prospectively for making decisions. Thus just the simple weight curve of the underfive, like the growth phenomenon itself, is unique, dynamic, should be viewed as a whole (global) and is continuous.

In this respect in Indonesia the Road-to-Health Card, familiarly known as the KMS (Kartu Menuju Sehat), introduced since about 2 decades ago, is also meant as an instrument for monitoring the child's growth and health. Unfortunately up till now the optimal usage of the KMS is still unsatisfactory, in a sense that almost always the weight curve is not graphically plotted. If then the weight curve is not even visualized or plotted in the weight chart, how then should it be expected to be used as a tool to monitor the underfive's growth and health. Up till now data on the utilization of the KMS is so to say still unavailable, while as has been recommended by the former investigators[1-7] its use is actually very crucial for monitoring the child's growth and health. The aim of this study was therefore to find data on the utilization of the KMS and to find out what conditions were related to it.

Methods

This was a prospective study performed by interview on home visits to families having underfives in Marunda, North Jakarta. The families were selected at random. The KMS of the underfives were reviewed. The interview included identification data and finding data about the underfive mortality in the family. In this study, KMS utilization was good or proper just when the child's weight curve was graphically plotted on the growth chart of the KMS.

Results and Discussion

One hundred and two out of a total of 500 underfives of that area were included in this study. There ages ranged from 6-60 months, consisting of 43 girls and 59 boys. A good utilization of the KMS actually means, among others, that: (1) the KMS card is kept with the child so that any health worker can at any contact with the child, wherever and whenever, assess the child's growth and health in general; (2) the KMS card is filled in properly: the child's identity, birth date, the child's weight curve properly plotted graphically on the KMS chart visualizing his/her physical growth and health, the presence of data about the child's immunization, morbidity, feeding pattern (esp. breastfeeding), other siblings, parent's use of contraceptives etc.; (3) used as informer on simple knowledge on growth and development and as reminder as when to come again.[7]

Table 1 shows that only in 17 children or 16.7% of children was the KMS utilization good, while in a much greater proportion, i.e., 85 children or 93.1%, the utilization was still poor.

Table 1. Distribution of studied children by utilization of KMS

KMS utilization	n	Percentage
good	17	16.7
poor	85	83.3
Total	102	100.0

In this study the data on KMS utilization items were as follows:

Table 2. Utilization items of KMS in this study

Utilization	n	Percentage
Kept by child/family	20	21.6
Weight curve on weight chart	17	16.7
Data on child immunization	102	100.0
Other data	none	-
Owning >1 KMS	72	70.6

In this study a good utilization of the KMS was meant just when there was visualization of the child growth; in other words, when the child's weight curve was present and graphically plotted on the weight chart of the KMS card. Although all underfives owned a KMS and even there was a 70.6% (72 children) over distribution (Table 2) even so as mentioned before there were only 17 underfives (16.7%) with a proper KMS utilization while the remaining 95 children had a poor KMS utilization. Those 17 children with proper KMS utilization were those who had their weight curves plotted in the weight charts.

Furthermore it was also obvious (Table 2) that still many items were left unfilled for the criteria of a good utilization, also that in 80 children (78.4%) the KMS was not with the child but instead kept by the Posyandu (integrated health post, health and family planning post for underfives and mothers) caretaker for fear of getting it lost if kept with the child/family. No data of the child other than identification and immunization were recorded in the KMS.

Table 3. Distribution of underfives by their immunization status

Immunization status	n	Percentage
Good	20	19.6
Poor		
not complete	26	25.5
never been vaccinated	56	54.9
Total	102	100.0

The overall immunization status was still very poor, since only 20 children (19.6%) had a good immunization status, and even 56 children (54.9%) had never had any vaccination at al.[7] There were in total 51 underfive deaths in the history of the families, scattered into 29 families. And is worth it to say that in the 17 underfives with good KMS utilization there had never been any underfive death at all.

Table 4. Relationship of utilization of KMS and related factors

	KMS utilization		p value
	good	poor	
Immunization			<0.05
good	8	12	
poor	9	73	
Underfive mortality			<0.01
none	17	56	
plus	-	29	

From Table 4 it was very obvious that the optimization of the KMS usage was significantly related to the child's immunization ($p<0.05$) and even more very significantly related ($p<0.01$) with the occurrence of the underfive mortality. By a good utilization of the KMS and informing the mother of her underfive's condition or growth and health and by involving the mother in filling in the chart and card, the mother will achieve a sense of belonging and a sense of relevance to her need with regard to her child's well being. Also it will underline the mother's vital function in the care of her underfive.

When afterward she witnesses and feels the betterment of the condition of her underfive it will arouse a sense of satisfaction in her that will make the regular visits to weight the child enjoyable and thus increase her inner motivation which is indeed very crucial for someone to succeed in adopting a certain behavior.[7]

By just adopting and applying this relatively easy, familiar, simple, low cost and yet appropriate technology in daily practice in the underfive's health care, as revealed in this study, the immunization state and coverage will improve and thus the underfive universal child immunization (UCI) target obtained, the mortality decrease, all in accordance with the child survival principles as endeavors to reach health for all by the year 2000.[4,5]

Conclusions

From this study, conclusions can be made as follows: (1) The KMS utilization was still very poor; there was overdistribution but underutilization; (2) The visualization of the child's growth (the weight curve on the weight chart) was also poor despite of being familiar, easy, simple, low cost and yet appropriate; (3) KMS utilization is very crucial and proved to increase immunization coverage and reduce underfive mortality.

Acknowledgments

The author would like to express her sincere gratitude to Prof. M. Soeryani, Director of PPSML UI (University of Indonesia Center for Human Resources and Environment Studies) for his encouragement and for providing the needed funds for this study. Heartfelt thanks are also tributed to the people of Marunda, in particular the families under study for their kind cooperation during this study.

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