

Chapter IV

Data Exercise

Introducing Standard Treatment Schedule through face-to-face Education: A way to improve rational prescribing in BRAC Health Centers

4.1 Introduction

The study proposes to employ a sequential process of examining the existing prescribing practices, diagnosis of causes and motivating factors, introducing the standard treatment schedule through face-to-face education and then evaluating the project.

First concern of my study is to measure current prescribing practices through quantitative method. The collection of data is done retrospectively from the prescription pads that remain at the health center. Another concern is to identify the causal motivations of the prescribers for such prescribing practices through a qualitative approach. In-depth interview will be used for the qualitative technique. This data exercise partly covers the both approaches in smaller extent.

4.2 Objectives

The prime objective of the study is to improve rational prescribing among the BHC prescribers by increasing the use of ORS and to reduce the use of antibiotic and anti-amoebic drugs in the treatment of acute watery diarrhea in children under - 5 years. The objective of this data exercise is to develop my skills on data collection techniques and learn how to tackle obstacles during data collection process, that may arise when the original study will be conducted. I only need to examine the process of the methodology that will be used in the original study whether the process is fair enough to conduct the proposed study or not. The formats that I adapted from WHO have been used several times in many countries. Furthermore, the measurement indicators, which I am going to study, were also tested in twelve developing countries including Bangladesh (Hogerzeil et al. 1993). Thus, data exercise is mainly centered around academic purpose rather than calling the factual components that is alike with the original study. The objectives of the data exercise are -

- To test out the data collection technique.
- To develop my skill on the data management

4.3 Methodology

An in-depth interview was conducted with the prescriber of Health center- 41, Klongtoye for exploring causal factors of irrational prescribing using predetermined guidelines (Appendix-IX). For measuring current practices, data was collected from prescription records. The process of the data collection is described diagrammatically in the proposal part (please see fig. 3.4).

4.4 Data collection method

4.4.1 Data collection technique

1. Collection of quantitative data from prescription records
2. In-depth interview with prescriber

4.4.2 Instruments for data collection

Similar to proposed study, two formats have used for the data management, one is for data collection and the other is for data consolidation (Appendix-VII and VIII). For the purpose of quantitative data exercise, collecting retrospective 2 months data (September & October 1998) from the prescription records was done. The steps for data collection was more or less similar, which will be used for the original study (Fig. 3.4). For the purposes of exploring causal motivations for irrational practices, an in-depth interview was done.

4.5 Location and profile of the health center

Health Center - 41, Klongtoye is under Bangkok Metropolitan Administration. Reasons for selecting this health center for the purpose of my data exercise are: the population covered by the health center is approximately 100 thousands (99,490); the center is situated near the Klongtoye slum so, there may be a high prevalence of infectious and communicable diseases. There are medical doctors and nurses who are providing prescriptions to the patient similar to the setting of BRAC Health Centers.

The health center has outpatient as well as inpatient services including pathology facilities.

4.6 Pre-field activities

Before proceeding to the health center at Klongtoye a draft study design was prepared and discussed with my advisor. In this regard, correspondences and contacts were made with the health center authority. A letter has been sent to the health center regarding my visit. I also talked with the administrator of the health center over telephone confirming my visit on the scheduled day.

4.7 Sample size

Data of 30 samples diagnosed as acute diarrhea were collected from the month of September and October 1998 from prescription records. First, I took all the prescriptions prescribed in these two months and separated all under - 5 cases, which were treated for acute diarrhea. From the total 49 cases that diagnosed as acute diarrhea in under - 5 children I randomly selected 30 records for this data exercise because of convenience. According to the WHO, minimum 30 records are sufficient enough to describe treatment practices of a health center (WHO, 1993). For the purpose of qualitative approach, only one prescriber has been used.

4.8 Findings and Discussions

4.8.1 Qualitative data

Upon arrival to the health center on March 9, 1999, I made a discussion with the administrator of the center, Dr. Pricha Charusumthorusri. I came to know that 10-15% of the total patients that are treated by the center comprises under-5 children. Among the under-5 group diarrhea, upper respiratory tract infection and dengue hemorrhagic fever are the most common diseases that attending at the center. Approximately more than one hundred patients visit everyday to this health center.

Regarding diagnosis of cases prescriber usually depends on the symptoms that mentioned by caretaker or children themselves and on the physical examination of the patient. Pathological examination of stool is rarely done.

Regarding the treatment of diarrhea, although they do not have any standard schedule for treating diarrhea cases, but mentioned that almost in every case they prescribed ORS, sometimes along with antibiotic or antidiarrheal preparations. Only the severe cases of diarrhea are treated with intravenous saline but the prevalence of severe cases is much lesser than the mild or moderate cases. He knew about the WHO guideline on diarrhea but they do not have any copy of that. He did not recognize any peer practice norms but while reviewing the treatment records I found the practices were exactly in similar pattern. I noticed that the junior prescribers followed the prescriptions of the administrator. The prescribers do not receive any training on diarrhea or the concept of rational use of drugs either. He explicitly mentioned about a

positive attitude towards standard treatment i.e. if there is any standard schedule implement in the health centers they will follow it. The reason behind it as he mentioned that it will improve their performance and can improve the quality of care by the center.

While talking about the cost of treatment of diarrhea I did not discuss in detail as treatment is free in children under the age of 12 years. But the average cost of treatment of diarrhea as prescribed by the health center is approximately 40 to 80 Baths. In contrast with the scenario every patient has to pay at BRAC Health Centers unless prescriber exempts someone after finding that s/he is very poor.

During the interview, I found that prescriber easily understood the questions or interview topics. Practically, interview topics are standardized and simple and adapted from 'promoting rational drug use training course' module.

4.8.2 Quantitative data

The prescriptions are kept in the pharmacy. Same prescription card for a patient was used by the prescriber different times according to the visit by the patient to the center. So, cards were not arranged by date rather haphazard. It made it difficult for finding out diarrhea cases from the whole records. The results of quantitative data exercise can only describe the current practices by the prescribers of the health center. It is similar like the baseline data, which will be collected for the original study. Table 4.1 shows the measurement indicators including the average number of drugs prescribed per encounter.

Table: 4.1 Current prescribing practices

Name of Facility	Avg. no. of drugs prescribed	% of ORS	% of Antibiotic	% Anti-amoebic	% Anti-diarrheal	Remarks
Health center 41, Klongtoye	2.3	76.66	63	0	36.67	

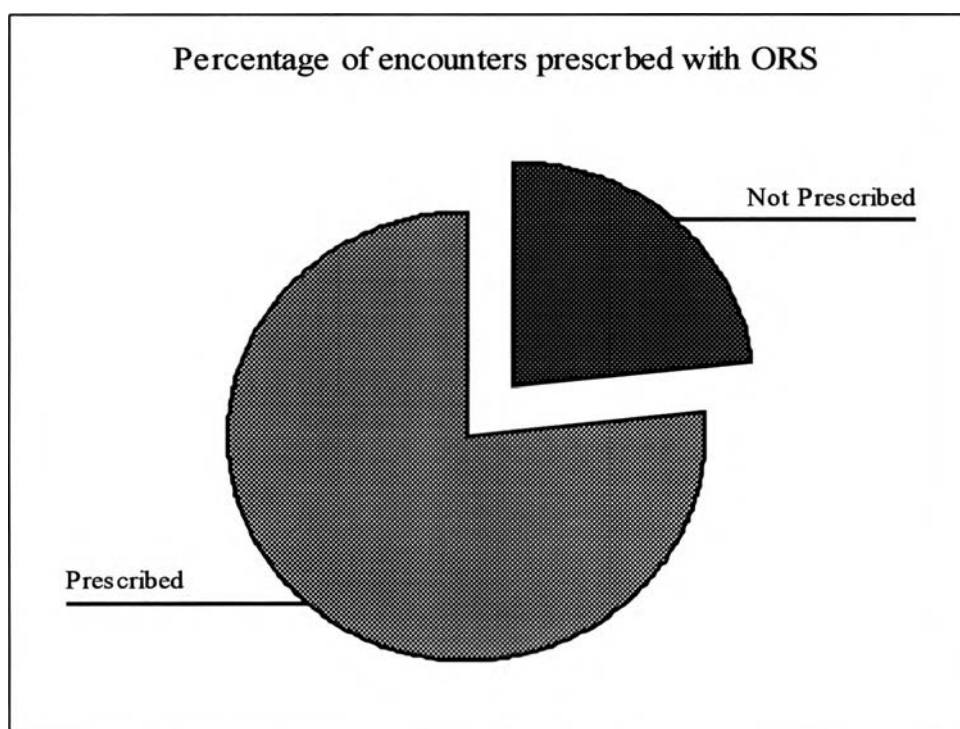
Fig 4.1 Percentage of encounters prescribed with ORS

Fig 4.2 Antibiotic use in the treatment of acute watery diarrhea

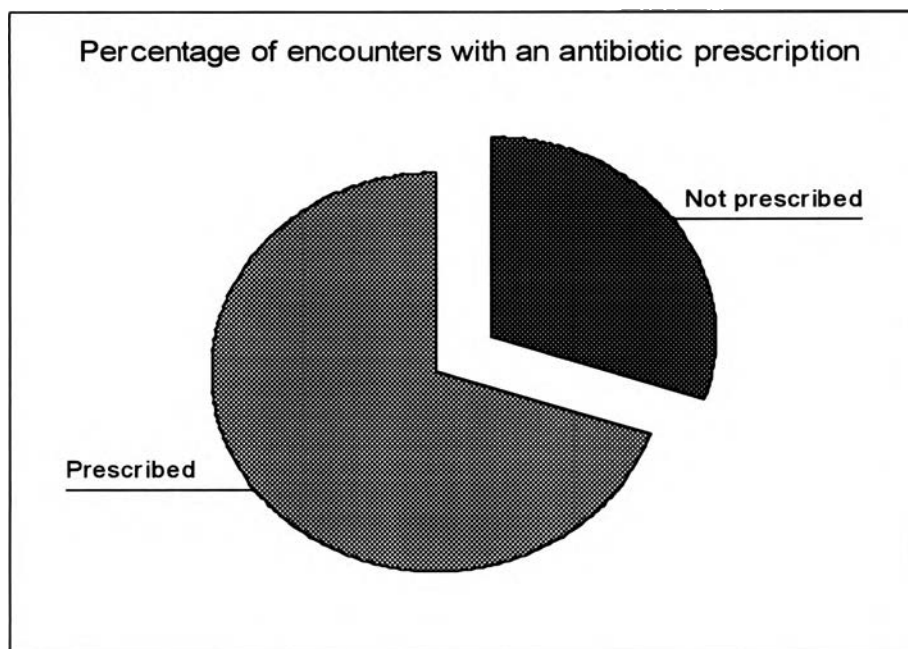
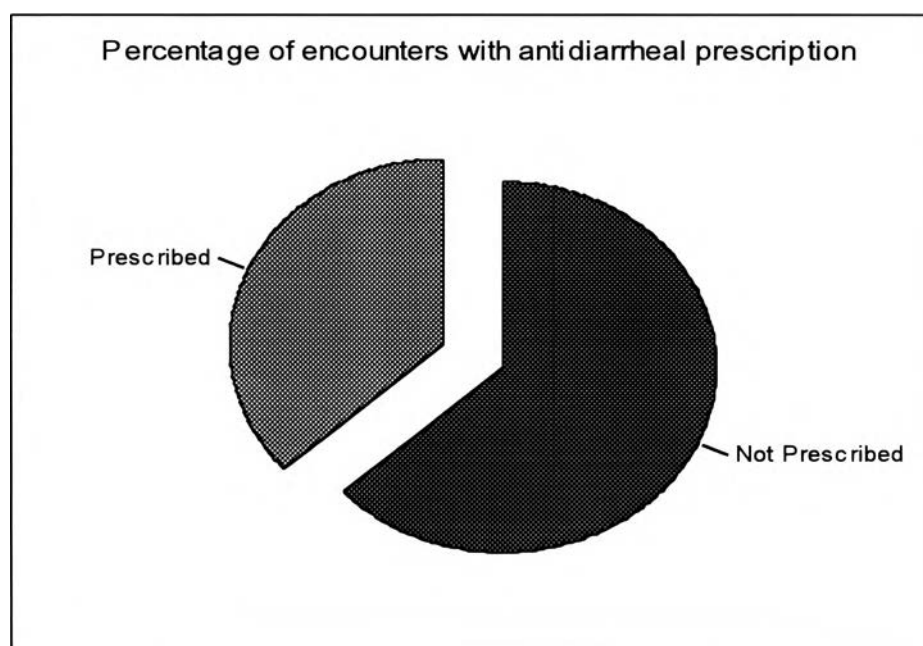


Fig 4.3 Antidiarrheal uses in the treatment of acute watery diarrhea in children under 5 years.



Although there is no gold standard on the prescribing indicators, but if we look at the standard treatment schedule in the treatment of acute watery diarrhea, the percentage of antibiotic prescription is very high (63%) in this facility. Regarding the use of antidiarrheal preparation, although it is found not to be effective rather contraindicated for its adverse effects in this age group, still percentage of prescribing this drug is quite high (36.67%). Although the use rate of ORS (76.66%) is satisfactory, still it needs to improve to use in every cases of acute diarrhea.

4.9 Lessons learned

The main aim of the data exercise is to develop my skill during the data collection process. The data exercise has shown that finding out the prescription records was slightly difficult that I mentioned earlier. Although prescription records are kept at the pharmacy, but not arranged systematically like monthly and annually. For that it took time to find out the two months records. The prescribed medicines were written in local trade name, sometimes difficult for me to understand whether it is antidiarrheal or antimicrobial agents. Message regarding my visit that I sent prior visiting health center, so that they accepted me and admitted me easily to the records. Forms for the data management are well enough to collect all the relevant information that I need for conducting the original study. Regarding the interview guideline, as I did only one interview, so I can not comment on it. But so far as I experienced during conversation with the prescriber that it also does not need any modification for finding out the causal factors.

4.10 Limitations

As I am not a Thai, so I did not understand the part of the prescription cards that is written in Thai. Otherwise the prescribed drugs were written in English except sometimes it was difficult to read. Discussion with the doctor was not very difficult but with the nurse was very difficult because of the language barrier. As I mentioned earlier that the prescribed drugs were written in trade name, so I often consulted with prescribers about their generic name. There was also a time constraints to the staffs to help and communicate with me as I went at the peak hour (9.30 am in the morning) when patient load at the center is usually very high. As I collected data only from one facility so that I can not compare the results or do any significant test or to show any associations. One of the main limitations of this data exercise is that this health center is a public sector facility, but the original study will be conducted in the private sector. So, there will be much more difference in the attitude of the prescribers. Record keeping and reporting system is also different and I can also be able to control all the obstacles that I faced here during data collection. In-depth interview was done with only one prescriber and this was another limitation of this exercise.