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ORIGINAL ARTICLE

The Behaviour of Health Care Providers in Managing Diarrheal Disease in Palembang City, South Sumatera, Indonesia

by

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Abstract

A study on knowledge, attitude and practice of health care providers in Palembang had been conducted at the end of 1989 and beginning of 1990. Four approaches were carried out: (1) by recording the help obtained by cases who consulted researchers for further help for the same diarrheal diseases (DD) episode, (2) by studying the medical records of DD cases admitted to three hospitals, (3) by studying prescriptions dispensed by three pharmacies and (4) by focus group discussions. The findings were analysed to evaluate the achievement of the Indonesian Diarrheal Diseases Control Program (CDD).

ORT, avoiding antimotility drugs and appropriated feeding have been accepted and practiced by the providers in Palembang. The target of promotion now is to support the acquisition of these behaviours to be implemented as a routine habit of the providers and as a part of the ongoing system of health care delivery system. Specifically the danger of loperamide promotion to the policy on antimotility must be stressed.

Rapid iv rehydration and avoiding surface precipitating agents have been accepted, but are not practiced consistently yet due to practical considerations.

It seems that there is no impact at all of CDD towards the rate of antibiotic therapy in DD. Besides intensifying the campaign, enforcing group pressure, may be we have to elaborate more the perception of health care provider as a practitioner, and conforming the strategy of the CDD campaign towards the findings.

Health education had not been practiced effectively yet. Morale and value system of the providers are important for the success of this program.

In general the medical-technic aspect of the CDD has been accepted by the providers, but there is still a lot to do in communicating them to be adopted as an effective behaviour.

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Introduction

The invention of oral rehydration solution (ORS) has changed drastically the pattern of diarrheal disease (DD) case management. The changes did not only occur in the field of fluid feeding regimen and the system of case management itself. To be effective, the new regimen needs behaviour changes of both the case attenders the households and the health care providers as well. In Indonesia these changes have been promoted by The Ministry of Health through the National Diarrheal Disease Control Program (CDD) supported by professional organisations, higher educations, international agencies, and other NGOs.

This paper describes the behaviour of health care providers in Palembang in managing DD cases. The discrepancies of the findings compared to the reference behavior promoted by CDD is reviewed. Palembang is the capital city of South Sumatera province, Indonesia. The School of Medicine Sriwijaya University has been actively participating in supporting CDD, including training health workers from all over Sumatera island on DD case management.

Materials and methods

The study area was Palembang City, which was approximately 900,000 population and is 224,000 square kilometers in area.

The health care providers were grouped into:

- pediatricians, who were regarded well informed in the new policy
- the residents in paediatrics, who have good access to information but have not matured enough yet
- other physicians who have private practices
- providers at hospitals, health centers, clinics; physicians or nurses.
- private practising nurses

The subjects of observations were these groups of health care providers who were chosen. purposively by grape sampling method". Sample size was not predetermined, but obtained by chance according to the method of data collection.

Data were collected by 4 approaches :

- Asking and observing the kind of help given to mothers for their children by previous providers when she took her child for further consultation for the same DD episode to one of the investigators at their private practice or teaching hospital. Data were recorded based on a close ended check list and questionnaire.
- Reviewing medical records of DD cases admitted to 3 hospitals: one a fully private hospital, one a semi private hospital and one a State Company hospital. Data were collected using a close ended check list. Medical records to be reviewed were from the cases admitted in September 1989 when there was an outbreak of cholera and in January or Februari 1990, when usually the incidence of bloody diarrhea was relative higher (1)
- Reviewing the prescription purchased at private pharmacies. Purposively 3 pharmacies were chosen, one at downtown, one at the slum area and one at the suburb area.
- Focus group discussions, to confirm and explore the reasoning of the findings of the first three data collection approaches. Discussion with paediatricians, residents in paediatrics, private practicing doctors, private practicing nurses and clinic's health care providers were conducted separately.

Quantitative data were processed by Epiinfo PC application program (2). Date were presented as frequency distributions, or by cross tabulation without analysing its statistical significance.

The findings were compared to the DD case management standard and CDD policy (3,4).

Results

Previous help

From the beginning of January 1990 up until March 19, 1990, the investigators had examined 69 cases who had had previous consultation for the same DD episode. The pattern of care and advices provided by these previous providers (PP) are shown in table 1. The average age of cases were 12.6 months, ranging from 1 to 49 months. Before attended by the investigators, the cases had suffered from DD for 1 to 12 days, 3.4 days on the average; 92.8% cases were with fever and 84.1% with vomiting.

Hospital medical record

Medical records of DD cases admitted in September 1989 and January 1990 at the pediatric ward of three hospitals had been studied. The first was a private hospital where almost all physicians in charge were "guest doctors"; they were part timely deployed doctors. The hospital had 310 beds including 87 paediatric beds. The second was a public company hospital with 125 beds including 24 paediatric beds. Paediatric beds were attended by one pediatrician and several general practitioners who were fulltimely employed. The third was a government subsidized hospital with 80 beds including 11 paediatrics beds. This hospital had one fulltimely employed paediatrician, several general practitioners, but it was also open for outside physicians to admit patients privately.

At the private hospital 51 medical records of patients had been surveyed, 37 were attended by paediatrician, 14 by general practitioners; at the public company hospital of 29 patients, 2 were attended by paediatrician and the other 27 by general practitioners; at subsidized hospital, of 19 patients, 15 were attended by paediatricians and the other 4 by general practitioners. In general, 99 medical records of patients of 0-156 months of age (mean 25.5 months) were surveyed. The diagnosis is shown in table 2.

Table 1 : *Pattern of care and advices rendered by "previous providers"*

	All Providers	Paediatricians	Other Physicians	Clinics	Nurses
Providers	69	11	31	18	9
ORS prescription/dispensing	43 (62.3%)	63.6%	54.8%	66.7%	77.8%
ORS packing : sachet	35 (81.4%)				
bottle	7 (16.3%)				
cartoon	1 (2.3%)				
Advice on disolving ORS powder	29 (77.1%)	100%	69.2%	81.8%	100%
Dissolving ORS according to advice	100%				
Advice : correct	19 (65.5%)				
incorrect : partially	5	2	4	2	1
did not stir	0				
Advice on drinking ORS	31 (72.1%)	71.4%	70.6%	75%	71.4%
Effort to comply with advice	29 (93.5%)	100%	100%	100%	2 (60%)
Injection	23 (33.3%)	27.3%	41.9%	27.8%	22.2%
Drug	66 (95.7%)	100%	93.5%	100%	88.9%
Solution	69.7%				
Tablet	25.8%				
Capsule	1.5%				
Powder	42.4%				
Antibiotics	90.9%				
Atimotility	28.6%				
Surface precipitating agent	35.7%				
Antivomiting	?				
Breastfeeding advice (breastfed 40)	30 (75%)				
Continue breastfeeding	97.7%				
Stop breastfeeding temporarily	2.3%				
Advice on formula (formulated 41)	26 (63.4%)				
Continue the same formula	42.3%				
Diluted the same formula	7.7%				
Change formula to low lactose	30.8%				
Stop temporarily	19.2%	2	2	1	0
Advice on solid (on solid food 60)	39 (65%)				
Continue	89.7%				
Diminish / softened	7.7%	2	1	0	0
Stop temporarily	2.6%	0	0	0	1
Advice on monitoring	13 (18.8%)				
Advice on danger sign :					
Frequent diarrhea	12 (17.4%)				
Sign of dehydration	1 (1.4%)				
Other danger sign	1 (1.4%)				

Table 2 : *Diagnosis of hosiptalized cases*

	On admittance	On discharge
Cholera	1 (1.0%)	6 (6.1%)
Acute diarrhea without complication	85 (85.9%)	82 (82.8%)
Acute diarrhea with complication	10 (10.1%)	10 (10.1%)
Vomiting	3 (3.0%)	1 (1.0%)
Mild dehydration	18 (18.2%)	
Moderate dehydration	39 (39.4%)	
Severe dehydration	29 (29.3%)	
Hypertonic	1	
Unknown	13 (13.1%)	
Complicating diseases/complications :		
Meteorism	4	
Severe RTI	2	
Status asthmaticus	1	
Febrile convulsions	6	
Fever	41.4%	
Vomiting	69.7%	

Table 3 : *Possibility of reasoning for not giving ORT in hospitalized cases*

age below 3 months	9 out of 12 cases
admittance diagnosis vomiting	3 out of 3 cases
vomiting	9 out of 69 cases
metorism	3 out of 4 cases
convulsions	2 out of 6 cases
dyspnea	3 out of 3 cases
unpredictable	9 cases

Seventy (70.7%) cases were given ORT. The possible reasons for not rendering ORT is shown in table 3.

In 97.8% out of 70 cases who got ORT, the ORS was given immediately on admittance. The remaining 2 cases where ORT was postponed suffered from convulsion. All cases got ORT up until the diarrhea stopped or the patients discharged. The volume and the duration of ORT not be calculated.

Based on the interview to the nurse, only around 50% of the physicians in charge recommended ORT. None of them gave advice to eradicate the causes or prevention of DD. In all three hospitals, formally, giving advice on ORT was the responsibility of the nurses.

Table 4 : *The average volume and duration of IVFD*

	Volume (ml)	Duration (hour)
Uncomplicated DD/cholera	2417	45
Mild dehydration	1529	10
Moderate dehydration	2234	56
Severe dehydration	2733	53
Cholera	3667	37
Complicated DD	2399	96
All cases with IVFT	2545	50

Eighty one (81.8%) cases got intravenous fluid therapy (IVFT) where 25 (30.8%) of them were given Ringer Lactate, 48 (56.8%) Darrow Glucose, 3 (3.7%) half strength physiologic saline and glucose 2.5%, 1 (1.2%) physiologic saline, 8 (9.8%) self mixed solution, 1 unknown. Table 4 shows the average volume and duration of IVFT.

Sixty three (63.6%) cases got injection where 58 of them got antibiotics consisting of tetracycline 1, aminoglycoside 23, chloramphenicol 15, semisynthetic penicillin 21, cephalosporin derivate 14, and other antibiotics in 1 patient. One got antivomitings, none got spasmolytics, 3 got antipyretics, some other got vitamins or other drugs.

Seventy one (71.7%) cases got oral drugs where 8 of them got tetracycline, 4 chloramphenicol, 3 semisynthetic penicillin, 25 cotrimoxasazole, 5 metronidazole, 4 (4.0%) got surface precipitating agents, 3 (3.0%) spasmolytics, 6 (6.1%) antivomiting. Other oral drugs used were antipyretic and anticonvulsants.

In total, 85.8% cases got antibiotics, 6.1% got antivomiting, 3.0% spasmolytics and 4.0% surface precipitating agents.

Forty (87.0%) out of 46 patients who were still breastfed were recommended to continue breastfeeding, 2 (4.3%) to stop temporarily and in 4 (8.7%) there were no information. Out of 46 patients who were formulated 4 (8.7%) were recommended to continue without modification, 8 (17.4%) with dilution, 2 (4.3%) to stop, 29 (63%) temporary change to low lactose formula, and in 3 (6.5%) there were no information. Out of 85 patients who got solid food, 35 (41.2%) were recommended to continue solid food without modification, 42 (49.4%) to soften, 0 (0%) to stop and in 8 there were no information.

Table 5 : *Drug prescribed accompanying ORS and anti diarrhea*

	ORS	Anti diarrhea
ORS	43 (76.8%)	14 (12.5%)
Antibiotics	8	66 (58.9%)
tetracycline	8	4
chlorampenicol	0	14
penicillin/derivate	14	24
cotrimoxazole	21	14
metronidazole	4	4
cephalosporin	0	4
quinolone derivate	0	2
Anti diarrheals	14 (25%)	112
spasmolytics	4 (7.1%)	80 (71.4%)
loperamide	4	58
surface prec. agents	10 (17.9%)	50 (44.6%)
Anti vomiting	4 (7.1%)	12 (10.7%)
metoclopramide	4	4
domperidon	0	4
phenothiazine	0	4
Anti pyretics	12 (21.4%)	?
paracetamol	6	
acetosal	4	
dipyrone	2	
Sedative	6 (10.7%)	?
Roborants	22 (39.3%)	?
multivitamin	10	?

Prescription

Seven thousand two hundred sixty eight prescriptions, dispensed by 3 pharmacies in December 1989 were surveyed. There were 56 prescriptions with ORS and 112 prescriptions with surface prescipitating agents and/or antimolity drugs.

Out of 56 ORS prescribed, 34 (60.7%) were as sachet of 200 ml packing, 12 (21.4%) prefabricated bottled solution, and 10 (17.9%) as solution dispensed according to physician's formula. The drugs prescribed along with ORS and anti diarrheals are shown in table 5. All patients who got spasmolytic were more than 12 years of age, except 4 patients who all got loperamide.

Focus group discussion

Five focus group discussions had been conducted in March and April 1990 attended by all investigators and group of respondents, each consisted of 14 paediatricians, 17 residents in Paediatrics, 9 private practicing doctors, 6 health Centre/Clinic doctors and 11 private practicing nurses or mildwives.

Discussions were started off with general explanation by the investigator explaining the aim and method of discussion for 5-10 minutes. In all groups the participants put forward their opinion openly and spontaneously, except in the "nurse group" where in the first hour they tried to impress the audience as being qualified and responsible practitioners. Although the discussion were planned just for 2 hours, it was continued up to 2½ to 3½ hours. The discussion was stopped when the participants started asking what was actually the correct/appropriate knowledge/behaviour.

The findings of the discussions were processed as a group. The findings were quantified by terms : all, most (almost all), a lot of, some, there were (a small number), and none.

ORT

All participants knew and used ORS but some of them did not know ORT nor CDD. The sources of information varied: formal education, job training, symposia, upgrading courses and references, informally from their superiors or coworkers. The important aspect was that some participants were forced to learn by themselves ORT/ORS due to enquires from their patients.

Most of the participants prescribed ORS only if the stool was liquid, most of them did not know yet the concept of dispensing ORS for the aim of education. Some of them gave ORS only if the patient suffered from dehydration. If there was no dehydration they recommended to drink more liquid as breast milk, soup or just drinking water or give SSS although most of them did not know the program on "home fluid". A lot of participants did not fully understand the concept of "coupling sodium absorption", and did not link the choice of home fluid to this concept.

The regimen of dissolving and drinking ORS used by participants varied, but most of the variations were based on the regimen ever recommended by programmers. For example, one paediatrician diluted ORS for neonate 3 times, according to the information he got from the National Seminar on Rehydration in 1978. He was content with this procedure and did not see the reason to change it, although he knew about the recommended new procedure.

The method of dispensing ORS also varied, some prescribed it, some dispensed it directly, some dispensed directly just for education, after that the recommended mother buy them at the dispensary or pharmacy, some just dispensed the leaflet provided by the producer of ORS. All nurses dispensed ORS directly. They complained about the price of ORS, if they dispensed ORS 5-6 sachets, the price of ORS will be 50-80% of the fee they usually charged the patient.

All participants had never found the serious untoward effect of ORT. Their concern were only how to face the mothers whose children rejected to drink ORS or vomited and how to convince mothers to continue giving ORS if the diarrhea did not stop promptly. Some participants said SSS was accepted better than ORS, so if there was no dehydration they prefered to recommend it. There are participants who lost confidence in ORS in prolonged diarrhea, and thus recommended to stop ORT.

All participants agreed that ORS must be used properly and the method of using it must be taught to the mother. But only some of them routinely practiced it. Some said that it was done by their nurses, some said that the mother should have known from the lot of information obtained from mass media, health posts and others.

Drug

Besides the conventional one, practitioners with reputation were the important source of information. Learning from these identification figures could be through direct communication or by studying their recipes. One impressive example was that in the early sixties when drugs were scarce in Indonesia, one well known senior pediatricians used streptomycin and phenobarbital in treating DD. There were nurses who still use this formula at the time being. The new regimen was adopted after a succesful trial was run to their patients. Pressure was a substantial tool in forcing providers to try the newly introduced regimen. One paediatric resident said : "I had used papaverine plus enterovioform for many years, I was content with it, I had never found side effects. Albeit such intensive campaign I did not see the reason to change the regimen. But when I undertook residency at the Department of Child Health, I was forced to leave this regimen and I found then the new regimen to be as effective as the former one, so I can accept it".

All the participants regarded there was an important role of antibiotics in treating DD. They used them although they did not know exactly whether the diarrhea was caused by bacteria. The reasons put forward were: "they believe that in general the cure will be faster", "there was the possibility that there were other infections," I work in a hospital, where usually my patient had been treated by other providers", "it was not appropriate to prescribe just ORS, and antibiotics was quite reasonable to be given", "it will be more cost effective if we give antibiotic directly instead of waiting for the disease to become more severe", "I just start with my private practice, so I need a more dependable regimen".

A lot of participants regarded that the benefit of antibiotic therapy was more than their shortcomings. Most of the participants regarded that the shortcomings of antibiotic therapy was just economic loss

although some of them included resistency of the bacteria. Side effects and toxicity can be minimized by choosing the appropriate antibiotic. Some health center providers restricted the use of antibiotics due to shortage of stock. There was one newly graduated participant who definitely said that antibiotics were worthless for watery diarrhea and he never used them. But on the other side there were health centre providers who left forced to use metronidazole, due to dearth of antibiotics.

Nevertheless when stimulated by a leading question most of the participants said that they used antibiotics for DD selectively. The indications put forward were: fever, mucoid or bloody stool, sting odor stool, diarrhea did not stop within 3 days. There were participants who said that they used antibiotics in all DD cases.

A lot of participants regarded the danger of spasmolytics to be meteorism, some of them had experienced it and found that it was dangerous. None of them put forward ''toxic megacolon'' or ''soiling''. Some participants still used spasmolytics on indications : such as frequent diarrhea, exaggerating intestinal sound, dysentery and prolonged diarrhea. Almost all participants did not used papaverin or sulfas atropine anymore, instead they used loperamide. Surface precipating agents were considered less dangerous, and might have some benefit, so a greater part of participants said that they still used them. These drugs were the armaments to change or add medicine if the mother was not satisfied with the progress of DD. Antivomiting should be used only on clearcut indications, such as severe vomiting, vomiting that disturbed intake. Some participants had practiced limiting the use of antivomiting drugs by just prescribing it for 2 days or just used it parenterally and choosing the less sedating. There were participants who had used antisecretory drugs such as acetosal or chlorpromazine.

Intravenous fluid

The source of information was more formal. Most of the participants who cared for inpatients knew and believed in ''rapid rehydration''. But most of them at the private hospital used slower and longer IV therapy because rapid rehydration needed intensive observation. They used Darrow-glucose solution or combined it with Ringer lactate. At the private hospital they tended to introduce IV fluid earlier and longer on reason : to do something to the admitted patient, and to fulfill the demand of the mother.

Feeding

It seemed that the knowledge on feeding regimen for DD promoted by the CDD program was less compared with the knowledge on fluid therapy and drug regimen. Some of the participants did not know yet that ''gradual realimentation'' was no more recommended.

But in general, participants did not starve the patients temporarily anymore. Some participants just gave clear fluids for 2-4 hours if there was vomiting. There were still a lot of participants who recommended to dilute formula and gave softened solid food and increased the consistency gradually. Most of the participants did not stop breastfeeding, but there were some who explixitly said that they recommended to stop breastfeeding for 4 hours, and one participant even said that he recommended to stop breastfeeding up until diarrhea

stopped. Some participants recommended to use low lactose formula, especially in prolonged diarrhea, diarrhea becoming more severe on regular formula or if the mother referred formula as the probable cause of diarrhea.

The reasons of gradual feeding that were put forward were : to diminish stimulus to the intestine, to accomodate maldigestion and to give rest to the intestine. Almost all participants did not know the logic of early and appropriate feeding although they knew that malnutrition was one of the risks of DD.

Health education

Almost all participants said that they were not well trained and motivated to render health education when they finished their formal education. The motive and need arose and was strengthened when they had closer contact with the community. This statement was supported by the finding that the participants who had been working or had worked at health centers were more aware and talkative about this health education aspect compared to participants who worked only at hospitals or at the university. Some participants honestly said their motive in doing health education was not just to educate people but also to build up and preserve their professional image. This motive can be illustrated by such message : ''if your child becomes weak, take him/her directly to the hospital saying that you are sent by me''. The main constraint in practicing health education was time and mothers resentment. Some doctors delegated the task for education to their nurses.

Almost all participants said that they educated mothers on the danger signs of DD, that including diarrhea did not stop in certain days, meteorism, weakness and high fever. Just a few participants talked on the subject of cause and prevention of DD with mothers. Although a lot of participants were aware that most of the mothers had a wrong perception on the cause and mechanism of diarrhea, none of them had tried to straighten it.

Discussion

In general ORT had been known, accepted and practiced. Selective drug therapy had also been known but antibiotic therapy was still regarded as the main armament to manage DD. Providers in Palembang were not ready yet to leave it. Antimotility drugs had been avoided, but there was a trend to use loperamide. Intensive campaign by manufacturers and some inviting reports on the benefit and safety of loperamide usage in DD might have caused this trend. Appropriate feeding during diarrhea had been practiced although the scientific foundation was not perceived well by providers yet. Previous assumption that most of providers practiced semistarvation in DD was not true. Providers in Palembang felt that they were not well trained and motivated yet to commit health education during their formal medical training. Health education was practiced more on the basis of ''doctor patient'' relationship, instead of a more idealistic motive, to improve the health behavior of the community. Implementation of concept and knowledge was

strongly influenced by the motive of preserving and building up self image as a provider. The consequence was that decision was more influenced by direct benefit and clearcut side effects. Thus the longterm benefit such as nutritional status and unrevealed or communal danger, such as resistance to antibiotics, were less considered.

Behavior changes (5,6,7) was started by melting the current behavior, by analysing and comparing it to the new behavior. The "actual" (directly perceived) and practical benefits or shortcomings come as the first consideration compared with the "late" and abstract one. So, what were observed were natural and human. ORT, which has strong actual and practical benefit, preserving the general condition of the child, is accepted easily. Antimotility drug, which has dangerous side effects, is accepted to be avoided. But selective antibiotic therapy with tight indication i.e. there is a substantial probability that it has some benefit, and the side effects are not directly being detected, will be difficult to adopt.

There are several approaches to promote these kind of behaviours. First, through scientific reasoning. For example by stressing the importance of nutrient sufficiency during diarrheal diseases for rehabilitating the mucosal damage, which will gain the practical benefit-speeding up the healing and shortening the duration of diarrhea, in promoting appropriate feeding during diarrhea. Second through identification figures. Usually they are more senior, well positioned and have established private practice. By appropriate approach they might be more willing to accept the new behavior. Third by social pressure, such as by stressing the danger of antibiotic therapy in mass media, which has been practiced in Indonesia.

After arising the motive for changes, the next step is trying the new behaviour. The drive for trying depends on the strength of the motives. This process can be stimulated by: model such as the behavior practiced by identification figures or at teaching hospitals and by group pressure. Group pressure can be achieved by regulation such as prohibiting manufacturing tetracycline suspension, by force such as enforcing a standard regimen in a hospital or by social pressure by building up the demand and perception of the community.

The accepted behaviour will be frozen to become a personal habit or institutional standard procedure. This process will be facilitated by a supporting atmosphere such as availability of ORS (logistic), flow of patients at hospital (system), drug production (policy). This process will be blocked by intruding factors such as formula promotion in breastfeeding campaign, introducing loperamide whilst campaigning to stop using antimotility drugs.

We can say that ORT, avoiding antimotility drug and appropriate feeding have been accepted by health care providers in Palembang. We have reached the "behaviour frozen" state. The target of promotion now is to support the acquisition of these behaviours to be implemented as a routine habit of the providers and as a part of the ongoing system of health care delivery, by providing the facilitating factors and prevent the intruding factor. Specifically, the danger of loperamide promotion to the policy on antimotility must be stressed. Loperamide is campaigned as an effective and safe drug to stop diarrhea. Besides interfering with the anti-antimotility policy, loperamide itself has been reported dangerous for infants. In Pakistan the distribution of drop and liquid loperamide has been suspended (8,9).

Rapid IV rehydration and avoiding surface precipating agents have been accepted, but are not practiced consistently yet due to practical considerations. The handicap for practicing rapid IV rehydration was the need for intensive bedside supervision and for avoiding surface precipitating agents was the need "to prescribe something".

It seems that there is no impact at all of CDD towards the rate of antibiotic therapy in DD. Besides intensifying the campaign, enforcing group pressure, maybe we have to elaborate more on the perception of health care provider as practitioner, and conforming the strategy of the CDD campaign towards the findings. One aspect is obvious, that preserving self image is the main factor of consideration in choosing the therapeutic regimen.

Health education is regarded by providers as their task, but has not been practiced effectively yet. The main component that we must look into is maybe the morale and value system of the providers, their are obligation toward the health of the community besides their patients.

In general we can say, most of the medical-tehcnics aspect of the CDD has been accepted by the providers, but there is still a lot to do in communicating them to be adopted as an effective behavior.

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