

How to Explain the Gap between Recommendation and Prescription in the Treatment of Diarrhoea?

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In 1990, WHO published a note¹ on the rational use of drugs in the management of acute diarrhoea in infants and small children indicating that almost 90 percent of the children who come to health care centers presenting with watery diarrhoea may be successfully treated with only rehydration and food intake. Antibiotics and antiparasitic drugs should be prescribed only in some very specific cases. In fact, rehydration is the only therapeutic method which has proved to be efficient. Taking its low cost into account, savings resulting from its use should be quite important.

We conducted a pilot study during two periods where the observation of diarrhoeal episodes was easy; it took place in July-August 1990 in Oran (Algeria), in two clinics and in a specialized unit.¹ It was observed that Oral Rehydration Salts (ORS) are rarely or never prescribed by some physicians and that, when they are prescribed, they are often associated with other drugs.

In a way, oral rehydration is therefore a paradox. How can we explain that a real gap exists between a medical advice whose valid-

ity is acknowledged by the practitioners themselves and what these same physicians prescribe?

The assumption on which this study was based is that this discrepancy is not basically due to a lack of information, as most physicians and families who were interviewed knew about ORS and the dangers of diarrhoea. This gap would mostly be due to the fact that oral rehydration does not meet the expectations of the families who bring their children. In other words, it would result from the lack of communication between the medical approach and that of the family.

To verify this assumption, six ethnologists and sociologists have carried out a comparative and qualitative anthropological survey in five locations: Oran (Algeria) and Bangkok (Thailand) for the two indepth studies, in Cairo (Egypt), Beijing and Urumqui (China) for the two exploratory studies.²

The following criteria for the selection of sites were adopted: diverse cultural backgrounds in the field of therapeutics (Oriental and Arabo-Moslem cultures), urban neigh-

bourhoods in which diarrhoea was frequent, and finally, clinics and hospitals where ORS were to be prescribed (except in the case of China where the selection of neighbourhoods and clinics could only be done via an informal social network).

To be thoroughly informed of the real approaches and proceedings adopted by families and physicians, in-depth interviews lasting from one to three hours were conducted on the work site or in the home. Health care and diagnostic practices were observed for a half-day, where decisions were taken by families or physicians (neighbourhood, house, clinic, pharmacy). The content was analyzed theme by theme following the itinerary method indicating step by step the moments where decisions are made, and the factors having an impact on these decisions.

Discussions took place in French, Chinese, Arabic and English, with the help of bilingual interpreters and ethnologists (French-Arabic, English-Arabic and French-Thai). The results took the form of notes written during or after the interviews, descriptions of written observations, and photographs of the environment. The survey focused on familial self-medication practices, traditional health care or use of medication. Concerning the latter, it included the use of ORS recommended by WHO and the diversity of therapeutic methods prescribed by physicians in their private or public practice.

Criteria for the selection of observations and interviewed subjects were as follows: families were selected in the clinics at the time the child presented; they were asked if they accepted to undergo the survey in their own homes. At least one major diarrhoeal episode must have occurred in the family within the last twelve months. The physicians who were selected for the study were all pediatricians, in both public and private practice, having a

good knowledge of ORS, whether they prescribed them or not. The pharmacists included in the study had to sell antidiarrhoeal drugs, either biomedical or traditional medicines. The average number of cases observed per site included 25 families with children between 0 and 2 years, 10 physicians and 8 pharmacists.

When looking at morbidity manifestations and health care as seen by families, three main items were observed: 1) Diarrhoea was not always considered by the families as a disease. It is even considered as a normal feature of child development (in Egypt and China), or as a positive sign: especially as an indication that passage to the sitting, then standing position took place normally (in Thailand). When diarrhoea was perceived as a disease, it was most often considered as a simple benign disease. 2) In all societies, however, a difference was made between benign and serious diarrhoeal episodes.

Each culture group, even each family, had established its own scale regarding the gravity of a disease. This scale varied, which explains why some families consulted a physician when the child presented with the first manifestations, others after two weeks of diarrhoea. The signs of a serious episode, however, were generally associated with an increased number of stools, some alarming changes in the child's behaviour (crying, weakness, refusing to eat) and the occurrence of new signs such as blood in the stools. 3) In all cultural backgrounds, diarrhoea was never considered as a serious dramatic event, contrary to the perception of AIDS in Europe, for instance. It is seen as a "down-to-earth disease".

Because this disease is most often considered as banal, the designers of public health campaigns have been led to dramatize the real danger of diarrhoea. This type of information sensitizes the families, but it also creates more

expectations regarding therapy. In particular, families expect to receive some kind of prestigious drug, with a fancy packaging or a high price. Above all, they expect that diarrhoea will stop immediately, and the therapeutic management will have to take these expectations into account.

When looking at family's therapeutic approach and medical prescriptions, four items were noted: 1) Observations and interviews emphasized the great diversity of the therapeutic approaches: families could decide alternately to come to the hospital or the clinic, to use traditional medicines or visit a private practitioner (except in China where there is no biomedical private medicine) or a pharmacist. To provide health care, the physicians were therefore in a competitive situation. 2) In the case of diarrhoea, families could observe the disappearance of the signs of diarrhoea which were readily visible: no more liquid stools, no more cries from the child, no more blood, but they were unable to perceive that dehydration had stopped. 3) Physicians could not ascertain their diagnosis. Without laboratory tests, they could not know for sure if the diarrhoea had a bacterial or viral origin, but these tests were not always possible because of their cost or due to a great geographic distance. 4) Observation and detailed knowledge of the adopted practices indicated that private physicians, and even those of the public sector, would base their biomedical treatment of diarrhoea on the prescription of five or six drugs: anti-diarrhoeal, antiemetic and antipyretic agents, often associated with antibiotics and sometimes ORS.

Finally, in terms of practices and family opinions regarding ORS, two items were noted: 1) The observation in the family environment of oral rehydration practices showed that the families did not easily follow the instructions given with the prescription. It was often

noted that the packet of salt was poured in the baby's bottle all at once and not given teaspoon by teaspoon for a longer period. 2) According to some families ORS had a negative image, because of its apparent ineffectiveness in controlling the diarrhoea. The mother (or in Algeria, the mother-in-law) did not see the end of the diarrhoea. ORS did not appear to be sufficiently effective to counter the dangers announced in the information campaigns.

Thus, the survey on medical practices carried out in the four countries confirmed the gap between the advice given by WHO and what was really prescribed.

This survey also showed that approaches of families and practitioners did not converge. It focused on the following paradox: the efficacy and scientific validity of a drug, its easy and simple preparation, and its low cost may be contrary to its widespread distribution as a therapeutic agent.

Accordingly, to ascertain that oral rehydration will be used by families, a sociological analysis has shown that five conditions must be met but that only one is really satisfied:

1. *A scientific condition:* oral rehydration must prove its efficacy; it is the only requirement that has been met.³
2. *A cultural condition:* families must consider diarrhoea as a disease, but this is not always the case.
3. *A semiologic condition:* the manifestations of the efficacy of the treatment must be easily recognized by the child's family, but ORS does not stop the signs of diarrhoea.
4. *A strategic condition:* a treatment must not represent a threat to the physician's expertise, as ORS can do apparently.^{4,5}
5. *An information-related condition:* in the

communication process no contradiction must appear between the dramatic image given of the disease and the banality of the treatment; but the ORS packaging is not seen as serious by the families and this goes against the prestige of the physician.

In conclusion, to encourage adopting an oral treatment of diarrhoeal episodes, it is necessary to better take into account the constraints imposed on physicians and their prescriptions in their daily practice, and those related to the success of their professional career; it may also depend on the development of a drug that, in association with ORS, could stop the manifestations of diarrhoea without the disadvantages of usual biomedical treatments prescribed to children under two years of age.⁶⁹

References

1. The rational use of drugs in the management of acute diarrhoea in children. World Health Organization, Geneva, 1990.
2. Desjeux D, Favre I, Simongiovani J. Anthropologie d'une maladie ordinaire. Etude de la diarrhée de l'enfant en Algérie, Thaïlande, Chine et Egypte. Paris, L'Harmattan, 1993.
3. Desjeux JF, Nath SK, Taminiou J. Organic substrate and electrolyte solutions for oral rehydration in diarrhoea. *Ann Rev Nutr* 1994;14:321-42.
4. Freidson E. Client control and medical practice. *Am J Sociol* 1960;374-82.
5. Freidson E. Profession of medicine. New-York, Harper and Row, 1970.
6. Rhoads JM. Earth, wind and fiber: is there a drug to treat acute diarrhoea? *J Pediatr Gastroenterol Nutr* 1994;19:251-4.
7. Madkour AA, Madina EMH, El-Azzoum O EZ, et al. Smectite in acute diarrhoea in children: a double blind placebo-controlled clinical trial. *J Pediatr Gastroenterol Nutr* 1993;17:176-81.
8. Brown KH, Perez F, Peerson JM, et al. Effect of dietary fiber (soy polysaccharide) on the severity, duration, and nutritional outcome of acute, watery diarrhoea in children. *Pediatrics* 1993;92:241-7.
9. Figueroa-Quintanilla D, SalazarLindo E, Sack RB, et al. A controlled trial of bismuth subsalicylate in infants with acute watery diarrhoeal disease. *N Engl J Med* 1993;328:1653-8.

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