

Impact of educational outreach visits by pharmacists on treatment of childhood diarrhoea - initial findings from Banke district, Nepal

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Abstract

Diarrhoea is one of the most common causes of mortality and morbidity in children in developing countries. Oral rehydration salts (ORS) and zinc are the primary tools used to fight diarrhoea in children. Educational outreach visits or academic detailing has been practiced over a period of time to improve prescribing behaviour in the developed countries. However, educational outreach programmes are very uncommon in Nepal. We conducted a pilot study to see the impact of educational outreach visits on the management of diarrhoea in children among 10 prescribers in the Banke district of Nepal. Initial findings suggest that there is a marked improvement on the prescribing of ORS and zinc by the prescribers after our intervention. Therefore it is planned to conduct the same study among a large number of prescribers in the Banke district of Nepal.

Keywords: Children, developing countries

Diarrhoea is a common cause of morbidity and mortality in developing countries like Nepal. Nearly 17,000 children under five years of age die annually due to diarrhoea in Nepal (Department of Health Services, 2004). The World Health Organization (WHO) and the United Nations Children's Fund (UNICEF) recommends oral rehydration salt (ORS) and zinc supplementation as primary treatment for diarrhoea (WHO, 2006).

Although there are only limited studies from Nepal, studies from other countries report under-use of ORS and zinc during the treatment of diarrhoea in children (Parekh *et al.*, 2004; Reis, *et al.*, 1994). Educational outreach visits, also known as academic detailing is defined as "the outreach educational intervention in which a trained health professional visits clinicians in their offices to provide evidence based information". It has been used to improve the prescribing behaviour of clinicians in the developed countries (Midlov, 2006). However, only a very limited amount of studies on educational outreach programmes available from developing countries.

With this background, we started a pilot study to assess the impact of an educational outreach programme by pharmacists on the management of childhood diarrhoea among ten prescribers in the Banke district of Nepal. This district is situated in the mid-western development region in Terai (the flat lowlands bordering India). Four visits were made to the prescribers at an interval of 7-10 days for two months promoting the use of ORS and zinc and discouraging the use of antibiotics in diarrhoea. One participant dropped out.

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Among the remaining nine participants, five were private practitioners and four were working in government health centers; while six of them were working in rural areas and three in urban areas. Four of the prescribers were qualified as Community Medical Assistants (CMA), three as Health Assistants (HA) and two as Auxiliary Nurse Midwives (ANM). The persons with the qualifications of CMA, HA and ANM are posted by the Government of Nepal in different types of health institutions and are eligible to write prescriptions for primary health care services.

To study the impact of outreach educational interventions we sent one simulated patient (approximately 4 years) with a caretaker to all the prescribers of our study. They were trained regarding the symptoms of acute diarrhoea without dehydration and were told to ask for a prescription for the same condition. The same simulated patient was sent to all the prescribers in our study to collect the pre-intervention as well as the post-intervention data. Data was collected one week prior to first intervention and one week after the fourth intervention. Our pre-intervention data shows that, prior to the intervention, five of the prescribers had prescribed ORS and only two had prescribed zinc. Five prescribers prescribed metronidazole; two prescribed a fixed dose combination of metronidazole and diloxanide furoate and three prescribed other antibiotics for acute diarrhoea without dehydration. Four prescribers prescribed vitamins, two prescribed enzymes and four prescribed other medicines. However, after the intervention we found an improvement in the prescribing pattern. Use of ORS and zinc had increased. Eight prescribers prescribed ORS and eight prescribed zinc. Only two prescribed metronidazole after the intervention. Five prescribed vitamins, two prescribed enzymes and two prescribed other

medicines to the simulated child with acute diarrhoea without dehydration.

The pilot study demonstrates that educational outreach visits promote the use of ORS and zinc and decrease the unnecessary use of antibiotics. However we could not find a decrease in the use of vitamins after our intervention. Similar educational outreach visits are planned to be conducted among a greater number of prescribers to study its impact on the prescribers of Banke district, Nepal, in the near future.

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