Quality improvement of integrated child health care management after in-service training for physicians

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Objective. The aim of the present study was to evaluate the quality of integrated child health care management (ICHCM) promoted by the World Health Organization (WHO) after an in-service training course.

Methods. The training was carried out in a rural and an urban health unit and in the paediatric ward of the local reference hospital. Tutorial courses were given to small groups (4–6 students) over a 5-day period (40 h in total). The courses consisted of demonstrations, discussions, analyses, applications and evaluations of the ICHCM (in-service training). The training was evaluated by comparing the quality of ICHCM given by each physician in their work place on three different occasions: 15 days before the course began (pre-course evaluation), 15 days after the course (post-course evaluation) and 6 months after the course had ended (follow-up evaluation). Each physician was observed in each period during his or her consultation with a child under 5 years of age who presented with acute diarrhoea or acute respiratory infection. A series of possible behaviours by physicians was checked against a list of behaviours that would indicate effective training.

Results. The average grades obtained by the 24 physicians evaluated (pre- and post-course) increased from 74.5 to 96.6 (22.1 points, $P < 0.01$). Physicians whose baseline grade was $< 80$ had the greatest increases. Their averages grades increased from 68.2 to 91.3 (23.1 points, $P < 0.001$). The overall change for the whole group was sustained for up to 6 months (post-course 96.6 points and follow-up 90.9 points, $P > 0.05$).

Conclusion. The quality of ICHCM improved after the in-service training. No additional resources were necessary in the clinical units. This type of training can be extended to other countries or health programmes.

Keywords. Acute diarrhoea, acute respiratory infections, health training, integrated child health care management, quality of care.

Introduction

An objective of the World Health Organization (WHO) is to control the most prevalent childhood illnesses. It has been estimated that with easy to apply low-cost technologies, 15 000 deaths per year could be avoided. Most of these would be related to diarrhoeal infections, acute respiratory infections and malnutrition. The basic strategy of the Mexican Child Health Care Programme is to promote integrated child health care management (ICHCM) by training medical staff working at the primary health care level of the clinical training unit in the use of facilities and resources similar to those where they work. The ICHCM model was developed based on experience with several national programmes and the proposal of WHO for the integrated management of the sick child. The objective of this paper was to evaluate the training used in one of the clinical training units that successfully set up the ICHCM programme.
Methods

Thirty physicians who attended six consecutive courses given during the first semester in 1999 were evaluated. All of them were working in primary level units in Mexico (60% in rural areas and 40% in urban areas). More than 70% were between 25 and 39 years old, 60% were male, 53.6% were general physicians and 46.4% were medical residents in their last year of training before graduation.

The co-ordinator of the training centre (HV) taught every course and worked as a paediatrician at the referral hospital. Physicians and nurses from the primary health care level units and the paediatric ward of the hospital supported the teaching/medical activities.

Tutorial courses were given to small groups (4–6 students) over a 5-day period (40 h in all). The courses included demonstrations, discussions, analyses, applications and evaluations of the ICHCM (in-service training). The courses focused on the weaknesses the participants identified in their baseline assessment.

The in-service training was evaluated by comparing the quality of ICHCM given by each student in his or her work place on three occasions: 15 days prior to the course (pre-course evaluation), 15 days after the course (post-course evaluation) and 6 months after the course (follow-up evaluation). This was done by choosing a child under 5 years of age with acute diarrhoea (AD) or acute respiratory infection (ARI) at random from the cases regularly seen on a given day. Patients with both diseases or chronic illness were not included. Three pre-coded formats structured as check-lists were used: the first for the integrated care management, the second for the treatment of children with AD and the third for the treatment of children with ARI.

The information for filling out the forms was obtained by direct observations of the medical consultation, interviews with the mother or person responsible for the children after the consultation, physical examinations, scrutiny of clinical records and checks of written prescriptions, the National Vaccination Record and the National Woman’s Health Record.

The quality of the integrated medical care given by each physician was considered to have improved when the grade in the second evaluation was higher than that at the baseline by at least 1 SD from the group’s average grade in the first evaluation. All physicians who had an initial evaluation grade <80.0 improved in the second evaluation.

Taking this into account, three different groups were formed: (i) all physicians who were evaluated; (ii) physicians who had an initial grade >80; and (iii) physicians who had a grade <80 in the evaluation previously mentioned.

The average and standard deviation of the integrated care management grades was evaluated in the three periods in each group: pre-course, post-course and follow-up evaluation. The statistical differences between the pre- and post-course results and between the post-course and follow-up period were evaluated by the Wilcoxon test.

Results

The three evaluations were carried out for 24 of the 30 physicians who were chosen for this research. The characteristics of the six physicians who were not available for evaluation after the follow-up were similar to all the groups.

The average grade attained by the 24 physicians increased from 74.5 to 96.6, which was statistically significant. This result was more evident in the group of physicians whose baseline grade was <80.0. There were no significant changes in the group of nine physicians whose baseline evaluation was >80.0 (see Table 1).

The grade average was similar in the third evaluation, so the change was sustained for up to 6 months.

Discussion

In Mexico, as in other countries, the most common reasons for seeking medical care for children under 5 years of age are ARI, AD, malnutrition and vaccination.
coverage. ICHCM stresses the need to cover each of these conditions in every consultation. It also seeks to identify factors leading to a bad prognosis; train mothers, focusing mainly on cases in which any bad prognosis factors are identified; and improve mothers’ health care by providing them with the National Woman’s Health Record, explaining how to use it and scheduling consultations whenever necessary.

The inadequate training that mothers may receive during consultations frequently counteracts the effectiveness of the consultations. It is possible that children die at home, even after a physician sees them, because the severity of the case was not identified or not managed properly, as our research group has often demonstrated in the past.

The development of the ICHCM programme initially included only care for ARI and AD. At a later stage, we included surveillance for malnutrition and updating of the vaccination schedule; more recently, we included mothers’ health care. Training mothers or relatives in different activities related to child care has been a basic component of the model in every stage. On the other hand, it was necessary to show that a high level of ICHCM could be applied in primary level units and its reference hospitals, with already existing physical and human resources. Personnel training can also be achieved in a few days, but lack of motivation is still the most serious obstacle to overcome.

Training activities were supported by workers from the centre, including health assistants, nurses and general physicians from the primary level unit, as well as paediatricians from the reference hospital.

The methodology used to evaluate the training courses has some characteristics worth noting.

(i) The evaluation was carried out in the same health centres where trainees work.

(ii) The quality of ICHCM was evaluated pre-, post- and 6 months after the course to ensure that the changes would last for a long time.

(iii) The indicators of assessment were the physicians’ conduct and abilities during consultation, not only the knowledge acquired (the latter is applied incorrectly in most routine evaluations).

(iv) The pre-course evaluations are a basic element for training the physicians because the identified deficiencies can be corrected.

The courses are given in clinical units with resources similar to those where the trainees work, and they are given by peers, i.e. by workers like themselves, who do not overwhelm them with knowledge, abilities or complicated equipment and instruments. These peers simply show the trainees that it is possible to offer good quality ICHCM in primary health care units with existing resources.

In conclusion, in-service training improved the quality of care by physicians applying ICHCM. The change persisted for at least 6 months. No resources other than those already in place in the clinical units were necessary. This type of training can be extended to other countries and other health programmes.

References


