

Developing and implementing appropriate health communication messages for community based management of fevers

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Summary

To improve access to care, integrated community case management (iCCM) of common childhood illnesses have been introduced to complement formal health care services.

The iCCM approach enables treatment for multiple common childhood illnesses including malaria, pneumonia and diarrhoea and is being adopted by many countries.

Following WHO's recommendation on community management of childhood pneumonia, the Ghana Health Service implemented a pilot randomized controlled trial between 2006 and 2009, in the Dangme West district. The trial aimed to operationalize the approach of using CHWs to manage malaria and pneumonia at the community level and to assess the impact of the intervention on under-five mortality in the study district.

Community based interventions can yield useful results, however demand generation activities are needed alongside to ensure adequate utilization and success. Therefore, to complement this trial, the present study, guided by the Intervention Mapping (IM) protocol for systematic planning of programs, developed and implemented health promotion interventions targeted at household caregivers/parents of children under five and other stakeholders to create community awareness of, and promote prompt and appropriate care seeking for fever in under-fives. The current thesis is based on the health communication component of the trial. This section summarizes the various studies reported in this thesis.

Chapters 2 and 3 present findings from formative studies conducted for the purpose of informing the design and implementation of context specific health communication messages/strategies for appropriate and prompt care seeking behaviour for childhood fever illnesses in the study district. In **Chapter 2**, we assessed community perceptions and practices of treatment seeking for childhood pneumonia in children under-five.

A mixed methods design was adopted for the study. Data were obtained from eight focus group discussions with 56 caregivers of under-fives; A caregiver was defined as the person whom household members regarded as having primary responsibility of caring for a child under five. Eight in-depth interviews with community Key Informants (KIs) and a cross sectional household surveys among 501 care givers. The caregivers were randomly selected through a multi-stage sampling technique.

The qualitative study was conducted by a social scientist together with a note taker and the Principal Investigator while the quantitative study was conducted using an interviewer-administered questionnaire. Questions included socio-demographic variables (age, sex, parity, education, marital status, religion, occupation and ethnicity) as well as caregiver recognition of childhood pneumonia and its treatment seeking practices. (Assessment of pneumonia was based on the criteria used by Integrated Management of Childhood Illnesses criteria i.e. the presence of cough, difficult or fast breathing with or without fever).

Findings from the quantitative study showed majority of the respondents were inadequately informed about pneumonia. Few indicated they had ever heard the name pneumonia and could neither state any symptoms of pneumonia. Very few suggested a word in Dangme for pneumonia and each name mentioned, varied.

Results from the FGDs and key Informant interviews also showed little knowledge of the disease pneumonia and its treatment seeking practices among the participants. Pneumonia or breathing difficulties were not mentioned or perceived as leading causes of Under-five mortality in the district. There appeared to be no common or single word for pneumonia in the local dialect.

However, the intention to use CHWs services for treatment of childhood fever was high . Intention was positively associated with marital status and birth parity. Married respondents were more likely than the unmarried to use services of the CHWs. The use of these services also increases with an increasing parity.

In chapter 3, we sought to explore caregivers' salient beliefs about seeking care for children Under 5 with fever from a CHW. The study reported in chapter 3 was nested within the household cross sectional survey on community perceptions and practices of treatment seeking for pneumonia (reported in chapter 2). In the present study we conducted a belief elicitation study (based on the Reasoned Action Theory) [76] among the 501 caregivers sampled for the larger formative study. In line with the RAA, we selected and stated the behaviour of interest in terms of action, target, context and time. The behaviour selected for elicitation was "taking your child under 5 with fever to the CHW immediately you notice that the child has fever". The phrase: "taking your child" reflects action, "child under 5" is the target, "with fever" is the context and "immediately" relates to the time frame – communicating the urgency with which action needs to be taken. This is in line with "prompt care seeking" defined by WHO as adequate treatment received within 24 hours of onset of illness; recommended to prevent the illness from progressing from mild symptoms to severe complications. [72]

Subsequently, as recommended by the authors of the theory, six open-ended questions were asked, two on each of the determinants of intention; to identify the underlying beliefs about: salient consequences (related to attitude), underlying beliefs about social referents (related to perceived norms) and beliefs underlying salient circumstances of performing the selected behaviour (related to perceived behavioural control):

The results showed that parents of the child were predominantly perceived as the referents for seeking immediate care for the child's fever with the CHW. Almost all respondents reported that no one will disapprove of their decision to utilize CHWs except where the people are not sure of the ability of the CHW and the efficacy of the drugs. Distance to the location of the CHW expressed as "proximity" or "nearness" was perceived as the main facilitator for using CHW services for the child's fever. On the other hand, financial constraint, or unfriendly CHWs were seen to be a hindrance. The

findings suggest that factors including prompt treatment, proximity, cost and inter-personal aspects of care are key to caregiver's expectations. The findings reported in chapters two and three formed part of the building blocks for our program development and demand generation for prompt and appropriate care seeking and treatment utilization for childhood fever.

Chapter 4 describes the application of the IM protocol to design and implement a multi component program, designed with elements to influence the determinants of the behaviour of caregivers of children under five, CHWs, professional health workers and community leaders regarding management of childhood fevers through theoretically based methods that included modeling, persuasion and skills training; and strategies including video and audio recordings and training.

Process evaluation results of various intervention components implemented were positive. For example communication activities reached a wide audience who also found the messages communicated acceptable, appropriate and understandable. Further, more CHWs were retained on the program, with a moderate rate of attrition of 21.2% over the 30 month period of intervention.

In **Chapter 5**, the study aimed to assess the adherence of CHWs to dosing and referral guidelines. We reviewed and analyzed records of consultations of children with fever, managed by CHWs in the study district. Appropriate use of drugs was defined as the provision of the correct drug pack(s) for the child's age group. Symptoms requiring referral were categorized into: danger signs; respiratory distress and symptoms indicating other illnesses. Multivariate logistic regression examined symptoms most likely to be noted as requiring a referral and those associated with a provision of written referral. The study found that most children received the appropriate drug and CHWs' adherence to dosing guidelines was high. Adherence to referral guidelines was however inadequate.

Chapter 6 presents findings from a mixed methods study that examined CHW attrition and correlates of attrition. Attrition rates were abstracted from the CHW database built as part of the project. Information contained in the database included socio demographic characteristics of CHWs such as age, sex, educational level attained, marital status, occupation, and total number of children ever had. The reasons for, or correlates of, attrition were analysed from data from face to face interviews (N=520) and focus group discussions (N=5) among CHWs who stayed till end of the project.

The findings showed a relatively moderate rate of attrition over the intervention period of 30 months. Attrition was comparatively higher in younger age groups than the older ones. The approval of a CHW by community and the CHW's immediate family were positively related to the probability of remaining in the programme. Results of the focus group discussions revealed that motivation for retention was related to the desire to serve their communities, humanitarian and religious reasons.

Chapter 7 assessed Caregiver Perceptions of Community Health Worker Services in the study district using a mixed methods design. The results showed that a majority, 93.06% (523 /562) of caregivers had knowledge about CHWs in their communities. More than half, 59.4% of care givers had used CHW services at least once for management of fever in their under-fives. Further, Caregivers who were exposed to the communication intervention were about four times more likely to use the services of the CHWs compared to those who were not exposed (OR=3.79, 95% CI (2.62, 5.49)), (P<0.001).

More female participants than males reported ever use of CHW services for treatment of their child's fever. A recount of caregivers' last visit to the CHWs suggested a general satisfaction with the quality of service. Specifically participants made reference to prompt treatment, friendliness and counseling on medication adherence. On the other hand, reasons some

caregivers gave for non-utilisation of the services of CHWs were mostly, perceived poor attitude of CHWs, existing interpersonal conflict between caregivers and CHWs.

Chapter 8 provides a general discussion of the main studies presented in this thesis. It also discusses the results in the light of the existing literature and highlights the strengths and limitations of these studies. The implications of the research findings for policy, program and further research are discussed.