

Abstract of Master’s Dissertation

No.1

Course	Health Innovation Course	Name	NKESHIMANA Anatole
Thesis Title	Evaluation of acute services delivery through integrated community case management (iCCM) health worker in Burundi		
<p>Background: Since the declaration of Alma-Ata on primary health care, numerous efforts have been made to reduce inequalities of access to basic primary health care between and within countries for the most vulnerable. Integrated community case management(iCCM) was introduced in Burundi in 2014. It uses community health workers (CHWs) to provide detection and first line treatment of pneumonia, malaria and diarrhoea in children aged less than 5 years. In Gitega health district, the assessment of acute malnutrition has also been included into iCCM. Little systematic documentation of how iCCM is being implemented is available.</p> <p>Objective: This study aimed to evaluate the effectiveness of Community health workers (CHWs) in the accurate detection of severe acute malnutrition (SAM) and the system of referral for treatment at designated health centres within the implementation of integrated community case management (iCCM) of childhood illnesses in Gitega health district</p> <p>Method: This study used a sequential explanatory mixed-methods design. The quantitative strand comprised a cross-sectional survey to assess CHW knowledge and competence in detection and referral of children with SAM and moderate acute malnutrition (MAM), and reported training and support received by CHWs. CHWs were randomly selected from 15/17 health centres in Gitega district who had at least one year working experience under the iCCM programme. A total of 53 out of 250 CHW registered were interviewed using a structured questionnaire and 51 directly observed performing MUAC measurement on at least six children. Additionally, a retrospective record audit was conducted. Data was extracted from 5,695 consultation forms from participating CHWs and from 911 patient records at all four health centres with outpatient therapeutic programme (OTP) for children with SAM for the period 01st January to 31st December 2017. The qualitative strand comprised focus group discussions (FGDs) and in-depth interviews with key informants to add to the interpretation of quantitative findings.</p>			

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<p>17 FGDs were performed with groups of CHWs, mothers, nurses and community leaders and three in-depth interviews with health district staff and with a local non-governmental organization (NGO) responsible for supporting local implementation of icCM. Participants for FGDs and in-depth interview were purposively selected based on the quantitative results.</p> <p>Result: The majority of CHWs were female (69.8%) and married (86.8%). The mean age was 44.7 years (SD: 8.8 years). The median performance score on direct observation of MUAC measurement was 87.5% with a range of (40.6% - 100%) whereas the mean score on theoretical performance was 75.0% (SD: 11.6%). The proportion of CHWs who achieved at least 90% error-free MUAC measurement as a major of good performance was 37.3% (95% CI (24.8% - 51.7%)). CHWs who were affiliated to OTP health centres were more likely to achieve 90% error free performance compared to those from other health centres (adjusted OR: 6.3, 95%CI (1.6 -24.4)). CHWs whose last training period was long were less likely to achieve good theoretical performance. Of 5,695 children brought to CHWs, 98% were aged 6 months or more. The proportion of children assessed by MUAC was 92.7%. The prevalence of moderate acute malnutrition and severe acute malnutrition (SAM) were 2.9% and 0.2%, respectively. Of these SAM cases, 77.8% (N=9) were referred but only one case was recorded at an outpatient therapeutic programme (OTP) health centre which took twelve days to arrive to the referral point. The majority of children (93.7%) had fever when they consulted CHWs. Malaria rapid diagnostic tests were performed in more than 95% of febrile cases. Cough was present in 3.4% of cases (n=191). The evaluation of respiratory rate was performed in only half of these. For the 911 cases, aged under five years, who were admitted to OTP, the recorded recovery and death rates were 77.5% and 1% respectively, thus achieving satisfactory performance, whereas the median length of stay was longer than the maximum recommended at 7 weeks.</p>			

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<p>The low number of cases reported by iCCM programme may be due to quarterly active case finding activities for SAM, supported by local NGOs. Unfortunately, the route of admission to OTPs was largely not recorded.</p> <p>Conclusion: The higher performance in CHWs associated with CMAM health centres suggested that with adequate training and support, CHWs can diagnose acute malnutrition. Our study suggested that a major proportion of malnourished referred children may not reach CMAM health centres supporting the need to extend the treatment of severe acute malnutrition into more health centres or to CHWs with adequate training and support.</p>			