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Department of Public Health Sciences

Delivering health services to children through integrated community case management in Uganda-from innovation to institutionalisation

DOCTORAL DISSERTATION

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by

Agnes Mbabaali Nanyonjo

Dr

Principal Supervisor:

Associate Professor Karin Källander
Karolinska Institutet
Department of Public Health Sciences

Co-supervisors

Professor Göran Tomson
Karolinska Institutet
Department of Public Health Sciences
Department of Learning Informatics
Management Ethics

Associate Professor Fredrick Makumbi
Makerere University
Department of Epidemiology and Biostatistics

Opponent:

Senior Lecturer Catherine Goodman
London School of Hygiene and Tropical
Medicine
Department of Global Health and Development

Examination Board:

Professor Lars-Åke Persson
Uppsala University
Department of Women's and Children's Health

Associate Professor Martina Björkman Nyqvist
Stockholm School of Economics
Department of Economics

Professor Bo Burström
Karolinska Institutet
Department of Public Health Sciences

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ABSTRACT

Background: Infectious diseases cause the majority of childhood deaths in low income settings. Integrated community case management (iCCM) is a health innovation relying on community health workers (CHWs) to diagnose and treat children with malaria, pneumonia and diarrhoea while referring children with severe disease. However, iCCM is a complex innovation and its perception by its intended users as well as the acceptability of its attributes and how these fit into the functions of the health system, are not well understood. Yet these factors are likely to affect adoption and effective coverage of the innovation.

Objective: The studies sought to explore the uptake and impact of iCCM in Uganda, with a focus on community acceptability, perceived quality of care, appropriate treatment and access to referral care, in order to formulate recommendations for improved implementation at scale.

Methods: Four studies (I-IV) were conducted among caregivers of children under-five and community members. Study I draws on diffusion of innovations and uses an explanatory qualitative approach with focus group discussions and interviews with community members, CHWs, and health facility supervisors to explore the acceptability and adoption of iCCM. In study II, a cross-sectional sample of caretakers of children aged 2-59 months who suffered an episode of malaria, pneumonia or diarrhoea and have been treated either by CHWs or primary health facility workers (PHFWs) were compared for perceived quality of care (PCQ) across quality domains specified in the Donabedian Model. Study III compares uptake of appropriate treatments for pneumonia and diarrhoea under iCCM and equity in use of CHWs. Study IV estimates the cost of referral and willingness to pay (WTP) for referral using a case-series study on children referred by CHWs to higher level health facilities.

Findings: CHWs were seen as acceptable providers of child health services and the communities appreciated the treatment provided (study I). The mean PCQ rating was higher among caregivers of children treated by CHWs relative to those treated by PHFWs (0.58 vs. -0.58; $p < 0.0001$). This finding was consistent across several domains of quality of care, except for continuity (study II). A significant increase in the proportion of children who received antibiotics for pneumonia (34.7%, $p < 0.05$) and ORS for diarrhoea (41.0%, $p < 0.05$) was observed among children using CHWs compared to those who did not; though no such increase was observed for zinc (study III). Use of CHWs was not significantly different between the poorest and least poor households for pneumonia (Concentration Index = -0.099; SE=0.073) or diarrhoea (Concentration Index = -0.073; SE=0.085) (study III). Referral completion was problematic and was hampered by both demand related factors among community members and access barriers within the health system. WTP for referral was higher (US\$8.25) than the average referral costs incurred (US\$ 4.89) by child caregivers (study IV).

Conclusions: iCCM as a complex health innovation was well accepted by the intended users due to the positive perception of most of its attributes; leading to equitable increase in appropriate treatment for sick children. However, uptake of zinc for diarrhoea and completion of referral remained problematic. In order to achieve optimal functioning and impact of iCCM, targeted efforts to embed the programme into the community and health system functions may be required, such as effective behaviour change communication, supervision and motivation of CHWs and functional drug supply chains. Ultimately local, sub-national and national level ownership is essential to ensure institutionalisation of iCCM into the health system.

Key words: malaria, pneumonia, diarrhoea, CHWs, case management, innovation, integration