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Improving pneumonia diagnoses using pulse oximetry at rural health institutions in southern Ethiopia: Protocol for a cluster-randomized controlled trial

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Protocol status: Working
We use this protocol in our group and it is working.

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Abstract

Abstract
Background: Hypoxemia is common in children with pneumonia. The World Health Organization and United Nations Children's Fund developed the Integrated Management of Childhood Illness strategy for diagnosing pneumonia. But the strategy has limitations to accurately detect hypoxemia in children with severe pneumonia. This study will assess whether pulse oximetry improves health workers' performance in diagnosing severe childhood pneumonia and whether the pulse oximeter is a cost-effective tool to improve diagnoses of severe pneumonia at primary health care units in South Ethiopia.
Methods: A cluster-randomized controlled trial will be conducted at 24 health centres in southern Ethiopia from September 2018 to February 2019. The trial has two arms: the first arm will examine the combined use of the Integrated Management of Childhood Illness (IMCI) strategy with pulse oximetry, and the second arm will examine the use of the IMCI strategy alone. The study population will include children between 2 months and 59 months of age who present with cough or difficult breathing. The primary outcome of this trial is severe childhood pneumonia, as diagnosed via the IMCI guideline and pulse oximetry. Secondary outcomes will be referred cases of severe pneumonia, and treatment failure on day 14 after enrolment. A cost effectiveness study will be conducted simultaneously.
Discussion: This study will determine if using a pulse oximeter at health facilities in rural Southern Ethiopia improves diagnostic accuracy for paediatric severe pneumonia. Our secondary aim will be to evaluate if the benefit of pulse oximetry justifies its cost.
Trial registration: PACTR201807164196402(14/06/2018). URL:https://pactr.samrc.ac.za/TrialDisplay.aspx?TrialID=3466.

Attachments

DOCX

Protocol.docx
111KB