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FRESH AIR: Assessment and treatment of acute respiratory illness in children under 5 in primary care in low- and middle-income settings: An observational study.

Jesper Kjærgaard[1], Anja Poulsen[1], Susanne Reventlow[2], Christos Lionis[3], Talant Sooronbaev[4], Rebecca Nantanda[5], Pham Le An[6], James W Stout[7], Marianne S Østergaard[8]
[1]Global Health Unit, Department of Paediatrics and Adolescent Medicine, Juliane Marie Center, Copenhagen University Hospital "Rigshospitalet", Denmark, [2]The Research Unit for General Practice and Section of General Practice, Department of Public Health, University of Copenhagen, Copenhagen, Denmark., [3]Clinic of Social and Family Medicine, Faculty of Medicine, Heraklion, Greece., [4]Respiratory, Critical Care and Sleep Medicine Department, National Center of Cardiology and Internal Medicine, Bishkek, Kyrgyz Republic, [5]Makerere University Lung Institute, Makerere College of Health Sciences, Kampala Uganda, [6]Center for Training Family Medicine, University of Medicine and Pharmacy in Ho Chi Minh City, Vietnam, [7]Department of Paediatrics, University of Washington, Seattle, Washington, USA, [8]The Research Unit for General Practice and Section of General Practice, Department of Public Health, University of Copenhagen, Copenhagen, Denmark

Aim

The purpose of this study was to evaluate whether the clinical practices of health workers in primary care in low- and middle-income settings are appropriate for differential diagnosis of respiratory disease, especially between pneumonia and asthma.

Method

Data were collected at rural primary care health facilities in Greece, Kyrgyzstan, Vietnam, and Uganda using direct observations of clinical consultations with children aged 2-59 months presenting with coughing and/or difficult breathing. The methodology was adapted from WHO's Health Facility Survey. Data analysis was done using descriptive statistics.

Results

In total, 665 observations were made by 90 health workers at 56 health facilities. Core respiratory symptoms such as temporality of symptoms or wheezing were asked in 17%-74% of consultations. Clinical examination was often sub-optimal, with only 14%–25% assessed for key signs like respiratory rate and distress. The consultations were shorter in Vietnam and Uganda (3-4 minutes) than in Greece and Kyrgyzstan (15-20 minutes). Bronchodilator trials were used in Greece (39% of consultations) and in Vietnam (13%) but almost never in Kyrgyzstan and Uganda. Pneumonia was diagnosed frequently in Uganda (17%) as opposed to the other countries (diagnosed in 0%-3%). Various bronchitis diagnoses were used frequently (15%-19%) in all countries except Uganda (1%). Asthma diagnoses were rare (0%-3%). Diagnoses of upper respiratory-tract viral-infections were most common in all countries, approximately 50%. Antibiotics were prescribed frequently for diagnoses caused by viral infections in all countries (27%-63%).

Conclusion

Where consultations were short, history taking was less comprehensive and clinical examinations were not sufficient to guide diagnosis either using a traditional medical approach or by IMCI guidelines. There was widespread use of antibiotics for non-bacterial diagnoses.

Declaration of Interest

The authors declare no competing interests. The research has received support from the EU RIA program Horizon2020, grant-agreement no. 680997.