

INFECTIOUS DISEASES (BACTERIAL, FUNGAL, VIRAL, PARASITIC, INFESTATIONS)

ACCURACY OF NON-EXPERT EXAMINERS IN THE DIAGNOSIS OF SCABIES AND IMPETIGO

M Osti⁽¹⁾ - O Sokana⁽²⁾ - C Gorae⁽³⁾ - M Whitfeld⁽⁴⁾ - M Marks⁽⁵⁾ - A Steer⁽⁶⁾ - Daniel Engelman⁽⁷⁾

Murdoch Children's Research Institute, Tropical Diseases, Melbourne, Australia⁽¹⁾ - Ministry Of Health, ., Honiara, Solomon Islands⁽²⁾ - Ministry Of Health, ., Gizo, Solomon Islands⁽³⁾ - St Vincent's Hospital, Department Of Dermatology, Sydney, Australia⁽⁴⁾ - London School Of Hygiene & Tropical Medicine, Clinical Research Department, London, United Kingdom⁽⁵⁾ - University Of Melbourne, Paediatrics, Melbourne, Australia⁽⁶⁾ - Murdoch Children's Research Institute, Topical Diseases, Melbourne, Australia⁽⁷⁾

Background: Scabies affects 200 million people worldwide, with the greatest burden in low-resource settings. Clinical examination remains the standard of diagnosis in most settings. Consensus diagnostic criteria for scabies have been published and require validation.

Objective: To investigate the feasibility and accuracy of the use of scabies diagnostic criteria by non-expert examiners after brief training.

Materials and Methods: Four nurse examiners completed a two-day training program, including a picture-based test. Primary school children in Gizo, Solomon Islands were then examined. The index test was the diagnosis of scabies and impetigo by the nurses. The reference test was the consensus diagnosis of two doctors with experience in clinical diagnosis of scabies. All examinations were blinded. Each participant was examined by all examiners.

Results: Nurse examiners scored 76%, 92%, 96% and 96% for the diagnosis of scabies and 70%, 80%, 92% and 92%, for impetigo on the picture-based test. 171 children were enrolled. The prevalence of scabies and impetigo by expert diagnosis was 54.3% (N=93) and 44.4% (N= 76) respectively. The agreement (kappa) between the experts was good (0.67 for scabies; 0.69 for impetigo). For scabies, the nurse assessment had an overall sensitivity of 54.8% (95%CI 49.6-60.0%) and a specificity of 88.8% (95%CI 84.7%-92.1%). For impetigo, the nurse assessment had an overall sensitivity of 52.6% (95%CI 46.9%-58.4%) and a specificity of 98.4% (95%CI 96.6%-99.4%).

Conclusions: Training non-expert examiners in the diagnosis of scabies and impetigo, using the recently developed diagnostic criteria, is highly feasible, with encouraging accuracy. Training methods and diagnostic protocols require further refinement and evaluation.