International Poster 6

Measles Outbreak and Vaccination Coverage — Kakuma Refugee Camp, Kenya, 2011

AUTHORS: **Joyce N. Wamicwe, E. Mbaisi, I. Njeru, S. Amwayi, A. Abade, J. Oundo, J. Omolo**

BACKGROUND: Measles, a highly infectious vaccine preventable disease, is widespread and severe among displaced populations due to overcrowding. In January 2011, three patients at the Kakuma refugee camp were reported to have laboratory confirmed measles. We investigated the outbreak to characterize it. We also determined measles vaccination coverage and factors associated with nonvaccination in children aged 12 to 24 months.

METHODS: A suspected case of measles was any person presenting with fever and maculopapular rash and a cough, coryza or conjunctivitis while a confirmed case was IgM positive for measles. We conducted active case searches and collected serum samples from suspected patients. A cluster survey (30 by 7) was used to assess measles vaccination coverage among children aged 12 to 23 months. We interviewed parents or caregivers to collect data on vaccination history and selected socio-demographic characteristics.

RESULTS: We identified 41 patients suspected to have measles. Fifteen of these were laboratory confirmed. Ten (67%) of the confirmed case-patients were aged > 5 years and eight (53%) were unvaccinated. The index patient had a history of travel to Eastleigh, Nairobi where a measles outbreak had earlier been reported. Vaccination coverage among children aged 12 to 23 months was 87%. Only 23% of the vaccinated children had received > one dose of measles vaccine. Children of single mothers (OR=3.0, 95% CI =1.1 -8.0) and those born outside a health facility (OR=4.2, 95% CI =1.7-10.8) were more likely to be unvaccinated.

CONCLUSIONS: We confirmed measles outbreak at Kakuma refugee camp. Primary vaccine failure may have increased susceptibility. We recommended providing a second opportunity for measles vaccination and lowering vaccination age to 6 months.

KEYWORDS: measles, vaccination, outbreak