

## **International Poster 10**

### **Investigation of a Measles Outbreak and Appraisal of Measles Elimination Indicators — Qasseem Region, Saudi Arabia, 2011**

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**BACKGROUND:** The Saudi Arabia Measles Elimination Program (MEP) is committed to success by the end of 2015. In early 2011, a Measles outbreak was reported from the Buraidah sector of Qasseem region. An FETP team investigated the outbreak to identify risk factors and make recommendations to improve the MEP.

**METHODS:** After a descriptive analysis of the outbreak, a case-control study was conducted with a case-to-control ratio of 1:2, matching for age-group, gender and place of residence. The team re-viewed records of MEP performance indicators for the year 2010 and the first half of 2011.

**RESULTS:** From 1st January to 20th May 2011, of 69 confirmed Measles cases in the region, 40(58%) were reported in the Buraidah sector (13/100,000 population). Sixty percent of the confirmed Buraidah cases were females and 40% were older than 18 years. The index and 13(33%) of cases were among a small nomadic group. One case and 55 (75%) controls had received at least one dose of measles vaccine (OR 0.01; 95% CI 0.00 - 0.07), with a vaccine efficacy of 99.1%. Disease was associated with a history of contact with a known Measles case (OR 3.23; 95% CI 1.26 - 8.38). Targets for most MEP outbreak investigation performance indicators were achieved, except timing of serology sampling (16%) and timing of availability of laboratory results (11%). MEP surveillance targets were achieved, except suspected cases discarded after laboratory testing (42%) and timeliness of weekly reporting (75%). MEP outcome targets were achieved, except Measles vaccination at 9 months (91%) and MMR at 12 months (83%).

**CONCLUSIONS:** MEP performance needed strengthening, especially among underserved nomads. A national house-to-house, school-based and mobile-unit MMR vaccination campaign was implemented, including vaccinations of nomads.

**KEYWORDS:** measles, elimination indicators, nomads, MEP