### Abstract

**Background:** Measles Case-Based Surveillance (MCBS) was started in Iraq in 2005 and every case of fever and rash should be immediately notified and investigated. **Evaluation** of Baghdad-Resafa Directorate of Health (DOH) was conducted in 2013. **Objectives:** to evaluate the quality of system, its performance and to determine the gaps and areas for improvement.

**Methods:** Field visits to surveillance section within Communicable Diseases Control Center/Directorate of Public Health and Primary Health Care/Ministry of Health-Iraq (Iraq-CDCC) and surveillance units at Baghdad-Resafa DOH, its seven districts, two pediatric hospitals and fourteen Primary Health Care Centers (PHCCs) using checklist consist of modified WHO proposed list of indicators for monitoring and evaluation. Epidemiological analysis of MCBS data was done from 2008-2012.

**Results:** Case detection, registration, confirmation, reporting; and epidemic preparedness were performed well at all levels. Data analysis and interpretation was only performed routinely at national level. Feedback reports were maintained at national, DOH and in 42.9% of the districts. Standard and guidelines were present in most studied areas. Only 62.5 % of the districts and 71.4 % of the visited PHCCs had trained staff. Although supervision was conducted, documentation and recommendations of the visits were present at DOH level,
71.4% of the districts; and only 50% of the hospitals and 42.9% of PHCCs. Completeness of surveillance data was varied from 83% to 90.9%. Timeliness was 100% for surveillance report submissions and outbreak detection. The system was useful, simple, accepted; and flexible at most levels. Sensitivity of the system was 92% in visited hospitals and 95% in visited PHCCs. Predicted Value Positive (PVP) was 3.6% in visited hospitals and 9.5% in visited PHCCs. Cumulatively 3,292 suspected cases were reported in Baghdad-Resafa DOH during 2008-2012. Among these, 2,603 (79%) were confirmed measles cases. Around 63.4% were 9-60 months, 15.6% were under nine-months. Around 68.2% were not vaccinated, 22.4% were vaccinated and the rest were of unknown vaccination status. About 99.3% of the vaccinated had one dose only. Card retention rate was 0.2% only. Despite progress achieved for most of WHO performance indicators, there was weakness in “percentage of suspected measles cases with complete investigation”, “percentage of suspected measles cases with specimen received at lab within 7 days of collection” and “non-measles non-rubella rate” in some districts. **Conclusion and recommendations:** The system appeared highly sensitive and met its stated objectives; although it was not fully satisfactory at all levels and some gaps are still there. It was recommended to repeat the evaluation periodically; conduct operational researches and independent assessment of Measles Containing Vaccine (MCV) coverage and to enhance training, supervision, and feedback.