Measles immunization coverage and three dose series completion among children in Tianjin, China

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Background: The World Health Organization recommends that children receive at least two doses of a measles containing vaccine, to achieve sufficient immunity. In Tianjin, China, measles vaccine (MV) is given at 8 months, and measles-mumps-rubella vaccine is given at 18-24 months (MMR-1) and 5 years (MMR-2). Despite high reported MV coverage, transmission of measles persists in China. The objectives of this study were to determine coverage of the three recommended measles-containing vaccines.

Methods & Materials: In July 2012, a sample of immunization records was selected from Tianjin’s Immunization Information Management System. Sex, date of birth, clinic, district of residence, and MV, MMR-1, and MMR-2 immunization dates were abstracted for children born from 2004 to 2011 who were over 8 months of age. Descriptive statistics were used to characterize the study population, and to assess timeliness and overall coverage rates for each of the three recommended measles-containing vaccines.

Results: We examined records from 205,982 children. Among children who were old enough to receive each vaccine, 98.5% received MV, 97.6% received MMR-1, and 78.6% received MMR-2. Of the children who were old enough to receive MMR-2, 78.5% (n = 55,068) received the complete three dose measles-containing vaccine series. However, just 52.5% received the series on time. Among children who were old enough to receive each vaccine, 98.6% received MV, 97.6% received MMR-1, and 78.6% received MMR-2. Of the children who were old enough to receive MMR-2, 78.5% (n = 55,068) received the complete three dose measles-containing vaccine series. However, just 52.5% received the series on time. Among children who were old enough to receive each vaccine, 98.5% received MV, 97.6% received MMR-1, and 78.6% received MMR-2. Of the children who were old enough to receive MMR-2, 78.5% (n = 55,068) received the complete three dose measles-containing vaccine series. However, just 52.5% received the series on time.

Conclusion: Passive case detection in the districts. The system is simple, representative and with low specificity. Feedback with stakeholders after the evaluation called for an improvement in case detection and testing. Use of community based volunteers will improve case detection.

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A contact pattern survey using paired self-report paper diary and direct observation in an acute tertiary care hospital in Singapore

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Background: Understanding the contact patterns between hospital staff, patients and hospital visitors can help to identify possible routes of disease spread as well as potential preventive interventions in hospital. We conducted a study comparing the contact patterns of nurses and patients in ward environment by using a paired self-report paper diary approach and direct observation method in an acute tertiary care hospital in Singapore.

Methods & Materials: Consented nurses and patients were observed by our study members in selected wards, with recording of each contact. Nurses were observed for one shift while patients were observed for 24 hours, observed date and shifts were arranged to equally represent the work shifts and days of week. The consented nurses and patients were also invited to finish a self-report paper diary at the same time when they were observed.

Results: Nurses (n = 71) were observed a median of 31 (inter quartile rage 23-47) contacts while nurses reported a median of 14 (IQR 9-19) contacts during a shift. Patients (n = 30) were observed a median of 21.5 (inter quartile rage 16-24) contacts while patients reported a median of 15 (IQR 9-19) contacts during 24 hours. Direct observation recorded more contacts than self report for both nurses and patients (both with P < 0.001). The difference of contacts frequency between direct observation and self report increased as the contacts frequency of direct observation became larger (r = 0.947 for nurses, r = 0.669 for patients, both with P < 0.001). For direct observation, patients and other nurses were the main contacts of nurses (79.8%) while nurses and visitors were the main contacts of patients (77.9%). Comparing to direct observation, nurses tended to report fewer contacts with other nurses, more contacts with patients and less contacts with visitors. 87.8% of nurses’ contacts were observed lasting less than 15 minutes while only 66.7% of nurses’ self-report contacts lasting less than 15 minutes (P < 0.001). Nurses reported a higher skin touch rate (57% VS 47%, P < 0.001) while patients reported a lower skin touch rate (50% VS 64%, P < 0.001).

Conclusion: The contacts frequency, category of contacts, duration of contacts and skin touch rate were different for direct observation method and self-report diary approach.

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