

MALNUTRITION AND INFECTIOUS DISEASE MORBIDITY AMONG CHILDREN MISSED BY THE CHILDHOOD IMMUNIZATION PROGRAM IN INDONESIA

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Abstract. Although it has been thought that child immunization programs may miss the children who are in greatest need, there are little published quantitative data to support this idea. We sought to characterize malnutrition and morbidity among children who are missed by the childhood immunization program in Indonesia. Vaccination and morbidity histories, anthropometry, and other data were collected for 286,500 children, aged 12-59 months, in rural Indonesia. Seventy-three point nine percent of children received complete immunizations (3 doses of diphtheria-pertussis-tetanus, 3 doses of oral poliovirus, and measles), 16.8% had partial coverage (1-6 of 7 vaccine doses), and 9.3% received no vaccines. Of children with complete, partial, and no immunization coverage, respectively, the prevalence of severe underweight (weight-for-age Z score <-3) was 5.4, 9.9, and 12.6%, severe stunting (height-for-age Z score <-3) was 10.2, 16.2, and 21.5%, and current diarrhea was 3.8, 7.3, and 8.6% (all $p < 0.0001$), respectively. In families where the child had complete, partial, and no immunizations, the history of infant mortality was 6.4, 11.4, and 16.5%, and under-five child mortality was 7.3, 13.4, and 19.2% (both $p < 0.0001$). Expanded programmatic coverage is needed to reach children who are missed by childhood immunizations in rural Indonesia, as missed children are at higher risk of morbidity and mortality.