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EFFECTIVENESS OF MEASLES VACCINATION  
AMONG FILIPINO CHILDREN IN PILA, LAGUNA, PHILIPPINES

วิทยานิพนธ์การ

จาก

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**Thesis Title:** Effectiveness of Measles Vaccination Among  
Filipino Children in Pila, Laguna, PHILIPPINES.

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#### ABSTRACT

To assess the effectiveness of measles vaccine in Pila, Laguna, Philippines, a retrospective cohort study was undertaken. From the civil registry, the 1985 birth cohorts were identified and followed up. Out of 635 birth cohorts, 484 (76.22%) children were included in this study while 151 (23.78%) were dropped. The cohorts were found to be homogeneous with respect to sex, number of siblings in the family, mother's occupational status and educational attainment and father's occupational status.

Cumulative incidence of measles among the vaccinated (0.31) was significantly lower than among the unvaccinated (0.42) ( $p$ -value = 0.046). Crude analysis showed that those vaccinated were 0.74 times protected of having measles compared to those unvaccinated (95% CI = 0.57, 0.97). Potential confounders such as sex, age, race, socio-economic status, exposure to measles in the family, illness and drugs taken at time of immunization were controlled either in the design or

analysis phase.

Place of vaccination was found to be statistically associated (p-value = 0.0001) with occurrence of measles. Those vaccinated in the outreach clinics had higher incidence of measles compared to those vaccinated in the static clinics (RR = 2.00; 95% CI = 1.44, 2.77).

Obtained vaccine effectiveness was 35% (95% confidence interval = 21 %, 46 %) which was low compared to the expected (80-95%). It is hypothesized that the low effectiveness obtained was due to improper storage and handling of measles vaccine. It is strongly recommended that the cold chain personnel be trained properly in order to maintain vaccine potency in the future. Immunization coverage should also be increased, preferably to 97-98%, in order to produce a herd effect, protecting even those who are not immune.