

## **Abstract**

**Vaccination is the most economic and most effective solution to prevent people from infectious diseases. This project aimed to explore the reasons why new born babies missed immunization schedule using data mining techniques and questionnaire survey by means of NIIS (National Immunization Information System) in the Center of Disease Control. Strategies to improve the vaccination percentage are proposed by revealing the reasons. The subjects were sampled by Proportional Probability to Sizes method from NIIS, which randomized 1,000 babies born in Tao-Yuan County in 2001. The researchers collected the subjects information by personal interviews and phone calls between August 1st and October 30th, 2004. Finally, this study completed 316 copies of questionnaires and the response rate was 31.6%.**

**In the result, the most common reason for missing vaccination schedule is that baby is in bad health condition, for example, fever. The second reason is the caregiver forgetting the appointment or have no time. Comparing to the previous study, the new reason is that the baby is abroad. According to the result, we propose the following suggestions: 1. Design the record of children health from the parent point of view; put the vaccination schedule in the front. 2. Incorporate immunization education materials in the community night school to educate the brides overseas or from mainland China. 3. Develop interactive media of immunization in airport or deliver CD to Taiwanese businessmen traveling to China. 4. Give a reminder to babies traveling overseas for updating their immunization record by rewarding a free gift. 5. Send the messages to parents mobile phone or leave messages about the appointment of vaccination one day before. 6. Add the field of e-mail address in NIIS for sending reminders to parents. 7. Choose one week or one month to promote vaccination to catch the nationwide attention of the importance of vaccination.**

**Keywords : Vaccination ; Miss-appointment ; National Immunization Information System ; Data Mining ; Educational Intervention**