This hospital based case-control study was intended to identify the risk of pneumonia among the children aged 1 to 60 months at Queen Sirikit National Institute of Child Health in Bangkok, Thailand. The subjects were 50 pneumonia cases who admitted in the ward of lung diseases and a control group of 50 children who attended the well-baby clinic. The study was conducted during February 22 to March 18, 2000. The mothers were interviewed by using a structured questionnaire and children were measured by weight and height in order to assess the nutritional status.

By using crude analysis to estimate the odds ratio of each factor, the results showed that the most important factors causing pneumonia were incomplete immunization status (OR=11.29) and family income less than 6,000 Baht (OR=11.22), the other risk factors were age (less than 2 years) (OR=8.31), birth weight less than 2,500g (OR=6.77), mother’s age less than 25 (OR=4.48), parental smoking (OR=4.29), indoor smoking (OR=3.29), child’s wheezing history (OR=3.26), malnutrition of weight-for-age (OR=3.17), mother’s education less than 7 years (OR=2.71), poor knowledge level of pneumonia (OR=2.5) with statistical significance. The variables which were not significant were: gender, malnutrition of height-for-age, breastfeeding, mothers’ marital status, education, occupation, number of children, family size, day care center attendance.

After applying forward Multiple Logistic Regression, incomplete immunization (OR=66.91), child age (OR=48.82), family member’s ARI history (OR=11.55), and family income less than 6,000 Baht (OR=8.79) were the most significant risks of pneumonia.

Several interventions can be identified to minimize the risk of pneumonia in the present study. Parents and health personnel should make sure that children receive vaccination on time according to the schedule, avoid children closely contacting with ARI patients, enhance primary health care management at community level, and promote public health education to improve the mother’s knowledge and child care practice.