FACTORS ASSOCIATED WITH INDUCTION OF LABOUR AND PREGNANCY

OUTCOMES IN 14 HEALTHCARE FACILITIES IN SRI LANKA

J. R. N. A. GUNAWARDANA[1]* AND S. S. N. PERERA[2]

[1] Department of Statistics & Computer Science, Faculty of Science, University of Kelaniya, Kelaniya, Sri Lanka

[2] Department of Mathematics, Faculty of Science, University of Colombo, Colombo 3,

Sri Lanka

ABSTRACT

Induction of Labour (IOL) is an important practice that is carried out commonly in modern day obstetrics. In medium to large healthcare facilities in Sri Lanka, it is estimated that approximately 35.5% of all deliveries involve IOL. This research attempts to identify the factors that affect IOL and to assess the association between IOL and the pregnancy outcome. In this study, we considered 18309 women who were admitted to 14 healthcare facilities for delivery in 3 randomly selected provinces in Sri Lanka (Western, Southern and Eastern provinces), during July to October 2011. Multinomial Logistic Regression model (MLR) and Fuzzy Expert System (FES) were used to identify the factors that lead to IOL.

The MLR model predicts IOL with a classification rate of 65.5% and the FES predicts IOL with an accuracy of 55.10%. Maternal age, number of previous caesarian sections,

* Corresponding author Email: <u>nishaniamalka@gmail.com</u> : ORCID: 0000-0002-5641-9332