

# Perception of End Users on I-Kelahiran in Sabah, Malaysia

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## Abstract

*I-Kelahiran (Inovasi-Kelahiran) is a health informatics system that manages birth data developed and implemented in Sabah to intervene birthing discrepancy, delayed reporting of high risk pregnancy and immunization coverage. Since its implementation, there has not been any formal evaluation on the acceptance of the system. This study aims to assess the perception and acceptance of i-Kelahiran among the nurses in Sabah Health Department. It was a cross-sectional web-based study, conducted on February 2013 among nurses actively working with i-Kelahiran in 21 hospitals and 292 health clinics. A 12-items questionnaire based on "perceived usefulness" and "perceived ease-of-use", adapted from technology acceptance model (TAM) was used for data collection. Data was analyzed using SPSS version 21. A total of 800 nurses participated in this study, with a mean age of 33.62 years (SD=8.060) and majority of them are community and staff nurses. About 63% of them are from primary health clinics and only 6.3% do not have any experience with computer. Mean score for both perceived usefulness 6.11 (SD=1.058) and perceived ease of use 6.14 (SD=0.952) were found to be high. Significant associations were found between perceived usefulness ( $p=0.001$ ) and perceived ease of use ( $p=0.008$ ) towards place of work. Significant higher score in perceived ease of use ( $p=0.033$ ) and perceived usefulness ( $p=0.047$ ) were found among nurses who have qualification at degree level or higher than those who have diploma. Though the study indicates that overall perceived usefulness and perceived ease of use were high, future study is needed to assess the effectiveness of this system as a whole using other study models.*

**Keywords:** health informatics; nurses; i-Kelahiran; Sabah

## 1 Introduction

Information and Communications Technology (ICT) has been referred to as a 'key instrument' in healthcare delivery and public health internationally (1). When designed and implemented effectively, ICT can improve access for geographically isolated communities; provide support for healthcare workers; aid in data sharing; provide visual tools that links population and environmental information with disease outbreaks; and is an effective electronic means to capture, store, interpret and manage data.

To achieve the 4th and 5th Millennium Development Goal, Sabah State Health Department has formulated

its strategies to improve the level of maternal health care and to achieve 100% immunization coverage in the state (2). Success of the measures taken to address all these issues so far has been marginal. Difficult geographical terrain, poor health accessibility, presence of huge number of illegal immigrants has always been among the major challenges faced by the department. About, 60% of Sabah's population lives in the rural area, and a quarter of its population is made up of illegal immigrants without proper legal documents. I-Kelahiran was created in 2012, mainly to trace high risk deliveries as well as post natal case tracings in the state. It also addressed the age old problem of birth record discrepancies, vaccine returns as well as post natal visits