

## TEMPERATURE DATA ANALYSIS OF THE VACCINE COLD CHAIN SYSTEM IN NORTHERN PART OF THAILAND

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Vaccines are temperature-sensitive biological preparations, 2-8°C or cold chain period were the appropriate range. The change of the temperature during transport system might be effect to vaccines quality assurance. This descriptive study was to analyze the data temperature of vaccine in cold chain system. We aimed to find the factor that effected to the change of vaccine's temperature before used, such as area of vaccine transport, seasonal and type of health care unit. Temperature data of DPT- HB vaccine that used in National Health Security Office (NHSO) region 1, included 8 provinces in northern part of Thailand were analyzed. The temperature data were collected by computerized data logger and analyzed by SPSS for window version 17.0 and logtag analyzer program. The result showed that, from 323 health care units in fiscal year 2011, DPT-HB vaccine temperature had lower than 2°C at 86.9% and upper than 8°C at 90.4%. Type of health care unit and seasonal didn't affect to vaccine temperature control, significantly. In fiscal year 2012, DPT-HB vaccine temperature from 1,399 health care units showed that lower than 2°C at 78.5% and upper than 8°C at 92.5%. Type of health care unit didn't affect to vaccine's temperature control following the World Health Organization criteria but the seasonal had significant effect to vaccine's temperature control. The study also found that most of the health care worker did not set the computerize data logger follow the handout of the company. Based on the study results, adequate equipment, provide training and supervision about new and current computerize data logger were recommended to support to maximize the efficacy and effectiveness of vaccine and cold chain monitoring in health care unit.

## BIOGRAPHY

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