Identifying risk factors for inter-facility transport

LI CH(1), LEE LLY(1), LO SM(1), WONG EML(3), TANG SYH(2), CHAN JTS(1), CHAIR SY(3)

(1)Emergency Department, Alice Ho Miu Ling Nethersole Hospital  (2)Emergency Department, Pok Oi Hospital  (3)School of Nursing, Chinese University of Hong Kong

Keywords:
Inter-facility transport
physiological deterioration
emergency departments
Hong Kong

Introduction
Inter-facility transport (IFT) itself imposes risks on patients that require it. The quality and safety of transports largely depends on pre-transport preparation and transport team configuration.

Objectives
The aim of this study is to present an overview of IFT from one centre in Hong Kong and identify risk factors associated with en route physiological deterioration. Methods: A retrospective review over a 6-year period identifying risk factors that predispose patients to en route physiological deterioration.

Methodology
Medical and ambulance records over a period between 2008 and 2014 were reviewed for patients who required inter-facility transport with accompanying emergency department staff. En route physiological deterioration was defined as deviation from normal physiological parameters during transport. Descriptive statistics was used to demonstrate information concerning the demography, case mix and physiological status. Parametric and non-parametric tests were used as appropriate to determine any univariate association between specific factors with occurrence of physiological deterioration en route. Logistic regression was used to identify any independent predictors of en route deterioration. SPSS v16.0 (SPSS Inc, IL, USA) and MedCalc v10.4 (MedCalc, Belgium) were used for the statistical analyses.

Result
Patients who are mechanically ventilated or with UGIB are more prone to physiological deterioration en route whereas systolic hypotension is the most important parameter to keep eye on. Transport of Paediatric patient is relatively rare but its risk cannot be underestimated. Stratifying risk by means of case-mix as well as pre-transport physiological status could be one principle for developing a safe triage
guideline for IFT in Hong Kong.