

HEAL system should be extended island-wide to cover all EAS ambulances and all public hospitals.

**Keywords:** hospital ambulance link; information technology; paramedics; prehospital care; records; severity score; standards; warning, advanced

*Prehosp Disast Med* 2001;16(3):S125-126.

### Transportation of Emergency Department Patients on Trolley by Head First Versus Feet First

*J. Yap; C.W. Loh; J. Teo; C.G. Seah; H. Alburque; Dr.*

*Lim Swee Han; Prof. V. Anantharaman*

Department of Emergency Medicine, Singapore General Hospital, Singapore

**Objective:** The traditional method of transporting Emergency Department (ED) patients in Singapore by trolleys is the head-first approach. The nurse is at the trolley head to monitor the patient while the porter pushes the trolley from the trolley foot. A few patients have complained of dizziness and disorientation when they were conveyed in this direction. The purpose of this study was to determine the nature and incidence of physiological and psychological effects when patients are transported in the direction of head or feet first, and to utilize the knowledge gained to improve patients' comfort and safety.

**Method:** This qualitative-purposive study was conducted in the ED of a tertiary-care hospital in Singapore with 118,000 visits per year. Patients were randomly assigned to two groups: head-first ( $n = 20$ ) and feet-first ( $n = 20$ ). Data were collected using a 4-part questionnaire. The questionnaires obtained the patients' demographic information, heart rate and oxygen saturation before, and after transportation, as well as possible factors that may contribute to physiological and psychological effects, i.e., speed of transportation. Patients also were asked to describe the physical and psychological effects experienced.

**Results:** Eight patients (40%) conveyed via the head-first direction experienced physical effects such as dizziness (5), nausea (1), chest pain (1) and headache (1). Two patients (10%) experienced a sense of fear. Of those who were transported in the feet first direction, only 3 patients (15%) had physical effects such as dizziness (2) and palpitations (1) and all had positive psychological effects including 1 patient who reported a sense of well-being. The heart rate and oxygen saturation levels before and after transportation were almost similar in both groups.

**Conclusion:** The results showed that the traditional head-first method of transporting ED patients may cause greater discomfort than in the feet-first position.

**Keywords:** comfort; direction; hospital; safety; transport; trolleys

*Prehosp Disast Med* 2001;16(3):S126.