

COMPARISON OF THE MANAGEMENT OF INHALATIONAL INJURIES PRESENTING TO THE EMERGENCY DEPARTMENT

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STUDY OBJECTIVES:

To compare the management, duration of stay, admission rates and outcome in patients with inhalational injuries presenting to the Emergency Department before and after the implementation of the Emergency Observation ward (EOW) toxic inhalation protocol in a tertiary hospital setting. The protocol was developed to reduce variation in clinical practice amongst different clinicians.

METHODS

We conducted a retrospective chart review of all patients presenting to an urban tertiary hospital, Singapore General hospital emergency department between 2006-2008 via the hospital's Emergency Department's EMERGE Version 4.9.1 system with a diagnosis of inhalational injuries, smoke inhalation, gas inhalation, carbon monoxide poisoning, toxic gas inhalation, poisoning by gas and burn injury to airway.

RESULTS

There were 48 patients in 2007 and 49 patients in 2008.

Respiratory symptoms were the main complaint (43.8% in 2007 , 59.2% in 2008).

In 2007, 88.3% of patients were discharged from the emergency department after an average observation period of 3.1 hours. 12.5% of patients were admitted for an average of 1.5 days. They were given an average of 9 days of medical leave if discharged from the inpatient and 2.6 days if discharged from the emergency department.

In 2008, 20.4% of patients were discharged from the emergency department after observing an average of 3.8 hours. 45.2% of patients were admitted for an average of 1.4 days. 30.6 % of patients were admitted to the EOW. They were given an average of 5.1 days of medical leave if discharged from the inpatient and 2.8 days if discharged from the emergency department.

There was less variation in patient management after the implementation of the EOW protocol with better documentation observed. There was 1 reattendance in 2008 in a patient who was discharged after inpatient admission for persistent chest pain. There were no bad outcomes due to observing the patient in EOW.

CONCLUSION

There were more patients admitted and more investigations ordered following the implementation of the EOW inhalation protocol. However, there was improvement in the documentation and less variation in the management of patients.