Backboard Removal: Guideline for Trauma Care

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Abstract

Prolonged backboard exposure is a problem unique to trauma care. A litigious climate further enhances the fear of taking overt corrective action. Continuous quality improvement provides the framework in which to address this problem. A negative patient outcome provided the necessary stimulus for the Hurley Medical Center Trauma Service to develop a guideline for backboard removal in trauma. This guideline is one Trauma Center's experience in utilizing continuous quality improvement to decrease trauma morbidity associated with backboard use.

The Hurley Medical Center Trauma Service developed the backboard removal guideline in response to the continuous quality improvement process. A poor patient outcome is often an opportunity for a quality improvement initiative. In this case, a preventable trauma morbidity was identified when a spinal cord injury patient sustained a prolonged stay on a backboard, which resulted in skin breakdown requiring several surgeries and a prolonged hospitalization. Corrective action involved the development of this guideline.

Trauma surgeons, emergency medicine, neurosurgery, orthopedics and nursing were involved in the development of the guideline. The orthopedic surgeons were especially vocal about the need to remove trauma patients from the backboard promptly in the emergency department and pushed the trauma service to enact this guideline. Nursing was hesitant at first fearing that they would somehow "forget" to logroll without the backboard providing a visual cue. The trauma coordinator inserviced the nursing staff and incorporated the guideline in all opportunities of teaching, during orientation of new employees as well as updates to experienced staff. Gradually these fears subsided with persistent education and the strong backing of the orthopedic surgeons.

Slider boards proved beneficial for bed-to-bed transfers. The operating room and critical care units as receiving patient units were also inserviced regarding prohibition of backboard use in their areas. Staff was instructed to question the attending trauma surgeon if they received a patient still on the backboard and if necessary to go up the chain of command to the trauma director real time to obtain an order to remove the patient from the backboard.

The policy was initiated in 1995. The trauma resuscitation flow sheet was revised in 1996 to incorporate a place to document time off backboard and ordering physician. The trauma coordinator tracked time off backboard and reported the results at the monthly quality improvement meeting providing feedback to the staff.

Shortly after implementation an unanticipated ramification of the guideline occurred when it was identified that radiology personnel where independently raising the head of the bed to obtain x-rays before spine clearance. Unfortunately, radiology had been left out of the guideline development. The trauma coordinator immediately sought radiology input and ultimately inserviced the radiology staff and monitored compliance with frequent unannounced observation of their work.

From 1995-1996, two cases were identified where a patient remained on the backboard from ED to surgery. In both cases, the patients had multiple injuries, were unstable, had known spine fractures, and involved the same trauma surgeon. These cases were presented at our educational trauma conference and quality improvement meetings. The trauma surgeons and orthopedic surgeons repeatedly discussed the guideline and endorsed it again and again. The outlier surgeon ultimately conformed his practice to that of the trauma service and guideline. There have been no further violations of the guideline for the past five years.

Nursing documentation improved steadily and backboard time decreased until it was less than 20 minutes 90% of the time within two years of implementation. The trauma coordinator now only monitors backboard times once a year for compliance, which has remained between 96-100%. There have been no identified cases of skin breakdown from prolonged backboard use and no identified cases of increased neurological deficit because of this guideline, since inception seven years ago.

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