

# A Pediatric Hospital-wide Asthma Severity Score (HASS): Reliability and Effectiveness

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## Abstract

Background: Asthma is a leading cause of pediatric hospitalization in the United States. Children hospitalized with asthma are often cared for in different care settings during a single hospitalization. Our objective was to study the reliability and safety of a new pediatric hospital-wide asthma severity score (HASS) across different care units within a single tertiary-care pediatric center. Methods. 150 patients between the ages of 2 and 18 years hospitalized with a principal diagnosis of status asthmaticus were included. Study patients were followed from initial triage in the emergency department until the time of medical readiness for discharge. Rates of medical errors, early transfers to a higher level of care and medically indicated hospital length of stay (LOS) were compared between 75 patients prior to and 75 patients after implementation of the HASS using retrospective chart review. Inter-rater reliability was determined by collecting independent HASS scores from blinded staff members after tandem or simultaneous patient assessment. Results. Inter-rater reliability among untrained staff members using the HASS was high. Rates of preventable adverse events and medical errors were low and not significantly different before and after implementation of the HASS. LOS was shorter after implementation of the HASS but without statistical significance. Rates of early transfer to a higher level of care were unchanged between study years. Conclusion. The HASS is a reliable asthma severity tool that can be used throughout hospitalization and also among multiple clinical providers to trend clinical progress and optimize communication, particularly during times of care handoffs.

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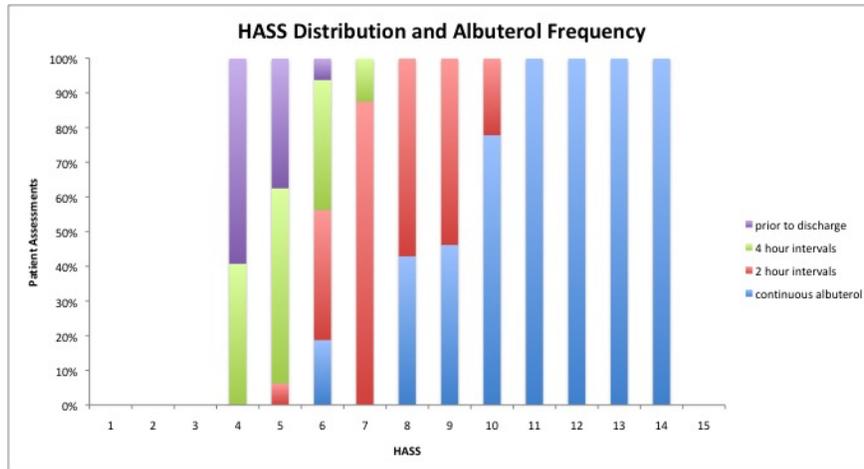
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