

## Sleep and Fatigue in Specialty Care Transport Team Personnel: Essential Concerns and Future Obligations

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Specialty care transport team personnel are a unique population within the realm of hospital-based healthcare providers. Commonly composed of specially trained clinicians including respiratory therapists, nurses, paramedics, and physicians, they routinely provide direct bedside patient care for critical patient populations as their primary duty. However, they are regularly required to leave their primary bedside patient care duties in their assigned units to participate in additional out-of-hospital patient transport duties via ground ambulance, rotary wing, and fixed wing aircraft. This amalgamation of duties should postulate immense concern vis-à-vis rest and readiness among specialty care transport team and hospital administrators.

The primary duty of hospital-based specialty care transport team personnel is to provide direct bedside patient care. Today's hospital-based healthcare providers commonly work lengthy, intense extended 12-hour shifts [1,2]. Not only do these shifts jeopardize healthcare provider safety, they also put patient safety at risk and have been linked to greater incidence of work-related accidents and injuries as well as increased numbers of medical care errors, respectively [3-5]. Moreover, the inherent nature of extended shiftwork incorporates consecutive, or back-to-back shifts. Back to back shifts do not allow for adequate amounts of quality sleep, recovery time, and lead to increased levels of fatigue and medical care errors [4,6,7].

In addition to hospital-based specialty care transport team personnel's primary duties to provide bedside patient care for critical patient populations, the amalgamation of their additional out-of-hospital patient transport duties should only escalate concerns. The transport missions of critically ill patients by ground ambulance, rotary wing, or fixed wing aircraft often take place with little to no notice given to the clinicians, often leaving their intense primary bedside care duties with urgency, to provide an advanced level of care under challenging conditions [8]; often confined to small spaces, loud noise, vibrations, high altitudes, and restricted equipment [9]. Out-of-hospital transport missions can occur toward the end of the team members assigned shift hours, and often require the clinicians to be "held over", working well beyond their normally assigned and already extended hours, further limiting their opportunity to obtain an adequate amount of quality sleep and recovery time, consequently increasing fatigue and possibly jeopardizing both patient and provider safety.

Furthermore, it is readily apparent that there is a lack of appropriate instrument to assess sleep and fatigue measures specifically within this understudied and overlooked population of hospital-based specialty care transport team personnel. Administrators often rely upon sleepiness and fatigue scales that are not specific to, nor appropriate for, the duties of this unique population. Nonetheless, why has there not been inquiry regarding sleep, fatigue, and the amalgamated duties within this population? At this point we can only assume that

the intense, amalgamated duties of clinicians assigned to hospital-based specialty care transport teams result in higher levels of sleepiness and fatigue which may contribute to more medical errors, decreased patient and provider safety, and lower overall quality of patient care. Future inquiry in order to prevent the aforementioned deleterious sequela is obligatory to both patient and healthcare provider safety. Future inquiry should be conducted empirically and aim to provide intervention through an instrument specific to the duties of this unique population which hospital-based specialty care transport team and hospital administrators may employ to create policies and procedures and subsequently improve their teams' rest and readiness protocols.

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