Frequency of musculoskeletal injuries and their impact on healthcare utilization among Naval Special Warfare Combatant-craft Crewmen

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Purpose: The aim of this analysis was to assess frequency and common types of musculoskeletal injuries, and describe their impact on healthcare utilization, among a sample of Naval Special Warfare Combatant-craft Crewmen (SWCC).

Methods: Medical records for a period of one year were reviewed for 145 SWCC subjects (age = 26.7 ± 4.9 years (mean ± SD)). Musculoskeletal injuries were described and classified according to their frequency, anatomic location, injury type and cause, and activity during injury.

Results: The frequency of musculoskeletal injuries was 31.03 per 100 subjects per year. Most musculoskeletal injuries (17/45, 37.8% of injuries) affected the spine. Common injury sublocations were the lumbo-pelvic spine (9/45, 20.0%), and shoulder and knee (each 8/45, 17.8%). Common injury types were pain/spasm/ache (10/45, 22.2%), strains (8/45, 17.8%) and sprains (7/45, 15.6%). Eleven injuries (11/45, 24.4%) were overuse injuries. Lifting was the cause of 8 injuries (8/45, 17.8%). In case of 22 injuries (22/45, 48.9%), subjects were engaged in physical or tactical training when injuries occurred. Radiological assessment was required for 13 injuries (13/45, 28.9%), rehabilitation for 15 injuries (15/45, 33.3%), and pain medication for 23 injuries (23/45, 51.1%). Eight injuries (8/45, 17.8%) resulted in prescription of rest. Thirty-one musculoskeletal injuries (31/45, 68.9%) were identified as preventable.

Conclusions: The reported rate of musculoskeletal injuries to the spine in SWCC is consistent with their tactical requirements. Future research should consider the fiscal implications of musculoskeletal injuries in SWCC and their chronic impact on tactical and physical readiness.