

Adult Orthopaedic Transfer Volume and Resource Use at a Large Referral Center

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Purpose: Anecdotal evidence suggests that community hospitals are increasingly referring complicated patients to large referral centers. Describing the demographics, time of day, day of the week, and specific characteristics of arrival of adult orthopaedic transfer patients may guide orthopaedic-specific staffing at large referral centers.

Methods: We performed a retrospective observational study of 3763 adult patients identified from the transfer center database from 2016-2021 with musculoskeletal-related problems transferred from another facility to the emergency department (ED) of a large academic referral center in New York State.

Demographic information, disposition, transferring facility, type of injury, means of arrival, case mix index (CMI), and day/time of the week were tabulated and analyzed using descriptive statistics.

Results: Overall, there was an increasing annual trend of orthopaedic transfers from 2016 (n = 558) to 2022 (n = 746). The most common diagnoses were femur fracture (19.7%, n = 741), pelvic and lumbar spine fracture (17.1%, n = 645), and lower leg, including ankle, fracture (13.3%, n = 501). Among these patients, 76.6% (n = 2882) were admitted to the hospital, with an average length of stay (LOS) of 7.74 days and an average CMI of 2.16. The average CMI of transfers increased over the study span by 10.2%. Transferred patients with femur fractures had the highest CMI (2.47) followed by lower leg fractures (2.11). The most frequent time of arrival for orthopaedic transfers was the evening between the hours of 3:00 pm and 11:00 pm (53.9%). Saturday (n = 656) and Sunday (n = 596) had higher mean number of transfers, compared to the mean number of total transfers on the weekdays (n = 502.2) (P = 0.0049 comparing weekend to weekday).

Conclusion: The 37% increase in adult orthopaedic transfer patients over the 5-year study period suggests the increasing role of referral centers in caring for complicated orthopaedic patients. The greater number of transfers during non-business hours also suggests that referral centers may play an even greater role in the community during times when community orthopaedic services are not available. Future research might confirm the generalizability of these findings by examining these trends in other settings.