

The objectives were to characterize the daily blood volumes drawn for diagnostic testing from patients discharged from a Canadian tertiary care center, describe the daily distributions of phlebotomy volumes across service locations, and describe changes in hemoglobin (Hb) and transfusion across service locations” Quinn et al (2019).

Abstract:

BACKGROUND: Phlebotomy for diagnostic testing is among the commonest hospital procedures, but hospital-wide surveys of all inpatients characterizing blood draw volumes have not been published. The objectives were to characterize the daily blood volumes drawn for diagnostic testing from patients discharged from a Canadian tertiary care center, describe the daily distributions of phlebotomy volumes across service locations, and describe changes in hemoglobin (Hb) and transfusion across service locations.

STUDY DESIGN AND METHODS: Data were obtained on all patients discharged between 2012 and 2014 using linked discharge abstract and laboratory data. Cumulative daily blood volume and draw frequency were reported by service and days since admission. Changes in Hb and red blood cell (RBC) transfusion rates were reported for nontransfused and transfused patients.

RESULTS: Data were included on 59,715 subjects. Mean daily estimated blood loss varied from 8.5 ± 6.5 mL/day onward to 27.2 ± 20.0 mL/day in the intensive care unit (ICU; $p < 0.001$). Phlebotomy volumes were highest on the first day of admission and declined thereafter ($p < 0.001$). For nontransfused individuals in the first week of admission, Hb levels decreased by the highest percentage in the ICU. The rate of RBC unit transfusion was highest in the ICU (232.4 units/1000 patient-days; 95% confidence interval, 225.8-239.2; $p < 0.0001$ compared with all other locations). **CONCLUSION:** Considerable variation was observed in estimated blood loss due to diagnostic phlebotomy across different services within one teaching hospital. Thi information is foundational for planning interventions to minimize estimated blood loss from phlebotomy.

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Reference:

Quinn, J.G., Levy, A.R., Cheng, C.K., Doucette, S., Theriault, C., Doiron, D., Kiberd, B.A. and Tennankore, K.K. (2019) A contemporary description of patients' estimated blood losses from diagnostic phlebotomy in a census of hospital episodes from a Canadian tertiary care center. *Transfusion*. July 8th. doi: 10.1111/trf.15434. .