

One in four patients in ICU receive red blood cell transfusion

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For patients admitted to intensive care units (ICUs) worldwide, red

blood cell (RBC) transfusion is common, with considerable variability across centers, countries, and continents, according to a study published online Oct. 12 in the *Journal of the American Medical Association*.

Senta Jorinde Raasveld, M.D., from the Amsterdam University Medical Centers, and colleagues examined and described ICU RBC [transfusion](#) practices worldwide in an international, [prospective cohort study](#) involving 3,643 adults from 233 ICUs in 30 countries across six continents.

The researchers found that 25 percent of the [patients](#) received one or more RBC transfusions during their ICU stay, with a median of two units per patient. Across centers, the proportion of patients who received a transfusion varied from 0 to 100 percent, while there was variation from 0 to 80 percent and from 19 to 45 percent across countries and continents, respectively.

A total of 1,727 RBC transfusions were administered among patients who received a transfusion; the most common clinical indications were low hemoglobin value, active bleeding, and hemodynamic instability (81.8, 27.7, and 23.5 percent, respectively). Of the events with a stated physiological trigger, hypotension (42.2 percent), tachycardia (27.4 percent), and increased lactate levels (17.8 percent) were the most frequently stated triggers. Of the ICUs, about 84 percent administered transfusions to patients at a median hemoglobin level >7 g/dL.

"A wide range in transfusion occurrence rates was found across centers, countries, and continents," the authors write.

Several authors disclosed ties to the pharmaceutical, [medical device](#), nutrition, and publishing industries.

More information: Senta Jorinde Raasveld et al, Red Blood Cell

Transfusion in the Intensive Care Unit, *JAMA* (2023). DOI: [10.1001/jama.2023.20737](https://doi.org/10.1001/jama.2023.20737)

Matthew D. Neal et al, Precision in Transfusion Medicine, *JAMA* (2023). DOI: [10.1001/jama.2023.16134](https://doi.org/10.1001/jama.2023.16134)

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