

FAST FACTS AND CONCEPTS #359
PALLIATIVE CARE ISSUES FOR TRANSFUSION-DEPENDENT PATIENTS
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Introduction Although no standardized definition exists, transfusion dependence (TD) usually describes patients receiving regular platelet and/or red blood cell (RBC) transfusions more frequently than every 8 weeks due to persistently low counts (1). Myelodysplastic syndrome, myeloproliferative neoplasms, and leukemias are most commonly associated (2). Transfusion thresholds have been subjects of debate, vary by population, and should answer the goals of therapy. Still, many with life-prolonging goals of care become accustomed to basing the need for transfusion on a diagnostic threshold (e.g. hemoglobin < 7), rather than a specific symptom. As TD patients near the end-of-life, they often face emotionally-wrought decisions about the continued role of transfusions.

Potential Benefits of Continuing Transfusions

- Patients may receive significant improvement in fatigue and dyspnea within hours from RBC transfusions when hemoglobin levels are < 7. These benefits likely dissipate after 13 days (3).
- Platelets transfusions can stop or prevent bleeding caused by severe thrombocytopenia within hours but usually have a life span of only 4-8 days (4). Although the usual threshold at which prophylactic platelet transfusions is considered is 10,000 (5), that threshold and the role of prophylactic platelet transfusions in seriously ill TD patients remains controversial and unstudied.
- A retrospective analysis of dying cancer patients suggested that RBC transfusions were associated with a longer survival (15 days) than anemic patients who were not transfused (7 days), and platelet transfusions increased the interval between hospitalizations from 10 to 16 days (6).
- Regular transfusions based on threshold lab values often become a familiar component of the care plan recommended by the cancer team. Transitioning to a care plan in which transfusions are based on how they feel, not lab values, can therefore be unsettling to patients.

Potential Harms of Continuing Transfusions

- Not only is TD a marker of disease severity, organ damage from iron overload can result from multiple transfusions. Thus, there is a 2.2-fold increase in 1-year mortality risk and a 4-year survival of only 47% among TD patients (7-10).
- Although transfusions often can be coordinated for hospice patients with a specific symptom need, logistical complexities do not allow transfusions to be done in a patient's home.
- For patients who desire to continue regular lab draws and blood transfusions, frequent visits to infusion clinics ensue and are associated with a diminished quality-of-life (8,11). Furthermore, hospice involvement is often delayed, thereby increasing the chances of death in a hospital (11,12).

Counseling Patients and Families A hospitalization due to a major medical crisis often prompts a discussion about discontinuing transfusions in the context of a larger discussion about transitioning to comfort-focused care. This can be a challenging time to discuss transfusion discontinuation, as patients can be overwhelmed by their overall medical situation. The following pearls may assist clinicians:

- Once TD is realized and eventual clinical deterioration is anticipated, discuss the expectations of transfusions along with clinical signs which would suggest an appropriate timing to discontinue them. This would pre-empt initiating such discussions during a time of medical crisis.
- Patient and families may worry about inciting imminent death or demise from discontinuing transfusions. For example, they may have been told that discontinuation of platelet transfusions can trigger massive bleeding. Fortunately, most dying patients who stop platelet transfusions do not suffer significant bleeding and most TD patients live > a week after transfusions are discontinued (6). Transparent disclosure of these prognostic implications may alleviate, not exacerbate, concerns.
- Inquire about ethical, legal, cultural, and/or religious concerns which may lead patients to associate transfusion discontinuation with "giving up" or euthanasia. Involve a chaplain or spiritual leader if concerns are identified.
- If a time-limited trial of continued transfusions is pursued, be specific about signs which would signify an appropriate time to discontinue transfusions. Examples of reasonable "end-points" include: a) an anticipated prognosis of weeks or less; b) platelet values which no longer respond to transfusions; c)

a terminally-ill, home-bound patient who develops a moribund functional status, as the burden of transport to an infusion clinic will likely supersede any clinical benefit.

- Involve the patient's oncologist or hematologist. Patients may need to hear from a trusted clinician that it is ok to stop transfusions.

Novel Programs Open access or concurrent care, is offered by select hospice agencies in coordination with some insurers. Through models such as these, patients who are willing to come into clinics for ongoing blood product transfusions may be able to also have access to an interdisciplinary hospice team. Coordination with clinical social workers can help patients and families explore these possibilities.

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Conflicts of Interest: None to report

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Version History: Originally edited by Sean Marks MD; first electronically published in July 2018.

Fast Facts and Concepts are edited by Sean Marks MD (Medical College of Wisconsin) and associate editor Drew A Rosielle MD (University of Minnesota Medical School), with the generous support of a volunteer peer-review editorial board, and are made available online by the [Palliative Care Network of Wisconsin](#) (PCNOW); the authors of each individual *Fast Fact* are solely responsible for that *Fast Fact's* content. The full set of *Fast Facts* are available at [Palliative Care Network of Wisconsin](#) with contact information, and how to reference *Fast Facts*.

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