



Advancing Transfusion and  
Cellular Therapies Worldwide

## **Blood Shortage Briefing: Supply, Demand, and Educational Resources**

### **Key Message**

The US is experiencing a nationwide blood shortage that is affecting virtually all blood collectors and hospitals. Blood collectors and hospitals can both take steps to ensure the availability of blood. We encourage hospitals to work with their blood suppliers and with their internal transfusion service leaders to continuously assess their blood inventory and utilization needs. Similarly, we urge hospitals to communicate with their blood suppliers to understand the current availability of blood.

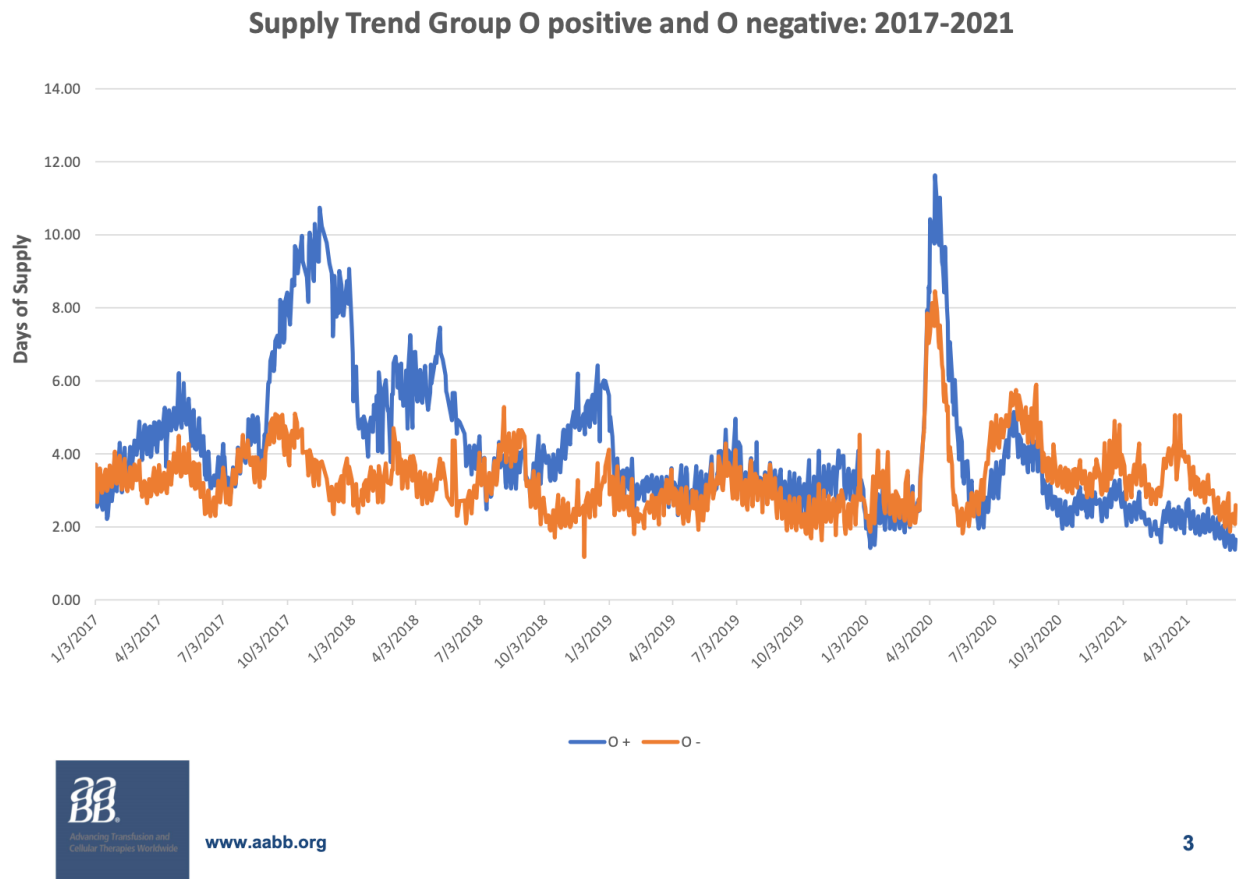
As the nation resumes some level of normalcy, hospitals' demand for blood is increasing. Many blood collectors are currently on appeal and the blood community is urging eligible, healthy individuals to donate blood now and throughout the summer. Hospitals should develop a plan with strategies that address the risk for blood shortages, and should communicate with surgeons, operating room and emergency room staff regarding the continued challenges facing the blood supply.

### **Introduction**

Blood centers are reporting that the use of Red Blood Cells (RBCs) and platelets is pacing significantly ahead of 2019. For RBCs, the use is largely driven by an increase in group O red cells. Many centers also report that they are collecting at or near capacity, and that the biggest challenge is the pace of demand rather than the volume of collections.

The supply trend for group O RBCs is presented below and represents data from America's Blood Centers, American Red Cross, and Blood Centers of America. The pressure on group O RBCs combined with the increased demand for platelets makes this a particularly challenging time.

AABB is working with ABC, ARC, and BCA to ensure that a weekly national blood supply report, modeled on the figure below, will be published and shared with the blood banking community on a weekly basis.



### Resources to Support Strategies Related to the Blood Supply

- AABB recently posted an article [encouraging](https://www.aabb.org/news-resources/news/article/2021/06/09/aabb-encourages-hospitals-to-develop-a-plan-for-potential-blood-shortages) hospitals to prepare for potential blood shortages.
  - LINK: <https://www.aabb.org/news-resources/news/article/2021/06/09/aabb-encourages-hospitals-to-develop-a-plan-for-potential-blood-shortages>
- AABB developed a list of [resources](https://www.aabb.org/docs/default-source/default-document-library/regulatory/extending-the-blood-supply-10-tips-for-hospitals.pdf?sfvrsn=418f8b26_0) that hospitals can use to develop strategies to extend blood inventory.
  - LINK: [https://www.aabb.org/docs/default-source/default-document-library/regulatory/extending-the-blood-supply-10-tips-for-hospitals.pdf?sfvrsn=418f8b26\\_0](https://www.aabb.org/docs/default-source/default-document-library/regulatory/extending-the-blood-supply-10-tips-for-hospitals.pdf?sfvrsn=418f8b26_0)
- In 2019, AABB released an [Association Bulletin](https://www.aabb.org/docs/default-source/default-document-library/resources/association-bulletins/ab19-02.pdf) with recommendations on the use of group O RBCs.
  - LINK: <https://www.aabb.org/docs/default-source/default-document-library/resources/association-bulletins/ab19-02.pdf>

The key recommendations in this Bulletin were:

1. Group O Rh(D)-negative RBCs should be reserved for three cohorts of females of childbearing potential: those who are group O Rh(D)-negative, those who are Rh(D)-

- negative requiring transfusion when type-specific blood is unavailable, and those of unknown blood type who require RBCs before the completion of pretransfusion testing.
2. Hospital transfusion services should closely monitor utilization of group O, Rh(D)-negative inventory, particularly during bleeding emergencies and during group O Rh(D)-negative shortages. Policies should be developed that describe when patients should be switched to Rh(D)-positive RBCs to avoid depletion of the group O Rh(D)-negative supply.
  3. Hospitals should have protocols to expedite sample collection to quickly switch patients to type-specific blood upon completion of pretransfusion testing.
- AABB has also published [Choosing Wisely statements](#) that describe practices to reduce inappropriate blood utilization.
    - LINK: <https://www.choosingwisely.org/societies/american-association-of-blood-banks/>
  - There are a number of helpful evidence-based resources to support the adoption of patient blood management, or PBM, which seeks to reduce unnecessary transfusions. These include clinical practice guidelines for the use of RBCs and platelets:

*RBC Guidelines:*

<https://jamanetwork.com/journals/jama/article-abstract/2569055>

*Platelet Guidelines:*

<https://www.acpjournals.org/doi/pdf/10.7326/M14-1589>

- PBM is an interdisciplinary exercise; hospitals that implement more restrictive transfusion consideration triggers often see improvements in outcomes, shorter lengths of stay, and cost savings. This requires buy-in from surgery, anesthesia, and a number of other clinical service lines. PBM programs focus on optimizing the patient preoperatively (through anemia management, for example), improving surgical techniques and intraoperative practices that reduce the need for transfusion, careful monitoring of the patient post-operatively, as well as the adoption of institutional rules, including:
  - The adoption of institutional guidelines for transfusion
  - Use of clinical decision support or computerized physician order entry systems, with logic and alerts to flag orders of blood for patients that do not meet institutional criteria for transfusion
  - Reduction of unnecessary or large blood draws in hospitalized patients to reduce iatrogenic blood loss
  - Physician-level analysis of blood ordering to identify opportunities for standardizing blood transfusion practices

Other helpful resources:

PBM Awareness Week poster:

[https://www.aabb.org/docs/default-source/default-document-library/resources/pbm-awareness-week-poster.pdf?sfvrsn=37b1fe86\\_0](https://www.aabb.org/docs/default-source/default-document-library/resources/pbm-awareness-week-poster.pdf?sfvrsn=37b1fe86_0)

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PBM Infographic:

[https://www.aabb.org/docs/default-source/default-document-library/resources/pbm-stats-infographic.pdf?sfvrsn=357e6ac1\\_0](https://www.aabb.org/docs/default-source/default-document-library/resources/pbm-stats-infographic.pdf?sfvrsn=357e6ac1_0)