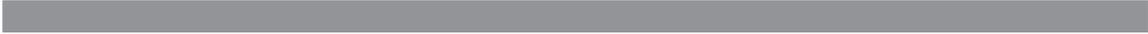


DISASTER OPERATIONS HANDBOOK—HOSPITAL SUPPLEMENT

**COORDINATING THE NATION'S BLOOD
SUPPLY DURING DISASTERS AND
BIOLOGICAL EVENTS**



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DISASTER OPERATIONS HANDBOOK—HOSPITAL SUPPLEMENT

COORDINATING THE NATION'S BLOOD SUPPLY DURING DISASTERS AND BIOLOGICAL EVENTS

AABB INTERORGANIZATIONAL TASK FORCE ON DOMESTIC DISASTERS AND ACTS OF TERRORISM

American Association of Blood Banks

America's Blood Centers

American Red Cross

Blood Centers of America/hemeric

Armed Services Blood Program Office

Centers for Disease Control and Prevention

Department of Health and Human Services

Food and Drug Administration

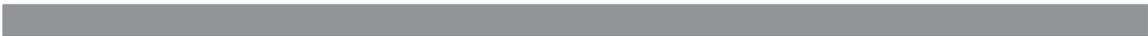
Advanced Medical Technology Association

American Association of Tissue Banks

American Hospital Association

College of American Pathologists

Plasma Protein Therapeutics Association



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1 INTRODUCTION

1.1 PURPOSE OF OPERATIONS HANDBOOK

The purpose of this Operations Handbook is to assist blood centers, hospital blood banks, and transfusion services in preparing for and responding to future domestic disasters and acts of terrorism affecting the blood supply. The Handbook is intended to facilitate coordination among these facilities, national blood organizations, and federal, state, and local government officials, in the event of a disaster, to

- Determine medical need for blood
- Facilitate transportation, if needed, of blood from one facility to another
- Communicate a common message to the national blood community and the public about the status of the blood supply in the disaster-affected community

This Hospital Supplement to the Operations Handbook addresses the hospital role in ensuring that blood for transfusion will be available. It does not address internal hospital transfusion policies that will be needed in the event of a disaster except to establish that all blood provided will be type O.

1.2 HANDBOOK ORGANIZATION

The primary focus of this supplement is to outline steps to be taken by hospital transfusion services in relationship to blood supply issues in the event of a “disaster” (see definition below). It also addresses hospitals that collect only autologous units. Hospitals that collect allogeneic units should consult the complete Interorganizational Task Force Disaster Operations Handbook, which contains more detailed information about a variety of practical and logistical issues blood collectors should address in preparing for and activating a disaster response plan (e.g., communications, transportation, managing donors, and volunteers). This Hospital Supplement to the Operations Handbook does not address specific details relating to such aspects of disaster planning (e.g., the need for utilities) since hospital disaster plans

would address them on a broader scale. Hospital transfusion services should consult their hospital disaster plans for guidance.

Transfusion services may access the complete Disaster Operations Handbook on AABB's Web site at www.aabb.org/disaster.

1.3 BACKGROUND OF TASK FORCE/PARTICIPATING ORGANIZATIONS

Following the events of September 11, 2001, the blood community recognized the need to evaluate its actions in response to the tragedy, examine "lessons to be learned," and develop recommendations relating to its response to future domestic disasters and acts of terrorism. In December 2001, the American Association of Blood Banks (AABB) convened a task force composed of representatives from various blood banking organizations, blood collector and hospital suppliers, and government agencies to address these concerns.

This Disaster Operations Handbook was prepared by the AABB Interorganizational Task Force on Domestic Disasters and Acts of Terrorism, whose members are as follows:

- American Association of Blood Banks (AABB)
- America's Blood Centers (ABC)
- American Red Cross (ARC)
- Blood Centers of America/hemeric (BCA)
- Armed Services Blood Program Office (ASBPO)
- Centers for Disease Control and Prevention (CDC)
- Department of Health and Human Services (HHS)
- Food and Drug Administration (FDA)
- Advanced Medical Technology Association (AdvaMed)
- American Association of Tissue Banks (AATB)
- American Hospital Association (AHA)
- College of American Pathologists (CAP)
- Plasma Protein Therapeutics Association (PPTA)

The Task Force believes that there are no *currently* identified scenarios in which the immediate need for blood and/or blood components would be beyond the capabilities of the blood community to meet. The single greatest risk of domestic disasters and acts of terrorism is not lack of supply, but disruption of the blood system.

Previous domestic disasters have led to three overarching lessons:

1. The need to control collections in excess of actual need
2. The need to ensure that facilities maintain inventories to prepare for disasters at all times in all locations (note that a seven-day supply of the combined inventory of both blood collectors and hospitals is recommended in preparing for a disaster)
3. The need for overall inventory management within the United States

1.4 DEFINITION OF A “DISASTER”

Unless otherwise stated, a “disaster” includes any domestic disaster or act of terrorism that

- Suddenly requires a much larger amount of blood than usual
- OR**
- Temporarily restricts or eliminates a blood collector’s ability to collect, test, process, and distribute blood
- OR**
- Creates a sudden influx of donors requiring accelerated drawing of blood to meet an emergent need elsewhere

Thus, this Handbook addresses how the blood community will respond to natural disasters and acts of terrorism, including situations resulting in mass casualties potentially requiring large amounts of blood, as well as bioterrorism* attacks with infectious agents, which would not necessarily require more blood but could substantially limit the blood supply by affecting donor suitability.

1.5 MEETING MEDICAL NEED

The Task Force made the following assumptions with regard to the principles it will follow as the best way to meet immediate medical needs within the first 24 hours.

- Blood supplied to meet emergency needs for transfusion will be type O red blood cells (RBC)
- Most disasters do not require extensive use of platelets or plasma, and the need for these components can be evaluated if special circumstances arise

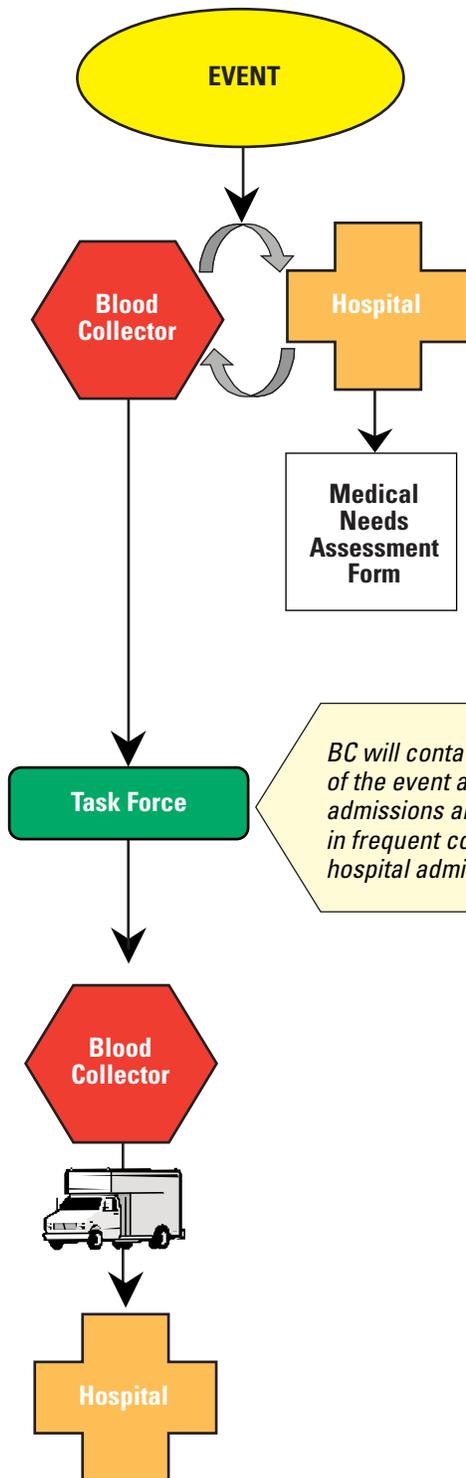
The Task Force will reassess medical need at 24 hours and may alter the strategy for meeting blood needs depending on the circumstances.

* For events involving Bioterrorism refer to Section 2.2, “Biological Attack Response Process.”

2 ACTIVATION/ EVENT OCCURS

2.1 OVERVIEW OF HOSPITAL RESPONSE IN DETERMINING MEDICAL NEED FOR BLOOD

In case of a disaster, hospitals need to collaborate with the blood collector(s) in the affected area (affected blood collector). The hospital will determine the immediate (i.e., within the first 24 hours) and short-term medical need for blood and communicate that information to the affected blood collector. The affected blood collector will act as a main conduit for information and communication to the Interorganizational Task Force (TF) via the AABB. The Task Force will then consider the national response and recommend an action strategy including, but not limited to, the shipment of blood to the affected blood collector and the coordination and dissemination of a message to the blood community and donors. Hospitals should coordinate all messages about the need for blood with the affected blood collector.



Step 1: Affected Blood Collector Assesses Medical Need for Blood

- ✓ Affected blood collector (BC) contacts local hospital customers and emergency services to determine impact of event, including
 - Type of event (e.g., disaster, terrorism*)
 - Current and expected hospital admissions
 - Current blood inventory levels of Type O RBC
- ✓ If blood is immediately needed, the affected BC will distribute blood to hospital from existing BC inventories
- ✓ Hospital completes Hospital Medical Needs Assessment and communicates results to blood collector**

* In case of bioterrorism, see Section 2.2, Biological Attack Response Process

** If hospital is supplied by more than one blood collector, report information to the primary supplier (to prevent duplicative results).

BC will contact the Interorganizational Task Force within 1 hour of the event and report information on current and expected hospital admissions and current Type O RBC inventory levels. BC will remain in frequent contact with TF and report any updates to the hospital admission and blood inventory numbers.

Step 2: Arrange Transport of Blood to Hospital

If TF determines that there is need for blood in excess of what is available to the affected BC, then

- ✓ TF will coordinate the immediate shipment from blood collector(s) with access to the most rapid means of transportation to the affected blood collector
- ✓ Hospital and affected BC should collaborate on receipt of blood shipment from Task Force. Issues to consider include
 - Points of delivery/emergency staging areas
 - Disruption to normal transportation routes/methods
 - Security/identification issues for drivers

Step 3: Continue to Communicate with Affected Blood Collector

- ✓ Establish regular times for communicating with BC until event has been resolved

Step 1: Assess Medical Need for Blood

- ✓ Affected blood collector will contact local hospitals and emergency services to determine
 - Type of event* (e.g., natural disaster, act of terrorism)
 - Current and expected hospital admissions
 - Current blood inventory levels of Type O RBC
- ✓ Hospital will complete the Hospital Medical Needs Assessment by filling in the totals in the following chart.
- ✓ If you are a hospital supplied by more than one BC, report this information to the primary supplier. It is important not to provide duplicate information to multiple blood collectors.

* For events involving bioterrorism, refer to Section 2.2, Biological Attack Response Process.

Hospital Medical Needs Assessment

Hospital Admissions Expected (Disaster Related Only)

Total Current Hospital Admissions:	_____
Total Potential for Expected Hospital Admissions:	(+) _____
Total Hospital Admissions Expected:	(A) = <input style="width: 100px;" type="text"/>

Type O (both + and -) RBC Available

Total Type O RBC at Hospital:	_____
Total Type O RBC Needed for Non-Disaster Related Need:	(-) _____
Total of Type O RBC Available:	(B) = <input style="width: 100px;" type="text"/>

Calculate the total number of units needed from the Task Force

Total Hospital Admissions Expected	<i>Multiply (A) by 3</i>	Total Type O RBC Needed	(-) minus	Total Type O RBC Available	=	Total Type O RBC Needed from TF
_____	x 3 units =	_____		_____		_____
(A)				(B)		

Step 2: Arrange Transport of Blood to Hospital

To allow for efficient transport and receipt of blood, the hospital should

- ✓ Be in contact with blood collector to arrange for transportation of blood to hospital
- ✓ Activate previously devised contingency plans with blood collector
- ✓ Notify blood collector of interruptions to the normal transportation methods, such as local clearances or transportation barriers

Step 3: Continue to Communicate with Affected Blood Collector

- ✓ Continue to communicate with the affected blood collector(s), updating the collector(s) about any changes in medical need for blood as soon as possible

2.2 BIOLOGICAL ATTACK RESPONSE PROCESS

If a community is faced with a biological attack with infectious agent(s), the issues facing blood collectors and hospitals regarding the potential impact on the blood supply and medical needs will not necessarily mirror those that arise following other types of disasters. Biological attacks may or may not require more blood. By affecting donor suitability, a biological attack may substantially limit the blood supply. The impact on the donor population will depend on which biological agent is involved in a disaster. The spread of certain agents may require immediate deferral policies. (For example, FDA has developed deferral policies relating to smallpox, in case there is an attack and/or a need for mass smallpox immunization.)

In the event of a biological attack, the blood collector should estimate the number of donors who will be deferred and the scope of expected shortages resulting from such deferrals and communicate this information to the Task Force.

The Task Force can act as a conduit between FDA and affected blood collector(s) in determining the appropriate course of action for deferring donors following a biological attack. The Task Force will also develop messages to be conveyed to the public about the impact of the biological attack on the blood supply.

In addition, should it identify an immediate need for blood (e.g., if there is a need to quarantine the blood supply or for increased transfusions), the blood collector should contact the Task Force, which will work to facilitate shipment of blood to the affected BC.

Transfusion services should contact their blood collector in the event of a biological attack that results in increased blood usage. The BC will then notify the Task Force and coordinate activities.

2.3 REGULATORY CONCERNS

While the availability of blood may be the primary concern in the event of a disaster, the safety of the blood supply is also paramount. Adherence to FDA regulations once an actual event has occurred is crucial. It is important to follow current good manufacturing processes and AABB Standards. Any consideration of regulatory exemptions will be driven by medical need. The Task Force will be in touch with FDA in the event of a disaster and will seek to convey to the blood community any changes in regular FDA policy.

The Task Force suggests the following recommendations during a disaster:

- ✓ Blood collection should be performed only by facilities that routinely collect allogeneic blood. Facilities that routinely collect only autologous blood or do not collect blood routinely should NOT collect allogeneic blood during times of disaster. Blood donor screening, collection, and labeling for autologous donors is quite different from the requirements for allogeneic donors, and must be performed by personnel who are trained in these functions.
- ✓ Units of blood released for transfusion should be fully tested, including infectious disease testing. Transfusion services should already have in place policies and procedures for emergency and exceptional release that may be applied if absolutely necessary to meet immediate needs.
- ✓ Testing should be performed only by facilities that routinely test allogeneic blood. Infectious disease testing is highly regulated. Facilities that do not routinely test allogeneic blood may inadvertently fail to meet these stringent regulated testing requirements.
- ✓ All regulated functions should be performed by existing trained staff. Volunteer personnel may be used for non-regulated functions only.
- ✓ Unlicensed, registered allogeneic collection facilities may ship blood only within the state. In times of disaster, FDA may allow interstate shipment provided the product is appropriately labeled. FDA must grant permission prior to any such shipment.

2.4 WORKING WITH THE MEDIA

When a disaster has occurred, it is imperative to inform the general public about blood supply needs. As past experience shows, many individuals will want to do all they can to help. Hospital transfusion services should coordinate messages about blood needs with the blood collector. The hospital may wish to refer media inquiries to the blood collector, or contact the blood collector for the appropriate message to convey.

3 GLOSSARY OF TERMS

3 GLOSSARY OF TERMS

Term	Definition
Affected blood collectors	Blood centers and hospitals that collect allogeneic blood and that are directly affected by an event
Amateur radio	Amateur (ham) radio that can be used to contact amateur radio network established to assist communication efforts during an emergency
Bioterrorism	Terrorist attack that involves the use of biological weapons of mass destruction, such as anthrax, smallpox, or botulism
Current hospital admissions	Disaster-related patients actually admitted to a hospital
Disaster	Includes any domestic disaster or act or terrorism that: Suddenly requires a much larger amount of blood than usual OR Temporarily restricts or eliminates a blood collector's ability to collect, test, process, and distribute blood OR Creates a sudden influx of donors, requiring accelerated drawing of blood to meet an emergent need elsewhere
Expected hospital admissions	The potential for expected disaster-related (live) victims to be admitted to a hospital
Interorganizational Task Force	A task force of representatives from various blood banking organizations, blood collector and hospital suppliers, and government agencies
Immediate medical need	The amount of Type O blood needed by the affected facility for disaster-related transfusion purposes within the first 24 hours of an event
Non-disaster-related need	The amount of blood needed for pre-disaster operations/transfusions
Transfusion services	Facilities that do not collect allogeneic blood