

Blood Transfusion Services in Disaster Management





Definition of Disaster (1)

- ◆ Disaster has become a part of civil society.
- ◆ Might be a fury of nature or man-made.
- ◆ AABB defined disaster as follows 'unless otherwise stated, a "disaster" include any domestic disaster or act of terrorism that:

* *Suddenly requires much larger amount of blood than unusual,*

or:



Definition of Disaster (2)

* *Temporarily restricts or eliminates a blood collector's ability to collect, test, process and distribute blood,*

or:

* *Create a sudden influx of donors requiring acceleration drawing of blood to meet an emergency need otherwise,*

or:



Definition of Disaster (3)

- * *Temporarily restricts or prevents the local population from donating or restricts or prevents the use of the available inventory of blood products requiring immediate replacement or re-supply of the region's blood inventory from another region.'*



Types of Disaster

◆ **Natural disaster:**

Earthquake, flood, typhoon, volcano eruption, tsunami, land-slide, cloud burst, wild fire, diseases outbreak etc.

◆ **Man made disaster:**

- * War & Terrorist activity
- * Train & other vehicular accidents
- * Chemical & biological disaster
- * Nuclear disaster

When disaster occurs?

◆ **Non-predictable:**

- * Natural (earthquake, tsunami, cloud blast, wild fire etc.)
- * Man-made (terrorist act, train & vehicular accidents, industrial catastrophe)

◆ **Predictable (sometimes):**

- * Natural (typhoon, volcano, diseases etc)
- * Man-made (war)





What happens?

- ◆ Majority disasters comes out of the blue.
- ◆ Sudden disruption of communication channels like telephone, mobile, TV etc. (over use, targeted attack, power)
- ◆ Sudden disruption of transportation: (panic, mass movement, road network)



How do we respond?

- ◆ Initial period of shock, information collection
- ◆ District Magistrate (DM) takes over charge of rescue & rehabilitation
- ◆ DM requisition help of medical, police, army etc. as required (specific protocol)
- ◆ All state Govt. established 'disaster management cell' for emergencies




Response from blood bankers (1)

- ◆ Immediately take stock situation at BB.
- ◆ BB staff should be on emergency alert & plan to run the BB 24 hours in full strength.
- ◆ Communicate with other blood banks for coordination, if required.




Response from blood bankers (2)

- ◆ Contact DM or other civil authority (through Med Supt./ Director) & assure about preparedness at BB.
- ◆ Contact Hosp. authority where victims are transferred, contact hosp BB & transfer blood/ materials/ manpower, if required.



Response from blood bankers (3) (in hosp. based BB)

- ◆ All hosp. must have emergency protocol.
- ◆ Chaos should be controlled.
- ◆ Unconscious patients should be identified as 'unknown 1,2,3' etc. by wrist band.



Response from blood bankers (4) (in hosp. based BB)

- ◆ Blood samples should be immediately collected (care for mis-identification).
- ◆ Senior staff may go to emergency to get request and identified samples.
- ◆ Coordination between emergency and BB staff to get blood ready.



Supply of Blood

- ◆ “Supply maximum units in shortest time”.
- ◆ Life saving/ no time: ‘O’ neg. (+ve)
- ◆ Immediate/ 5 min: Group specific
- ◆ Urgent/ 10 min: Immediate spin technique
- ◆ Dire emergency: first few units un X-match
IST routine X-match (units to be X-
matched later).
- ◆ Use of ‘AB’ plasma as vol. expander.
- ◆ Massive transfusion: FFP (after 4-6 units);
platelet & cryoppt. (for fibrinogen), if
required

Public response & blood donation

- ◆ Public always response to tragedy by donating blood to show solidarity
- ◆ Role of mass media (TV, radio, civil authr.)
- ◆ Huge rush of donor- call for help- involve volunteers from social organizations
- ◆ Maintain discipline, don't overcrowd, don't compromise with quality in blood collection





Anticipated disaster

- ◆ Flood & subsequent outbreak of dengue, leptospirosis, malaria etc.
- ◆ *Shamefully* every year; failure of civil authority to prevent.
- ◆ *Mumbai flood 2005*, serious shortage of platelet & flown from Ahmedabad, Chennai, Bangalore, Nagpur, Nasik etc.



Role of professional bodies

- ◆ Role to play by ISBTI, IMA, IS of Pediatric/ Surgeon etc.
- ◆ Should have active state chapters
- ◆ Proactive actions:
 - * Be a part of local disaster management team (under DM)
 - * Coordinate with NGO & other Prof. bodies
 - * For public: Involve NGO, Ad, public CME
 - * Interdisciplinary CME & individual roles.

Ultimate aim

Prevent minimum (or no loss) of precious human life with prompt and professional approach to manage disaster.





Thank you

