

Safe Blood: Challenge and Opportunities

Dr Syed Abdul Mujeeb
Blood Bank,
Jinnah Postgraduate Medical Center,
Karachi

What is safe blood?

- A safe blood is a blood that
 - Does not harm the donor
 - Does not spread the disease
 - Has no or a minimum adverse effect but provides maximum benefits to the recipients
-

Safe blood: Do not harm the donor

- Sixty six percent blood banks were lacking to select healthy BD because either of following equipments were missing
 - HB meter
 - Weighing machine
 - Thermometer
 - Stethoscope
 - BP apparatus
-

Safe Blood –Do not spread the disease

Patients	Hepatitis B	Hepatitis C	HIV
Thalassaemia major pt.	22% Mujeeb etal.JPMA 1996	51% Mujeeb etal. Tropical doctor.1997	0% Mujeeb etal.unpublished study
Hemodialysed pt.	27% Mujeeb etal.JPMA.1994	46% Mujeeb etal. JPMA.1994	0% Mujeeb etal. unpublished

Safe blood- Do not spread the disease.

Infections n= 21125	Prevalence	95% confidence interval
HCV	3.3%(688)	3%-3.5%
HBV	3.3%(687)	3%-3.5%
HIV	0.02%(6)	0.01%- 0.06%

Safe Blood: not to spread the disease (SBSM-sindh).

- ❑ A total of 74% blood banks were lacking either of five screening markers: HIV, HBsAg, HCV, malaria and syphilis.
 - ❑ A total of 46% blood banks were lacking either of HIV, HBV, and HCV screening kits.
-

Safe Blood: Do not spread the disease (SBSM-Sindh).

- ❑ A total of 86% blood bank reported draining the infected blood in the common sewerage line and discarding the empty bag at community waste site.
 - ❑ A total of 11% facilities were bleeding paid donors in their facilities.
-

Safe Blood: Do not have any adverse effect (SBSM Study)

- ❑ None of blood bank studied have any haemovigilance system to monitor adverse effects
 - ❑ Human hand and shoppers were the most common containers used for transportation of blood.
 - ❑ 23% percent blood did not have alternate power supply.
-

Safe blood – Do not have adverse effect (SBSM-Sindh)

- ❑ In 13% facilities, house maids/ visitor of the patients were found transfusing the blood.
 - ❑ In only 2% facilities blood request record was documented.
 - ❑ No patient received any blood product in the preceding year
 - ❑ A total of 87% of requirement of blood remained un-met
-

Safe blood-Provide maximum benefits: Safe motherhood

- A total of 82% respondents were not aware of WHO' criteria of BT in anemia in the last trimester of pregnancy, mostly were prescribing at higher level of hemoglobin.
 - Thirty nine respondents were unaware of blood ordering policy in C section
-

Safe Blood – Provide maximum benefit: Safe motherhood

- Only 14% person responsible for blood transfusion services have had a maximum five days training in blood transfusion medicine.
-

Safe Blood- Provide maximum benefits: Safe Motherhood

- Thirty four blood bank did not have any blood in their inventory
 - Twenty percent of blood did not record date of collection of blood on the blood bags
 - None of blood bank recorded date of expiration on blood bags.
 - Only one blood bank did have a blood product.
-

Safe Blood: Provide maximum Benefits: Safe Motherhood

- A total of 70% blood bank lacks capacity to perform complete compatibility testing for lack of anti Human Globulin.
-

Safe Blood: Requirement of blood

Age Group	Proportion of population	Requirement of blood	Total requirement of blood
>40 years	0.19	6	1.82
< 40	0.81	1	1.30

Safe Blood: Requirement of blood

Population	Size	Requirement of blood (million)
Thalassemic children	50,000	1.2
Pregnant ladies	80,000	0.8
Others		1.2

Safe Blood- Opportunities replacement blood donors

- Seventy million of our population are in blood donating age, motivation only 5% population to donate once a year at their birth day can meet all our current blood requirements.
 - Replacement blood donors make 33% of total family blood donor population
-

Safe Blood- Pre requisites

- National Coordinated BTS
 - Collection of blood from NVBD
 - Testing of all donated blood for TTIs
 - Rational use of blood and blood products
-

Safe Blood- PSH can be a catalyst in

- ❑ developing guidelines and offering training on rational use of blood and blood product
 - ❑ developing guidelines and training on safe administration of blood and blood product
 - ❑ reviewing existing curricula at graduate, postgraduate, paramedical and nursing level and formulating appropriate recommendation in this regard
-

Safe Blood-PSH can be a catalyst to advocate:

- ❑ safe blood is government responsibility, other organizations may support government in this regard
 - ❑ to establish BTS as a separate unit in hospitals with responsibility, authority and adequate budget.
-

Safe Blood- PSH can be a catalyst in

- ❑ Developing guidelines and training technical staff on technical evaluation of screening kits
 - ❑ Advocating regulation of import of screening kits
 - ❑ Advocating for establishment of external quality assessment program and encouraging blood banks to get accredited from quality assessment programs
-

Thank You
