

TOWARDS STRENGTHENING THE NATIONAL BLOOD SERVICE TO FACILITATE THE ACHIEVEMENT OF MILLENNIUM DEVELOPMENT GOAL (MDG) 5

The need for a safe and adequate blood supply is essential. In countries with developed health care systems, blood and blood products are primarily used to support advanced medical and surgical procedures, and the treatment of patient with conditions such as haematological disorders. However, the pattern of blood usage is different in countries where diagnostic facilities and treatment options are more limited, with a **greater proportion of transfusions being prescribed for the treatment of complications during pregnancy and childbirth and severe anaemia in children.**

The achievement of four (4) of the health-related MDGs (**MDG 4 - Reduce Child Mortality; MDG 5 - Improve Maternal Health; MDG 6 - Combat HIV/AIDS, Malaria and other diseases and MDG 8 - Create a global partnership for development**) can be facilitated by efforts to attain universal access to safe and adequate blood.

The United Nations target for MDG 5 - Improving Maternal Health is to; i. Reduce by three quarters, between 1990 and 2015, the Maternal Mortality Ratio (MMR), and ii. Achieve by 2015, universal access to reproductive health.

The Maternal Mortality Ratio (MMR) estimate for Ghana is quoted as a range from 214/100,000 -740/100,000 live births (GDHS, 2003, UNICEF/WHO).

The **Institutional MMR for Korle Bu Teaching Hospital, the premier teaching hospital and referral centre is however higher. In 2005 there were 103 maternal deaths and MMR was 951 / 100,000 live births whilst in 2006, there were 56 maternal deaths and MMR was 882 /100,000 live births. Haemorrhage was responsible for 27.2% of the deaths in 2005 and 23.2% of the deaths in 2006 respectively.**

For every maternal death, there are up to 30 severe complications with **hemorrhage and hypertension topping the list of causes of morbidity and mortality.** There is a very high risk to women even in urban settings with relative access to health care.

The availability and accessibility of safe, adequate and efficacious blood and blood products for the management support for all such patients in both urban and rural setting is critical. Bleeding in all forms of severe obstetric haemorrhage irrespective of the cause of blood loss is often sudden, unpredictable and profuse with rapid patient deterioration. Adequate blood products must therefore be readily available and accessible to avert any untoward situation.

In addition to the comprehensive management provided by the Obstetric Teams to a patient with severe obstetric haemorrhage, the following important general considerations are absolutely essential and must be adhered to:

- A protocol for managing obstetric haemorrhage should be available, and this should be well known by every member of the team should be in the form of posters at all emergency points. **There must be absolute team work!**
- Rapid and resolute action is paramount. Delays in achieving haemostatis results in terminal coagulopathy and later Disseminated Intra-vascular Coagulation (DIC) from prolonged shock. Surgery may then be too late at this stage.

- There should be prompt and good communication between the clinical specialties, diagnostic laboratory, blood bank staff and the local blood centre.
- There should be early consultation with Anaesthetic, Haematology and Surgical colleagues where applicable.
- Expert advice should be sought from colleague Haematologist where available for appropriate investigations, interpretation and optimum corrective therapy.
- A member of the team should be selected to act as the coordinator for organization, liaison, communication and documentation.
- Identify predisposing factors for early intervention and take preventive and prompt measures to decrease massive blood loss with the resultant need for massive transfusion.

The Role of the Blood Transfusion Services

The National Blood Service is currently being positioned to effectively ensure access to safe, adequate efficacious blood and blood products to support the haemotherapy requirements of all patients in hospitals throughout the country. Some key interventions being worked on to facilitate the achievement of MDG 5 include:

- i. Putting in place adequate strategies to ensure the collection of all donated blood from voluntary non-remunerated repeat blood donors (VNRRBD) to meet blood needs of all patients requiring haemotherapy and phase out the existing family replacement system. VNRRBD are the most reliable source of a safe and adequate blood supply. In addition, the blood needs of the country can be effectively planned to ensure adequacy. **All developed countries with significantly reduced MMR invariably have a 100% VNRRBD system.**
- ii. Process almost all donated blood to ensure adequate blood components i.e. Concentrated Red Cells, Fresh Frozen Plasma, Cryoprecipitate, and Platelet Concentrates to support appropriate management.
- iii. Training of all prescribers and users to ensure the judicious use of blood and blood components.
- iv. Training of blood bank laboratory staff in safe blood bank procedures as well as education on obstetric haemorrhage and the urgency of the need for blood and blood components for its management.
- v. Ensure accessibility of blood and blood products by facilitating the establishment of blood bank laboratories at the site of treatment (adequate staff, space, blood bank fridges, freezers, other equipments).
- vi. Spearhead and encourage formation of Hospital Transfusion Committees to provide the forum on which a rapid communication cascade can be agreed and massive transfusion episodes reviewed.
- vii. Co-ordinate, monitor and support Blood Centres and Blood Banks throughout the country.