

Factsheet on Malawi's blood services: 2016

In 2015, an estimated 303,000 women died worldwide from complications related to pregnancy and childbirth¹. Around two-thirds of these maternal deaths (66%) occurred in sub-Saharan Africa¹, with severe bleeding as the leading direct cause accounting for 24.5% of maternal deaths in this region². Out of all these maternal deaths from severe bleeding in sub-Saharan Africa, an estimated 26% are directly related to a lack of an emergency supply of blood³.

Key interventions to reduce maternal deaths from severe bleeding are skilled birth attendance, which includes the enabling environment to provide skilled care (e.g. availability of all essential drugs, supplies and equipment) and ensuring the availability of quality emergency obstetric care^{3,4}. Blood is needed for caesarean sections and blood transfusions, which are two essential components of comprehensive emergency obstetric care⁵.

Women who haemorrhage while pregnant or around the time of delivery are at high risk of dying because once bleeding has started death can occur in around two hours⁶.

Therefore, among other strategies to prevent maternal deaths from haemorrhage, it is crucial for women to have rapid access to adequate, safe, and affordable blood for transfusion³. Despite considerable progress made in recent years, a survey by the World Health Organization (WHO) shows that the African region has yet to meet the required need for blood and blood products⁷.

The World Health Organization's integrated strategy for safe and effective use of blood includes⁸:

- @ Establishment of a centralised, nationally-coordinated blood transfusion service
- @ Collection of blood only from voluntary unpaid blood donors from low-risk populations
- @ Testing of all donated blood, including for transfusion transmissible infections
- @ Reduction in needless transfusions through the effective clinical use of blood

Go to www.who.int/bloodsafety for more on WHO's recommendations on blood safety, developing a national blood system, and the clinical use of blood



- @ Just over **one third** of blood needed in Malawi is being collected^{9,10,11,a}
- @ Help make that 100% and save the lives of mothers and babies **Donate blood today!**
- @ To find out more about the blood services in Malawi and where you can donate blood, please visit www.mbtsmalawi.com
- @ For more information on why you should be a voluntary donor, please visit www.mamaye.org.mw

**AT LEAST
10 WHOLE BLOOD UNITS
PER 1,000 POPULATION
ARE NEEDED ANNUALLY**



**3.4 BLOOD UNITS PER 1,000 POPULATION
WERE COLLECTED IN MALAWI IN 2015
GIVE BLOOD TO SAVE A MAMA AND A BABY!**

* TO DOWNLOAD SOURCES VISIT: WWW.MAMAYE.ORG/REFERENCES



Achievements in blood donation and availability:

- Ⓒ Malawi established the Malawi Blood Transfusion Service (MBTS) in 2003^{12,13}, but started blood collections in 2004.
- Ⓒ A National Blood Policy was developed in 2010¹¹ and the Guidelines for Safe Blood Transfusion were updated in 2012¹⁴.
- Ⓒ A baseline survey was conducted in 2008, filling critical evidence gaps in the availability and safety of blood in Malawi¹⁵.
- Ⓒ Findings identified challenges regarding availability of blood, but also showed encouraging results relating to blood transfusion, including that 100% of samples were screened for HIV and 98% of laboratories were staffed by qualified staff¹⁵.
- Ⓒ An External Quality Assessment Scheme has been implemented with the assistance of the National Reference Laboratories in Melbourne, Australia¹⁶. MBTS have performed well in these assessments¹⁷.
- Ⓒ Club 25 was established in 2004. This is a youth-targeted club that encourages young people to commit to donating blood at least 25 times, as well as promote safe life-styles to their peers and encourage others to donate blood. There are more than 500 active members in Malawi^{18,19}.
- Ⓒ Malawi successfully increased the units of blood collected from 49,698 in 2011²⁰ to 50,729 in 2014¹¹.

Continued challenges for availability of blood in Malawi:

- Ⓒ Malawi successfully increased the units of blood collected in 2014¹¹. However, the population also increased so the percentage of blood collected decreased slightly in 2014 as compared to 2011^{9,10,11,15,a}
- Ⓒ Total blood collected is not enough to meet the total need in Malawi^{9,10,11,a}
- Ⓒ Several districts reported shortages of blood in 2013^{21,22}.
- Ⓒ There is an over-reliance on young blood donors¹⁷
- Ⓒ Malawi lacks a robust policy to ensure sustainable availability of low-risk blood donors and increase access to safe blood products²².
- Ⓒ Beliefs held by potential donors can inhibit them from donating blood²³.
- Ⓒ Problems with the Data Management System²³.
- Ⓒ Lack of up-to-date and publicly available information on:
 - Ⓒ The amount of blood units required to meet the total need
 - Ⓒ The amount of blood units used, including for mothers and babies
 - Ⓒ The distribution of blood to meet local need
 - Ⓒ The donor population, including break-down of voluntary unpaid, paid, and family-replacement donors
 - Ⓒ Blood safety and screening

Organisation of the Blood Transfusion Services in Malawi

Established national policy	Yes ¹²
Established guidelines on blood donation	Yes ¹⁴
Blood system: centralised or decentralised	Centralised and decentralised: Blood collection, donor mobilisation and blood distribution are all decentralised. Blood testing is centralised for quality control purposes ^{11,13} .

Blood supply

Total population of Malawi	17.2 million (mid 2015) ¹⁰
Estimated blood needed	172, 000 units (2015) ^{9,10,a}
Blood units collected	53.000 units (1st July 2015 to 31st May 2016) ¹¹
Estimated blood needed per 1,000 population	10 units per 1,000 population (2014) ⁹
Blood units collected per 1,000 population	3.4 units per 1,000 population(2015) ^{9,10,11, a}

Donor population

Voluntary unpaid donors <i>WHO recommendation: 100%</i>	65% (2014) ²⁴ . The national blood transfusion service collects blood from voluntary non-remunerated blood donors.
Family replacement donors	35% (2014) ²⁴ . These donors give blood to hospitals to cover gaps in the supply from the national blood transfusion service.

Blood use towards maternal, newborn and child health

% of blood demanded for paediatric and maternal patients	Up-to-date figures are required. Information from 2007 suggests ¹⁵ : Ⓒ 55% of blood demanded was for paediatric patients Ⓒ 11% of blood demanded was for maternal patients
--	---

Blood Safety and Screening

Blood tested for HIV	Yes (MBTS & Hospitals) ¹⁵
Blood tested for Hepatitis B virus	Yes (MBTS & Hospitals) ¹⁵
Blood tested for syphilis	Yes (MBTS & Hospitals) ¹⁵
Blood tested for Hepatitis C	Yes at MBTS, not routinely tested at hospitals (7%) ¹⁵
Blood tested for malaria	Yes at MBTS, not routinely tested at hospitals (27%) ¹⁵
Blood screened for <u>all</u> of HIV, Hepatitis B, syphilis, Hepatitis C and Malaria	Yes at MBTS, not screened in hospitals ¹⁵

Notes

^a The World Health Organization recommends that the minimum level of blood needed is 1% or 10 units per 1,000 population⁹. For 2015, the estimated population in Malawi was 17.2 million¹⁰ and an estimated 53,000 units¹¹ of blood were collected from 1st July 2015 to 31 May 2016 (11 months). To estimate an annual amount of blood collected we divided 53,000 units by 11 months: $53,000 / 11 = 4,818.18182$. Then multiplied this by 12 months = 57,818.1818. The units collected per person was therefore $57,818.1818 \text{ units} / 17,200,000 = 0.00336152$ units per person. Therefore the units collected per 1,000 people was $0.00336152 \times 1000 = 3.3615222$ units per 1,000 population (rounded to 3.4).



Acknowledgements:

MamaYe! would like to thank the Malawi Blood Transfusion Service for their support in developing this factsheet.

This factsheet was produced in June 2014 and updated in June 2016

References

1. World Health Organization, UNICEF, UNFPA, The World Bank, & the United Nations Population Division. (2015). *Trends in Maternal Mortality: 1990 – 2015. Estimates by WHO, UNICEF, UNFPA, The World Bank Group & the United Nations Population Division*. Geneva: WHO.
2. Say, L., Chou, D., Gemmill, A., Tunçalp, Ö., Moller, A.-B., Daniels, J., Metin Gülmezoglu, A., Temmerman, M., & Alkema, L. (2014). Global Causes of Maternal Deaths: A WHO Systematic Analysis. *The Lancet Global Health*, 2(6), e323 - e333.
3. Bates, I., Chapotera, G. K., McKew, S., & van den Broek, N. (2008). Maternal Mortality in sub-Saharan Africa: the contribution of ineffective blood transfusion services. *BJOG: An International Journal of Obstetrics and Gynaecology*, 115(11), 1331–9.
4. World Health Organization. (2004). *Making Pregnancy Safer: The Critical Role of the Skilled Attendant: A Joint Statement by WHO, ICM and FIGO*. Geneva: WHO.
5. World Health Organization, Averting Maternal Death & Disability, UNFPA, & UNICEF. (2009). *A Handbook on Monitoring Emergency Obstetric Care*. Geneva: WHO.
6. Family Care International Inc & Gynuity Health Projects. (2006). *Postpartum Haemorrhage: A Challenge for Safe Motherhood*. New York: Family Care International Inc & Gynuity Health Projects.
7. Tapko, J. B., Toure, B., & Sambo, L. G. (2014). Status of Blood Safety in the WHO African Region: Report of the 2010 Survey. Brazzaville: WHO Regional Office for Africa.
8. World Health Organization. (2009). *Aide-memoire: Blood Safety for National Blood Programmes*. Geneva: WHO.
9. World Health Organization. (2010). *Towards 100% Voluntary Blood Donation: A Global Framework for Action*. Geneva: WHO.
10. Population Reference Bureau (2015). *2015 World Population Data Sheet*. Washington DC: PRB. .
11. Kaombe, A. Malawi National Blood Transfusion Services, Marketing and Public Relation Manager. Personal Communication. 3 June 2016.
12. Ministry of Health [Malawi]. (2014). *The National Blood Policy*. Lilongwe: MoH.
13. Kongnyuy, E., & van den Broek, N. (2008). Availability of blood for transfusion in maternity units in Malawi. *The Internet Journal of Third World Medicine*7(1).
14. Malawi Ministry of Health. (2012). *Malawi Guidelines for Safe Blood Transfusion*. Lilongwe: MoH.
15. M'baya, B., Mfunne, T., Ndhlovu, D., Mphalalo, A., Magombo, E., Ndileke, M., Mtambo, P., Banda, G., Palapandu, J., Lichapa, B., Sankhani, C., Nkhoma, A., & Kalombola, S. (2009). *Report of the Situational Analysis of Blood Safety in Malawi 2007*. Blantyre, Malawi: Malawi Blood Transfusion Service.
16. Emmanuel, J. (2006). Developing a blood donor programme: Malawi blood transfusion service (MBTS). *ISBT Science Series*, 1, 46–51.
17. Kaombe, A. T. (2013). Presentation: Malawi Blood Transfusion Services Background and Operations to Date. In *Evidence for Action National Blood Transfusion Service Regional Exchange and Learning Visit: September 2013*. Dar es Salaam: Malawi Blood Transfusion Services.
18. Malawi Blood Transfusion Service. *About Club 25*. Retrieved March 29, 2014, from [http://www.mbtsmalawi.com/club 25.html](http://www.mbtsmalawi.com/club%2025.html)
19. Kaombe, A. Malawi Blood Transfusion Services, Marketing and Public Relations Manager. Personal communication. 16 September 2013
20. Reddy, R. (2012). Blood donation patterns and challenges in Southern Africa. *ISBT Science Series*, 7(1), 296–9.
21. Kanyemba, N. (2013, November 13). Malawi: Blood Shortage Hits Ntcheu District Health Office. *Malawi News Agency*. Retrieved June 10, 2014, from <http://allafrica.com/stories/201311140075.html>
22. Pemba, P. (2014, January 4). Blood Shortages Fuel Maternal Deaths - Parent and Child Health Initiative. *The Nation*. Retrieved 10 June, 2014, from <http://mw.nation.com/blood-shortages-fuel-maternal-deaths-pachi/>
23. Bugge, H. F., Karlsen, N. C. T., Oydna, E., Rake, M. M., Wexels, N., Bendabenda, J., Roald, B., Heier, H.E., Chisuwo L., & Jourdan, P.M. (2013). A study of blood transfusion services at a district hospital in Malawi. *Vox Sanguinis*, 104, 37–45.
24. Kaombe, A. Malawi National Blood Transfusion Services, Marketing and Public Relation Manager. Personal Communication. 27 May 2015.