



## Challenges facing Uganda Blood Transfusion Services (UBTS)

### Overview

The mission of Uganda Blood Transfusion Services (UBTS) is to provide sufficient and efficacious blood, and blood components through voluntary donations for appropriate use in health care service delivery. The UBTS` main objective is focusing on increasing annual blood collection necessary to meet the transfusion needs for all patients in the country who need it. This is to be achieved through increased advocacy and mobilization for blood donation, strengthened strategic collaboration with the Uganda Red Cross Society and improved care and retention of safe blood (*Ministry of Health, FY2016/17*).

Despite the increase in collection, the UBTS still falls short of official hospital blood unit demands. According to the World Health Organisation (WHO), a country is supposed to collect units of blood equivalent to 1% of the total population. Thus in Uganda, 350,000 units of blood per Financial Year (FY) should be collected.

This Briefing Paper examines the extent and the key challenges faced by UBTS. The information used is based on field findings of the Budget Monitoring and Accountability Unit (BMAU) and other relevant literature.

### Key Issues

- Blood shortages in most health facilities due to inadequate donations.
- Limited budget for blood processing.
- Staffing gap at the regional blood banks and at UBTS headquarters. A total of 390 posts were approved, however, 231 are filled and 159 vacant.
- Limited infrastructure for blood collection and processing. Performance is affected by power outages and limited storage equipment.

### Introduction

The UBTS was established as an autonomous institute in 1989 and commissioned in January 2003. It operates within the framework of the National Health Policy (NHPI) and the Health Sector Development Plan (HSDP). The headquarters at Nakasero Blood Bank act as a reference centre for the regional blood banks and other public and private hospitals. Blood is collected from healthy volunteer donors with least risk for Transfusion Transmissible Infections (TTIs).

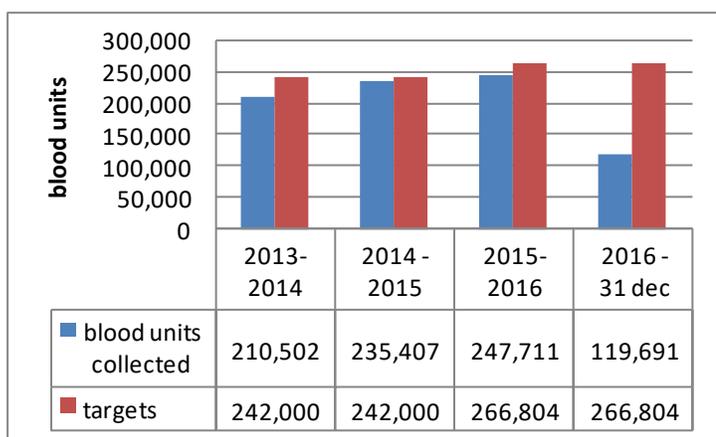
The UBTS has grown from supplying blood in Central Uganda within a radius of 100km to a network of seven regional blood banks namely; Arua, FortPortal, Mbarara, Mbale, Gulu, Kitovu



and Nakasero, and six collection centres; Hoima, Jinja, Kabale, Rukungiri, Lira and Soroti.

The core aim of UBTS is to collect and provide safe blood and blood components in the prevention and treatment of Malaria, Anemia; morbidity and mortality reduction; prevention of HIV/AIDS and other TTIs, promotion of Maternal and Child Health; and provision of blood for victims of accidents and emergencies. The UBTS has a target of offering Blood Transfusion Services at all HCIVs, however, blood collection has not always met the targets as shown in figure 1.

**Figure 1: Blood collected versus targets (Financial Year 2013/14 to 31<sup>st</sup> December, 2016)**



Source: UBTS

Funding for the UBTS improved between FY 2014/15 and FY2015/16 (Table 1), however, currently the Government budget is highly constrained following the closure of the Presidents Emergency Program for AIDS Relief (PEPFAR) on 3<sup>rd</sup> March, 2016. The Government has provided funds for salaries for PEPFAR staff but no additional funds for blood collection and field allowances have been provided to fill the funding-

gap. PEPFAR closure left a funding-gap of Ug shs 5.4billion.

**Table 1: Financial performance of UBTS from FY2014/15 to 31<sup>st</sup> December, 2016**

Financial Year	Approved Budget (billion)	Budget Release (billion)	Expenditure (billion)
2016/17(Half year)	8.934	5,597	4.135
2015/16	8.703	8.811	8.673
2014/15	6.807	6.090	5.655

Source: Approved Budget Estimates

### Challenges facing UBTS

#### 1) Blood shortages in most health centers

UBTS FortPortal achieved 70% of the targeted collection in Q1 and Q2. Blood shortages were also registered in Mityana General Hospital despite the fact that it was a newly rehabilitated and renovated hospital which has attracted a great number of patients. The number of deliveries increased from 500 to 600 per month by 31<sup>st</sup> December, 2016 with an increase in transfusions. Unfortunately, the blood supplied was not enough to cater for the increase.

The overall blood shortage was occasioned by the long school holidays. Students while in school, contribute over 70% of the blood collected as their blood is usually healthier and safer.

#### 2) Limited budget for blood processing

The unit cost of processing blood is USD 29 translating into Ug shs 98,600 per unit. To that effect, Ug shs 27billion is required to process at least 280,000 units of blood in FY2016/17. The



annual allocation of Ug shs 7.8billion for FY 2016/17 to National Medical Stores (NMS is in-charge of procuring blood kits and reagents for UBTS) from UBTS was far below the required funding. By February 2017, UBTS had registered stock outs of blood screening supplies and NMS could not supply as their budget had been exhausted.

### 3) Staffing Gaps

Another challenge is human resource shortages. The UBTS has 390 approved vacancies of which 231 were filled and 159 vacant by 31<sup>st</sup> December, 2016/17. The staffing levels were at 60% by 2016/17 with most critical cadres missing (Table 2). For example there are seven vacant posts for Principal Blood Donor Recruiters which has partially led to UBTS's failure to meet the required collection targets. In addition, Fort Portal regional blood bank also had a challenge of understaffing due to failure to replace retired staff.

**Table 2: Staffing status of UBTS by 31<sup>st</sup> December, 2016**

Post Title	Approved post	Filled post	Vacant post
Principal Medical Officer	6	5	1
Senior Principal Laboratory Technologist	1	0	1
Principal Systems Administrator	1	0	1
Principal Laboratory Technician	1	0	1
Senior Blood Donor Recruiter	7	0	7
Senior Nursing Officer	23	16	7
Senior laboratory	8	5	3

Post Title	Approved post	Filled post	Vacant post
Technologist			
Senior Laboratory Technician	8	6	2
Blood Donor Recruiter	16	14	2
Systems Administrator/ Data Officer	7	1	6
Stores Officer	1	0	1
Biomedical Engineer	1	0	1
Engineering Assistant	1	0	1
Laboratory Technologist	14	11	3
Laboratory Technician	14	12	2
Nursing Officer	37	15	22
Medical Records Assistant	16	9	7
Enrolled Nurse	37	28	9
Laboratory Assistant	28	23	5

*Source: UBTS*

### 4) Inadequate infrastructure for collection and distribution of blood

- I. **Blood transfusion infrastructure** (buildings and power supplies like generators) is still inadequate with some of the centres operating from a few borrowed rooms within the Regional Referral Hospitals (RRHs). The UBTS Arua operates within Arua Regional Referral Hospital. Other inadequately furnished smaller centres were in Hoima, Kabale, Jinja, Soroti and Masaka. These currently collect and distribute blood but require more appropriate structures.



- II. ***Lack of proper storage and power outages for blood collected at the regional centers;*** some centers lack enough fridges to store blood. For example Mbarara RRH reported a poor blood storage system and lack of reagents making it difficult to provide transfusion services to patients. The West Nile region also had power shortages because most rivers had dried up due to the weather changes.
- III. ***Limited blood banks, regional collection centres and transportation means*** making it difficult for some transfusing entities to undertake timely blood transfusions. Mubende and Hoima RRHs lack regional blood banks; their collection center is Nakasero Blood Bank which is very costly in terms of transportation. FortPortal UBTS also faces transportation inadequacy and operates mainly in FortPortal town, whereas they could provide outreach services to Kibaale, Kagadi, Bwere and other areas.

3. The UBTS should plan for hi-tech equipment and standby generators at every blood bank to avoid power shortages which destroy already processed blood.
4. The UBTS and Health Service Commission should fill the vacant positions.

## References

- Ministry of Finance, Planning and Economic Development (MFPED) 2017. Semi-Annual Budget Monitoring Report FY 2016/17
- Uganda Blood Transfusion Services (UBTS)
- MFPED Approval Estimates of Revenue and Expenditure (Recurrent and Development) 2015, 2016, 2017
- Ministerial Policy Statement Ministry of Health FY2016/17
- MFPED, 2015 Public Investment Plan 2015/2016-2016/2017

## Conclusion

There has been an increase in blood collection by the UBTS from 187,000 units in 2010 to 266,800 units in 2016 but this is still inadequate. The blood shortages are largely due to funding gaps, inadequate human resources and infrastructure. These constraints are not insurmountable.

## Recommendations

1. The Ministry of Health (MoH) should work with UBTS to establish blood banks and collection centers at every RRH and General Hospital.
2. The MoH should reprioritize blood transfusion services and provide more funding to UBTS.

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