

Transfusion Safety and the Communication Challenge of Blood Supply at the Yaoundé Military Hospital

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ABSTRACT

Background: Cameroon is facing security challenges that are significantly impacting the demand for blood and blood products in its health facilities, including military health facilities. The Yaounde Military Hospital (HMRI) Blood Bank, with its human, material and managerial potential, and its location, was the framework for analysing the communicational challenges of blood supply.

Methodology: A qualitative-quantitative situation analysis aimed at describing the blood bank's communication system at the military hospital and its deployment in 2017 was carried out. The adapted WHO GDBS (Global Database on Blood Safety) 2014 collection and analysis tool was used to exploit the bank's staff and their routine documents.

Results: The Bank registered 1101 candidates in the range [18-27]. The release of labile blood products (LBPs) was subject to an emergency caution and the product was served immediately. There was no communications programme focused on defence institutions, colleges and neighbouring communities. The already commendable work of a small but high-quality staff needs to be further promoted and supported.

Conclusion: The Region 1 Military Hospital (HMRI) has the potential to mobilise a large number of both donors and policy-makers, and it would be worthwhile setting up and supporting communication strategies to bring these forces together in the interests of an efficient blood supply.

Key words: blood, communication, supply, HMRI

I. INTRODUCTION

Blood is a rare and precious resource that comes from the generosity of people. Mainly used

in the management of chronic diseases, complications related to various conditions and trauma in peacetime, the demand is exacerbated during periods of crisis, as is the case currently in military regions [2]. In Cameroon, 400,000 bags are needed, a quarter of which is collected with difficulty, mainly from family and replacement donors (Ref). The HMRI is not only the military referral centre for the Yaounde Military Hospital, but also acts as the Cameroon Armed Forces Teaching Hospital, i.e. the referral centre for all the other regional military hospitals and the last line of defence before any decision is taken to evacuate patients abroad. It is located in a cosmopolitan area with many universities, higher training institutions, administrative institutions and garrisons. A previous study in its bank reported the presence of human, managerial and material potential, which should, however, be better organised [3]. As a result of this process of optimising the blood supply given the ever-increasing demand in both emergency and routine care, it is essential to ensure that the resources are in place to guarantee a regular flow of donors, volunteers and loyal donors, as well as a safe, clinically effective and efficient practice. The aim of this study was to determine how the HMRI blood bank's communication is geared to its optimal deployment.

II. METHODOLOGY

The study began by obtaining administrative, institutional and ethical clearances and authorisations. A mixed situation analysis (qualitative-quantitative) for the purpose of describing the blood bank's communication system, from January to December 2017, with all stakeholders in the transfusion chain who agreed to take part in the study, as well as a review of the

relevant working documents. Data collection was carried out from January to June 2018 using two modified questionnaires based on the WHO model on transfusion safety GDBS 2014 [4]. These questionnaires were adapted to be applicable to the realities of the resource-limited study setting.

The data were analysed using SPSS version 18.0 software. Three key groups were identified and analysed: prospective donors (PDs), bank staff (BS) and their routine, which took into account current documents and procedures, and technical and financial partners (TFPs).

III. RESULTS

HMRI registered 1888 candidates, with 1101 aged [18-27] and 20% female. The blood products available were whole blood, packed red blood cells (PRBC) and fresh frozen plasma. A deposit of twenty thousand (20,000) CFA francs plus two donors were required, and the requested product was routinely served two to three quarters of an hour later. In the event of an emergency, the

two donors were no longer required and the product was served immediately. The implementation of blood transfusion policy guidelines and the management of candidates for donation by bank staff were effective, while messages and good practice were much less amplified and reinforced. Information on the bank's activities was relatively readily available to prospective donors, staff from other HMRI services, Ministry of Defence officials and the blood transfusion service (BTS). It covered the type of labile blood products (LBPs) that can be donated and/or obtained from the bank, the products that are available, expired and destroyed, as well as their causes, the no-cost and military coverage, and the banners used during campaigns and World Blood Donor Day.

However, there was no blood bank management software and archiving was manual. There was also no communication plan for the blood bank's activities, and no marketing plan for military facilities and the nearby communities, universities and higher learning institutions.

Not (see Table I).

Table I: Characteristics of routine shared health information.

Beneficiary	Quality	Characteristic
NBTP/MOH	√	Number and type of LBPs produced, served and destroyed
MINDEF	E	Covered by MINDEF, free of charge
Other BTCs	√	Stock levels, management of referred demands, rare groups
BDA	√	Campaign organisation, mobilisation, awareness-raising
Blood bank staff	E	LBP donations, blood bag price, conditions
Donors	√	Information, guidance and management of TTIs, modalities
Bank targets	X	Information, mobilisation, sensitisation

√= Yes ; X= no ; E= Elementary.

IV. DISCUSSION

Transfusion safety (TS) insists that a blood supply of sufficient quality and quantity must be backed up by a practical, national policy aiming to implement a donor service and a programme to raise awareness, recruit and retain donors, collect safe blood, provide information and educate the general population [5]. In Africa, as elsewhere, it is crucial to know who donates blood, for at least two reasons. Firstly, to ensure that there are sufficient reserves, which means knowing who the donors are and, even more importantly, why they donate blood. Secondly, the situation of donors largely determines the safety of transfusions, since it may favour the transmission of infections, thus guiding the messages that can be addressed to them without

ever ceasing to emphasise the fundamental human values of altruism, empathy, solidarity, generosity and compassion, the cornerstone of voluntary, regular and unpaid blood donation systems [10, 11]. The affiliation of the population to medical resources located in the same territories leads to more favourable conditions that modulate the organisation of resources according to the needs of the population and to greater territorial autonomy [7].

Blood transfusions, like any other treatment, require regular assessment of their indications, efficacy and risks, as well as techniques for sharing and promoting a culture of information. Generally, all laboratory personnel must be able to guide an LBP user, and bank

personnel in particular should have the technical competence as well as the relevant message with regard to the candidate donor, the donor or even the LBP requester. The staff of the blood bank, who are few in number but versatile and capable of transferring tasks, do not know that blood transfusion is very well regulated in Cameroon and that national training courses do exist. They are familiar with all the technical procedures and operations involved in the transfusion process, but are not interested in related activities such as communication about their activities in other services and outside the bank, the exploitation of their research findings, and the possibility of academic recognition of their acquired experience. They do not even know the approximate cost of running a blood bank or a mobile blood drive. The financial management of the service, the requirements of the blood transfusion system (BTS) and the latest national and regional progress made in blood transfusion should be an integral part of the bank's capacity-building and monitoring programme, in addition to postgraduate courses (PGC) and workshops of the same nature that have already been initiated. The notion of the cost of a bag can be counterproductive to the mobilisation of volunteer donors, who may wonder about the "sale" of blood donated free of charge [8]. Efforts should be made to educate potential donors so that they understand the implications and realities of blood donation and the supply chain. Although blood is a free resource, there is a cost to producing it and a cost to destroying bags that are unsuitable for consumption. The quality, accessibility and availability of inputs have an impact on the production and distribution costs of LBPs, the diversity and the quality assurance guarantee of the products delivered, as well as on delivery deadlines. Staff should also be briefed and discuss with user clinicians the proper clinical use of blood, the different blood products available, compliance with transport and storage conditions prior to transfusion, recipient monitoring, and the latest international and regional progress made in transfusion safety and haemovigilance. The phenomenon of bags expiring in a context of pronounced shortage highlights the need to disseminate information on the availability of LBPs, contact between producers (BTC) and prescribers (Doctors), and within producing health facilities (HFs) with those that do not have equipment for preparing LBPs. It is important that orders are redirected or modified, and that other blood transfusion centres (BTCs) receive

information on this matter emphasising the production and storage capacity of this blood bank, arguments that are also of interest to clinicians who carry out scheduled surgery and autotransfusion.

The procedures used to manage candidates for donation, the psychosocial support and care given to candidates who have tested positive for TTIs, and the dispensing of bags are also important aspects of the information given to applicants for blood and LBPs as is the care given to candidates who have tested positive for TTIs, logistical and military support activities and free services for the needy.

Communication on the bank's results is crucial, as performance assessed according to a logical and reproducible scheme is sought out, supported and encouraged by financial and technical partners (TFPs), who can then take full or partial responsibility for the training, mentoring and on-the-job professional development of staff in services related to blood transfusion activities, and for the provision of laboratory equipment, BT equipment, infrastructure, etc. The action of TFPs appears to be transversal between the bank's human resources and the candidates for donation. There are many of them, and they provide support in many different ways, in volumes ranging from flyers to bank equipment. Funding depends on both partner support and government commitment [9]. The publication and sharing of its activities encourages and attracts partners, as far as MINDEF and its facilities are concerned the right information, the right gesture as far as blood transfusion is concerned and the right attitude in their context of defence, emergency and acquisition of stock to face all their possible imperatives (military camps, medical centres, infirmaries, training centres). Messages promoting best practice to men need to be amplified.

The desire to raise awareness among the men present in the facilities is commendable, but should be subject to a rigorous approach that respects the rules (authorities and the principle of equity). In practical terms, as far as military facilities are concerned, it would be necessary to obtain the approval of the authorities to advocate the setting up of a specific information, education and communication programme on blood donation and transfusion geared towards men in uniform, and its implications in their context, taking into account the framework of their missions. The aim is to raise awareness and bring about a change in behaviour, hoping to build up a military base of

safe, informed and operational volunteer blood donors.

V. CONCLUSION

At various levels and through various stakeholders, the communication levers on which to act to improve the supply of safe and secure blood to the HMRI are known, ranging from the potential to mobilise donors and develop their loyalty, to resource capacity. A methodical approach with appropriate targets and messages is needed here, as a response strategy, to intensify and accelerate efforts to provide blood in compliance with transfusion safety standards.

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