



# Safe Blood for Africa™ Foundation

## Cameroon Office

Physical address: 7121, Carrefour TKC, Yaoundé,

Phone: +237 693060083

www.safebloodforafrica.org

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## 2024 ACTIVITIES

### IMPLEMENTATION PROJECTS

#### BOOK ON TRANSFUSION MEDICINE IN RESOURCES LIMITED SETTINGS

The SBFA has contributed to the design and the future publication (in 2025) of the new version of the **Practical Hand book of Blood Transfusion in Resource-limited settings**.

The book entitled “Practical Hand book of Blood Transfusion in Resource-limited settings” was published for the first time in 2013 by a mixed team of experts from French-speaking Africa and European experts (French and Belgian). It was financed by the Belgian Red Cross. The experts noted that there does not exist, in the French language, a practical field manual, adapted to the daily realities of personnel working in blood transfusion in Africa, and providing concrete and effective solutions to daily difficulties, while respecting quality requirements. Existing books meeting these criteria are all in English.

The book was designed to meet the following needs:

- Focus on what differentiates from usual practices, in a broad geographical perspective.
- Frequently use illustrations (drawings, diagrams, images), tables and figures to better capture information
- Ensure content is evidence-based, concise and focused.
- Have evidence-based discussions
- Keep the language simple
- Cite concepts and evidence and avoid paraphrasing (too many comments on the concept)

The emphasis was placed on the specificities of regions with limited resources. The book was published in more than 500 copies with a funding provided by the Belgian Red Cross, distributed free of charge. It was very appreciated by users in French-speaking Africa. (See the book cover at the end of this note).

During discussions with authors and users, we got their suggestions for improving the book.

#### **Objectives**

The objectives of this reissue are:

- Update practical information with regard to new recommendations on blood transfusion
- Add information on new, recently proven techniques
- Complete the chapters that were omitted in the previous version to reflect all sections of the transfusion chain
- Better illustrate the chapters with diagrams and appendices
- Involve mainly Africans in the writing of their practical manual
- Distribute the book to more African practitioners

### **Approach**

We plan to prepare a writing plan that will detail all the necessary chapters and sections of the book. The plan will indicate word count, potential authors, and writing style. The authors will be provided with the chapter and section to be written as well as writing guidelines/model. Each chapter/section will have at least two authors, including a lead author who will coordinate the writing, as chapter/section editor

### **The authors**

The authors will be selected from among French-speaking experts, directors of national transfusion centers in Africa and French and Belgian experts with good knowledge of the issue of transfusion in Africa. They will then be requested. The seven authors who participated in the first edition and 5 other African authors have already agreed to participate in the writing of the book.

Prof Claude Tayou will be, as for the first version, the chief editor (see attached CV).

Prof Claude Tayou is a doctor, biologist and expert in blood transfusion. He is the Head of the Hematology and Transfusion Department at Yaoundé University Hospital. He is the Director of Accreditation at the African Society of Transfusion, expert from WHO Geneva and member of the board of directors of the Société Francophone de Transfusion sanguine.

We will contact a publishing house for proofreading, corrections and layout and printing.

## Book structure

<b>Chapitres</b>
Foreword
Abbreviation
Glossary
General Introduction
Section 1 : Organisation and Management of blood services in resource-limited settings
Section 2 : Blood donor and blood donation
Section 3 : Blood collection
Section 4 : Transportation and Storage
Section 5 : Blood Components production
Section 6 : Blood donation testing
Section 7 : Compatibility testing
Section 8 : Distribution of blood components
Section 9 : Quality control
Section 10 : Blood Transfusion
Section 11: Hemovigilance
Section 12 : Quality management system
References
Annexes
Samples of organization, process and procedures

## For each section

Section	Content	Number of words	Number of pages
<b>Introduction</b>	Set the context and objectives, indicate the importance of the subject in transfusion safety, supply and/or quality	<b>300-600</b>	<b>1-2</b>
<b>Principle</b>	Describe the principle of the strategy, technique or practice, Explain the physiological, technological, organizational or structural mechanism of the technique or practice	<b>300-600</b>	<b>1-2</b>
<b>Material and staff</b>	List and explain the minimum equipment needed and the type of personnel required, emphasizing those that are applicable in resource-limited environments, drawing on your field experience. Only accessible and proven effective material is relevant	<b>600-1200</b>	<b>2-4</b>
<b>Methods and application</b>	Describe the different approach methods for this strategy, technique or act. Prefer the one that is the most used or most relevant.	<b>900-1500</b>	<b>3-5</b>

	<p>Ensure that the proposed methods are based on evidence and successful experiences</p> <p>Present the chronological steps for each method when possible.</p> <p>Indicate the most suitable circumstances for each method (mobile collection, collection at a fixed station, hemoglobin measurement in the bag, at the donor, blood grouping at the donor, at the patient?)</p> <p>Specify the circumstances and their particularities in particular.</p> <p>Emphasize context-specific practices and what is different from standard practices</p> <p>This chapter is the place to discuss practical field situations, to discuss variations and particular requirements of methods and to detail special situations.</p>		
<b>Limitations</b> «CAUTION »	<p>Indicate for each method the disadvantages, the limits of its implementation and the precautions to take to make it efficient.</p> <p>Emphasize the limits linked to the limited-resource context</p>	<b>300-600</b>	<b>1-2</b>
<b>Key points</b>	Give 2 or 3 ultimate tips to remember for the success of this practice	<b>100</b>	<b>1/3 de page</b>
<b>References</b>	Cite some references that can be used to better understand the practical aspects of this section	<b>3-5 references</b>	

### Presentation

The book will be presented in the form of a “practical notebook” of 200 pages, in pocket format to be used at the workstation.

### Diffusion

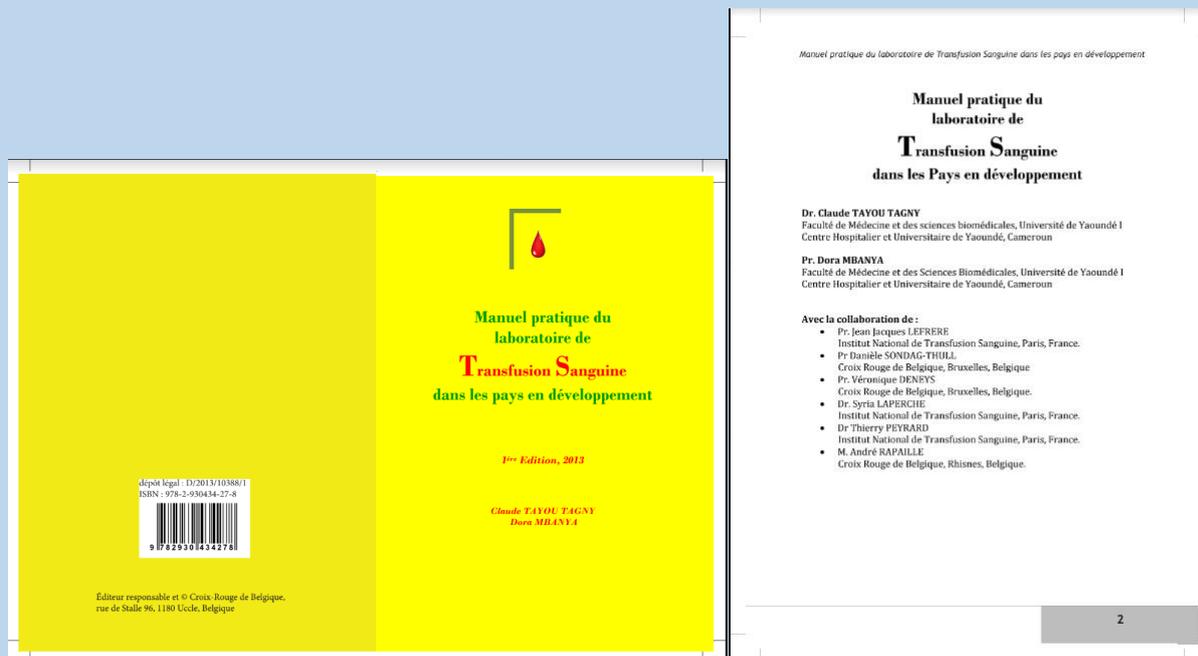
Once printed, the book will be distributed free of charge in its digital form on public sites accessible to transfusion specialists in French-speaking Africa including the Blood transfusion centers, the Francophone African Blood Transfusion Network, the Francophone Society of Blood Transfusion and other sites which will agree to distribute it.



### Funders who accepted to support the project:

Funders	Unit (Euros)	Nombre	Total (Euros)
Fonds Baele-Remion (Belgique)	-	-	To be determined
Service Francophone du Sang (Belgique)	30	200	6000
European School of Transfusion Medicine (ESTM)			To be determined

## Previous version of the book :



## TRAINING OF AFRICAN ON RESEARCH ON TRANSFUSION TRANSMISSIBLE INFECTIONS

### ( see attached document )

Transfusion safety and the prevention of viral infections remain major problems for public health in Africa. Indeed, the prevalence and incidence rates of blood-borne viruses (HIV and hepatitis B and C viruses) are significantly higher in Africa than in other parts of the world. Approaches to prevention are not well developed and limited resources prevent the adoption of long-term strategies. In addition, knowledge on the modes of transmission of these viruses remains limited, particularly in West and Central Africa.

Capacity building and especially training of staff enable blood banks and health systems to implement prevention tools, including surveillance, risk factor research, quality control and assessment of risk factors. The capacity to conduct clinical research is a fundamental element of improving blood safety. It allows trainees to develop research projects nationally and internationally, but also to use the knowledge to improve laboratory practices and better manage their blood banks or hospitals.

A clinical research course on prevention of blood-borne viral infections was provided for 12 years (from 2007 to 2018) at the Institut Pasteur in Paris in collaboration with the University of

California San Francisco and Vitalant Research Institute (UCSF/VRI) in San Francisco and the National Institute of Blood Transfusion (INTS) in Paris. After completing the training program, most trainees applied their new skills at their blood banks and hospitals to conduct locally-relevant clinical research. In addition, alumni from the course formed the Francophone Africa Transfusion Research Network to allow collaborative research across francophone Africa. The group has published more than 30 articles, with topics including: organization of blood banks, medical selection of blood donors, residual risk of HIV infection, assessment of viral screening algorithms and quality improvement (Tagny et al, 2013). Some of the best trainees also took advantage of other research training opportunities (Murphy & al, 2009, Tagny & al, 2013). These activities have also promoted a research orientation among transfusion medicine and infectious disease professionals in francophone Africa. However the Institut Pasteur course was discontinued after 2018 and there was a perceived need to offer the course closer to its African audience to satisfy the ongoing demand for research training of blood bank professionals. The first francophone course in Africa was conducted in Yaoundé, Cameroon in 2019 with a successful training of 6 international students and 15 local students. After a gap due to the COVID-19 pandemic, we have now restarted the training.