

Reviewing the Swiss Red Cross international engagement for safe blood supply

Findings and lessons learned from an evaluation of the Swiss Red Cross support for blood transfusion services in ten countries



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SRC-supported blood donation session arranged in a school in Malawi.

Introduction

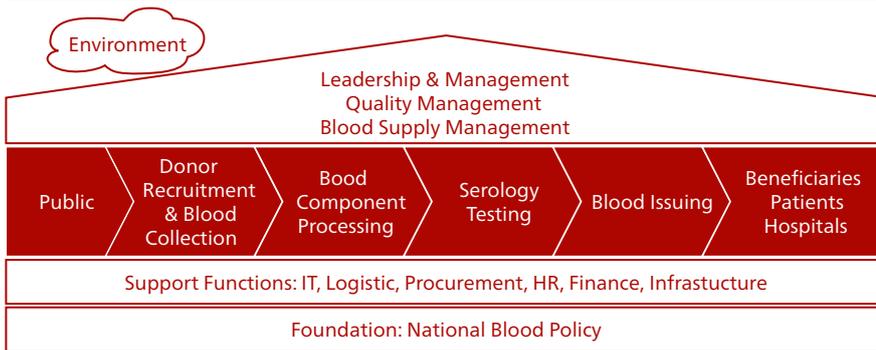
Receiving blood saves the lives of millions of people every year. However, in low and middle income countries the blood transfusion services (BTS) often struggle to meet existing needs. As a result, patients who require transfusion - such as mothers after childbirth complications, children with malaria-induced anaemia or people suffering from large blood

loss due to accidents or violence - do not have timely access to safe blood and blood products. This leads to preventable death or ill-health.

Blood transfusion services are extremely relevant to the reinforcement of health system. However, providing adequate and functioning blood services for the population is a complex task for a national health system. In

low and middle income countries, challenges can be multifold. To name a few: The BTS might lack a stable base of blood donors, encounter problems in reliably screen donated blood for infectious diseases or deal with shortcoming in logistics, human resources, finance, information technology (IT) or infrastructure. Graph 1 gives an indication what is needed for functional national BTS.

Graph 1: National Blood Transfusion Services Model



- increasing the access to safe blood by raising the number of blood donations, especially from voluntary non-remunerated blood donors (VNRBD)
- improving quality procedures including screening for transfusion-transmissible infections (TTI)
- enhancing capacities in IT, logistics and infrastructure
- reinforcing the management and legislative framework of the BTS

Blood programmes of Swiss Red Cross

Red Cross and Red Crescent (RC/RC) Societies have played an important role in setting up, strengthening or running BTS in many countries. The Swiss Red Cross (SRC) began in the 1960ies to support RC/RC or health ministries in different African countries to build up or reinforce their BTS. After 2010 SRC started to engage in blood programmes ¹ in other parts of the world. Through these years of commitment, the SRC is well known within the RC/RC movement for its expertise in blood programming.

In 2019 SRC decided to carry out an external evaluation synthesis of its current and recently closed international blood programmes (see table 1). The aim was to review the successes, failures, challenges and opportunities of the SRC international engagement for safe blood supply and to critically review its conceptual approach. A team of seasoned transfusion medicine experts worked over a period of half a year on the evaluation. This document synthesizes the main findings and recommendations.

Evaluation methodology

The evaluators conducted a desk study and reviewed over 250 documents (evaluation and mid-term stu-

dies, project proposal, etc.) on the eleven blood programmes of the ten countries ². They designed a list of appraisal criteria which they applied to all blood programmes. In addition to the study of documents, they engaged in extensive communication via skype and emails with 15 SRC programme coordinators, delegates and involved experts to get further information. Reports were produced for each country blood programme which formed then the data base for the global evaluation synthesis report.

Achievements and key factors for success

In its blood programmes SRC aimed to achieve overall 48 outcomes and outputs. They addressed various aspects of the BTS. Typically, outcomes and outputs were about:

The evaluation showed that of the 48 envisaged outcomes and outputs 60% could be fully and 25% partially achieved. 15% could not be reached. The evaluators concluded that the SRC international engagement in blood programmes showed a high rate of achievement.

The blood programmes in Egypt, Haiti, Lebanon (LRC), Malawi, Moldova and South Sudan were the most effective programmes. Their positive impact was judged as long-lasting and strong. According to evaluators, the main factor for success was quality of project proposals. High quality proposals have a large influence on how action plans are planned, implemented and monitored. Clear outcomes and outputs

Table 1: List of blood programmes included in the evaluation

Country of blood programme	Main partner of the SRC blood programme		Duration of blood programme at the time of the evaluation (years)	Evaluated years
Egypt		MoH	20.3	2008-19
Eritrea		MoH	13.8	2008-13
Haiti	RC		6.8	2012-18
Honduras	RC		5.3	2014-18
Kyrgyzstan	RC		3	2017-19
Lebanon	RC (Lebanon)		5	2015-19
Lebanon	RC (Palestinian)		5.2	2012-18
Malawi	RC	MoH	5.2	2017-19
Moldova		MoH	5	2014-19
South Sudan	RC		3	2016-18
Togo	RC	MoH	3	2017-19

¹ The term programme is used as the engagement usually consists of several successive blood projects.

² In Lebanon, SRC supports the Lebanese Red Cross (LRC) as well as the Palestinian Red Crescent (PRC) in their respective blood projects.

Examples of achievements

- In **Egypt** SRC supported the health authorities in modernizing the national BTS in various ways. One was the facilitation of a new IT system which plays a key role in the quality management processes. Nearly half a million blood donations are made per year. With such a high amount, quality management is paramount. The new system helps that patients in hospitals get safe blood on time.
- In **Malawi** SRC helped Malawi Red Cross Society in the promotion of VNRBD. New donors could be found and retained by diversifying recruitment strategies. The national BTS was able to supply 77% of the blood units requested by the health facilities of the intervention region (as compared to 50% when the SRC project started). The national BTS recognizes the increasing contribution of the Malawi Red Cross Society in bringing in VNRBD.
- In **Moldova** SRC assisted the Ministry of Health to improve the overall capacity of the national BTS. This was done by addressing a range of areas: improving screening for infectious diseases, replacing outdated technology with new equipment and IT software, enhancing clinical use of blood products and haemovigilance by training medical staffs and promoting VNRBD.
- In **Lebanon** SRC reinforced the BTS of the Lebanese Red Cross. The programme successfully strengthened the quality processes, increased the number and safety of blood products and the percentage of VNRBD (compared to 2017 baseline: increase of 25% of blood products and 42% of VNRBD).

that are feasible in terms of time-frame, adapted to BTS actors and measured by SMART³ indicators with realistic targets were associated with higher success. Regarding failure factors the evaluation did not show any generic factor beside the absence of the success factors.

SRC capacities to implement blood programmes (providing expertise, guidance, funding etc.) were considered as strong by the evaluators

and generally identified as a factor for success. External factors such as political instability and unforeseen changes in government policies as well as regional shortages in fuel, power and qualified staff tended to be factors leading to not reaching the outcomes and outputs.

Evaluators recommended to SRC to further capitalize on its strong implementation capacity in future blood programmes and enhance its attention to the quality of proposals.

Evaluators' assessment of the SRC approach

The evaluators reviewed the SRC blood concept which sets out the SRC approach to blood programmes. They judged the concept as "strong and appropriate" to guide programmes to work towards blood sufficiency and blood safety. Furthermore, the evaluators analyzed whether the implemented SRC blood programmes were in line with the blood concept. They found that most but not all programmes were aligned with the blood concept and recommended that the concept should be better applied in all SRC blood programmes. Especially the aspects of blood sufficiency (blood production meets as much as possible required blood supply) and blood safety should always be addressed or at least potential effects of non-addressing should be considered.

The evaluators also suggested a few changes to the concept and thus to the SRC approach itself. The concept states that blood products must meet the highest possible safety standards. Here the evaluators advice to take this requirement with pragmatism and caution. They argue that blood screening technologies

and quality standards should be tailored to the supported countries capacities as the highest available technology and quality standards might not be implementable or sustainable in low income countries.

The SRC blood concept further states, fully in line with the WHO, that blood donation should be based on VNRBD. The evaluators took a different stance and argued that the traditional model, the family replacement donations (FRD), is deeply rooted in the culture of most SRC blood programme countries. Shifting to VNRBD might take longer than SRC engagements last. In addition, evaluators pointed to published research indicating that first time donors, regardless whether VNRBD or FRD, have similar health risk and are therefore comparable regarding blood safety. According to evaluators, retention, or repeated donation, is associated with lower risk of TTI, no matter if the first donation was FRD or VNRBD. Thus, while the evaluators agreed that the long term goal of reaching 100% VNRBD is appropriate, they advocated that SRC gives up, for the time being, its focus on VNRBD only. SRC should consider VNRBD and FRD as equally needed for first-time donations and thus actively support the safety and retention of both donor groups in its programmes. For these reasons, they recommended that SRC does not target to increase the VNRBD percentage in its programmes, at least not without consideration of effects on blood supply. In addition, they asked SRC not to set targets to decrease FRD as they consider this as a potential threat to blood supply. The evaluators argued that aiming at decreasing FRD could incentivize campaigns against FRD while VNRBD practice

³ SMART stands for Specific, Measurable, Attainable, Realistic and Timely.

and culture is not fully established yet. This could potentially decrease overall blood donations.

Lessons learned for SRC and further steps

Generally, SRC feels encouraged by the findings and conclusions of the evaluators. The SRC international engagement in safe blood supply and the conceptual approach gets overall very positively evaluated. Evaluators recommend SRC to apply the concept and its key targets such as blood sufficiency and blood safety more rigorously on all SRC blood programmes. While SRC agrees that blood programmes should aim ultimately for blood sufficiency and blood safety, specific projects as part of an overall blood programme can concentrate on specialized areas of the BTS if there are relevant reasons not to work on several areas at the same time. However, SRC fully agrees with the evaluators that the effects on blood sufficiency and blood safety need to be considered at any time.

SRC will ensure that, if not addressed, the effects are properly reflected in proposals.

SRC is pleased to learn that the evaluators see the SRC implementation capacities as one of the main factors for success of blood programmes. Regarding the quality of proposals which is another identified success factor: Planning new projects already now involves a stepwise, internal quality control and approval process which aims, through peer review, to

raise the quality of project proposals. However, some of the evaluated programmes started already several years back when quality control processes had not been as rigorous as today or had been the result of a negotiation process with partners in the field.

SRC will review its current processes and see how quality ensuring processes can be further optimized.

The evaluators suggest interesting adaptations to the SRC blood concept. SRC welcomes the critical input explicitly as this will help to further improve the approach in blood programming. Most of the recommendations will be implemented directly, a few have been rejected after balancing the pro and cons. Regarding VNRBD vs. FRD: Here SRC shares the viewpoint of the evaluators that many countries still heavily depend on FRD for blood supply. Actively discouraging FRD before strong VNRBD systems are established would be highly problematic. Still the SRC is convinced that VNRBD can be promoted if FRD is not actively discouraged. This could even enlarge blood supply as more donations are added to the system. As evaluators recommend, SRC will not use targets to discourage FRD in the future. Regarding retention: It is already the IFRC blood policy that FRD shall be recruited for VNRBD.

The SRC blood concept will be revised and the mentioned aspects better clarified.

Overall, the evaluation has shown that the SRC is successful with its international blood programmes. SRC is reinforcing health systems in low and middle income countries and is contributing to improved health outcomes. SRC is encouraged by the results to intensify its efforts for safe blood supply and is dedicated to continue with its work.

Table 2: Abbreviations

BTS	Blood Transfusion Services
FRD	Family Replacement Donation
HR	Human Resources
IFRC	International Federation of the RC/RC Societies
IT	Information Technology
LRC	Lebanese Red Cross
MoH	Ministry of Health
PRC	Palestinian Red Crescent
RC/RC	Red Cross and Red Crescent
SMART	Specific, Measurable, Attainable, Realistic and Timely
SRC	Swiss Red Cross
TTI	Transfusion-Transmissible Infections
VNRBD	Voluntary Non-Remunerated Blood Donation
WHO	World Health Organization

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