Cross-Country Collaborative Peer Learning as an effective tool to strengthen safe blood systems in Low- and Middle-Income Countries

Introduction

Health systems are complex, involving multiple levels – governance, patients, providers, and technology – and a health system's capacity to adapt to challenges and changes at the different system levels demonstrates resilience ("Promoting Resilience," USAID, n.d). This level of interdependence mandates that collaborative learning both within and across the levels of a health system can play a key role in improved healthcare performance and strengthened health systems. Collaborative learning is often used in program design and implementation toolkits and can be incorporated within Health Systems Strengthening (HSS) programs as an alternative or complementary model of technical assistance. With strong participant engagement and effective facilitation, it has the potential to strengthen health systems and accelerate progress towards improved health outcomes in low- and middle-income (LMICs) countries.

USAID has been a continued champion of collaborative learning, routinely incorporating it in international development projects globally since 2012. In 2022, USAID compiled collaborative learning practices to improve development effectiveness in their programs ("Understanding CLA" USAID. n.d). The Collaborating, Learning and Adapting (CLA) practices have been successfully integrated in the work of staff, missions, international as well as local partners.

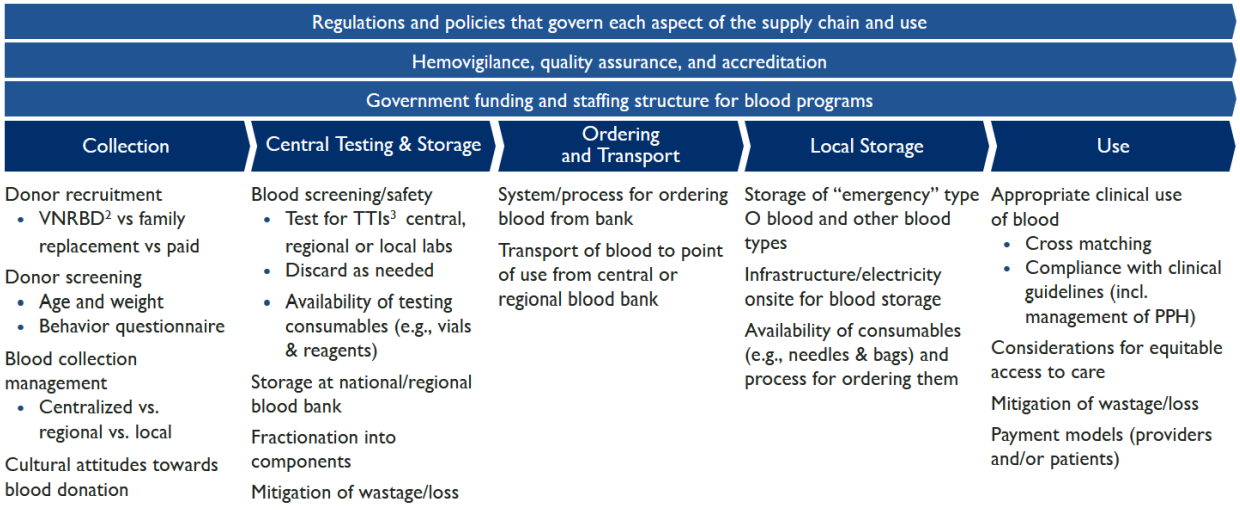
What is collaborative learning?

Collaborative learning is an approach for elevating local expertise and developing strong ecosystems to drive sustainable systems change and strengthening. It is about creating a vibrant community of leaders deeply engaged in peer-to-peer learning to jointly solve problems, generate new knowledge, and adapt and apply that knowledge in real time (HSSA). It is also categorized by USAID as a "Learning Network" which is "a facilitated network comprised of a finite number of organizations (represented by individuals) whose common interest is the development and pursuit of a shared learning agenda to be explored over a fixed period of time" (USAID). Collaborative learning is the intentional, demand-driven, country-owned knowledge sharing and experience.

Ingredients for successful collaborative learning

- Participants drive the agenda and own the learning network.
- Trust and openness are critical to success, which are built through recurring face-to-face events and virtual exchanges.
- Participants must bring their direct experience and be honest about their challenges.
- The network supports the achievement of participants' self-defined goals and avoids being driven by external agendas.
- The network creates new knowledge and aims to establish a sustainable infrastructure whereby participants share and co-produce demand.

From 2022 to 2204, the USAID-funded Health Systems Strengthening Accelerator (the Accelerator), utilized collaborative learning to enhance the direct technical assistance being provided to the safe blood services of Liberia, Malawi, and Rwanda. The three country blood systems were assessed using the Safe Blood Starter Kit (Figure 1) and the challenges within each of the countries were identified (Figure 2). In the safe blood system context, collaborative learning has proven to be beneficial because of the homogeneity of the blood services – regardless of blood system maturity or development, there are common threads in the processes needed for successful blood transfusion chain (See fig.1,2,3).



1. "Value chain" refers to overall system components and the steps of how blood moves through the system 2. Voluntary non-remunerated blood donor 3. Transfusion transmissible infection

Figure 1: Overview of the Safe Blood Starter Kit assessment, an action-oriented framework designed to ensure a holistic view of strengths and challenges across the blood system. BCG-R4D-USAID Safe Blood TA in Liberia, Malawi, Rwanda. Slide Deck. 2 February 2023.

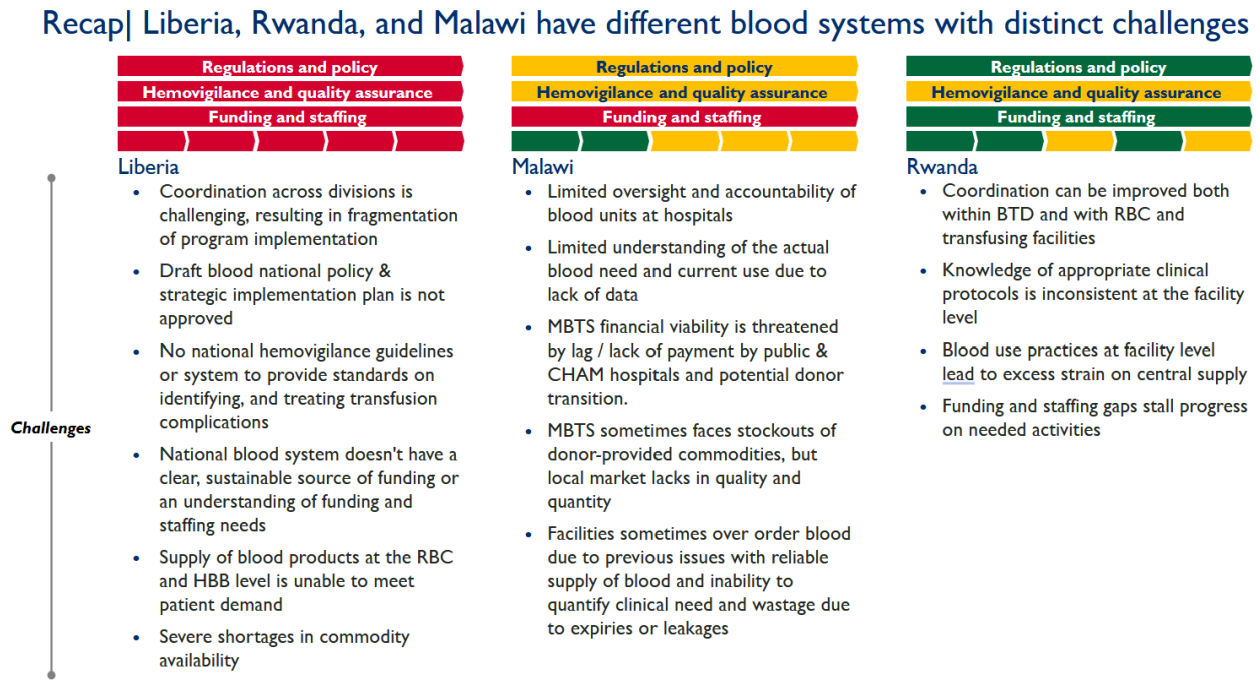


Figure 2: Overview of the results of the Safe Blood Starter Kit assessment. BCG-R4D-USAID Safe Blood TA in Liberia, Malawi, Rwanda. Slide Deck. 2 February 2023.

This brief highlights the Accelerator's application of collaborative learning for safe blood systems, highlighting the advantages and recommendations for applying this method to strengthen and improve safe blood services challenges.

Cross-country collaborative learning to support and strengthen safe blood services

Collaborative learning is done best when it is demand-driven, intentional, and engagement and ownership of the knowledge sharing is sustained by the participants. It requires transparency, trust, and vulnerability for all participants, which in turn is bolstered by the participants having consistent meetings; virtual or in-person. Within the Accelerator, collaborative cross-country learning was intentionally applied to the Strengthening Safe Blood Systems in Liberia, Malawi, and Rwanda activity after a strong shared interest in knowledge ownership and experience sharing was identified. The strengthening safe blood activity had a clear vision and value-add for all participants, necessary components for effective collaborative learning.

The three country blood systems face common challenges, variation in maturity and development along the blood transfusion chain (Figure 2) providing fertile ground for collaborative learning to complement and enhance the technical assistance and improve blood services.

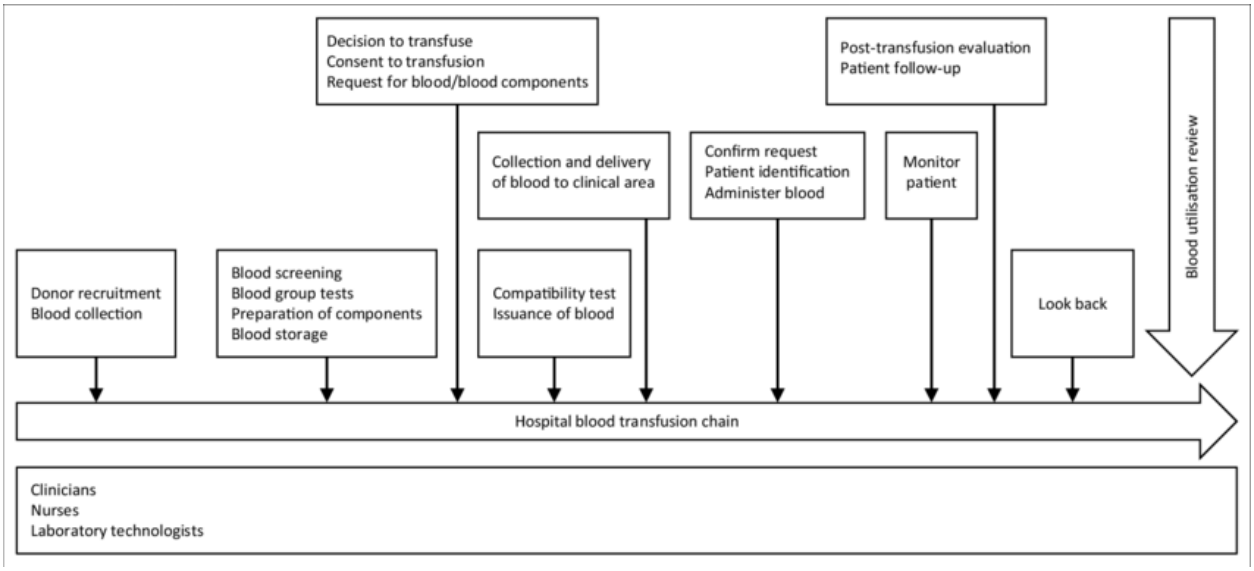


Figure 3: Blood Supply Chain Diagram. Mbuthia, Anne et.al (2019). Organizational management of hospital blood transfusion services in Nairobi County, Kenya: Evidence of implementation. African Journal of Laboratory Medicine. 8. 10.4102/ajlm.v8i1.676.

From 2022 to 2024, the Accelerator's cross-country learning initiative to support the strengthening of the safe blood systems brought together stakeholders from Liberia, Malawi, and Rwanda to exchange knowledge, proffer solutions, identify best practices, and share insights on the challenges of safe blood availability and prioritized blood systems reforms in a bid to improve timely access and availability of safe blood for their populations. While the three countries are at varying stages of development and maturity in their blood systems (Figure 2), there was a strong demand to learn from one another. Responding to this demand, topics for cross-country learning were identified and prioritized by safe blood stakeholders from all three countries via key informant interviews (conducted from January to March 2023) and a co-creation session held in May 2023 at the International Maternal Newborn Health Conference (IMNHC) in Cape Town, South Africa. During the co-creation the CEOs and Medical Directors from the three countries prioritized the following topics for learning: (1) sustainable funding sources and strategies; (2) hemovigilance; (3) blood donor recruitment, retention, and management; (4) coordination between the national blood service and regional/district hospitals; and (5) routine data generation, use, and management (covering service delivery and blood donor data). Informed by the co-created learning agenda, the Accelerator facilitated action-oriented cross-country learning (virtual and in-person formats) among the supported countries, Liberia, Malawi, and Rwanda.

Synthesis of cross-country learning

The topics (blood donor mobilization and retention, hemovigilance, and hospital transfusion committees) addressed in the webinar forum are common complex blood system challenges. The aims of the webinars were to increase awareness of these emerging health systems themes, countries to share successes and learn best practices most suited for their context and blood system challenges and identify promising approaches to adapt and scale.

Webinar 1: Blood donor mobilization and retention strategies

The first cross-country learning webinar took place on November 8th, 2023, featuring participants from Liberia, Malawi, and Rwanda, with a turnout of over 40 attendees. The webinar began with introductions of the topic and the experts, including Mrs. Malvis Chirwa and Janet Katonda from the Malawi Blood Transfusion Service (MBTS) and Mr. Menard Mutenherwa from the Zimbabwe National Blood Service (NBSZ). Mrs. Chirwa shared insights into Malawi's donor mobilization strategy, noting that 75% of their donors are voluntary non-remunerated blood donors (VNRBD), primarily secondary students aged 16-25, considered low risk. However, she mentioned the challenge of maintaining donor clinics during school holidays, which are then set up in busy trading centers. Mr. Mutenherwa discussed NBSZ's strategy of achieving 100% VNRBD by recruiting donors from community blood champions, faith-based organizations, youth leaders, and schools. He emphasized the operation of both static and mobile clinics, with mobile units located no more than 300km from a regional center to ensure prompt and quality handling of blood. NBSZ's approach focuses on targeted donor populations to enhance the efficiency of blood collection, reducing unnecessary deferrals and disposal of unsuitable blood.

Both countries (Malawi and Zimbabwe) shared their methods for setting annual blood donor targets, which include reviewing past trends and demands influenced by health issues such as malaria and anemia and aligning collection efforts with school calendars and local events.

Webinar 2: Hemovigilance across the blood transfusion chain

The second learning event was held on the December 15, 2023, and focused on the challenges of implementing good hemovigilance policies, protocols and guidelines, and the best practices, approaches and strategies for vein-to-vein process and blood transfusion. The session highlighted the importance of a robust governance structure to ensure long-term sustainability. Discussions emphasized the need to integrate quality management systems into BTSs to deliver healthcare that is not only effective, efficient, but also sustainable.

The webinar drew over 40 participants across the three countries and featured speakers Dr. Bodunrin Ibitola Osikomaiya from the Lagos State Blood Transfusion Service (LSBTS) and Mrs. Caroline Wangamati from the Coalition of Blood for Africa (COBA). The webinar began with a technical framing of hemovigilance systems by Dr. Osikomaiya, using the LSBTS as a case study. Dr. Osikomaiya highlighted the results from a recent audit conducted that noted several challenges within the LSBTS, challenges that are common in the hemovigilance systems within LMICs and the three countries.

During her presentation. Mrs. Caroline Wangamati focused on the overview of HTCs and their role in the hemovigilance system. Mrs. Wangamati spoke on strategies to implement and make active HTCs by providing an overview of the framework needed, as well as functions and benefits of HTCs before delving into the challenges that arise when developing these committees, and recommendations for successfully sustaining them. Following this, the participants were placed in breakout rooms by country (Liberia, Malawi, and Rwanda) to discuss how the implications of not having functional HTCs impacts the hemovigilance system, identify some of the gaps and potential solutions that could be implemented in their respective countries' blood system. The participants discussed who should be present, and what departments should be prioritized in the development of HTCs. The outcomes of these discussions were presented to the wider group with actionable next steps to be incorporated in the respective blood systems moving forward.

Webinar 3: (Re)Activating Hospital Transfusion Committees

This webinar was held on the February 15, 2024, and began with a presentation from Dr. Chris Gashaija from the Rwandan Blood Transfusion Division (BTD) on Rwanda's newly drafted hemovigilance strategy. Rwanda had been operating a hemovigilance system with a documented hemovigilance strategy that highlighted data collection and management rather than roles and responsibilities in the transfusion chain which created fragmented procedures across hospitals and blood banks. Dr. Gashaija discussed the newly drafted strategy's goals, the institutions targeted, as well as their roles and responsibilities, the objectives, features, and intended outcomes of the strategy. A unique aspect of the BTD strategy was the explicit inclusion of the regulatory authorities, the Rwanda Food and Drug Agency, and their responsibilities within the hemovigilance systems. Dr. Gashaija highlighted the challenges encountered with implementing the strategy that included the necessity to sensitize all stakeholders – the Ministry of Health, regulatory authorities, hospitals and health facilities. Additionally, Dr. Chris explored data privacy, traceability of blood products, and security of the hemovigilance strategy.

The webinars were very engaging with participants providing feedback on the topics presented and highlighting additional points to be captured within their context. In addition to the inherent complexity of blood systems challenges, the webinar series demonstrated the need for low- and middle-income countries (LMICs) to have a space that is specifically targeted to their contexts and challenges. The webinars served as a key moment to share and learn from other country BTSs and how they have applied and adapted approaches to address priority BTS challenges.

The blood stakeholders also pushed for the need to develop a clear approach to demonstrating the impact of the provision and/or lack of safe blood on the overall health system.

In-Person Cross-Country Learning Event

In April 2024, the Accelerator hosted a three-day in-person cross-country learning event that brought the three countries together in Windhoek, Namibia (Figure 4). During the key informant interview process, the BTS stakeholders identified the Namibia Blood Transfusion Service (NamBTS) as a system they most admired and wanted to learn from. The event included a site visit to the NamBTS and concurrent learning

sessions on (1) Sustainable and Innovative financing for safe blood services (2) Generation and use of routine safe blood data for decision-making and performance management. The three country teams participated in a site visit as well as presentations from NamBTS staff on blood donor retention, marketing and communication strategies, their blood data management system and the history and growth of NamBTS from diminished Global Fund and PEPFAR funding in 2015 to full cost recovery in 2024. Additionally, participants toured the NamBTS lab, witnessing and learning the quality assurance systems and testing employed by NamBTS, plasma fractionation, efficient funding and data management innovations. The country participants had a day of expert-led presentations on the various strategies to improve the allocation and efficiencies of funding for safe blood services, and the generation and management use of data in their respective blood systems. Discussions were led and expertly facilitated by Dr. Mohammed Farouk from the AfSBT and the NamBTS Medical Director, Dr. Carla Van Zyl. On the third and final day of the in-person learning sessions, the participants re-convened in one session to apply the learnings from the previous two days and used that information to develop country specific strategies, frameworks and advocacy messages using the Five why's of marketing for influential stakeholders within their blood systems.

Figure 4: Group photo of participants during the Strengthening Safe Blood Systems in-person learning event in Windhoek, Namibia. April 2024.

Webinar 4: Reflections and the Ways Forward: Sustainability of Cross-Country Learning for Safe Blood Systems

Following the learning event, key informant learning checks were conducted with country stakeholders in which participants highlighted the structured and demand-driven approach and expressed interest in engaging in more cross-country learning to strengthen safe blood systems. Notably each group of country BTS stakeholders stated that they have absorbed and adapted the learnings into their own systems seamlessly – from incorporating blood donor feedback surveys, creating student ambassador and/or community blood champions, marketing and communication strategies, and more effective cost recovery strategies inclusive of advocacy for the impact of safe blood on the health system.

The results of the key informant learning checks led to the development of the final webinar, a capstone event. The capstone session offered opportunities for BTS stakeholders to discuss ways to promote the sustainability of cross-country learning. Country participants identified ways to sustain and further cross-country learning, including 'twinning', which aims to establish a 'win-win' relationship between BTSs to exchange knowledge and best practices and to publish research articles jointly. While participants noted that the virtual platform was effective for learning, it posed challenges for networking. Finally, participants were asked to rank priority topics for future learning during the event. Most participants emphasized the importance of funding and government buy-in, data management for decision-making, and blood donor mobilization as priority topics for learning within their blood systems.

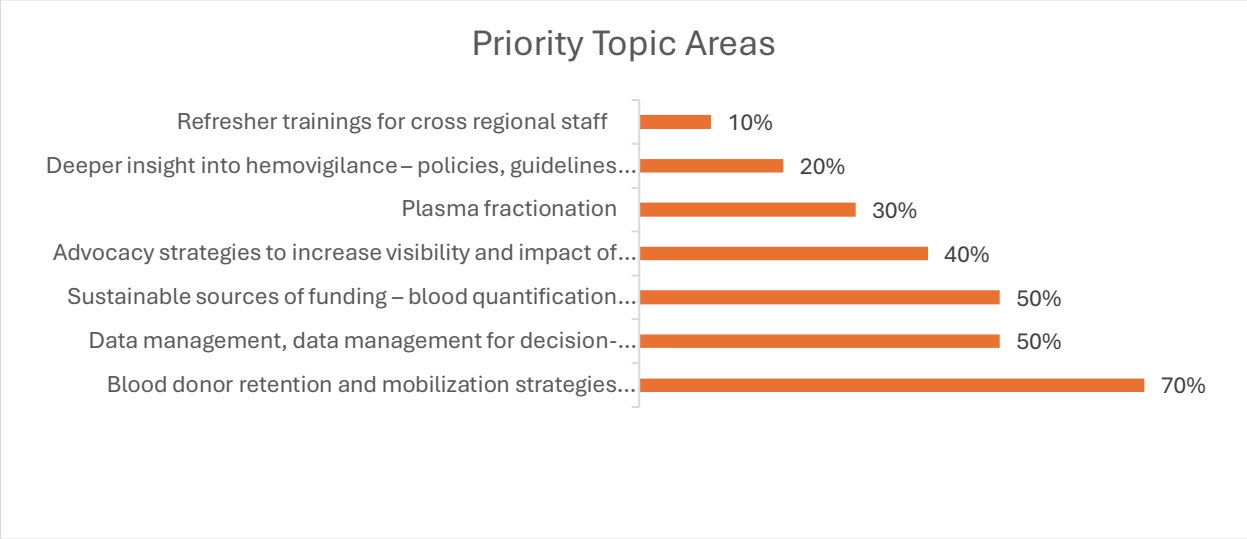


Figure 5: Graph of priority learning topics ranked by cross-country learning participants during the final cross-country capstone learning session.

Our experience and results of using the collaborative learning methods to tackle safe blood challenges suggest that safe blood systems lend themselves well to collaborative learning because the definitions, protocols, etc. are the same across countries, but there is variation in the implementation of the systems, especially in the blood transfusion chain.

Lessons, reflections, recommendations

Cross-country experience sharing provided an opportunity for peer learning, experience sharing and assessment of the direction of blood systems development amongst the three country blood transfusion services. To follow are lessons learned and reflections from the Safe Blood collaborative learning process.

Effective outside facilitator is crucial for success

An effective outside facilitator is crucial for successful collaborative learning. The role of a facilitator is pivotal in guiding the learning process. Their ability to navigate cultural nuances while maintaining organizational rigor can greatly influence the success of collaborative efforts. Ideally, the facilitator should have a deep understanding of the local cultural context, blood system challenges and needs and the organizational skills to manage and document the learning process. However, finding such a facilitator outside a structured project setting can be challenging due to limited human resources and the need for impartiality.

Importance of structured platforms and ongoing engagement with stakeholders

Clear, well-structured platforms for discussion are essential. Ensuring that all participants have an equal voice is critical for sustained engagement. A blend of formal platforms (like scheduled meetings) and informal ones (such as WhatsApp groups) can be effective in maintaining open lines of communication among all participants and is key to sustaining cross-country learning beyond the project lifespan. The mix of formal and informal communication platforms reflects the need for flexibility and adaptability in managing cross-country collaborations. Ensuring equitable participation through these platforms fosters a more inclusive and effective learning environment.

The Strengthening Safe Blood Cross-country Learning team found that continuous engagement between collaborative learning sessions is vital to keep stakeholders involved. Building trust among facilitators and participants, as well as between various actors, is necessary for sustaining cross-country learning networks. Regular engagement and relationship-building are crucial for maintaining stakeholder interest and commitment. The time invested in these activities can significantly impact the success and longevity of collaborative learning networks. Alignment of timelines and schedules with intervention activities enhances the relevance, uptake and application of shared knowledge.

Alignment and Sustainability

A significant challenge to the long-term sustainability of collaborative learning can be the misalignment between the learning process and intervention activities. The alignment of learning activities with intervention strategies is and requires a dynamic and ongoing process. To ensure alignment, complementarity of implementation and collaborative learning activities requires frequent and effective dialogue between country stakeholders, cross-country learning and project implementation teams. For effective alignment, when setting an agenda for a learning event, the safe blood system stakeholder's interests and challenges were at the forefront, topical experts and new country stakeholders invited, as needed and warranted.

Monitoring and adaptation

Tracking stakeholder involvement and changes in the context is essential. Identifying and including new stakeholders as needed can help maintain relevance and dynamism in the learning process. Establishing indicators to measure progress and determining the frequency of communication between learning and intervention activities are important for addressing gaps and ensuring ongoing effectiveness. In the Safe Blood activity, bi-weekly meetings were established between the cross-country learning and implementation teams while weekly meetings were established between the cross-country learning and country teams. These regular meetings between the project implementation, country and cross-country learnings allowed the learning team to regularly adapt the learning approach based on stakeholder feedback and changes in the context.

Recommendations

- Invest in training and resources for facilitators to enhance their cultural competency and organizational skills. Consider establishing a pool of trained facilitators who can provide support as needed.
- Develop and maintain a structured communication strategy that includes both formal and informal platforms. Ensure that all participants are comfortable and actively engaged in these platforms.
- Implement strategies for continuous engagement, including regular updates and interactive sessions. Focus on building and maintaining trust among all stakeholders to support the collaborative learning process.
- Ensure that learning activities are synchronized with intervention timelines. Develop a flexible schedule that allows for adjustments based on the progress and feedback from stakeholders.

Across the themes highlighted, it has emerged that the experience sharing confirmed that safe blood systems share a common foundational goal and a 'north star' for effective and efficient blood transfusion services. Most country blood systems have a similar north star, and there is homogeneity in safe blood processes (Figure 3). The universal nature of safe blood systems underscores the effectiveness of cross-country collaboration as a learning tool. It allows countries to leverage collective knowledge and experience, promoting mutual growth and improvement. Regardless of a country's level of blood system development, safe blood practices, themes, protocols, and guidelines are universally applicable. This highlights the value of collaborative learning, as each country can both contribute expertise and gain insights irrespective of their development stage. By utilizing implementation and technical assistance teams for ongoing assessments of the collaborative learning process to provide context-specific insights, these teams can help ensure that the cross-country learning is relevant and effective. By addressing the above recommendations, cross-country collaborative learning for safe blood systems can be further enhanced, leading to more effective and sustainable improvements in safe blood systems globally.

References

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