GG 2459030

Rwandan Nurses Saving Lives
Global Grant Closeout Narrative
Rotary Foundation Area of Focus: Disease Prevention and Management
Disease Prevention and Management
Grant Overview & Summary

Objectives

1. Create, review and adapt a sustainable train-the-trainer model to train front-line health center nurses working in remote areas without physician support in the early detection of streptococcus pyogenes infections to facilitate a reduction of Rheumatic Heart Disease (RHD) in Rwanda.
2. Improve the country's capacity to provide training to front line health center nurses, community health workers and school teachers by training a core training team and certifying conference presenters to conduct future training
3. Increase the ability of front-line health center nurses in the early detection of streptococcus pyogenes infections to eventually facilitate a reduction of Rheumatic Heart Disease (RHD) in Rwanda. The target audience was at least one nurse from every health center in five district hospital catchment areas chosen by the government. The primary objective of the educational content was to provide knowledge and skills for frontline nurses fulfilling a primary care role.
4. Improve the understanding of community health workers and school teachers about the importance of encouraging parents to seek earlier treatment for children with sore throats and clinically treating a sore throat diagnosed with strep with a full 10-days of antibiotic.

Accomplishing the Objectives

1. Sustainable train-the-trainer model for frontline nurses

The project developed, reviewed, and adapted a sustainable **train-the-trainer model** to strengthen the capacity of frontline health center nurses working in remote settings without routine physician support. Through this model, a Core Team and Certified Conference Presenters were prepared to deliver contextually relevant education on the early recognition and management of *Streptococcus pyogenes* infections, acute rheumatic fever, and rheumatic heart disease. The phased implementation (train-support-mentor- distant) demonstrated that locally trained Rwandan health professionals could independently lead the Phase 3 training, thereby embedding knowledge and instructional capacity within the national health system. This approach supports long-term disease prevention by enabling earlier recognition and treatment of streptococcal infections, reducing progression to acute rheumatic fever and, ultimately, rheumatic heart disease. The model and materials developed (manuals, power points, interactive activities,

educational flip charts, posters) combined with the tools (stethoscope and otoscope) have been effectively used for successful train-the-trainer sessions at all levels.

2. Building national capacity through training of nurses, community health workers, and teachers

The grant improved Rwanda's capacity to provide continuing education for frontline health personnel and community-based stakeholders by establishing a cadre of trained local educators. A Core Team was developed and district hospital nurses were certified as conference presenters, enabling them to conduct future trainings for health center nurses, community health workers, and school teachers. This model expanded educational reach beyond clinical facilities and created a practical pathway for ongoing dissemination of prevention and early detection knowledge. By strengthening the instructional capacity of local professionals, the project supports sustainable, locally owned continuation of disease prevention and management activities. These tactics were evidenced by multiple community education events by CHWs and teachers, and colleague training by HCNs. Rwandan Nurses Saving Lives included a component of Leadership and Mentorship for the Core Team and Certified Conference Presenters. This training increased capacity of leadership skills, building trust relationships, improved communications, and confidence that was expressed through evaluations at all three levels (Core team, CCPs, and HCNs).

3. Increasing frontline nurses' ability to detect streptococcal infections and reduce RHD

Streptococcus pyogenes is endemic in sub-Sahara Africa, and this tenacious bacterium is the direct cause of acute rheumatic fever and rheumatic heart disease. The grant increased the ability of frontline health center nurses to identify and manage streptococcal infections at an earlier stage, thereby supporting the long-term reduction of rheumatic heart disease in Rwanda. The project targeted at least one nurse from each health center in selected district hospital catchment areas and provided focused education and skills training for nurses functioning in primary care roles. Training emphasized clinical assessment, recognition of warning signs, evidence-based treatment, and timely referral. As a result, nurses reported improved knowledge, confidence, and practical application in identifying sore throat, impetigo, acute rheumatic fever, heart failure, and rheumatic heart disease. These improvements directly align with Rotary's goals of strengthening the health workforce and improving disease prevention, early detection, and management. The Health Center Nurse's knowledge and skills gained from the training was evaluated by six different questionnaires using a mixed methodology of qualitative and quantitative questions taken at the training time and 8 weeks later.

4. Improving understanding among community health workers and teachers

The grant improved the understanding of community health workers and schoolteachers regarding the importance of encouraging families to seek timely treatment for children with sore throats and to complete the full 10-day antibiotic regimen for clinically diagnosed streptococcal infection. In addition, teachers learned they are key people to recognize the bizarre symptoms of acute rheumatic fever in young children as vocabulary, writing skills, and behavior changes are common in ARF. Through the *Building Stronger Communities (BSC)* educational component, participants gained increased awareness of the connection between untreated streptococcal infection and later development of acute rheumatic fever and rheumatic heart disease. By equipping trusted community-based individuals with accurate prevention messages, the project strengthened early care-seeking behavior, reinforced adherence to treatment, and expanded disease prevention efforts beyond the health facility into schools and communities. The participants of BSC were highly engaged and profoundly affected by the knowledge gained. Each participant received an educational flip chart and poster to facilitate continued education and a manual translated into their native tongue for review. Multiple photos were sent showing CHWs and teachers conducting education sessions to others.

Bullet Point Summary

Process

- Led by the Rotary Club of Lander and the Kigali Club in partnership with Team Heart to address rheumatic heart disease prevention and early recognition in Rwanda.
- Focused on two priorities: early treatment of streptococcal infections to prevent acute rheumatic fever and improved recognition of heart failure and established rheumatic heart disease.
- Developed culturally relevant manuals, flipcharts, posters, and questionnaires tailored to sub-Saharan African settings.
- Used a train-the-trainer model in which a Core Team trained district hospital nurses as Certified Conference Presenters.
- Delivered five nursing conferences across seven district hospitals in three phases: supervised, mentored, and then independently led by Rwandan trainers.
- Extended education beyond health centers through the Building Stronger Communities seminar for community health workers and teachers.

Outcomes

- Reached 7 Core Team members, 18 Certified Conference Presenters, 176 health center nurses, 171 community health workers, 76 teachers, and 20 physicians.
- Strengthened capacity in seven district hospital catchment areas serving an estimated 1.5 million children ages 5 to 15 at risk for acute rheumatic fever and rheumatic heart disease.

- Improved nurse awareness, knowledge, clinical skills, and confidence, with effects reported to continue at least 8 weeks after training.
- Improved case recognition, referral decisions, and continuity of care through mentorship and stronger district hospital to health center connections.
- Expanded access to essential diagnostic tools by providing stethoscopes and otoscopes to participating nurses.
- Documented a life-saving impact when a trained nurse identified abnormal heart findings in a child, leading to referral and valve replacement surgery.

Sustainability

- Phase 3 demonstrated that Rwandan health professionals could independently deliver and replicate the training.
- Ownership of the program shifted to local Core Team members, Certified Conference Presenters, and the partner NGO.
- Peer-to-peer leadership and mentorship capacity were strengthened within district hospitals and health centers.
- Educational materials remain available for continued use in Rwanda and are adaptable for other sub-Saharan African countries.
- Ongoing WhatsApp-based virtual mentorship reinforced learning, confidence, and professional relationships after conferences.
- The partner NGO began advocacy efforts to address systemic barriers, including national antibiotic policy issues.

Other

- Participants identified important knowledge gaps, including limited prior understanding of the link between untreated sore throat and rheumatic heart disease.
- Community misconceptions and traditional practices were reported as barriers that can delay effective care and referral.
- Key lessons learned included the need for longer Core Team training, stronger data collection systems, and role-specific educational materials.
- A three-day nurse conference format and structured mentorship groups were found to improve learning and collaboration.
- The project highlighted the value of including teachers, community health workers, and potentially pharmacists in prevention efforts.
- Recommendations for future projects include stronger Ministry of Health alignment, expanded Core Teams, electronic data systems, and continued virtual mentorship.

Grant Overview & Summary

Global Grant GG2459030, *Rwandan Nurses Saving Lives*, was a Disease Prevention and Treatment/Vocational Training Team (VTT) project led by the Rotary Club of Lander (Wyoming, USA) and the Kigali Club (Rwanda, Africa) in Rwanda with the assistance of the NGO, Team Heart. The project addressed endemic rheumatic heart disease (RHD) by strengthening frontline prevention and early recognition—focusing on 1) Timely assessment and treatment of Streptococcus pyogenes infections (strep throat and impetigo) to prevent acute rheumatic fever (ARF) and subsequent RHD, and 2) improving clinical recognition of heart failure and established RHD.

To support consistent, evidence-informed practice, the team developed culturally relevant teaching tools (manuals, flipcharts, posters, and questionnaires) with graphics reflective of sub-Saharan Africa. A sustainable train-the-trainer" model was implemented: a Core Team trained district hospital nurses as Certified Conference Presenters (CCPs). These individuals then co-led five nursing conferences serving seven district hospitals. Delivery occurred in three phases—Phase 1 supervised by the VTT, Phase 2 mentored by the VTT, and Phase 3 implemented independently by Rwandan CCPs. Successful implementation of Phase 3 by health professionals trained in Phase 1 and 2 demonstrated the local capacity to replicate conferences.

In addition to clinical training for nurses working in health centers, the project delivered *Building Stronger Communities*, a three-hour seminar for community health workers (CHWs) and teachers. This expanded awareness beyond health centers, increased CHWs' and teachers' (in the grant project) ability to recognize possible streptococcal infection, ARF, heart failure, and RHD. This ability supported earlier referral and treatment of infections.

During Phase 3, facilitated discussions with health center participants highlighted critical gaps and actionable opportunities. Many health center nurses expressed surprise at the direct link between untreated sore throat and RHD and described missed chances for ARF and RHD prevention due to limited prior training. Participants also identified persistent community misconceptions (including multiple Kinyarwanda terms for sore throat" that reinforce beliefs that illness is caused by cold water) and traditional practices that can delay effective care. Project participants recommended strengthening education on tonsillitis/impetigo, improving access to appropriate antibiotics, and reinforcing follow-up and referral protocols.

Scope of Influence/Reach

- 7 Core Team members
- 18 Certified Conference Presenters (CCPs)
- 176 health center nurses

- 171 Community Health Workers (CHWs)
- 76 teachers
- 20 physicians (who requested to attend the training as participants)

Training was delivered through five conferences serving seven district hospitals, which the Rwandan Government identified under a memorandum of understanding with our host country nonprofit, Team Heart. Trained nurses and physicians serve the seven district hospital catchment areas, impacting an estimated 1.5 million children ages 5–15 who are at risk for ARF and RHD.

Outcomes and Measurement

Summary: Outcomes were evaluated through direct observation, 11 questionnaires (qualitative and quantitative), and informal discussions with participants. Health Center Nurse responses showed increased awareness, knowledge, and clinical skills; improved confidence and trust-based professional relationships; and translation into clinical practice, sustained for at least 8 weeks after the conferences. Nurses also reported continued community education activities after the training, ranging from one-on-one teaching to larger community events.

Sustainability

The phased implementation transferred ownership to local health professionals on the Core Team and the NGO. By Phase 3, Rwandan CCPs independently delivered the training under the NGO's auspices, demonstrating the ability to continue and replicate training within district hospital systems. The project also strengthened leadership and mentorship capacity among hospital nurses, supporting ongoing peer-to-peer education and quality improvement in primary prevention and early management of RHD.

Outcomes and Impact

This Rotary International Global Grant supported training health care professionals to enable them to address disease prevention, early detection, and management of streptococcal infections, acute rheumatic fever, and Rheumatic Heart Disease (RHD) in children. The grant achieved measurable outcomes by strengthening the capacity of the local health workforce to enable early diagnosis and improve relationships within established referral pathways. Phase 3 demonstrated that Rwandans could sustain the project's training components within Rwanda s primary healthcare system.

Strengthened Disease Prevention and Early Detection Capacity

The Global Grant significantly increased frontline capacity for primary and secondary disease prevention by equipping nurses with knowledge and clinical skills to recognize, treat, and prevent

streptococcal infections that lead to Rheumatic Heart Disease. A train-the-trainer model was implemented, in which a core group of two physicians and five nurses (Core Team) were trained to full clinical competency as country experts in RHD prevention, early detection, referral, and management. The Core Team subsequently trained district hospital nurses as Certified Conference Presenters, who then together provided education to health center staff.

This training improved the health center nurses' ability to identify cases early and make timely diagnoses. These abilities help ensure that disease prevention capacity remains embedded within personnel in the healthcare system in Rwanda.

Improved Case Management and Referral Systems

Before the training, gaps in clinical knowledge and in coordination between Health Centers and District Hospitals were reported by health care professionals as limiting timely access to advanced cardiac care. The project strengthened the health system of the participating hospitals by designating District Hospital Non-Communicable Disease nurses as Certified Conference Presenters, which can lead to consistent clinical leadership within the referral system.

Through training and the structured virtual mentorship following training, nurses demonstrated improved recognition of disease severity, more appropriate clinical decision-making, and increased confidence in initiating referrals. These improvements led to enhanced continuity of care and more effective management of pediatric cardiac disease, as confirmed in mentorship evaluations and observed changes in practice.

Expanded Access to Essential Diagnostic Tools

As part of efforts to improve disease management capacity, the project addressed a critical resource gap by providing stethoscopes and otoscopes to participating Health Center nurses. In Rwanda, these tools are not routinely available for nurses and are provided in limited numbers at health centers. Access to these tools enabled nurses to conduct basic oral-pharynx and cardiopulmonary assessments, support early detection, initiate treatments and make informed referral decisions.

The sustained use of these tools, confirmed through follow-up mentorship and observation of nurses in clinical settings, demonstrates improved access to essential diagnostic resources, a key indicator in the Disease Prevention and Management area of focus.

Evidence-Based Education Supporting Prevention and Treatment

The Global Grant primary contact developed and disseminated evidence-based educational materials addressing prevention, diagnosis, treatment, and follow-up of streptococcal infections, acute rheumatic fever, heart failure, and Rheumatic Heart Disease. These materials were designed specifically for frontline nursing practice, written in accessible English, and illustrated using culturally appropriate imagery developed with the assistance of AI and supporting the African nurse as provider.

Materials included nurse manuals, clinical skills flip charts, patient and community education tools, and school-based teaching resources. All content was reviewed with host partners to ensure clinical accuracy and cultural relevance. These materials can continue to support consistent,

evidence-based disease-prevention messaging beyond the grant period. All educational materials are ready for implementation in any sub-Saharan African country.

Increased Community-Level Disease Prevention

To extend prevention efforts beyond clinical settings, the grant supported community education delivered by nurses, community health workers, and teachers using standardized, culturally appropriate flip charts. The flip chart was a new educational tool for nurses, community health workers, and teachers. These efforts can lead to improved community awareness of streptococcal infections and RHD, supporting primary prevention and early care-seeking behaviors.

Ongoing use of these materials has been confirmed through on-site observation and virtual mentoring, indicating sustained community impact consistent with Rotary s Disease Prevention and Management goals.

Documented Health Outcomes and Life-Saving Impact

A primary outcome of the grant was improved early identification and referral of children with Acute Rheumatic Fever and Rheumatic Heart Disease. Nurses trained through the project say they are using the clinical practices in the training to deliver more thorough health screenings. This can lead to the identification of clinical signs that were previously unrecognized.

In a documented case, a Health Center nurse detected abnormal heart sounds in a child presenting with chronic fatigue and shortness of breath, initiated referral, coordinated evaluation during a cardiac surgical screening, and contributed directly to the child receiving lifesaving valve replacement surgery within weeks. This case demonstrates measurable improvement in disease detection, referral effectiveness, and clinical management resulting from the training in the grant.

System-Level Impact and Sustainability

The overall outcome of this Global Grant is an increase in nurses' knowledge and skills, which can lead to improvements in the prevention, early diagnosis, and management of infectious and cardiac diseases at the primary healthcare level. Nurses have the ability to routinely diagnose and treat streptococcal infections (strep throat and impetigo) using evidence-based protocols, preventing progression to acute rheumatic fever and Rheumatic Heart Disease. Community education materials increase awareness and promote early parental care-seeking when used by the essential and influential community health workers and school teachers.

In addition, the NGO has assumed an advocacy role to address systemic barriers to disease prevention, including policies on antibiotic treatment duration. This local ownership and ongoing engagement demonstrate a durable systems-level impact aligned with Rotary s Disease Prevention and Management area of focus.

Disease Prevention & Management Metrics Summary

- **Improved prevention:** Community and provider education on streptococcal infections and RHD can enhance prevention.
- **Early detection:** Nurses participating in the grant are trained and equipped to recognize cardiac disease at health centers

- **Better case management:** Nurses have the skills to lead to timely diagnosis and treatment, and referral pathways are strengthened
- **Health workforce capacity:** Nurses trained as local leaders who can train others.
- **Sustainability:** Education, tools, and advocacy are established within the seven hospitals involved in this grant.

Supporting Metric Summary

GG2459030 – Rwandan Nurses Saving Lives
Rotary Area of Focus: Disease Prevention and Management

Rotary Disease Prevention & Management Criteria	Grant Outcomes and Evidence	Impact Classification (Rotary)
Improves prevention of disease	Nurses can now routinely diagnose and treat streptococcal infections (strep throat and impetigo) using evidence-based protocols, preventing progression to acute rheumatic fever and Rheumatic Heart Disease. Community education materials can expand awareness and promote early care-seeking behavior among parents.	Primary prevention
Improves early detection of disease	Health Center nurses were trained to recognize abnormal cardiac findings using newly provided diagnostic tools (stethoscopes and otoscopes). Nurses can now identify pediatric cardiac disease that may have been previously undetected.	Secondary prevention
Improves disease management and treatment	Nurses demonstrate improved diagnosis, treatment, and referral of streptococcal infections, acute rheumatic fever, heart failure, and RHD. Nurses initiate clinical management and appropriate referral pathways with increased confidence.	Disease management
Improves referral and continuity of care systems	District Hospital nurses trained as Certified Conference Presenters strengthened referral pathways between Health Centers and District Hospitals. Increased communication and continuity of care were documented through mentorship evaluations.	Health system strengthening

Rotary Disease Prevention & Management Criteria	Grant Outcomes and Evidence	Impact Classification (Rotary)
Expands access to essential diagnostic tools	Health Center nurses received personal stethoscopes and otoscopes, enabling cardiac assessments at the primary care level and reducing reliance on delayed downstream diagnosis. Sustained appropriate use confirmed post-training (through??)	Access & equity
Builds capacity of local healthcare workforce	A sustainable train-the-trainer model equipped Rwandan physicians and nurses to independently teach, mentor, and expand disease prevention education without external dependence.	Workforce capacity
Uses evidence-based health education	Developed culturally appropriate, evidence-based educational materials for nurses, community health workers, patients, and schools addressing prevention, diagnosis, and management of RHD related conditions. All materials reviewed with host partners.	Quality of care
Demonstrates measurable health outcomes	Documented case of a child identified by a Health Center nurse, appropriately referred, and receiving lifesaving valve replacement surgery within weeks. Nurses report they are now recommending children now receiving correct antibiotic treatment for strep infections.	Measurable health outcomes
Ensures sustainability beyond the grant	Skills, tools, educational materials, and leadership are established within a portion of Rwanda's health system. Nurses report continued daily application of prevention and management practices, and the partner NGO is advocating for national antibiotic policy change.	Sustainability
Promotes local ownership and accountability	Rwandan nurses (?) and partners report assuming leadership and advocacy roles, including engagement with national decisionmakers to address systemic barriers to effective antibiotic treatment for disease prevention.	Local ownership

This Global Grant aligns fully with the Rotary Foundation Area of Focus: **Disease Prevention and Management** by measurably improving health workforce capacity to lead to disease prevention,

early detection, treatment, and referral systems. Outcomes demonstrate sustainable systems-level change can be achieved. Rwandan healthcare professionals can lead implementation. There is a documented lifesaving health impact.

Lessons Learned & Recommendations

Layered Training Model and Sustainability

The train-the-trainer model was highly effective in establishing a locally led program. By developing a cadre of highly trained healthcare professionals who then trained District Hospital nurses (CCP), the project strengthened local ownership and contributes to continuity of training.

Country Expert Core Team

The establishment and intensive preparation of a country expert Core Team were essential to the program's quality, consistency, and sustainability. The Core Team demonstrated strong capacity to deliver content using interactive, and competency-based teaching methods.

The Vocational Training Team (VTT) component was effective in strengthening clinical knowledge, educator skills, data-collection competencies, conference-planning capacity, and professional collaboration. Experience has confirmed that a longer training period is necessary for effective Core Team preparation. Core Team training occurred over 4 days. It is estimated that this training should be increased to 6 days to improve project outcomes and ensure trainers are available for the full duration of subsequent trainings. Physician partners noted that a Core Team composed primarily of nurses promoted peer-to-peer learning. The core team of seven members proved to be problematic as every conference had Core team members who could not attend or were required to leave early. This limited the opportunities for Core Team members to learn from each other. These gaps were filled by CCPs and VTT members (in Phases 1 and 2). A future consideration is to expand the Core Team to approximately 12 healthcare professionals, including leadership, to enhance scheduling flexibility, geographic coverage, and the time commitments of post-conference mentorships. This would, however, increase the costs to implementation through increased core team travel and mission fees. Plus core team members should be nurses for peer-to-peer training.

Expanded train-the-trainer model with the Certified Conference Presenter

The project design aimed to increase the number of certified conference presenters (CCPs) to expand continuing education opportunities for additional nurses and physicians working in the District Hospital and Health Centers. The CCPs were selected by the Director of the District Hospital from nurses working in Non-communicable Disease (NCD), pediatrics, or the emergency room. The role of the CCP was complex and included serving as a presenter for both lecture-style and hands-on skills training, a virtual mentor during the 8-week mentorship process, and an on-site mentor conducting full reviews of selected health center nurses. They were responsible for

completing five questionnaires. This role was found to be critical to the project's success. While CCPs fill an important role, the implementation costs of increased travel and mission fees need to be considered in determining the best combination of Core Team and CCPs needed for a project.

Virtual Mentorship

The eight-week virtual mentorship component delivered via WhatsApp was a significant strength of the project, reinforcing learning and providing opportunities for asking questions. Participants reported increased confidence in their clinical practice, improved application of evidence-based practices, and strengthened professional relationships. This mentorship reinforced learning from the conference and supported sustained behavior change, contributing to the durability of project outcomes. Experience demonstrated the importance of dedicating budget resources to communication support, such as phone cards, to remove barriers to engagement. Time commitment of the CCPs and Core Team in conducting the mentorship is critical for success.

Presentation Language

Although Rwanda has adopted English for all higher education, the HCN role is not one in which English is spoken daily in clinical practice. At the first conference, it was recognized that the presenters (Core and CCP) should present in the language that provided the greatest comprehension. In Rwanda, the RNSL was presented in a combination of Kinyarwanda, French, and English, as the native tongue lacks words for medical terms or disease processes. All evaluation questionnaires were available in Kinyarwanda and English. It would be helpful to have a person proficient in English and the native language to validate the training content presented by the Core team member or CCP to monitor whether content delivery matches content design.

Provision of Essential Medical Equipment

Providing each participating nurse with a personal stethoscope and otoscope enables nurses to improve clinical efficiency and the accuracy of patient assessments. High-quality stethoscopes were critical for accurately detecting abnormal heart and lung sounds, while otoscopes served as essential light sources for throat examinations. The project underscored the necessity of including hands-on training in the proper use and care of equipment, as many participants had limited prior exposure. Although these items represented a substantial portion of the grant budget, their impact justified the investment. Since stethoscopes and otoscopes are not standard equipment for nurses in Rwanda, they could be subject to accusations of theft. To reduce potential accusations that nurses stole a stethoscope for personal use, a signed, personalized ownership card was created stating that the stethoscope was a gift from Rotary International to the individual nurse.

Role-Specific Educational Materials

Role-specific flipcharts tailored for nurses, community health workers, and teachers were reported to be effective in reinforcing standardized messaging and supporting community-level education. Participant feedback identified the important role of pharmacists in ensuring adherence to a full ten-day penicillin regimen, underscoring the value of including pharmacists in prevention strategies. Distribution experience showed that one flipchart per participant was adequate for healthcare workers, whereas teachers requested at least two copies to facilitate use in multiple classrooms.

Data Collection and Evaluation

Multiple questionnaires were used to evaluate project outcomes; however, reliance on handwritten data collection limited efficiency and timely analysis. Future evaluation projects should use electronic data collection methods to improve accuracy, reduce transcription burden, and strengthen outcome measurement for multisite interventions. This was the first multi-site and multiphase study of the Nurses Saving Lives project. The data review after each phase led to questionnaire revisions. Revised evaluation questionnaires, however, were not always used in upcoming project phases. This was an important lesson, given the multiple questionnaires and data management. The host-country NGO housed all returned questionnaires, and electronic data storage was often by participant rather than by questionnaire, adding time for those analyzing the data. To address these difficulties, data collection, management, and analysis should be reorganized, and the responsibilities of each grant partner should be clarified.

Electronic data submission was piloted in Phase three with knowledge questionnaires for HCN and BSC. The Core team reported the process went well.

Nurse Training - Length and Structure

The two-day conference format successfully delivered core content and skills training; however, consistent participant feedback indicated that additional time would have further enhanced interactive learning and skills practice. The Phase 3 implementation increased the nurses' training to three days and was conducted independently by the Rwandan team. The Core Team implementing Phase 3 confirmed the educational benefit of a three-day format, reinforcing lessons learned regarding optimal training design.

In Phase 2, the conference seating was changed to six tables with six chairs each. This allowed the nurse participants to choose where to sit and helped form the 6 teams that would be used for all interactive scenarios, group work, skills education, and virtual mentorship groups. This allowed the participants to begin forging a group relationship. A Core Team member and a CCP were assigned to each group. The groups were identified by matching colored hearts for easy identification.

Conference Capacity and Skills Station Design

Conference size was determined by skills station capacity, ensuring high-quality, hands-on learning. Optimal implementation supported six groups of six participants, with a potential ability to increase to six groups of eight participants when sufficiently trained facilitators and excellent conference management are employed.

Community Partnerships and Interdisciplinary Engagement

The Building Stronger Communities" component was a key success of the project. Joint training of community health workers and teachers strengthened trust, improved early identification of children with symptoms of streptococcal infection, Acute Rheumatic Fever, or Rheumatic Heart Disease, and enhanced referral pathways. Community Health Workers and teachers are trusted and influential people in their communities. Inclusion of pharmacists was recognized as particularly valuable due to their critical role in supporting adherence to international antibiotic guidelines. This interdisciplinary approach strengthens community-level disease prevention and reinforces the project s sustainability.

Missed opportunities and failed attempt

The initial design of RNSL had a component to invite local nursing school faculty members and additional nurses and physicians to attend the first day of the conference (The knowledge day). The invitation to send additional staff was given to the Directors of the District Hospital hosting the training. In Phase 1 all extra staff who attended (20 physicians and 15 nurses) wanted to be included in the skills training. This increased number of people at each station slowed the training and increased work on insuring the skills were completed correctly. Plus, these staff members felt that they, too, should receive payment (mission fees) for attended. The intent to increase the knowledge to additional staff at the District Hospital failed.

The concept of including faculty from local school of nursing close to the District Hospital hosting the training was difficult for the NGO to understand. It was reported that making the contact and providing the invitation was too much additional work for the NGO. Thus, it was determined for the best interest of partner relationships that this component was eliminated. It represents a missed opportunity to showcase the importance of the history and physical exam, clinical diagnosis, the RHD knowledge and skills for nurses working as primary care providers.

Training Details- Attendees Swag to promote Nurses Saving Lives

Providing attendee with materials to both engage and promote the training is important. This grant provided the attendees with a branded, t-shirt, tote bag, pen, a RHD coloring book, and a box of crayons in addition to the manual and poster. In Rwanda, the T-shirt is the most wanted item to wear and show to the community they have attended the training. Rwanda prohibits all plastic bags. Having a well-made tote bag for the training allows multiple uses and displaying the branded bag. In Rwanda, we choose to support RHD survivors of valve replacement to be the seamstresses for the 400 bags made. This process was facilitated by the NGO partner. At every training it was shared that RHD survivors created the bags. Pens are a prized item. The RHD coloring book was a local design and written in Kinyarwanda for children to learn about RHD. The coloring book and crayons were funded by our NGO. Overall, these items were selected with care to culture and funds. Although expensive as whole, these items promote the training long after it is completed and create opportunities for the participants to share their experience.

Recommendations for Future Nurses Saving Lives Projects

1. Work with the Ministry of Health to receive their endorsement and planned support for the project before starting training.
2. Clearly identify all partner roles and ensure they are understood.
3. Use the layered train-the-trainer model

4. Increase the Core Team to 12 to improve scheduling flexibility and train influential people to advocate for project outcomes. Core Team members should be nurses, new to the subject matter area, able to control their schedule or dedicated to the project by their employer.
5. Increase the Core Team training to six days to include data and conference management; enhance interactive educational techniques; expand the physical assessment skills and the teaching of skills section; develop the virtual mentorship program together; establish a data collection and verification system; and expand stakeholder and advocacy role development.
6. Country-expert content and evaluation should remain specific to the host country to ensure continued clinical relevance and applicability in daily practice.
7. Develop the Certified Conference Presenter role to enhance understanding of on-site mentorship through role-playing exercises during CCP training. Increasing the CCP training to 4 days would help ensure proficiency in knowledge, skills, presentation, data management, and mentorship.
8. Develop and test an electronic data management process with host partners before the start of training. Consideration should be given to the cultural context of respondents and to any local tendencies not to report difficulties. Evaluation methods may need to be revised if self-reported data is deemed inaccurate.
9. Continue using the manuals and flip charts. The host team should determine if translation is required. Note: the educational materials have been updated to 2025 through the latest literature review. They are considered textbooks, and the grant primary contact in the Lander Rotary Club makes revisions.
10. All graphic artwork must support the country of presentation. Currently, the Nurses Saving Lives educational materials use graphic artwork for sub-Saharan Africa.
11. The language for the conference presentation should be determined by the Host team. A person proficient in that language should evaluate the training implementation at conference sites.
12. Continue the virtual mentorship to reinforce knowledge and skills used in clinical practice.
13. Provide high-quality dual-head stethoscopes. Cheap stethoscopes will not allow nurses to learn the correct sounds, specifically carditis of ARF, and softer murmurs of mild to moderate RHD.
14. If within budget, increase the HCN conference to 3 days.
15. Continue the same RNSL conference design with 6 groups of 6 nurses or expand to 8 nurses per group. The latter would increase conference attendees by 25%. The knowledge and skills of the Core Team directly impact their capacity to train 8 people at each skill station which is achievable with the 6 day Core team training.
16. Continue to use the skills training process with the skills flipcharts during training. Encourage more hands-on time, practice, and evaluation of skills adoption during the training.
17. Add pharmacists to the Building Stronger Communities training for CHW and teachers. Continue role-specific educational flip charts. Translate flip charts if needed with host team input.

18. Continue to work to integrate governmental health care systems into the project through personnel and trainees.
19. Plan ahead to develop stakeholder groups, particularly for presenting project outcomes.
20. Invite nursing school faculty as Core team members, or to attend training as an invited guest to monitor a training event.