

## Sustainability Questions

### Project Planning

#### **Describe the community needs that your project will address.**

In the last 3 years, there has been a 150% increase in the number of deliveries at Gondar University Hospital—up to 15,000 deliveries a year. This dramatic increase is a direct result of war in Ethiopia. Pregnant mothers traveled to Gondar to escape fighting in the countryside. Many local health centers where deliveries often occurred closed due to fighting, putting a huge strain on the hospital and outstripping the capacity of the recently purchased autoclave to meet the demand for sterile drapes and instruments for deliveries. This project will purchase supplemental autoclaves to meet the demand for sterile supplies for the increased number of deliveries.

**How did your project team identify these needs?** We identified these problems in several ways. The team at University of Gondar Hospital recognized that the heating elements for the Autoclave were failing frequently. Root Cause Analysis determined that the autoclave was overused. Rather than running the recommended 7 to 8 cycles per 24 hours, the machines were running 13 to 15 cycles, causing the autoclave to break down. The tremendous increase in number of deliveries at the hospital was a direct result of population displacement from the civil war. The University lacked the resources to purchase more autoclaves. In addition, we administered a Community Assessment questionnaire to the operators of the machines purchased with GG 2094220 funds. This questionnaire confirmed that the autoclave was often offline because of frequent breakdowns.

#### **How were members of the benefiting community involved in finding solutions?**

Discussing the challenges, we encountered during our previous grant with other Rotarians resulted in an introduction to Tim Beacon from Medical Aid International. Medical Aid International is an NGO from the UK that specializes in providing skills and equipment especially designed to meet the needs and infrastructure of low- and middle-income countries. Medical Aid International has participated in several other projects at the University of Gondar and is well known there. Tim suggested several types of basic autoclaves that could withstand the constant use and infrastructure challenges in Gondar. We held discussions with the Gondar team for their comments and recommendations.

#### **How were community members involved in planning the project?**

We held a Zoom meeting where all the options were discussed, and the team members determined what their needs and priorities were. Their decisions determined what equipment will be purchased and where the grant funds will be allocated.

## Project Implementation

Summarize each step of your project's implementation.

Do not include sensitive personal data, such as government ID numbers, religion, race, health information, etc. If you include personal data, you are responsible for informing those whose personal data is included that you are providing it to Rotary and that it will be processed in accordance with Rotary's [Privacy Policy](#).

| #  | Activity  | Duration |
|----|---|----------|
| 1. | Order Equipment   | 1 month  |
| 2. | Clear Customs   | 1month   |
| 3. | Transport Equipment to Gondar   | 2 weeks  |
| 4. | Install Equipment   | 1 week   |
| 5. | Local Training of Operators and Biomed Staff  | 1 month  |
| 6. | Begin MedAid Academy Training for Biomed Engineers  | 1 year   |
| 7. | Routine Maintenance and Repair  | 1 year   |
| 8. | Quality Assurance, Problem Identification, Root Cause Analysis, Determine solutions, test | 1 year   |

**Will you work in coordination with any related initiatives in the community?**

Yes  No

**Please describe the training, community outreach, or educational programs this project will include.**

Dr. Sewbesew, Clinical Director of the hospital, reported that there are plans underway to increase the capacity of hospital services to meet the needs of a growing patient population. The university is in the process of developing an Oxygen Generation plant. As part of this overall plan, they will increase the capacity of central laundry, the sterilization facility, and provide clean water and wastewater removal systems. These plans will take time to develop and complete. In the meantime, they would like to have a supplemental autoclave to avoid service interruption when the machines are offline waiting for spare parts. We will coordinate with the university as they develop the plans for meeting the increased demand for sterile drapes and instruments by purchasing supplemental autoclave with this grant.

**How were these needs identified?**

The need for supplemental autoclave was identified through the Quality Assurance process with GG 2094220, through a community assessment, and with a Zoom meeting with Dr. Sewbesew who discussed the need for supplemental autoclaves to avoid service interruptions.

**What incentives (for example, monetary compensation, awards, certification, or publicity), will you use, if any, to encourage community members to participate in the project?**

We will appoint a Project Coordinator to oversee the project and provide a small stipend. We will provide small stipends for the autoclave operators and biomedical engineers to participate in the local training sessions .

**List any community members or community groups that will oversee the continuation of the project after grant-funded activities conclude.**

Dr. Tewodros, Obstetric Dept.  
Dr. Yohanis, Chairman of the Department of Pediatrics  
Hailu Kassie, Supervisor, Biomedical Engineering Dept.  
Awoke, Maru, Autoclave Supervisor

### **Budget**

**Will you purchase budget items from local vendors?**

Yes  No

**Explain the process you used to select vendors.**

Tim Beacon, CEO of Medical Aid International, has years of experience procuring equipment specifically designed to meet the special needs of hospitals in low- and middle-income countries. The autoclaves he recommends are simple, rugged, will stand up to continuous use, and meet the infrastructure challenges in Gondar. These autoclaves are not available locally in Ethiopia. The options for specific machines were presented to the Gondar Team and they prioritized their choices. Medical Aid International will handle the purchase, shipping and installation of the autoclave.

**Did you use competitive bidding to select vendors?**

Yes  No

**Do any committee members have a potential conflict of interest related to a vendor?**

Yes  No

**Please provide an operations and maintenance plan for the equipment or materials you anticipate purchasing for this project. This plan should include who will operate and maintain the equipment and how they will be trained.**

The University of Gondar Nurses who run the autoclave will receive training in the use of the autoclave from Medical Aid International staff. Following the training they will be supervised by Awoke Maru, the autoclave Supervisor who will provide periodic in-service training.

The University of Gondar Biomedical technicians will receive training in maintenance and repair of the autoclave from the Medical Aid International staff. Following training they will be supervised by Hailu, Kassie, Biomedical Supervisor. They will receive periodic in-service training on equipment maintenance and repair.

An important service Medical Aid International provides is to continue ongoing support of the team even after the project is complete. This support will help ensure sustainability of the project.

The grant will fund Biomedical Engineering training of several Biomedical Technicians through the MedAid Academy. This is a huge step forward in sustainability. In the past the University had to purchase expensive service contracts for equipment purchased. Once the training is complete the Biomed team will be able to service and repair multiple types of equipment and the contracts will no longer be necessary.

**Describe how community members will maintain the equipment after grant-funded activities conclude. Will replacement parts be available?**

The autoclaves will be very simple with few parts which need replacement. The grant will provide multiple spare parts.

All the biomedical technicians will receive training in the use, maintenance, and repair of equipment. There will always be a technician on duty who will be available to consult on equipment problems.

In addition, several biomedical technicians will receive online web-based Biomedical Engineering training through MedAid Academy. This includes a professional grade toolkit, textbooks, digital Library, and reporting tools to track student's progress.

**If the grant will be used to purchase any equipment, will the equipment be culturally appropriate and conform to the community's technology standards?**

The equipment recommended by Medical Aid International is designed for and adapted to the specific needs of low- and middle-income countries. It is culturally appropriate and conforms to the community's technology standards and can handle the infrastructure challenges in Gondar.

**After the project is completed, who will own the items purchased by grant funds? No items may be owned by a district, club, or member.**

The University of Gondar Hospital will own all the equipment after the project is completed.