End of year report

2015 Project

N/a'an ku sê Foundation

Lifeline Clinic

The funds provided to your organisation for the current year by TFWA Care were donated following the approval of the TFWA Management Committee and board. Among the prerequisites for funding by TFWA Care are transparency and accountability. We would be grateful if you could send us a brief summary of the project, the objectives achieved, problems encountered, impact on the local community and indicators of the project's success. We will share the report with the Management Committee at the end of year meeting.

Please do not hesitate to report on the project's successes as well as any aspects that did not go according to plan. This serves to provide a greater understanding of the challenges and issues encountered by the communities on whose behalf your organisation is working. Any quantifiable indicators will also be helpful in your report.

Thank you.

Project details

1. **Please summarise in a few words the project supported by TFWA CARE, including the principle objectives and duration.**

The N/a a'n ku se Lifeline Clinic in Epukiro, in the remote eastern region of Omaheke, Namibia, is dedicated to the health and welfare of the San Bushman community.

The San are considered to be the oldest people in the world. For tens of thousands of years the San were hunter gatherers and did not farm or keep livestock. With the advent of agriculture the San have been forced from their original lands and are unable to live their traditional lifestyle.

As a consequence, most San people now live in extreme poverty.

- They are the poorest group in Namibia with a per capita income of just N$ 3,263 compared with a national average of N$ 10,358.
- They suffer from discrimination, political and social marginalisation, domination and exploitation.
- They are the unhealthiest group in Namibia and have a life expectancy of just 46 years.

Through the Lifeline Clinic, the N/a'an ku sê Foundation is committed to improving the health and wellbeing of the San people of the Omaheke region.

Support from TFWA care in 2014/2015 has enabled us to:

- Continue the Community Health Worker Scheme (commenced in 2012/2013)
- Continue equipping the Lifeline Clinic (Equipment provision, commenced in 2012/2013)
- Initiate a TB research/project

Community Health Worker Scheme:

The purpose of the Community Health Worker Scheme (CHWS) is to educate one community member to lead basic healthcare and knowledge within their community. The CHW disseminates this information through peer to peer education within the community and empowers members of the community with healthcare knowledge. This project is now in its third year and has enjoyed some successes over the past 4 years.

The project was started in 2012 and is something that we hope to continue in the long term, with the aim of continuing to empower the community to have more autonomy with regards to health care.

Equipment Provision:

The clinic, CHWS, outreach facility and TB research project see around 5,500 patients per year and this number is rapidly increasing. The equipment requested during this period was to allow us to provide our patients with the highest level of medical care possible.

This is also something that we hope to continue in the long term although year on year the various needs will vary based on several factors including the skill set of the staff, equipment failure and changing health care needs.

TB Project:

Tuberculosis (TB) is preventable in the 21st century, yet many people in Namibia, especially from lower socioeconomic and marginalised communities still contract and die from this disease. A study in 2003 found the TB infection rate among the San Bushman of Namibia to be the highest in Namibia and one of the highest in the world. More than 50% of the adult deaths among the Ju/'hoansi San were associated with TB. In many communities a demonstrable cycle between poverty, employment and health is evident. We are determined to help the San communities that we work with to break this cycle.

This project is now operational with Dr Rebecca Taylor, a UK trained respiratory consultant, leading the project for the next 2 years.

The objectives of the TB research / project are to:

- Identify the incidence and prevalence of TB in the San community.
- Research and develop a screening programme, built on WHO recommendations, and then screen the whole San population for TB.
- Research and develop a treatment programme, which reduces interruption and defaulting from treatment.
- Ensure the best treatment for our patients with TB, helping them access healthcare and receive appropriate treatment.
- Provide additional support for our patients with TB – they are usually always malnourished, our aim is to ensure they receive at least one nutritious meal each day.

2. **What activities were carried out within the scope of the project over the course of the year?**

Community Health Worker Scheme:

The Lifeline Clinic Community Health Worker Training scheme has successfully developed a network of San community or 'village' health workers (CHWs) in the Omaheke region. It was originally started in 2013 and has continued to expand with increasing numbers of CHWs being trained in various different centres throughout this large region.

There is now a well maintained and robust vehicle - a Land Rover ex-military ambulance, which enables us to visit the remote farms and re-settlement villages where the CHWs are based.

We have a hard working and enthusiastic translator who is able to help with the training of CHWs and feedback to the doctors at the Lifeline Clinic.

Currently there are a total of 38 CHWs trained across 17 different centres. These centres include the settlements of Drimiopsis (10), Donkerbos (9), Skoonheid (6), Pos 9 and Pos 9b. There are also CHWs based at 3 schools in Pos 8, 10 and 13. These workers are key as sadly San children are frequently exposed to bullying, harassment and exclusion leading to high school dropout rates.

There are many large farms across the region which often employ San as casual labourers. These individuals are often very mobile and the increase in CHW numbers at various farms has been useful at helping to "track down" patients who would otherwise have been lost to follow up and in encouraging patients to seek medical attention. Currently there are CHWs at Jacobs Farm, German Farm, Tweerivier, Bonanza, Hinda, Grasslaachte and Witbank.

The CHWs have all been provided with a mobile phone as a means of communication with the clinic doctor as well as with the other CHWs and state health workers including the nurses at the state clinics and TB field workers.

In addition to training, updating and motivating the CHWs, we have also taken the opportunity when visiting resettlement villages and farms to talk to the wider community about TB – how to recognise it and the importance of complying with treatment. In the primary schools we visit, we have talked to the higher grades about the impact of running away from education, drinking alcohol and using tobacco.

CHWs have also been taught how to help identify patients who may have TB as well as ensuring those that are diagnosed and commenced on treatment are continuing to take their medications.

Equipment Provision:

The provision of suitable equipment continues to be important in ensuring the medical staff are able to investigate and treat patients with a high level of care.

The requests for equipment provision continue to change on a regular basis. In the hot, dry and dusty environment of the Kalahari there is frequent equipment failure. Some of this includes basic but vital equipment that allows the medical staff to properly assess patients.

Finally, within the original funding request for the 2015 year, there was no specific request for milk powder and food for those who are malnourished. This has been something that has been requested in previous years and its absence appears to have been an oversight.

It was important to continue providing food for those that require it as to stop suddenly would adversely affect their health.

The food provided has included powdered milk for babies whose mothers have died shortly after giving birth and are now being cared for by foster parents. Currently we are providing powdered milk for babies who are fostered. We also feed children who are malnourished with a high calorie maize meal until they meet criteria to continue their own normal diets. Again, without this being provided by the Lifeline Clinic the babies would require hospital admission and would be at high risk of death.

As part of the TB project we are diagnosing and treating increasing numbers of TB patients. These patients are also receiving a food allowance whilst on treatment in order to ensure they are adequately nourished.

A nutritious meat stew is provided to the San who live or are visiting the village of Epukiro every 2 weeks at a mother and baby session. The diet in the region contains hardly any protein and the addition of meat every 2 weeks for these villagers is important for the general health of the community. The meal also provides an incentive for the villagers to come to the clinic where we are able to deliver public health messages. Recent sessions have focused on advice around HIV, malaria and the recognition of an unwell baby.

The funds from TFWA have been utilised as follows:

- **Windows rack mounted 2Tb RAID 5 server and filemaker database software:**

Money originally allocated for this was diverted to provide the milk formula and patient food as outlined above. This has included baby milk powder, maize meal for malnourished babies, meat for mother and baby sessions and food for malnourished TB patients.

- **iPad Air 32Mb Wifi x 2:**

Not purchased both due to reduction in funding and recognition that may not be the best device for the purpose required. Portable digital equipment such including iPads tend to overheat quickly and as such, are not reliable in the field. Money that was originally planned for this has instead been reallocated to pay for stationary for the clinic and outreach/TB screening.

- **Autoclave:**

Purchased with TFWA funds.

- **Neonate/paediatric oximeter:**

Difficult to source this year so not yet purchased. The money originally allocated for this was instead used to purchase oxygen. There has been an increase in the number of acutely unwell patients with respiratory disease who require oxygen. Without this valuable resource patients would be much more likely to die in the clinic or during emergency transfers to hospital.

- **UNICEF hanging scales for babies and infants and UNICEF electronic scales:**

Difficult to source this year and so not yet purchased. The money originally allocated was instead diverted to purchase a new otoscope as the previous instrument bulb had failed (due to general wear and tear over several years). The remaining funds allocated for this were used in the purchase of the steriliser as its total cost was more than the original estimate.

- **Haemocue curvettes:**

Purchased with TFWA funds.

TB Project:

The TB project is now being led by Dr Rebecca Taylor who started work at the Lifeline Clinic on 1st May 2015, and plans to be in Namibia for 2 years. She is a UK-trained respiratory consultant and has been employed by the Lifeline Clinic to specifically run the TB project working as a 'clinical and research fellow'. Dr Taylor has clinical responsibility for patients with potential TB. Alongside this she runs the research programme, with the aim of obtaining research that can be presented at national and international conferences.

The project / research team includes Dr Rudie van Vuuren, Professor Ian Purves (previous project lead), Dr Sharon Smart (the previous Lifeline Clinic doctor, employed at the clinic

until August 2015), Dr Sarah McCabe (the current Lifeline Clinic doctor), Dr Leonard Kabongo (Chief Medical Officer at Gobabis hospital, the local hospital) and a variety of medical volunteers who spend time at the Lifeline Clinic.

A multifaceted research plan has been developed that focuses on the following key areas:

- The relative incidence of TB in different language groups
- Screening and diagnosis of TB
- Treatment of TB

Relative incidence of TB in different language groups:

A pilot study at Gobabis Hospital in 2014 showed that over half (54%) of the patients admitted to hospital with a new diagnosis of sputum-positive pulmonary TB in the Omaheke region are San-speaking. Only 7% of the population are San-speaking, suggesting that the incidence of TB in San-speaking people is very much higher that in other language groups.

This pilot study was not sufficiently powered to obtain statistically significant results. Due to the interesting results obtained, the decision was made to investigate this further. A study proposal was submitted to The Ministry of Health and ethical approval for a prospective study was obtained in May 2015. This study was then commenced on 6th October 2015.

The original pilot study was presented in poster format at the Namibia TB/HIV symposium in October 2015.

Screening and diagnosis of TB:

Our research findings have suggested the prevalence of TB in the San of the Omaheke region is 10.1%. With such a high prevalence, the San are one of the subpopulations in whom the World Health Organisation (WHO) recommend systematic screening for TB.

To enable us to systematically screen for TB among the San, we are currently undertaking a population census of the San in the region. This had been started at Epukiro Pos 3, Pos 9 and local farms in 2014. This year it has been continued in Skoonheid, a San resettlement village.

Our initial screening algorithm included use of the gene xpert MTB/RIF test. This was being used on all sputum samples submitted for analysis in 2014. However, in 2015 this has been withdrawn from the local hospital. As such the protocol has had to be reconsidered, with more emphasis on our clinic obtaining our own x-ray machine (see appendix 1).

Treatment of TB:

Namibia provides WHO recommended standardized TB treatment regimens. Recommended treatment regimens for new and previously treated TB patients are 6 and 8 months respectively. For patients with multiple drug resistant TB (MDR-TB) treatment is for 2 years or more.

The San population is well known to be difficult to retain in a TB treatment programme and many end up as 'interrupters' which increases the risk of:

- Continued ill-health.
- Passing TB to other individuals.
- Developing MDR-TB. This form of TB is a huge public health issue and is the greatest threat to the achievement of global and national TB control targets.

We have identified many reasons that the San based in Omaheke interrupt or stop their TB treatment:

- Physical distances and isolation of their villages.
- Lack of access to healthcare.
- Lack of education and specifically lack of health education in Ju/'hoansi language (most common San language spoken in Omaheke).
- Anxieties about going to Gobabis for 2 weeks initiation treatment.
- The San are highly mobile so difficult for healthcare workers to find.
- San individuals have several names so it can be hard for doctors and nurses to know who they are looking for.
- TB field workers working for the National Programme for TB and Leprosy often do not have access to transport to allow them to visit patients and undertake contact tracing.
- Patients are routinely given 30 days treatment, but often TB field workers do not return to the village to do outreach clinics or patients do not attend the community state clinics before the drugs are finished.

We plan to perform qualitative research to explore this further.

TB Clinical Work:

As well as the research work, Dr Taylor also performs all the clinical work for TB patients cared for by the clinic.

This includes following the WHO algorithm for diagnosis, following up results, ensuring patients with positive results are admitted to hospital and appropriate treatment

commenced, visiting patients in hospital, discussing complicated patients with the admitting team at Gobabis Hospital (she is one of only three respiratory consultants in Namibia), following up patients post discharge, performing contact tracing and co-ordinating food distribution.

Evaluation

3. **Has the project been successful? Please outline the success factors for each objective as well as the challenges encountered and solutions adopted to overcome them.**

Project	Successes	Challenges	Solutions
Community Health Worker Scheme:			
Training CHWs	Total of 38 CHWs now fully trained.		
Retaining CHWs	Core group trained remain.	Mobile population means that some are now moving to different areas.	Extra trained this year in key settlements.
Documentation:	Pilot using pictorial chart moderately successful.		
Equipment Provision:			
General	All equipment purchased by funds has been well utilised.	Difficult to source some equipment. Requirement for equipment varies year on year.	Continue utilising available resources. Ability to reallocate funds.
X-ray equipment		Expensive, not covered by TFWA funds awarded.	
Vehicle		Expensive, not covered by TFWA funds awarded.	
IT equipment		Money utilised elsewhere (milk and food) as felt to be more needed than new IT equipment.	

Autoclave	Purchased by TFWA funds.		
Pulse oximeter		Not able to be sourced originally.	Namibian company has recently been able to provide quote, aim to purchase next year.
Scales		Not able to source, money diverted to purchase steriliser and new otoscope.	Continue to attempt to source.
Haemocue	Purchased by TFWA funds.		
Stationary	Purchased by TFWA funds.		
Oxygen	Purchased by TFWA funds.	Money for this originally for paediatric pulse oximeter which could not be sourced.	
Otoscope	Purchased by TFWA funds.	Money for this originally for scales which could not be sourced.	
Milk and food	Purchased by TFWA funds.	Money for this originally for IT equipment. Milk and food money not part of original funding request but vitally important for a large number of patients who would require hospital admission/die if not receiving nutrition.	It was felt that money was better spent on continuing the feeding programmes already in place.

TB Project:

Undertake sub-population analysis of the prevalence data to determine	Previous audit showed statistically significant increased risk of San people	Delay in obtaining ethical approval. Ensuring accurate recording of data on	Ethical approval finally obtained. Lifeline Clinic doctors check the

the relative prevalence of TB in San-speaking patients	contracting pulmonary TB with a 10% TB prevalence. Ethical approval obtained and 6 month prospective study underway.	the TB ward. Ensure all TB patients are included (not just sputum positive TB).	recording of data weekly. Other wards involved, nurses informed and posters put up on walls.
Scale up the TB screening programme to include all San occupied villages within 150km of Pos 3	Dr Taylor has taken over the screening programme.	The screening programme relied on using hospital genexpert machine. However, the lab no longer let us use this for initial screening. Our nearest x-ray machine is 120km away at the hospital. Performing appropriate screening was therefore difficult.	Screening protocol reviewed to try and diagnose as many patients as possible with limited resources. Audit performed to establish how many TB diagnoses made due to Genexpert. Continue to source funding for a mobile chest x-ray machine.
Undertake an audit of how many San people interrupt their TB treatment	This is ongoing. We are undertaking a qualitative review of the issues through patient interviews.	Many patients live a long way from the clinic and are hard to find after receiving an initial diagnosis of TB.	Keep accurate patient records, utilising the state online recording system for TB patients.
Submit research at national meetings	TB research presented at Namibia TB/HIV symposium.		
Ensure individualized care of patients	Several patients have received all their care through the Lifeline Clinic, with minimal state involvement.	This is time-consuming. But worthwhile.	Continue to identify as many patients as possible that we can take full responsibility for.
Ensure patients with TB receive appropriate nutrition	We try to give food to all TB patients – either at our clinic or when reviewing them in the community.	All our patients are hungry. It can be hard for those who are unwell but don't have TB to see others being fed. Our food supplies are limited.	Increase nutrition budget in next proposal. We see huge benefits from feeding our patients.

4. **Did the work accomplished this year help you learn lessons that will benefit future work?**

Community Health Worker Scheme:

The solid ground-work for this project over the last 3 years has meant that the project is self-sufficient to a certain extent.

There continues to be a need for further training due to movement of some of the CHWs. However, the strong core group and full time translator are able to help encourage and train new CHWs.

With our reliable ambulance we have been able to access more remote parts of the region. This has highlighted the need for the project to continue to expand out to increase our network over a larger area. Many of the lessons learnt from challenges over the last 3 years of this project will be beneficial in recruiting and training further CHWs in these more remote areas.

Starting to integrate the CHWs with some of the other work, notably the TB project has been beneficial and the hope is that this will continue in the future. With increasing links to the TB project this will not only be of benefit in following up TB patients and ensuring medications are taken, it will also increase the overall empowerment regarding health in the community.

Equipment Provision:

The equipment purchased this year as part of this project has already been well used within the clinic and will certainly continue to be beneficial in future day to day clinic work.

The recognition of the importance of milk powder and food provision has been an important lesson learnt for the future. This ongoing need for several of our patients is vital for their health. Without milk powder for the babies who have foster parents there would be no other way to feed them which would result in severe malnutrition.

Feeding those who are found to be malnourished has prevented hospital admission for at least 3 children this year. Over several months these children have successfully gained weight and 2 are now no longer requiring our formulated maize meal.

The simple meal provided every 2 weeks at mother and baby has been hugely successful as a means to engage with the community. It has helped to provide a platform for easy to delivery of public health messages to most of the community. It has also strengthened the relationship between the community and the Lifeline Clinic – this is important in a community who feel marginalised and discriminated against. This strong relationship is vital

to ensure the community continues to engage with the health care and messages that we are providing.

The work completed within this project has highlighted the need for flexibility in planning for future equipment.

TB Project:

We have identified many challenges this year. The realities of working in such a harsh environment are difficult to appreciate until actually living and working out here. The distances are huge, and the mobile nature of our patients is astonishing. Keeping track of everyone is difficult. However, as with everything, increased experience has led to improved skills, and we are now adapting to working here, and learning how best to treat patients with TB. We have learnt the best way of providing food to patients – who to give it to in the family, who to only feed in the clinic etc. We have learnt some reasons why patients don't seek medical help when suffering from TB, or why they may keep previous episodes of TB secret (treatment for relapsed TB involves 8 weeks in hospital rather than 2 weeks).

Sustainability

5. **How has the project had a positive impact on the community/ies at the core of the project and what will be the long-term benefits? Please explain if the project has helped empower the beneficiaries by providing greater autonomy.**

Community Health Worker Scheme:

This project has continued to allow the community to be more involved in their own health care. The workers who are trained as part of this scheme have been greatly empowered by their training to make health decisions. This is of benefit to the community as this simple knowledge can help treat a patient at home so avoiding the often lengthy journey to the clinic. It also allows for the recognition of those that do really need to be seen by a health professional so encouraging the patients to seek medical attention in a timely fashion.

In the long term we hope to continue to grow this project so that the communities throughout the region can be more autonomous with their health care decisions. The increasing integration with the TB project and the dissemination of public health messages should, in the long term, be beneficial to the entire community by improving the overall health of the San community.

Equipment Provision:

Recent funding for this has importantly allowed us to have access to basic equipment that ensures we are correctly diagnosing patients.

The autoclave is vital as it ensures that we can sterilise our own equipment. The steriliser has allowed the reuse of equipment on multiple patients. This will not only save money in the long term but ensures that for the future we are able to carry out simple and safe sterile procedures in the clinic so significantly reducing the risk of infection and the need for referral to hospital to perform these procedures.

An otoscope is an important yet basic piece of equipment in any doctor's surgery or hospital. It allows proper evaluation of patients, particularly children to ensure there is no evidence of ear infection requiring antibiotics as well as to check from ear trauma or foreign body.

The haemocue machine allows a quick and accurate recording of a patient's haemoglobin. This can be a deciding factor in whether to admit a patient to hospital or not and as such is an incredibly useful investigation when practising medicine in a remote setting. It continues to be used on a regular basis.

The purchase of oxygen and increased utilisation in the clinic has quite literally been life saving for a number of our patients. The widely dispersed population can sometimes travel many kilometres over several days to reach the clinic. This will sometimes mean that by the time of presentation they are acutely unwell with an immediate need for stabilisation and oxygen. Over the last few years there have been increasing presentations and hospital admissions of patients with respiratory disease and the utilisation of oxygen is likely to need to continue in the foreseeable future.

A large part of the equipment provision budget has allowed us to feed certain key groups of patients. This is important in the short term as it helps to prevent hospital admissions.

Ensuring the population is adequately nourished is also beneficial to long term health as it decreases the risk of contracting various communicable diseases (including TB) and ensures those most at need are nourished enough to work or attend school. This leads to increased income and overall levels of education, both factors important in helping to lift the community out of a cycle of poverty.

TB Project:

This project is having a positive impact on the San community as those people with TB are being diagnosed and treated. This will improve their health, life-expectancy, ability to work and reduce transmission to children. As this project is being scaled-up following the appointment of a respiratory consultant, the impact is now much greater.

By developing a treatment programme that reduces interruptions and stopping of treatment, we will reduce the risk of developing MDR-TB (multiple drug resistance TB). This form of TB is a huge public health issue and is the greatest threat to the achievement of global and national TB control targets.

The presence of a respiratory consultant based at the clinic has improved TB diagnosis rates and has helped with emergency cases, saving lives.

The links between the clinic and the state facilities are improving, and subsequently resulting in more patients receiving appropriate treatment.

Dr Taylor's presence 'out in the field', performing screening in the villages, has heightened awareness of TB. This educates the locals (we continue to show the TB film made by the clinic last year in the San language), and results in more patients seeking medical help. The links with the community health workers are improved through her presence, and they have been used to contact villagers before our arrival, co-ordinating specimen collection / patient review etc.

We also provide TB education at our mother and baby sessions. Dr Taylor's participation has improved the quality of this.

6. **Will the project continue in the future or is it now complete? Will further funding be required in the future to complete the work? Please indicate if the initial funding request was a multi-year project. ** (see footnote)**

All 3 projects are due to continue in the future and we are submitting a funding request for 2016.

Finance

7. **Please provide a summarised breakdown of how TFWA Care funds were utilised for the project.**

Community Health Worker Scheme

Item	Euros awarded	Euros spent	Remaining budget
Doctors salary	7,200	6,000	1,200
Doctors accommodation	2,500	1,250	1,250
Translator salary	1,000	875	125
Car maintenance	6,000	3,750	2,250
Driver / caretaker	0	0	-
Education material	0	0	-
Mobile phones and credit for CHWs	500	1,000	-500
Outreach medicine costs	2,200	1,450	750
Total	19,400	14,325	5,075

The 2015 total funding budget requested was €25,300 of which app €19,400 has been awarded and €14,325 spent up until October 2015 hereby €5,075 remains.

(NOTE: The approximate total funded for which positions with the Community Health Worker Scheme is not totally clear, hence cannot be exactly pin-pointed)

Equipment budget

Item	Euros awarded	Euros spent	Remaining budget
Windows rack mounted server	850	0	850
Filemaker database software	0	0	0
iPad Air	0	0	0
Autoclave	2500	2500	0
Paediatric oximeter	350	0	350
Unicef hanging weighing scales for babies and electronic scales	1000	0	1000
Haemocue curvettes	300	310	-10

ECG paper	0	5	-5
Otoscope	0	207	-207
Oxygen	0	400	-400
Milk powder & nutrition	0	1250	-1250
Clinic stationary	0	270	-270
Total	**5,000**	**4942**	**58**

The 2015 total funding budget requested was €8,220 of which app €5,000 has been awarded and €4,942 spent up until October 2015 hereby €58 remains.

TB research project

Item	**Euros awarded**	**Euros spent**	**Remaining budget**
Doctor's salary	7,200	6,000	1,200
Doctor accommodation	3,000	1250	1,750
Translator salary	1,000	875	125
Food / accommodation for training etc	400	700	-300
Food / toiletries for patients with TB under care of clinic	1000	1630	-630
Car maintenance	3,000	3750	-750
Satellite phone credit	0	0	0
Education material	0	0	0
Total	**15,600**	**14205**	**1,395**

The 2015 total funding budget requested was €23,200 of which €15,600 has been awarded and €14,205 spent up until October 2015 hereby €1,395 remains.

NOTE: Any remaining funds not yet accounted for in this account will help fund the doctors' salaries, accommodation costs, translator salaries and car maintenance over the rest of the year. It will also help fund food for patients with TB – an important aspect that takes a significant part of the budget.