
Monitoring and Evaluation Review of a Leishmaniasis Control Programme in Syria

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Abstract

This paper will provide a discussion of a monitoring and evaluation (M&E) plan done for a leishmaniasis control programme in Syria. The paper will start with a brief overview of the impact of the disease in Syria, followed by the following sections: methods and tools used for the M&E plan; aims, objectives and parameters of the plan; limitations and difficulties faced to conduct the plan and resolution strategies; programme conflict analysis; needs assessment; ethical issues faced and mitigation strategies; the use of qualitative and quantitative data collection methods; tools necessary for completion of the plan; and ways evidence was used to support the decision making throughout the programme.

Keywords: leishmaniasis; humanitarian crisis; monitoring and evaluation; Syria.

1. Introduction and Case Study Description

Leishmaniasis disease was considered endemic to Syria before the current war in Syria, however it is believed that the recent war has exacerbated the problem. The disease is famously known inside Syria as “Aleppo button” or “Aleppo Boil” due to the believed origin of early cases being in Aleppo, Syria.

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All types of leishmaniasis disease are caused by the bite of an infected female sand fly but different species of the female sand fly causes the different types of the disease. According to the World Health Organization (WHO) there are three types of leishmaniasis disease:

- I. Visceral (VL): affects internal organs like the liver and spleen. If no treatment is offered, it causes cause death in approximately 90% of the cases.
- II. Cutaneous (CL): a superficial type of the disease. Occurs in the form of ulcers in the place of bite.
- III. Mucocutaneous: causes damage to the mucous membranes of nose, mouth and throat and can lead to death from suffocation.

The most common type of leishmaniasis in Syria is CL. After the war started in 2011, the infected cases reached 100,000 by the end of the 2013 [5, 6]. Leishmaniasis disease can be treated and prevented, according to the Manual of CL Case Management in the Eastern Mediterranean region by WHO [13]. It is primarily treated with the medications Glucantime and Cryotherapy and the use of liquid nitrogen. Prevention depends first on the treatment of the infected patients since they are carriers of the parasite. Subsequently, killing the vector (sand flies) is necessary through methods such as indoor residual spraying (IRS), long lasting insecticidal treated bed nets (LLINs) and long lasting insecticidal treated curtains (LLICs), controlling the reservoir hosts such as dogs and cattle, and getting rid of waste and rubble that provide a welcoming environment for the breeding of the sand flies [2, 14, 15]. Due to the conflict within Syria, there has been significant breakdown of health infrastructure within the country. A primary focus has been put on emergency health efforts and war surgeries. Disease like CL, which requires primary health care centres for treatment, has been neglected. Subpar treatment has been using a locally produced Glucantime, which did not pass any quality standards or approvals to be used for CL treatment. The accumulation of rubble and waste, the lack of waste management projects, and absence of vector control programmes has contributed to the ability of sand flies to find adequate breeding grounds. Furthermore, with the bombing, fighting, and lack of adequate resources such as water, food and electricity, mass amounts of the local population has been displaced which is leading to widespread geographic transmission of the disease.

2. Aim and Objectives of the M&E Plan

The programme was designed to provide Glucantime medication for the health facilities in Aleppo, Idleb, Raqqa, Hamah, Deir El Zour and Lattakia. This included approximately 100 health facilities in total. The program was also designed to conduct prevention activities in Aleppo and Idleb where the number of patients was significantly higher compared to other regions. Syrian national medical and prevention supervisors implemented the programme. The programme was designed and funded at the regional level by:

- I. European Commission's Humanitarian Aid and Civil Protection department (ECHO) from the European Union (EU).
- II. Office of United States (US) Foreign Disaster Assistance (OFDA) from the US government.

III. Department of International Development (DFID) from the British Government.

No funds were received directly from these donors but instead through an American humanitarian non-governmental organization, which acted as an implementing partner. The fund proposals were submitted to the mentioned donors directly.

3. Rationale of the M&E methodology

The programme was planned to be conducted for six months as an emergency programme then subsequently for at least two years as an established public health project. It was identified that a monitoring process would be continuously needed to be able to track the progress of the project and to ensure the project was meeting the donors' requirements. An evaluation was planned at the end of the this six months, before receiving the next instalment of funds, to evaluate the activities performed and showing evidence of the results to date. Moreover, the M&E plan aimed to identify any mistakes requiring correction in the long-term project. The most relevant processes and approaches for conducting the M&E plan were:

- I. Performance monitoring: Continuous monitoring of the treatment and prevention activities to confirm the objectives were met. Objectives include the correct number of medications reaching the health facilities and a critical mass of civilians covered and protected by the prevention activities through national management staff.
- II. Summative evaluation: Evaluation of a vector borne disease (VBD) project is best performed after prevention activities are completed. Additionally, sand fly population monitoring process must be conducted in the field to obtain evidence as to whether the prevention activities were successful in reducing the vector population. This is done by comparing current population numbers with baseline data collected at the beginning of the intervention.
- III. Participatory approach: Any VBD requires a comprehensive prevention plan that covers at least 80 percent of those who both are and are not infected with the disease [9]. This project aimed to cover large number of populations living in all the infected areas in Syria. Due to the widespread nature of the project, local councils, local relief committees, and community leaders were consulted regarding the best approaches for the intervention.

Before conducting the M&E plan, a research utilization model is needed. The plan must be relevant to the programme's goals and objectives. This project utilized a two-pronged model [12].

- I. Knowledge driven model: Since leishmaniasis disease has been considered endemic in Syria since the 19th Century, many studies have been conducted regarding the disease in Syria, particularly within areas of historically high incidence rates. Research has also been collected regarding reasons for such high incidence, thus providing preliminary knowledge for our intervention approach.
- II. Problem-solving model: Prior research has shown high incidence rate of the disease in Aleppo, yet the

population in Aleppo was significantly decreased when we started the programme because of the displacement of the population due to the war between the armed state and non-state actors. While we know there are many patients suffering from the disease, we were unaware of their exact geographic location after being displaced. Therefore, research was done by the medical team in health facilities in Aleppo, Idleb, Raqqa, Hamah, Deir El Zour, and Hassaka to identify the numbers of the patients per governorate.

Due to the emergency nature of the programme in an area such as Syria and the tight schedule provided by the donors to accomplish the first phase of the programme, there were barriers and limitations to conduct an effective M&E plan. Barriers included:

- I. Outdated and non-professional prior research about the disease before the start of the war in 2011. Yet, since the dynamics within Syria have significant changed since the war, we used old research studies only as a starting point.
- II. Challenges in conducting field research in many cities inside Syria because of difficult access from city to city due to the fighting and security barriers. Some cities cannot be accessed directly from its border city due to travel restrictions.
- III. Lack of experienced researchers within Syria to conduct broad professional technical research and data collection. This required substantial training from outside sources.

4. Conflict Analysis

The Syrian conflict appears to have occurred due to conflict between Sunni groups and Alawites. Due to the conflict, it was very important to conduct both a context and conflict analysis during the programme implementation. Since the conflict happened because of a contextual problem, it can be argued that the Syria conflict is a hidden historical internal conflict that turned to be an exposed intensive one. According to Jonathan Goodhand [4] the first step is conducting contextual analysis is to study the root causes of the conflict together with the origins of the aggravation whether “security, political, economic and social”. The war in Syria has involved many actors such as the Syrian Government, Free Syrian Army (FSA), Hezbollah, the Islamic State in Iraq and Syria (ISIS), Jabhat Al Nusra, Gulf countries, the United States, France, and Turkey, all of which are financing the opposition as well as Russia, China and Iran backing the Syrian government. The role of these actors take us to the second stage of the analysis which is analysis of key actors in matters of their benefits, connections, abilities, political will, and rewards toward the conflict. It is also necessary to inspect the effect of foreign bodies involvement. Lastly, analysis of the factors that can aggravate or mitigate the conflict is needed [4]. As previously explained, the nature of the Leishmaniasis control programme is comprised of two sub activities (i.e. treatment and prevention) in wide geographical areas in six different cities. There is a unique context in each city since each area is under control by armed groups with different political and military objectives. Every armed group needed a certain mechanism and approach to grant permission for the project to occur. Analysis of these armed groups on the ground was very crucial to gain their acceptance and access to the

population living in their areas [11]. The following conflict analysis tools and frameworks were also relevant to the leishmaniasis control programme case study [11].

- I. Benefits/harms handbook: focuses on analysis, impact assessment, and project design in the field level.
- II. Making sense of turbulent contexts (MSTC): Focuses on the NGOs emergency response locally.
- III. Do No Harm conflict analysis
- IV. European Commission Checklist for the root causes of the conflict

The project also needed to be analysed from the perspective political analysis of the Turkish government. Turkey has been heavily involved in the Syrian conflict and helps to facilitate cross-border humanitarian assistance into northern Syria. However, northern Syria is not under government control and was the site of many suicide bombings targeting the Syrian and Turkish government. It has been a complicated process to analyse and draw conclusion regarding this aspect of the conflict.

5. Needs Assessment Framework and Approach

Needs assessment in a humanitarian assistance intervention is crucial because it acts as a decision-making tool for intervention and affects the type, level and preference of the intervention [3]. For this project, numerous challenges were faced when conducting the needs assessment. These challenges occurred due to the nature of the project being a remote management project, the inability to send international experienced technical staff inside Syria to conduct needs assessments due to security challenges. Needs assessments that were needed included monitoring sand fly population, which is different than other needs assessments that professionals within Syria are used to conducting for projects such as assessing for adequate food or shelter. In addition, the scattering of approximately 100,000 patients due to displace from conflict and the lack of data about their geographical concentration made it difficult to pinpoint the starting point of needs assessment activity. One of the important functions of the needs assessment activity in this project was the production of a baseline date from the needs assessment [3]. We aimed for accurate data despite the challenges of working within a conflict area. We understood the effectiveness of the project could only be demonstrated by overcoming these obstacles. Also, to measure the effectiveness of the prevention activity of a VBD, it is necessary to know the vector population before conducting prevention activity and to compare it with the vector population after the activity is finished. It is then necessary to access whether the intervention worked as planned or if it needs modifications to further reduce the vector population.

The most applicable and relevant needs assessment approaches for the programme the time we started were:

- I. Coordinated assessments (CA) approach: Since we started the project in August 2013, more than two years after the conflict and the start of the humanitarian operations in Syria, we coordinated with other NGOs who were working on the ground for at least one year. These organizations helped to development an assessment of the leishmaniasis disease situation. Also, we only focused on prevention

and treatment yet since one of the factors that increase the spread of the disease is the waste and rubble. We partnered with the Water, Sanitation and Hygiene (WASH) sector through a process of coordinated logistical assessments to understand the importance of WASH in combatting leishmaniasis disease.

- II. Vulnerability and capacity assessment (VCA): Cutaneous leishmaniasis disease is considered a primary healthcare problem, not an emergency health concern. Since a conflict area such as Syria primarily funnels resources to emergency medical assistance, diseases and chronic illnesses such tuberculosis (TB), leishmaniasis, hepatitis, and cancer are often neglected. Therefore, a capacity assessment was needed to assess the capacity of healthcare infrastructures to cope with leishmaniasis disease. It was necessary to uncover what was needed to build upon our plan in the six cities where the project was implemented [7].

6. Data Collection methods and tools

Since data collection and analysis is considered one of the needs assessment activities for the leishmaniasis control programme, many qualitative and quantitative data needed to be collected and analysed before the intervention started. A quantitative and qualitative research methods approach was employed in the field to gather such data. The following data and information were needed for effective implementation of the leishmaniasis control programme [1]:

- I. Number of CL and VL patients: This was done by primary quantitative data collection by the national Syrian staff using information from the health facilities including the patient's registration books. Depending on this information, the amount of international procurement of the Glucantime medication was decided.
- II. Effectiveness of the medication on the patients: This was done using the qualitative data collection method known as the knowledge, attitude, and practice (KAP) survey. Patients and doctors were interviewed and asked open-ended questions about the effectiveness of the medication in treating the leishmaniasis lesion in the patients' body. They gave a general overview about their degree of knowledge about the disease and we addressed critical information they misunderstood, such as modes of transmission and prevention.
- III. Number of houses, schools and structures in the urban areas within targeted cities: This information was very crucial for the IRS implementation since it is considered a door-to-door activity. Data was obtained via secondary quantitative data collection from the local councils in the targeted cities. The data was primarily dated before the war started; therefore, the data was not the most accurate due to bombings and destruction of houses that had occurred. Our team tried to do realistic assumptions on the percentage of accuracy of these numbers using the experience from the NGOs working in the ground.
- IV. Number of populations living in rural areas in targeted cities: For the prevention activity of a VBD to be effective it should cover at least 80 percent of the population or area [9]. therefore, we needed data regarding population statistics. This information was needed to be able to know the number of LLINs

and LLICs to be distributed in rural areas. We utilized the calculation of one bed net for every three persons and one curtain for every six persons (or family) to help us in reaching the desirable targeted percentage.

- V. The approach needed to conduct an IRS activity in the internal displaced populations (IDPs) in the camps: Every camp has its own management committee including local community leaders who would sometimes stop the research and evaluation activity with little warning. Contact communication and feedback was needed before starting the activity to help avoid these barriers. By using qualitative method like focus group discussions and interviews, we were able to identify the best time for implementing activities and gain feedback from community leaders regarding how to approach and manage efforts within the camps, including how to best convey information to the public.

7. Ethical Issues

Several Ethical issues occurred and may continue to occur during the project implementation. These ethical issues arose or will arise due to the conflict occurring in Syria and because of the nature and spread of the disease. We have been told by many of the local people that it is not ethical for civilians dying from conflict as local health facilities are not equipped with surgical equipment, trained medical staff, or in some cases even adequate food and water. People gave feedback that spraying houses that may be eventually bombed and distributing bed nets that they never used prior is not a priority. Others suggested that CL is not fatal and that they focused instead of fatal health and safety concerns. There were however, around fifteen individuals suspected to suffer from VL, the fatal type of leishmaniasis, in Idleb. Those cases are under laboratory investigations. To help overcome hesitancy, it was justified to the local civilians that responding to the emergency of the spread of the disease are crucial on the long-term. It was explained that not treating and preventing leishmaniasis now may result in a large increase in the number of deformed individuals which can lead to the stigmatization of the infected people and become marginalization in the community as has occurred in Afghanistan and Pakistan in the early 1990s during wartime. Some of the stigmatization problems in Afghanistan and Pakistan include “women [who] are particularly victimized as they are considered unacceptable for marriage, sometimes by their own families. Women are often separated from their children during the disease by their family and not allowed to breast-feed. These women usually suffer from depression and often anxiety” [8]. According to study results about these cases, it was emphasised that “this exclusion [of people infected with leishmaniasis] can consist of minor domestic restrictions (40 [46%] of 89 FGD respondents said they would not share plates, cups, or towels with Leishmaniasis patients) or more severe measures that lead to physical and emotional isolation” [11]. An information, education and communication (IEC) campaign may play an effective role in the awareness of the importance of the disease prevention and treatment among local civilians. In addition, another ethical issue that arose due to the conflict within Syria was the organization’s ethical responsibility toward the donors in comparison to its responsibility to the national Syrian staff working within Syria. Working in a war zone in a door-to-door activity like spraying houses to kill flies and conducting data collection had to be done quickly to meet the donors’ timeline requirements. This had to occur as bombings and intense drastic security emergencies occurred within Syria. Ethically any organization should cease its activities during periods of time when fighting intensifies so as not to sacrifice the lives of the staff. Yet, donors

do not always understand this. Pressure was put on staff to work if they want to be offered extra grants. Since NGOs often have a mandate not to intervene in wars or conflict and to act only as a reaction to crisis to alleviate the suffering of civilians and non-combatants, significant communication had to be maintained with the donors to explain the situation, address the NGO's unique role, and advocate for the staff within Syria conducting the study.

8. Conclusion and Recommendations

A VBD control programme like the leishmaniasis programme in Syria needs a very strong baseline data that will provide evidence for intervention in certain geographical area. Unlike other humanitarian programmes when food and non-food items are distributed as an intervention, VBD programmes are driven by the location of where there are both significant amounts of vectors (i.e., sand flies) and citizens. A baseline data about the population of the sand fly using technical sand fly monitoring techniques is very essential for the success of the programme and to be able to conduct a comprehensive M&E plan. For example, the sand fly monitoring should be done only in the season where the sand flies are active and go out of their hibernation sites. This is during the summer or times when the temperatures are above 25 degrees Celsius, the temperature at which the eggs of the sand flies hatch and the adult sand flies become active. It is important to say that due to the current security situation in Syria, conducting a fully effective baseline data assessment is very difficult. Due to safety reasons, monitoring of sand flies cannot be conducted in areas where there is heavy fighting or conflict among the armed state and non-state actors. Yet, there are unique and creative opportunities to find baseline data substitutes that provide strong evidence and will lead to effective and accountable intervention.

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