Health Learning Paper

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Referral System Strengthening in Lake Province, Chad.

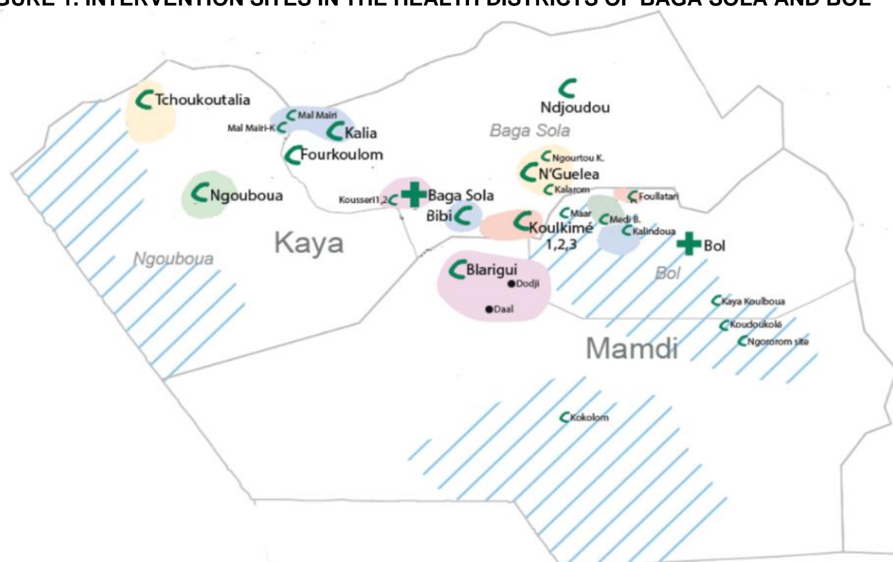
Support to life-saving emergencies: July 2022 - May 2023, Baga Sola and Bol Health Districts.

Introduction

The Lake Chad province, in the grip of a complex and protracted conflict, has been affected by a serious humanitarian crisis linked to incursions by armed groups and the effects of climate change, resulting in poor access to livelihoods and basic social services. According to the Humanitarian Needs Overview (2022), over 400,000 people, or more than 60% of the province's population, are currently internally displaced because of attacks by non-state armed groups[1]. In June 2023, the number of internally displaced people (IDPs) in the Lake Chad province was estimated at 215,928[2].

In May 2022 the second phase of the project funded by the European Commission's Civil Protection and Humanitarian Aid Operations department (DG ECHO) was launched in the health districts of Bol and Baga Sola, Lake Chad Province. Following on from a first phase (May 2021 - April 2022), the project's main objective was to increase access to essential health, nutrition and water, hygiene and sanitation (WASH) services over the period 1 May 2022 - 30 May 2023. In collaboration with the health authorities of Baga Sola, the project supported 7 health centres, 1 health post and 4 IDP sites using a mobile clinic. In the Bol health district, Concern supported the deployment of 2 mobile clinics in 8 IDP sites[3] (Figure 1).

FIGURE 1. INTERVENTION SITES IN THE HEALTH DISTRICTS OF BAGA SOLA AND BOL



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[1] Source: Humanitarian Needs Overview, 2022

[2] Source: Displacement monitoring matrix, Lake Province, Chad, June 2023, IOM

[3] For Bagasola health district: health centres: Blarigui, Kalia, Ngouboua, Tchoukoutalia, Bibi, Nguelea, and Koulkime; Fourkoulom health post; internally displaced sites: Mal-Mairie, Kousseri 2, Ngourtou Koumboua, Kalarom. For Bol mobile: Maar, Foullatari, Kokolom, Kalindoua, Medi Boudoumarie, Koudoukole, Ngororom, Kaya Koulfoua.

Concern worked with the two health districts to strengthen primary health care (PHC). Access to secondary healthcare, however, remains a major challenge for the population. In July 2022, Concern expanded its support to life-saving emergencies (previously limited to patient transport) to cover for in-patient costs (e.g. laboratory, imaging, drugs, and surgical procedures) and the provision of dry rations for patients and their caretakers. The support targeted all age and gender groups.

A classification of the main life-saving emergencies and a data collection template were developed. A memorandum of understanding was also established between Concern, the Provincial Health Delegation of the Lake Province, Baga Sola district hospital and Bol provincial hospital. Maternity and paediatric services and the stabilization centre (SC) in Baga Sola district hospital have been respectively supported by the International Rescue Committee (IRC) and Action Contre la Faim (ACF). The provincial hospital of Bol has been receiving support from both IRC and UNICEF (e.g. for the SC).

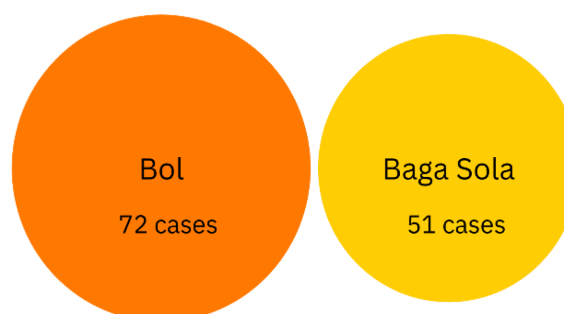
This document presents the main findings of the support, the lessons learned, and the recommendations drawn from the experience. Due to the absence of a database at the start of the project, the analysis focused on available data from December 2022 to May 2023. All patients were anonymised. Two case studies are presented at the end of this document.

Main results

Hospital Admissions

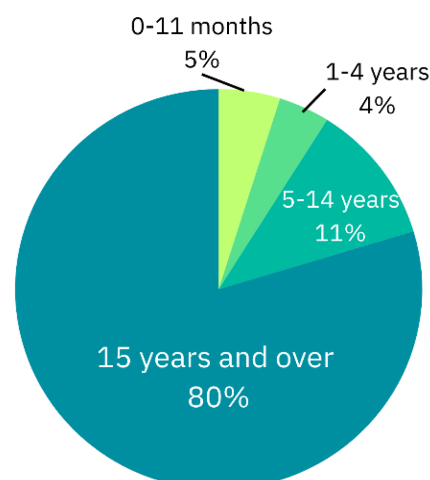
From 1 December 2022 to 30 May 2023, 123 life-saving emergencies were referred to the two hospitals: 41% (n=51) to Baga Sola district hospital and 59% (n=72) to Bol provincial hospital (Figure 2). In addition, 53 children under the age of 5 (29 girls and 24 boys) suffering from severe acute malnutrition (SAM) were admitted to the SC of Baga Sola. For these SAM cases, Concern only covered the transport costs, with the other costs being covered by ACF. These 53 cases were treated separately and not recorded in the life-saving emergencies database.

FIGURE 2. HOSPITAL ADMISSIONS



The larger number of patients admitted at the Bol hospital can be attributed to the advanced technical facilities available. It should also be noted that, during this period, the Bagasola hospital had only one doctor, who was simultaneously working as a consultant, the hospital director and the administrative head. Consequently, for cases exceeding the technical capabilities of Baga Sola district hospital, patients were transferred to Bol for appropriate care. An additional factor was self-referral. Since the district of Bol has no district hospital, several patients came spontaneously, without a referral slip. According to the database, they represented 24% (n=17) of the total number of patients admitted to Bol provincial hospital. For Bagasola, there was only one case of self-referral.

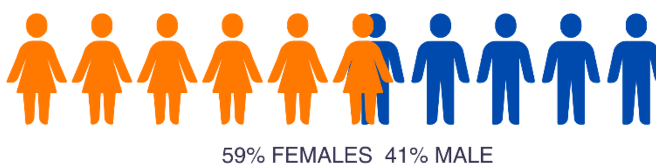
FIGURE 3. DISTRIBUTION OF PATIENTS BY AGE



Patient Profile

Most patients (80%) were aged 15 and over; 59% were female (Figures 3 and 4).

FIGURE 4. DISTRIBUTION OF PATIENTS BY GENDER



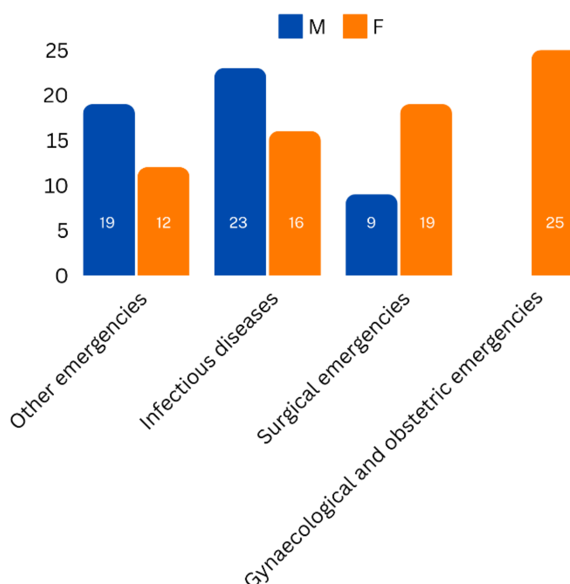
Reason for admissions

The life-saving cases were grouped into four main categories: infectious diseases, surgical emergencies, gynaecological and obstetric emergencies and other emergencies (Figure 5). Infectious diseases (severe malaria, pneumonia, other infections) were among the most common causes of admissions (32%). Other emergencies, such as gastro-intestinal complications, anaemia, stroke) accounted for 25% of referrals. Surgical emergencies (e.g. tumours, hernias) and: gynaecological/obstetric emergencies accounted for 23% and 20% of the total cases respectively.

Male patients outnumbered female patients when it came to infectious diseases and other emergencies. Female patients sought secondary care for surgical, gynaecological and obstetric emergencies (Figure 6).

FIGURE 5. LIFE-SAVING CASES BY CATEGORY (%)

FIGURE 6. DISTRIBUTION OF PATIENTS BY GENDER

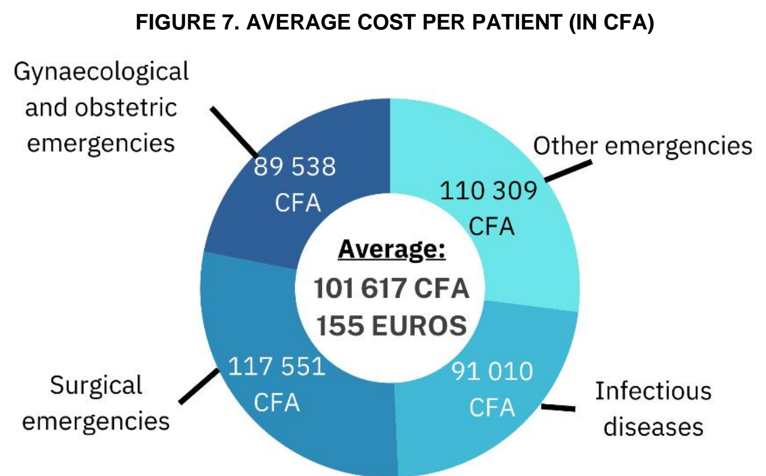


Hospitalisation costs

The initial budget allocated to life-saving support by the project was 16,250 euros. For the period December 2022 - May 2023, the amount spent was CFA 12,498,865 FCFA (EUR 19,054.40). The costs attributed to Baga Sola hospital accounted for 55% of the overall spending. It should be noted that, for the third phase of the project, Concern will continue to cover the costs of patients admitted at the provincial hospital of Bol while IRC will cover the costs of

admissions at the district hospital of Baga Sola. The average cost per patient was estimated at 101,617 CFA, with the lowest being for gynaeco-obstetric emergencies (89,538 CFA) and the highest for surgical emergencies (117,551 CFA) (Figure 7).The drugs made up the largest share of hospitalisation expenditures (7,528,365 CFA), followed by spending on laboratory costs (2,653,000 CFA), other expenses such as administrative fees, consultations, supplies and equipment (1,434,000 CFA), surgical procedures (527,500 CFA) and imaging (356,000 CFA). The relatively low spending for imaging can be attributed to the limited availability of equipment (only in Bol).

FIGURE 7. AVERAGE COST PER PATIENT (IN CFA)



Implementation challenges

Referral pathway

The referral pathway was not clearly defined in the Memorandum of Understanding. As Bol district does not have a district hospital, 17 patients went spontaneously to the provincial hospital without being referred by a health centre or mobile clinic, leading to difficulties in validating their treatment expenses.

Follow-up of patients

Patient follow-up in both hospitals was the responsibility of Concern's medical coordinator and medical supervisors. The medical supervisors were strategically positioned, one based in Bol and the other one in Baga Sola. This enabled them to optimise monitoring and to act as “Concern focal points” for the hospitals. Several challenges were however reported.

Firstly, monitoring was intermittent and highly dependent on project workload and other activities (e.g. monitoring and support to health centres). In addition, follow-up was limited to basic check-up and discussion with patients. Important information (e.g. patient identity, place of origin, length of stay in hospital, and outcome) was not documented. There was no double-check either on the invoices submitted by the two hospitals. These gaps may be due to peaks in activity, intense training periods and other competing priorities. They all together impacted on the capacity to maintain regular follow-up of patients.

The second challenge in the follow-up process was the communication gaps with the hospitals. There was no systematic report to Concern on the admissions of new cases, making patient follow-up difficult.

Data collection template

The data collection template did not adequately capture critical information. For instance, information on patient's status (IDP/host community), length of stay, discharge date and discharge summary (e.g. cured/deceased) should have been included in the data collected.

Reimbursement of invoices

Another major challenge was the frequent irregularities in hospital invoices, such as variations in the unit prices of drugs or hospital services, which resulted in a tedious and lengthy verification and validation process. This problem

created significant back and forth between the hospitals and Concern to clarify and review the invoices before payment.

Once the invoice had been validated by the Concern team in Baga Sola, the payment process was then transferred to Concern Ndjamena for bank settlement, as the amounts often exceeded the thresholds authorised for cash payments. This step also considerably slowed down reimbursement, while adding a further level of complexity and delays to the settlement of hospital expenses.

Fuel management

Each month, around 900 litres of fuel were given to the Baga Sola hospital and 500 litres to the Bol hospital. This fuel was used to cover both the transport of referrals/counter-referrals and the running of the generators at Baga Sola and Bol hospitals. In Baga Sola, the ambulance was refuelled directly from Concern's base for each case referred, posing a logistical challenge with constant verification and monitoring, as well as the presence of the storekeeper and the person in charge of validation. To optimise the process and reduce logistical constraints, the ambulance's refuelling was adapted. Currently the ambulance refuels in larger quantities, either directly at the Concern base or at a nearby gas station. The aim is to reduce the need for frequent trips to the base, thereby improving efficiency and optimising time, while ensuring that the ambulance is always available for referrals.

Lessons learned

The main lessons learned are as follows:

1. Memorandum of understanding.

It is essential to incorporate into the memorandum of understanding with the hospital and the Health Delegation precise and detailed clauses concerning the referral of life-saving cases. This protocol must clearly define the conditions for eligibility as a beneficiary of Concern's support. The conditions we used and proposed are:

- The beneficiary should carry a referral form.
- In the absence of a referral form and depending on the severity of the case, the referral must be approved by both the Hospital medical doctor and Concern's medical supervisor.

The objective of this measure is to limit patients bypassing primary level of care and referrals of non-life saving cases.

2. Classification of life-saving emergencies.

This classification should be reviewed to better define the “others” category (accounting for 25% of total cases) and to identify patients who meet the criteria for life-saving referrals. Appendix 1 presents the proposed classification currently under finalisation.

3. Setting up a robust monitoring system.

A robust monitoring system is critical. According to the system set up by Concern for this project, the hospital should call Concern's medical supervisor/coordinator for validation before recording a referral. The systematic use of referral form should also be encouraged as a key document for justification and monitoring of expenditures. In addition, a reliable database is essential for accountability and accurate monitoring of patients and treatment received. The database should include patient details, origin, gender, diagnosis, expenditure categories, date of admission and discharge, and the patient's discharge status (e.g. cured or deceased). It should be updated at the end of each month.

4. Communication with hospital staff.

An inception meeting with hospital staff is critical to clarify any issues related to invoices and reimbursements. A good communication with hospital staff is equally essential to ensure smooth and efficient implementation. In addition, to ensure a consistent approach, it is essential to inform health centres, mobile clinics and hospital staff on the classification given to life-saving emergencies in the context of this project.

5. Human resource setup.

For effective coordination and management, it is crucial for Concern medical supervisor to monitor in-patients and act as the focal point with the hospitals. Close and regular monitoring would not only enhance attention to patients' needs, but also contributes to the overall quality of care and coordination with hospital staff.

6. Mapping of actors.

Accurate and up-to-date mapping of the various actors supporting secondary healthcare is crucial to avoid duplication of effort and resources. Such mapping makes it possible to clearly identify the interventions of each actor, their capacities and the synergies, thus contributing to improved coverage without unnecessary overlap.

Conclusion

The referral of life-saving emergencies should be continued and strengthened, especially as it takes place in a humanitarian context and within a constrained healthcare system facing challenges to meet the multiple needs of populations. To improve project effectiveness, lessons learned must be integrated and specific measures put in place. These adjustments will optimise resources and help improve the quality and continuity of care.

Appendix 1: Classification of life-saving emergencies

The revised classification of life-saving emergencies is as follows:

1. **Surgical emergencies**: appendicitis, peritonitis, intestinal obstruction, strangulated hernia, knife or firearm injuries, as well as road accidents with surgical complications.

2. **Obstetric emergencies**: placenta previa, pre-uterine rupture syndrome, uterine rupture, post-partum haemorrhage, cord prolapse, acute foetal distress, retroplacental haematoma, ectopic pregnancy, prolonged labour and threatened abortion.

3. **Gynaecological emergencies**: haemorrhagic or painful fibroids, torsion or rupture of ovarian cysts, among others.

4. **Medical emergencies**: complications of severe malaria (pernicious malaria attacks, severe anaemia), shock, cerebral vascular accidents (CVA), heart failure, acute renal failure, acute respiratory failure, hypertensive crises, epileptic crises, hepatic encephalopathy.

5. **Mental health disorders**: attempted suicide or self-harm and treatment of acute psychotic disorders.

6. **Other emergencies**: Cases not corresponding to the above categories, to be assessed on a case-by-case basis. Validation by a Concern medical supervisor/coordinator will be required to determine reimbursement of costs.

Appendix 2: Case study

Case study 1: Case management, Bol Provincial Hospital

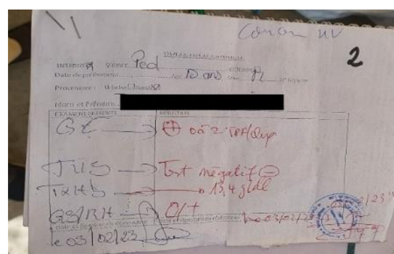
Gender: Male
Age: 27
Admission date: 6 January 2023
Place of origin: Bol
Status: Host population
Diagnosis: Abdominal wound, acute generalised peritonitis, post-operative superinfection, severe malaria

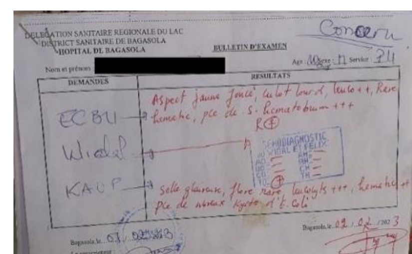
The 27-year-old patient was admitted to Bol Provincial Hospital on 6 January 2023 with an abdominal wound sustained in a fight. Initial surgery was performed on 11 January to treat acute generalised peritonitis. Unfortunately, in addition to severe malaria, he developed post-operative complications (infection of the wound). A second surgery was required on 15 February. According to the hospital director, he had been abandoned by his family because of a belief linked to "diya" (financial compensation from a third party in the event of an accident resulting in death). The family had accepted the diya on the assumption that he would not survive and feared claims if the patient returned in good health. Faced with the seriousness of his condition and the absence of family support, the hospital director asked Concern for help with his treatment. After several months of care and numerous interventions, the patient was able to leave the hospital in good health on 28 March 2023, expressing his deep gratitude to the hospital team and Concern. This case highlights the complex challenges faced by healthcare systems and humanitarian organisations, including the cultural and social barriers that can hinder access to healthcare. It also illustrates the crucial importance of collaboration and financial support in accessing secondary healthcare.

Case study 2: Reference and counter-reference, Tchoukoutalia insular zone

Gender: Male
Age: 10 years
Admission date: 1 February 2023
Place of origin: Tchoukoutalia insular zone *(no-go area)*
Status: Internally displaced
Diagnosis: Severe malaria with severity criteria according to WHO classification

Two days before being admitted to hospital, a 10-year-old child began to experience consciousness and speech problems, which worsened, plunging him into a coma 24 hours later. Alarmed, his mother immediately took him to the Fourkoulom health post. The health staff, noticing the seriousness of his condition, quickly contacted the District Health Authorities. Two hours later (average time between Baga Sola and Fourkoulom), the ambulance took the child to Bagasola hospital. Concern's supervising doctor and medical coordinator were also informed by phone. When the child arrived at the hospital, he was provided free medical care and the caretaker received food. Aware of the free healthcare and touched by this generosity, the mother invoked "*blessings for Concern Worldwide and the European Union, thanking all the forces that made this care possible*". The same day, the child was referred to the Fourkoulom health post for further treatment, close to his home.





DELEGATION SANITAIRE REGIONALE DU LAC
DISTRICT SANITAIRE DE BAGASOLA
HOPITAL DE BAGASOLA
BULLETIN D'EXAMEN
DEMANDES
RESULTATS

Figure 8 and 9. Results of laboratory tests, Paediatrics Department, Baga Sola Hospital

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