

FINAL REPORT



International Federation of Red Cross and Red Crescent Societies
Fédération internationale des Sociétés de la Croix-Rouge et du Croissant-Rouge
Federación Internacional de Sociedades de la Cruz Roja y de la Media Luna Roja
الاتحاد الدولي لجمعيات الصليب الأحمر والهلال الأحمر

ETHIOPIA: MENINGITIS EPIDEMIC

26 August 2002

The Federation's mission is to improve the lives of vulnerable people by mobilizing the power of humanity. It is the world's largest humanitarian organization and its millions of volunteers are active in 178 countries. For more information: www.ifrc.org

Appeal No. 06/2002; Launched on: 21 February 2002 for 3 months for CHF 1,460,000 to assist 1,800,000 beneficiaries.

Disaster Relief Emergency Fund (DREF) Allocated: CHF 200,000 (reimbursed to DREF)

Period covered: February - June 2002 ; last Operations Update (no. 01) issued 11 April 2002

IN BRIEF

Final appeal coverage: 21.9%

Related Appeals Ethiopia 2002 Annual Appeal no. 01.10/2002

Analysis: Due to the evolution of the epidemic which turned out to be less severe than anticipated (see further details on this in the narrative below) what normally would have been a critically low appeal coverage of 21% proved to be less dire than usual. The balance remaining on this programme will be used for a project aimed at boosting the response capacity in the management of further meningitis outbreaks in selected branches of the Ethiopian Red Cross Society (ERCS).

Summary w

An epidemic of meningitis occurred in Ethiopia starting from the month of September 2001. By the beginning of February 2002 a total of 1,332 cases and 85 deaths had been reported to the Ministry of Health (MoH). Expecting a major outbreak, the MoH reactivated the ad-hoc committee on meningitis which is composed of the MoH, the World Health Organisation (WHO), UNICEF, the Ethiopian Red Cross (ERCS), Médecins Sans Frontières and other major partners in the country. The MoH also launched an appeal to the international community in February 2002 requesting assistance for 5.6 million people in the high-risk zones.

The Ethiopian Red Cross Society (ERCS), as a key partner in the control of similar epidemics in recent years, identified North Omo as a priority area for intervention. This zone was recently divided into three separate zones: Gamogofa, Wolayta and Dawuro. The ERCS took its decision to intervene in this area based on information provide by the MoH. Following a request from the ERCS, the Federation launched this appeal in February 2002.

There were serious delays in getting surveillance reports from the health institutions and health offices at various levels. In addition local health authorities decided on focal selective vaccinations that brought the epidemic in some of the areas in North Omo under control without mass vaccination. However, since the transmission was not halted completely an epidemic erupted in the Dawuro zone

starting from early March 2002. The five woredas in Dawuro zone were affected by the epidemic. By the end of June 2002 a total of 459 cases and 21 deaths had been reported to the Dawuro zonal health department.

The ERCS intervened in the Dawuro zone with youth volunteers who mobilized and sensibiled the community to participate in the mass vaccination. In this intervention, 22 health professionals, 31 volunteers, 4 supervisors and 4 support staff have participated. A total of 208,642 people living in the affected woredas were vaccinated within 35 days. There was adequate coverage to halt the transmission and the co-operation between the Red Cross and the health sector was very good.

Coordination w

The MoH chaired the ad-hoc committee on meningitis in Addis. Co-operation between the different partners was good, but would have been better had reports from the field been received earlier. The operation revealed in fact shortcomings of the surveillance system which should be addressed through the appropriate channels.

Objectives, activities and results w

Ethiopia is one of the countries lying in the “African Meningitis belt”. Outbreaks of meningitis were reported in 1935, 1940’s, 1950’s, 1964, 1977, 1981 and 1989.

The 1981 and 1989 outbreaks were the biggest epidemics ever reported. Nearly 50,000 cases and 990 deaths were recorded in the 1981 epidemic and 45,806 cases and 1,686 deaths were recorded in the 1989 epidemic. The overall attack rate in 1989 was 133/10,000 population and case fatality rate was 3.7%. About 70% of cases were between the age of 5- 44 years.

The current epidemic started in September 2001 in SNNPR, in the south of the country. The MoH conducted an assessment in the most seriously affected areas and submitted a comprehensive proposal for potential donors to assist the most vulnerable communities mainly in the south of the country.

The ERCS, following the request by the MoH, prepared an appeal to assist the control of meningitis in North Omo zone of SNNPR of Ethiopia. The woredas of Damotwoyde, Ubadebiretsehay, and Arbaminch Zuriya were identified as the priority areas of the intervention for the Red Cross based on the information obtained from the MoH. This proposal was also seconded by WHO as North Omo was located between two adjacent zones in the region where the epidemic was prominent. Some of the selected woredas had reported cases beyond the threshold limit for mass vaccination. In addition to the three woredas initially identified Kucha woreda was later considered as more cases were coming in the 7th and 8th calendar week after the submission of the proposal.

However while the Red Cross was finalizing its plan of intervening in North Omo, the local health authorities were conducting selective vaccinations in the most affected areas. Some of the interventions were carried out by the local health officials even before the MoH launched the appeal. The following table shows the coverage and period of vaccination by these local health officials.

Woreda	Total population	Target population	No. of people vaccinated	Period of vaccination	Coverage
Ubadebretsehay	39,518	56,454	8,741	Jan. 9-21/02	15%
Boreda	131,313	91,919	3,132	Feb.19-25/02	3%
Arbaminchzuriya	208,355	145,848	11,477	Dec.19-27/01	7.8%
Kucha	134,682	94,277	4,594	Feb.19-25/02	4.9%

The vaccination conducted was selective covering only those kebeles from which cases were reported, the coverage even in most of these kebeles where the vaccination was carried out was not adequate.

This selective intervention has changed the course of the epidemic, but was not sufficient to control the transmission to adjacent areas. Consequently cases were reported from the Dawuro zone (a newly created zone from North Omo).

Faced with the reality in the field the ERCS in agreement with the MoH and following consultation with the International Federation decided to direct its efforts towards the outbreak of the epidemic in Dawuro.

Health and care w

Objective 1 To procure 1.8 million doses of meningitis vaccine and related supplies (18,000 boxes of auto-disposable syringes, safe-disposal boxes) for mass vaccination in North Omo Zone, SNNPR, and 2,000 vials of oily Chloramphenicol for treatment of meningitis cases.

The operation was started with the procurement of 200,000 doses of meningitis vaccine with accessories and 2000 vials of chloramphenicol in oil suspension from the Federation's Disaster Relief Emergency Fund (DREF).

The vaccines and chloramphenicol were received and handed over to the MoH as the responsible body for storage and distribution of vaccine.

Objective 2 To assist the Regional Health Bureau and Zonal Health Departments in the mass vaccination activities in North Omo zone of the SNNP region, through the deployment of Red Cross volunteers for the purpose of mobilising the communities to increase public awareness and vaccination of population groups at risk.

The ERCS, supported by the Federation, mobilized the volunteers and health professionals to conduct mass vaccination in the affected woredas. The main approaches used were:

- Surveillance and collection/verification of case and death data.
- Training and provision of logistical support to health professionals.
- Pre-vaccination campaign planning exercise.
- Training of 31 volunteers on community mobilisation, case detection and dissemination of health information.
- Mobilisation of the community by the Red Cross volunteers.
- Inclusion of 31 volunteers in the vaccination team.

The response to the epidemic was significantly delayed due to the poor surveillance system and due to the difficult topography. The administrative restructuring of North Omo may have also significantly contributed to the delay of the intervention. In Loma and Mareka woredas for example, (refer the table in annex I) there were 57 and 41 cases in the first week of the epidemic while there were no cases in the previous weeks. This indicates that the index case could possibly be in the previous weeks. If the surveillance system was good enough it would have been possible to prevent the transmission of the epidemic to the adjacent woredas thereby preventing the suffering of the people and additional expenses. This delay can further be explained from the previous supervisory visit made by the ERCS/International Federation staff in March and April. The ERCS/International Federation staff has made the first visit in Mid March, but except for some preliminary figures from the Regional Health Bureau, there were no tangible evidence for the epidemic in Dawuro zone whereas from the table in annexe 1 it has been made clear that this period was the time where the epidemic has been almost on its peak. The zonal Health Department has attempted to control the epidemic by giving a selective vaccination early march but it has failed to control the transmission effectively.

Even though the intervention was delayed the mass vaccination has been able to successfully contribute to control the epidemic. The intervention has possibly minimised the magnitude of the

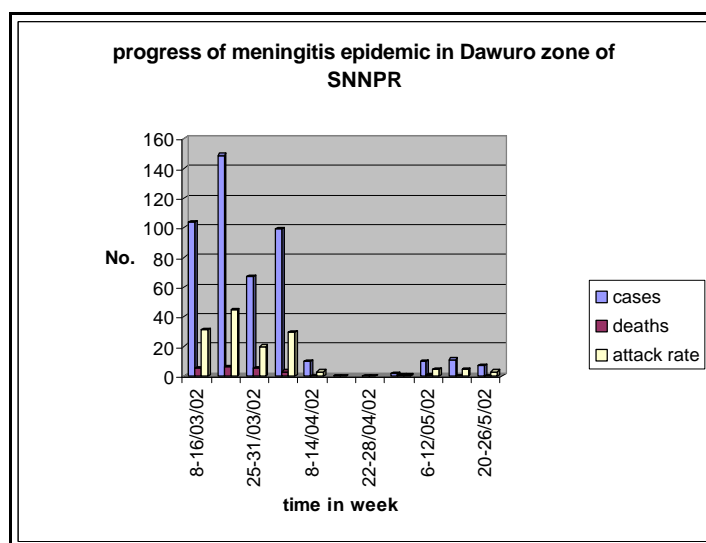
epidemic in the last three woredas. The community sensitisation by the volunteers may have also contributed for the low case fatality rate.

Achievements

Mass vaccination was performed to a total population of 208,642 people, the coverage is shown in the following table

Woreda	Total Population	Target Population	Total population vaccinated by age				Coverage (%)
			2-14 yrs	15-29 yrs	>30yrs	Total	
Loma	81,000	56,700	17,204	19,638	5,538	42,380	64.98
Mareka	79,000	55,300	17,204	19,638	5,538	43,502	68.65
Tocha	66,000	46,200	34,408	39,276	4,840	43,072	82.75
Genabosa	64,000	44,800	1,866	20,984	3,926	43,576	88.50
Isera	48,000	33,600	18,701	11,979	5,432	36,112	91.30
Total	338,000	236,600	89,383	111,515	25,274	208,642	77.50

Nearly 500 people were admitted for meningitis and treated either with Crystalline penicillin or chloramphenicol in Oil suspension based on the severity of the disease. The importance of chloramphenicol was appreciated by the health professionals.



National Society Capacity Building

This intervention has significantly improved the capacity of the branch in Arbaminich and the Sub branch in Wolayta in mobilizing the community and managing similar out breaks in the future. In this intervention the volunteers reached 148,000 people with health education messages. More than 500 posters, and 1500 leaflets were distributed to the community to raise awareness on meningitis.

The net working of the branch and the ERCS with the community, the woreda and zonal administration and the health sector was improved. The intervention also had a very positive impact on the image of the ERCS.

Assessment and lessons learned

The delay in reporting meningitis cases was the serious problem in this intervention. A considerable amount has to be done to raise the awareness of the health professionals at the grass root level to deliver reports immediately.

Low health care coverage and lack of adequate health professionals in the zone: the zone is in the process of establishing the various services after the recent administrative restructuring of the region. Besides, the distribution of health institutions and health professionals is very limited. All health institutions were closed down for a period of not less than 12 days to conduct the mass vaccination. The following table shows the distribution of health manpower in the woreda.

Woreda	Total population	Hospital	Health center	Health station	Health post	Health manpower distribution					
						Physican	Health officer	Nurse	Technician	sanitarian	Health assistant
Loma	81,000	-	-	4	4	-	-	1	-	-	5
Mareka	79,000	1	1			-	2	8	5	1	9
Tocha	66,000	-	-	4	5	-	-	3	-	-	4
Gena bosa	64,000	-	-	3	4	-	-	-	-	-	5

The difficult terrain was the other barrier in this intervention as most of the kebeles and woredas are inaccessible by car.

Lack of coherence by the local health authorities to the globally accepted strategy of doing mass vaccination at the specified threshold. Due to various pressures and frustration local health authorities started to do selective vaccinations with the limited resources available.

The collaboration between the ERCS and the health sector was encouraging. This collaboration should be improved further not only during the time of epidemics but also in normal times. This will enable the ERCS volunteers to play a major part in the dissemination of health information to the community.

The preparedness of the ERCS in the area of detecting and assisting such control interventions should also be improved through workshops and training. The lessons learnt in this intervention should be documented and shared with all branches and volunteers for a better and efficient action in the future.

Similar analysis of the current intervention by different partners in different areas should be done to identify the areas of weaknesses and develop appropriate strategies so that similar out breaks in the future will be handled more efficiently and effectively.

The ERCS and the Federation should advocate for the need to improve the surveillance system in the country and for the need to adhere to standard approaches in managing epidemics of similar nature.

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All International Federation Operations seek to adhere to the Code of Conduct and are committed to the Humanitarian Charter and Minimum Standards in Disaster Response (SPHERE Project) in delivering assistance to the most vulnerable. The procurement for this operation was carried out in full compliance and conformity with the Federation's standard for international and local procurement.

For support to or for further information concerning Federation operations in this or other countries, please access the Federation website at <http://www.ifrc.org>.

This operation sought to administer to the immediate requirements of the victims of this disaster. Subsequent operations to promote sustainable development or long-term capacity building will require additional support, and these programmes are outlined on the Federation's website.

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Annex 1 - Progress of the meningitis epidemic in Dawuro Zone (SNNPR - Ethiopia)

Woreda	Total Population	Number of cases(C) & deaths (D) reported by week of epidemic											total	
			8-16/03/02	17-24/03/02	25-31/03/02	1-7/04/02	8-14/04/02	15-21/4/02	22-28/04/02	29-5/5/02	6-12/05/02	13-19/5/02		20-26/5/02
Loma	81000	C	57	92	11	13	4	0	0	0	0	0	0	177
		D	3	2	0	0	0	0	0	0	0	0	0	5
		AR*	70.37	113.58	13.58	16.05	4.94	0	0	0	0	0	0	0
Mareka	79000	C	41	33	17	52	5				0	0	0	148
		D	1	2	1	1	0	0	0	0	0	0	0	5
		AR*	51.9	41.77	21.52	65.82	6.33	0	0	0	0	0	0	0
Tocha	66000	C	6	5	11	31	1	0	0	0	0	0	0	54
		D	1	0	2	2	0	0	0	0	0	0	0	5
		AR*	9.09	7.58	16.67	46.97	1.52	0	0	0	0	0	0	0
Gena bosa	64000	C	0	19	28	3	0	0	0	0	0	0	0	50
		D	0	2	2	0	0	0	0	0	0	0	0	4
		AR*	0	29.69	43.75	4.69	0	0	0	0	0	0	0	0
Isera	48000	C	0	0	0	0	0	0	0	2	10	11	7	30
		D	0	0	0	0	0	0	0	1	1	0	0	2
		AR*	0	0	0	0	0	0	0	4.17	20.8	22.9	14.6	
Total Zone	338000	C	104	149	67	99	10	0	0	2	10	11	7	459
		D	5	6	5	3	0	0	0	1	1	0	0	21
		AR*	30.95	44.35	19.94	29.46	2.98			0.59	4.2	4.62	2.94	

INTERNATIONAL FEDERATION OF RED CROSS AND RED CRESCENT SOCIETIES

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Appeal No & title: 06/2002 Ethiopia meningitis
Period: February to July 2002
Project(s): PET515
Currency: CHF

I - CONSOLIDATED RESPONSE TO APPEAL

FUNDING	CASH		KIND & SERVICES		TOTAL INCOME
	Contributions		Goods/Services	Personnel	
Appeal budget	1,460,000				
less					
Cash brought forward					
TOTAL ASSISTANCE SOUGHT	1,460,000				
<u>Contributions from Donors</u>					
Australian Red Cross (DNAU)	2,662				2,662
Finnish Red Cross (DNFI)	36,700				36,700
Japanese Red Cross (DNJP)	48,000				48,000
Monaco Red Cross (DNMC)	7,319				7,319
British Red Cross (DNGB)	58,456				58,456
German Govt.via German Red Cross (DGND)	73,155				73,155
TOTAL	226,292				226,292

II - Balance of funds

Opening balance	
CASH INCOME Rcv'd	226,292
CASH EXPENDITURE	-192,262

CASH BALANCE	34,029

Appeal No & title: 06/2002 Ethiopia meningitis

Period: February to July 2002

Project(s): PET515

Currency: CHF

III - Budget analysis / Breakdown of expenditures

Description	Appeal Budget	CASH Expenditures	KIND & SERVICES		TOTAL Expenditures	Variance
			Goods/services	Personnel		
<u>SUPPLIES</u>						
Shelter & Construction						
Clothing & Textiles						
Food/Seeds						
Water						
Medical & First Aid	972,000	101,951			101,951	870,049
Teaching materials						
Utensils & Tools	33,000					33,000
Sub-Total	1,005,000	101,951			101,951	903,049
<u>CAPITAL EXPENSES</u>						
Land & Buildings						
Vehicles						
Computers & Telecom equip.						
Medical equipment						
Sub-Total						
<u>TRANSPORT & STORAGE</u>	105,000	9,895			9,895	95,105
Sub-Total	105,000	9,895			9,895	95,105
<u>PERSONNEL</u>						
Personnel (delegates)	30,000	9,689			9,689	20,311
Personnel (local staff)	77,000	202			202	76,798
Sub-Total	107,000	9,891			9,891	97,109
<u>GENERAL & ADMINISTRATION</u>						
Assessment/Monitoring/experts		5,718			5,718	-5,718
Travel & related expenses	20,000	3,075			3,075	16,925
Information expenses	5,000					5,000
Administrative expenses	58,000	7,612			7,612	50,388
Sub-Total	83,000	16,406			16,406	66,594
<u>PROGRAMME SUPPORT</u>						
Programme management	98,000	11,618			11,618	86,382
Technical services	29,000	3,478			3,478	25,522
Professional services	33,000	3,859			3,859	29,141
Sub-Total	160,000	18,954			18,954	141,046
Operational provisions						
Transfers to National Societies		35,166			35,166	-35,166
TOTAL BUDGET	1,460,000	192,262			192,262	1,267,738