1.0. DISEASE SURVEILLANCE – AND EARLY WARNING AND RESPONSE NETWORK (EWARN)

1.1. Annual Progress Report Compiled

Activities in non-government controlled areas for 2001 focused on consolidating achievements in 2000. Based on reviews from implementation of project activities in non-government controlled areas, implementation of activities in government- controlled areas, Juba, Malakal, and Wau, started in November 2000. Similar approaches, assessment protocols and training tools were used in both sides. Activities in 2001, for both sides focused on:

- Extending local capacity building to more areas, recruitment and training of field staff, and health workers,
- Strengthening laboratory support and communication
- Strengthening supervision, networking and community orientation.

Among others, achievements include,

- 127 health workers trained on an integrated clinical and laboratory training/EWARN.
- 225 community opinion/religious leaders, village health committee members, teachers, EPI, and other health program volunteers were oriented on EWARN.
- Additional 6 laboratories were equipped with lab equipment, supplies and reagents.
- 10 laboratory staff from 6 laboratories attended an integrated clinical and lab training, including lab techniques, collection, testing and referral of specimen.
- 168 field staff and coordinators from UN, NGOs, and local counterparts consulted and oriented on EWARN, and partnership in suspected outbreaks alert and response.

HIGHLIGHTS

- EWARN reviews provide lessons for further enhancing capacity building
- Refresher training offered to EWARN members and health workers
- EWARN partnership proved effective in detection, alert and response to meningitis and suspected VHF
- More polio immunization campaign (NIDs) carried out in southern Sudan

WHO SOUTHERN SUDAN
HEALTH UPDATE
January/February 2002
27 NGOs, UN agencies and counterparts participated in alerting, verification, and response to suspected outbreaks.

64 suspected outbreak alerts from 24 counties/districts (vs 43 alerts from 19 counties/districts for 2000) were received.

Response within one week of reported onset has improved from 14.3% to 25%. Response from reporting date remains fairly the same (85.7%, and 87.2%, for 2000 and 2001, respectively.

There is still a need to improve timely reporting of suspected outbreaks (only 45% of suspected outbreaks were reported within one week of onset).

1.2. Review Missions

An internal review was carried out to share experience and identify gaps to further extend and strengthening community-level EWARN. The review identified that after one year from orientation community members were “aware when to suspect, and how and where to report unusual diseases or suspected disease outbreaks.” Thus, it was recommended to extend this approach to more areas while at the same time ensuring field visits, refresher orientation and improving preparedness and response in areas where EWARN activities have started. Analysis of data showed that there are improvements in alerting of suspected outbreaks, nevertheless, there are considerable delays in early detection, particularly in areas where the network has not yet reached. A mission from HQ/Lyon to assess feasibility of drafting an EWARN cost-effectiveness operational study paper was conducted. Inputs on the need for including more sites for weekly surveillance are used to enroll three more facilities in weekly reporting.

WHO liaison office for southern Sudan participated at a UNIFP project review and planning workshop held in Accra, Ghana. The objective of this meeting was to review and plan the next phase of the project activities. Delegates from AFRO, EMRO, WHO/HQ, CDC, PHSWOW, UNIFP, The Rockefeller Foundation and USAID attended the meeting. Similarly, WHO country offices, MoH, and field staff from UNFIP project countries, namely Burkina Faso, Ghana, Guinea-Conakry, Mali, and Sudan participated. Experiences from implementing partners, donors, WHO/HQ, EMRO and AFRO and country offices were discussed and activities for the next phase of the project on strengthening of surveillance and response for epidemic prone and vaccine preventable diseases were drafted.

Review of implementation in government and non-government controlled areas of southern Sudan showed that activities are on track. Next phase plans for both sides were jointly developed.
1.3. Orientation and Training

WHO, and Yambio County Health Department organized a two-days EWARN orientation and feedback workshop for 18 participants. Health workers, village health committee, opinion and religious leaders attended. Experiences from one-year EWARN team activities were used to further strengthen the role of communities, health workers and counterparts in early detection, alert and response to outbreaks.

A one-week training was organized by WHO Yambio CHD, and Yambio Hospital, for 8 members of the County EWARN Team. The participants discussed on outbreak surveillance, investigation and response, data management, and partnership in EWARN. Surveillance focal points were selected and trained on weekly data collection, compilation, reporting and use.

1.4. Outbreaks Preparedness and Response

In the update period, 13 suspected outbreak alerts were received from, investigated, and responded by a network of NGOs (AMREF, COSV, DOT, GED, GOAL, KEMRI, MedAir, MSF-B, MSF-H, NCA, SCF-USA), local partners, UNICEF/OLS, and WHO. Suspected outbreaks included meningitis, followed by diarrheal diseases, measles, and VHF (latest summary to be included in March Update).

CSF tests for meningitis, including latex agglutination, culture and sensitivity at AMREF, confirmed *N.meningitidis* group A. In Torit county, a total of 29,297 were vaccinated.

Following a report from a hospital doctor and preliminary report from County EWARN team on suspected VHF, a WHO/KEMRI team investigated two suspected cases. Laboratory results from KEMRI were negative.

Bacteriological tests for enteric pathogens at AMREF, from Upper Nile, isolated *S. flexneri* resistant to tetracycline, co-trimoxazole erythromycin, and augmentin. In Kerker, Nuba, an acute watery diarrhea outbreak among under-5 children, was managed by SCF-US.
2. AFP Surveillance Update--2000 and 2001

Acute flaccid paralysis (AFP) surveillance started in southern Sudan in 1998. During 2000, southern Sudan exceeded the WHO-established minimum AFP reporting rate of 1 non-polio AFP case per 100,000 children aged <15 years, which indicates a sensitive surveillance system. In 2000, the rate was 1.21 and in 2001 the rate was 2.89.

The second key indicator of the quality of AFP surveillance is a minimum of 80% adequate stool specimens collected for all persons with AFP. Although there is steady progress towards the target, southern Sudan has not yet met this target: the adequate stool specimen collection was 39% in 2000 and 49% in 2001. It is interesting to note that during 2001 the adequate stool collection for the period January-June was 24%, but markedly increased for the period July-December to 60% (and 63% for the last quarter). NB: the adequate stool collection for the first quarter of 2002 is 92%.

The number of clinically confirmed cases of polio in southern Sudan was 23 in 2000. At the end of 2001, southern Sudan (as part of Sudan) changed from the clinical classification scheme to the virological classification scheme. This change was implemented retroactively for 2001. On 6 March 2002, the southern Sudan Expert Review Committee met for the first time and classified all of the 17 pending cases from 2001 (those that had inadequate stool collection AND no wild virus isolated AND residual paralysis/patient died/patient lost to follow-up). The Expert Review Committee classified 6 of these pending cases as non-polio AFP and 11 cases as polio-compatible.

Low-level transmission of wild poliovirus in southern Sudan was identified first in 1999 and then again in 2001. Poliovirus type 1 was isolated from one case in the Upper Nile region in April 2001-in an area that has had ongoing insecurity which has disrupted campaign activities and delayed the establishment of AFP surveillance in the area. This isolation of wild virus came after a 9-month period from the previous isolation of wild virus in northern Sudan in July 2000. The interim genotyping report of the southern Sudan virus indicates that it is clearly a Sudan virus, but not immediately linked to the previous Sudan isolates from 2000. The parents of this virus had been missed for at least a year, possibly two. However, the genetic distance is greater than can be explained by time alone.

Stool specimens from southern Sudan are initially tested in the Kenyan national lab (KEMRI) in Nairobi, Kenya. Isolates requiring intra-typic differentiation (ITD) are sent to the WHO-AFR regional reference laboratory in South Africa (NIV). In 2000 and 2001, 117 specimens (59 cases, 98% cases had two stools) and 170 specimens (87 cases, 97% cases had two stools) respectively were tested at KEMRI. Laboratory results from KEMRI were reported within 28 days of receipt for >90% of stool specimens tested in 2000 and 2001.