IDS/HEALTH INFORMATION BULLETIN

WHO Country Office for Uganda

in collaboration with Great Lakes Epidemiological Bloc

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CONTENTS

EDITORIAL

More efforts continue to be put in strengthening IDSR activities in Uganda. We commend the Ministry of Health and all its partners for the progress made so far. However, response to epidemics is an area that needs more support, especially in terms of resources. WHO continues to advocate for a bigger multi-sectoral and sustainable partnership to address the continued occurance of disease outbreaks in the Great Lakes sub-region, especially on the border areas.

Laboratory surveillance is crucial in confirmation and eventual response to disease outbreaks. We commend the WHO Reference Lab at the Uganda Virus Research Institute for the demonstrated effort in this direction.

We dedicate this issue to the late Dr. Jimmy Kamugisha, our fallen hero in IDSR implementation in Uganda and founder co-author of this bulletin. May we follow his example to keep the IDSR candle burning.

Dr. Oladapo Walker - WR Uganda

Cholera persists along Lake Albert

(A multi-sectoral solution required)

LAKE ALBERT lies on the western end of Uganda bordering the Democratic Republic of Congo (DRC). Along the lake, are the districts of Bundibugyo, Hoima, Masindi, and Nebbi in Uganda, and the provinces of Orientale and North Kivu in the DRC. Over the years, this border area has been identified with landing sites, fishing villages and camps of Congolese refugees. The area is among the identified epidemic-prone zones in the Great Lakes sub-region and cholera has been endemic in this area for a long time.

The endemicity of cholera along Lake Albert has many times gone beyond epidemic threshold levels and case fatality rates of more than 1%. For instance, between January and September 2002, a total of 572 cholera cases and 19 deaths were reported in Bundibugyo district (CFR = 3.1%); and 152 cases and 27 deaths in Hoima (CFR = 18%).

The main causative agent isolated from stool samples taken from the border districts has been *vibrio cholerae El-Tor 01 Ogawa.* In addition, V*ibrio cholerae El-Tor 01 Inaba* has also been confirmed from a few samples taken from far areas to the north of Lake Albert (Arua and Nebbi districts). The main risk factors include:

- Contaminated water sources (lake, springs). Samples taken have shown presence of *Escherichia coli* and other *coliforms.* Boiling of water has been hindered by lack of wood fuel in the area.
- The overall sanitation (latrine coverage) is poor due to the high water table that makes it difficult to sink latrines as settlements are just along the shores of Lake Albert.
- Scarcity of qualified medical personnel. Many cases are usually managed by community health workers and many landing sites are not easily accessible due to escarpments.
- Crowding in refugee and internally displaced peopleís camps and the situation is aggravated by lack of sanitation facilities.
- Negative attitudes and behaviour of the community (e.g. unhygienic food handling and contamination of water bodies).

On many occasions, the concerned districts have implemented preventive and control measures to curb the cholera upsurges. These measures have included community mobilization and sensitization, provision of emergency supplies to treatment centres in the affected communities and setting up temporary cholera treatment centres. WHO has also provided technical support, supplies (drugs, IV fluids, etc.) and public information in Bundibugyo and Hoima Districts.

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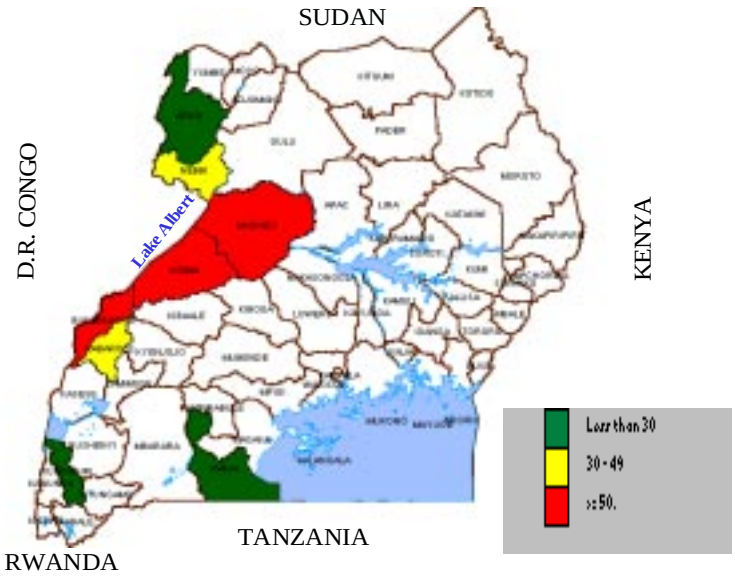
Distribution of Cholera Cases - Jan. to Sept. 2002



Source: Epidemiological Surveillance Division, Ministry of Health

The following recommendations and control measures are proposed:

- An in-depth assessment covering issues on environment, water sources, latrine coverage, etc. should be carried out in the most affected areas to provide a clear understanding of the problem in order to find feasible solutions and **advocacy for resource mobilization.**
- **Need to design a special model of latrines in this area.** Experiences from other areas in Africa and Asia with high water table problems need to be studied for possible adaptation.
- **Initiate a programme to chlorinate water sources (wells, boreholes, etc.) and water in containers at community level.** This should be implemented by health inspectors/assistants and community health workers to ensure improvements in the water quality. There is also need to monitor water source quality on a regular basis through testing water samples on a monthly basis.
- **Continuous health education on diarrhoeal diseases and community-based disease surveillance should be strengthened** especially in the most affected districts.
- **A multi-sectoral approach to the cholera problem along Lake Albert is called for.** Ministry of Health, Ministry of Local Government, Water and Forestry Departments should work together in gazetting settlements along lake shores, improving water quality, etc. to develop a sustainable solution to the persisting cholera problem. ❑

Animal bites (suspected rabies) in Uganda

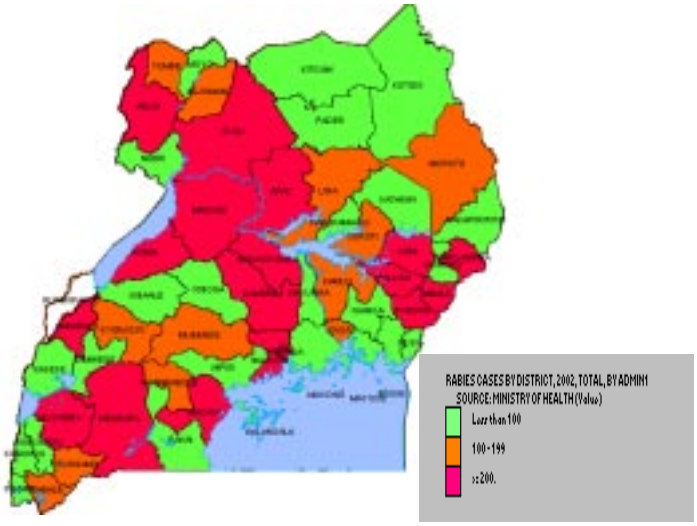
ANIMAL RABIES occurs mainly in dogs, cats and wild carnivores. Among these, dogs account for about 95% of all human exposure to rabies. The most vulnerable age group is the 5-15 years and males are more exposed to rabies than females.

In Uganda, animal bites which are a pointer to rabies surveillance are reported through the weekly tracking system. Animal bites (suspected rabies cases) were reported by 55 out of the 56 districts of Uganda in the period January 2001 to June 2002. The data indicate that one third of the districts reported at least 200 cases during the period under review *(see map)*. A total of 9,615 cases and 48 deaths due to suspected rabies were reported.

This calls for strengthening the veterinary public health department in the MoH. In addition, Ministry of agriculture and animal industry should invest more resources for the control of dog rabies which is the major source of human rabies.

There is also need to work on the legislation for mass animal vaccinations so that prevalence for animal bites and suspected rabies is minimized. ❑

Distribution of Suspected Rabies - Jan 01 to June 02



Source: Epidemiological Surveillance Division, Ministry of Health

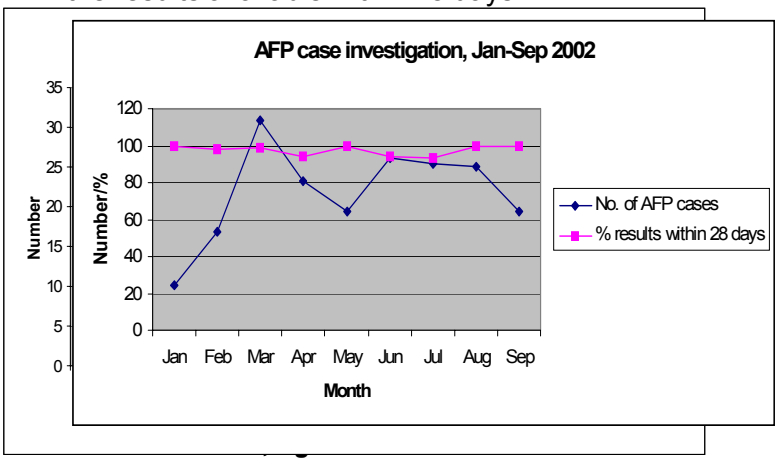
EPI Laboratory Surveillance in Uganda

THE EPI LABORATORY at the Uganda Virus Research Institute plays a key role in disease surveillance for AFP and measles in Uganda. The lab handles AFP surveillance specimens and data, and investigates a number of reported measles outbreaks on a monthly basis. In addition, the lab supports other countries in the region through analysis of stool samples for AFP surveillance. During the period of May to September 2002, the EPI lab handled 711 stool specimens from different countries as shown in the table below.

COUNTRY	NUMBER OF SPECIMENS
Burundi	54
Kenya	4
DR. Congo	317
Rwanda	80
Uganda	256
Total	**711**
Total with results	**615**
Total specimens with results-within 28 days	**594 (96.6%)**

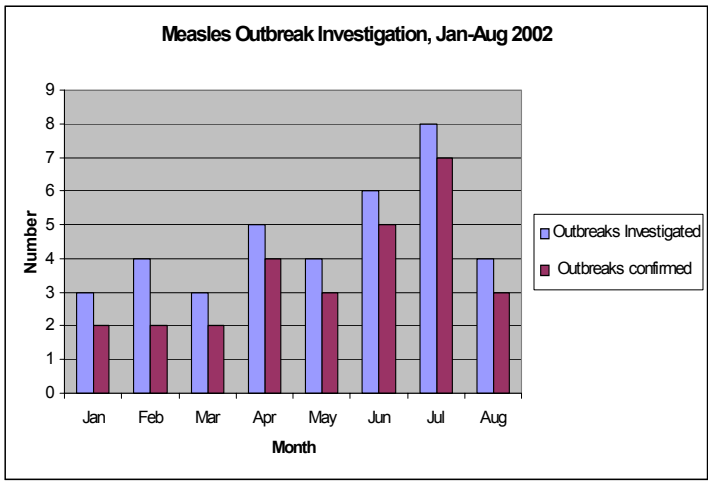
Source: EPI Lab, Uganda Virus Research Institute

The EPI lab investigates and processes an average of 150 AFP specimens on a monthly basis, with 97% of the results available within 28 days.



Measles laboratory confirmation in Uganda is also handled by the EPI lab. This involves collecting 5 to 10 blood samples from the community where an outbreak is reported and these are tested for measles *Immunoglobulin type M* (IgM). The graph below shows the trend of measles outbreaks investigated and confirmed during three-quarters of 2002.

The EPI lab has been instrumental in confirming measles outbreaks for appropriate response and providing adequate information on other suspected outbreaks. The biggest number of measles outbreaks were reported, investigated and confirmed in June/July 2002. Conclusive tests have shown that half of those unconfirmed for measles were due to *rubella*.



Source: EPI Lab, Uganda Virus Research Institute.

The EPI lab further supports measles sentinel site surveillance by analysing blood specimens of some line-listed cases. During three-quarters of 2002, 151 specimens from six sentinel sites with a catchment of 14 districts were analysed, of which 119 (79%) were measles IgM positive (see graph). The trend seems to suggest an increase in the number of specimens collected and analysed every after 2 months with over 75% IgM positivity in each monthís batch.

Source: EPI Lab, Uganda Virus Research Institute.

To ensure that the laboratory has capability and capacity to perform according to international standards, an annual accreditation exercise is conducted using WHO guidelines. In June 2002, a proficiency test panel and on-site review was carried out by WHO/AFRO and the EPI lab scored an overall mark of 93%. The lab was fully accredited for the next 12 months.

The efforts put in processing results by the EPI lab while following rigourous standards are enormous and highly commendable. The results processed by the EPI lab are disseminated to the districts, but most times this feedback stops at the district medical office. It is recommended that all health workers in lower facilities be availed such results in order to encourage them to obtain specimens from suspected cases in time and forward them for confirmation of cases and/or outbreaks. This will also strengthen AFP surveillance as we move towards polio-free certification. ❑

Meningitis Epidemic in GL Countries

IN THE PAST, meningitis epidemics were reported in Rwanda (1978) and recently, Burundi (1991-92), Uganda and Tanzania (1991). Since then, only Rwanda has continuously reported small epidemics of minor magnitude every year during the dry season (see graph below).

Meningitis trend in Rwanda from 1991 to 2001

Source: Division Epidemiologie, MiniSante, Rwanda

In September 2001, a meningitis epidemic occurred in South Kivu province in the Democratic Republic of Congo. With the support of WHO and partners, this epidemic was controlled before the end of the year.

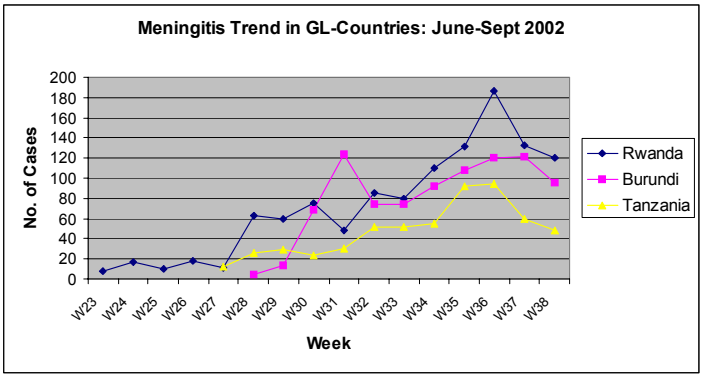
Following the meningitis epidemic cycle, new alerts were raised to all Great Lakes countries on possible major outbreaks in March 2002 *(refer to IDS bulletin Issue No.4 of March 2002).*

At the beginning of June 2002 (week 23), first sporadic cases of meningitis were reported in Butare province in Rwanda. An investigation was done at the end of June and the epidemic declared early July. The epidemic threshold (10-15 cases per 100,000) was reached by the end of week 28 (ending 14th July). Then the epidemic spread to other provinces. A mass vaccination campaign was started in week 28. The epidemic trend started declining since week 37. Due to the high magnitude of the epidemic in Rwanda, vaccines were mobilised from various partners to support the mass campaign. Despite this, the vaccines were not enough to cover the affected provinces and through inter-country cooperation, two requests were sent through WHO to the Ministry of Health in Uganda to provide additional vaccines to Rwanda for mass vaccination. These requests were positively honoured.

Burundi and Tanzania reported cases of meningitis from week 27. After the investigation in week 30, Burundi launched vaccination in selected areas of the first affected province. In Tanzania, the investigation was done during week 35 and mass vaccination was organized at the beginning of week 38.

In all the 3 countries, the meningitis epidemic was confirmed to be caused by *Neisseria Meningitidis serogroup A*.

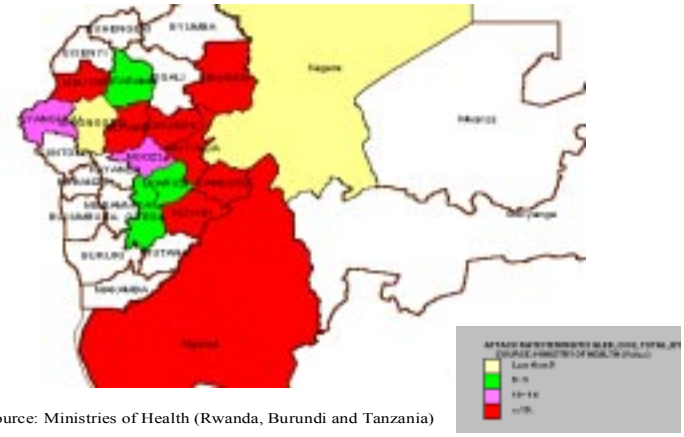
Regarding the trend of the epidemic, major peaks were observed in Burundi and Tanzania during weeks 31 and 36 respectively (see graph). Since week 37, the epidemic was declining in the two countries.



S*ource: Ministries of Health (Rwanda, Burundi and Tanzania)*

The most affected areas from the 3 countries were mainly the border districts and provinces where attack rates were higher than 15 cases per 100,000 inhabitants *(see map ñ note that Kigali Rural and Umutara provinces are not included because the map boundaries used are not updated).*

MENINGITIS EPIDEMIC IN GL COUNTRIES: AFFECTED PROVINCES



Source: Ministries of Health (Rwanda, Burundi and Tanzania)

Concerning case management, it has been observed that up to week 38 case fatality rates were higher in Rwanda (11.9%) and Tanzania (8.9%) than Burundi (7.0%). In some districts, case fatality rates were very high reaching 20% This was mainly due to late admission of the patients and the lack of oily chloramphenicol.

Some recommendations can be formulated for the improvement in surveillance, case management, vaccination and epidemic management:

- IDSR trainings need to be continued at district and health facility levels in order to improve overall surveillance and response to epidemics.
- Dissemination of IDSR guidelines and epidemic thresholds to all districts and health facilities.
- Ensure availability of security stock of vaccines and oily chloramphenicol.
- Epidemic reports from neighboring countries received at central level should be shared with border districts in order to be timely prepared.
- Social mobilization should be conducted at community level to avoid late admission of patients and reduce case fatality rates.

Countries should remain on high alert even for the next season because the meningitis epidemic cycle varies from 8-12 years. ❑