



**World Health  
Organization**

REGIONAL OFFICE FOR **Africa**

# COMMUNICABLE DISEASES EPIDEMIOLOGICAL REPORT

DATA VALID EFFECTIVE  
17 FEBRUARY 2010

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## CDER EDITORIAL

**T**hrough this issue of the CDER we are happy to share with you some findings from the analysis of weekly disease surveillance data received from countries of the WHO African Region. The hottest news is that “countries of the meningitis belt are going through the epidemic season”.

Together with communicable diseases, the Republic of Niger is monitoring malnutrition due to protein-energy deficiencies (PEM) on a weekly basis. This is a good example of how surveillance of noncommunicable health conditions can be jointly done with communicable disease surveillance. Analysis of the data for the year 2009 provides evidence that PEM is a major endemic condition in Niger: this fact calls for more support to this country against this underlying determinant of disease and high disease burden.

Maternal and neonatal tetanus (MNT) still occur in many countries of our Region, a situation that calls for action against this disease targeted

for elimination. Since any case of neonatal tetanus is a sign of defective performance of our curative and public health services, the list of MNT-affected districts and villages should be given priority in health planning at field level. The appropriate response is through the strengthening of primary health care, including community-based surveillance and response, and the strengthening of mass immunization and routine immunization.

With regard to the timeliness and completeness of reporting, some of us still question the quality of weekly and monthly disease surveillance using aggregated data report forms in Africa. A snapshot of the level of these indicators in Tanzania is provided in this Report.

We hope you enjoy reading this issue of the CDER. Your feedback would be most welcome.

DR J. B. ROUNGOU  
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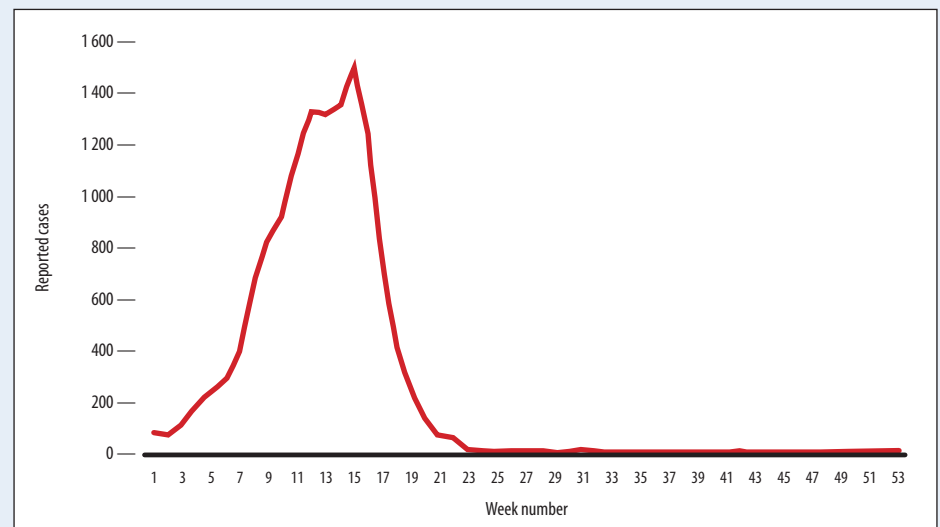
## BREAKING NEWS: CEREBROSPINAL MENINGITIS EPIDEMICS

The epidemic season has started in countries of the meningitis belt. By the week ending on 7 February 2010 the Multi-Disease Surveillance Centre of Ouagadougou (MDSC) reported that 3 districts (Pama and Titao, Burkina-Faso) and the Central African Republic (1er Arrondissement, Bangui) are in a state of epidemic. The epidemiological situation of the disease and its causal pathogens is being closely monitored by the MDSC and the affected countries for evidence based action.

# SUMMARY FINDINGS FROM IDSR WEEKLY SURVEILLANCE OF DISEASES IN NIGER DURING THE YEAR 2009

Analysis of Niger's weekly disease surveillance data reveals that malaria, cerebrospinal meningitis (CSM), dysentery, and measles have dominated the epidemiological situation in this country during the year 2009 (Table 1). An outbreak of CSM that claimed over 500 lives marked the first half of the year 2009, from weeks 5 to 19 (Figure 1). From week 8 to 17, more than 500 cases of the killer disease were reported per week, including more than 1,500 at the peak of the epidemic on week 17. The sharp decline usually occurs with the first rains of the year in this Sahelian country. Prompt access to treatment, proper case management and the causal pathogens (most of them being *N. meningitidis* rather than *S. pneumoniae*) explain the moderate case fatality rate, another reason being a possible high number of community deaths among defaulting patients. More details on this epidemic, including information about the causal pathogens will be shared in next issues of the CDER.

**Figure 1. Trends of cerebrospinal meningitis in Niger during the year 2009**



Source: Ministry of Health Niamey, 8 January 2010 update.

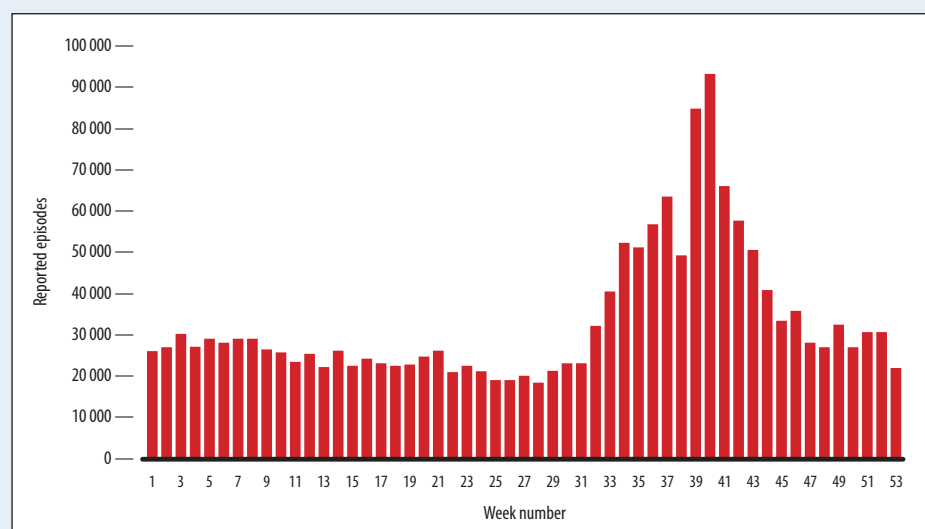
Some other findings are worth commenting from the findings of Niger's data analysis. A malaria epidemic followed the CSM's from weeks 33 to the end of the year (Figure 2). Table 1 reminds us that Guinea worm disease (also called dracunculosis) is not eradicated in Niger yet. Measles has claimed 49 deaths. With 155 cases and 37 deaths tetanus is still not a rare disease. Protein energy malnutrition in the under five years old is highly prevalent. Laboratory information is needed about the reported cases of bloody diarrhea, diphtheria. The suspected yellow fever cases have not been lab confirmed. The good news was that there was no reported cholera case.

**Table 1. Reported cases of, and deaths from, health conditions under weekly surveillance in Niger, 2009**

Disease	Cases	Deaths	Case fatality rate (%)
Acute flaccid paralysis	234	0	0
Avian influenza	0	0	
Bloody diarrhoea	7 905	2	0
Cerebrospinal meningitis	13 449	558	4
Cholera	0	0	
Diphtheria	1	0	0
Dracunculiasis (Guinea worm disease)	5	0	0
Filariasis	0	0	
Malaria	1 764 643	1 699	0
Measles	7 429	49	1
Protein energy deficiencies, moderate in under 5 year-olds	115 418	42	0
Protein energy deficiencies, severe in under 5 year-olds	84 914	426	1
SARS	0	0	
Tetanus, neonatal and maternal only	14	7	50
Tetanus, other types	141	30	21
Whooping cough	1 355	0	0
Yellow fever (no confirmed case)	21	2	10

Source: Ministry of Health Niamey, 8/1/2010 update.

Malaria episodes occurred throughout the year in Niger with an epidemic pattern from week 33 to the end of the year with a peak at week 40 (Figure 2). This pattern is historically usual: therefore, public health interventions against malaria are indicated all the year long, mostly before week 33 (mid-August) in order to lower the peak.

**Figure 2. Trends of reported malaria episodes in Niger in 2009**

Source: Ministry of Health Niamey, 8/01/2010 update.

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Table 2 provides a list of 30 districts that have reported tetanus cases. Priority should be given to these districts when planning anti-tetanus interventions in Niger. Because it reported a high number of cases of this disease, Birni N'Konni's district deserves a special consideration. To optimize the cost of such interventions the integrated disease surveillance (IDS) case report forms will provide the exact locations where this disease occurred.

**Table 2. Reported cases of tetanus in Niger, by district, 2009**

District	MNT cases	Other types	Total
Abalak	0	2	2
Arlit	0	1	1
Birni N'Konni	1	43	44
Boboye	1	2	3
Bouza	3	2	5
Dakoro	0	9	9
Dogon-Doutchi	0	3	3
Dosso	1	1	2
Gaya	2	2	4
Goure	1	1	2
Guidan-Roundji	0	3	3
Illela	0	4	4
Kollo	0	1	1
Loga	1	1	2
Madaoua	0	3	3
Madarounfa	0	3	3
Magaria	2	2	4
Maradi	0	8	8
Matameye	0	2	2
Mayahi	0	2	2
Mirriah	0	1	1
Niamey I	0	19	19
Niamey III	0	1	1
Ouallam	0	4	4
Say	1	0	1
Tahoua	0	6	6
Tanout	0	1	1
Tchintabaraden	1	0	1
Tera	0	4	4
Zinder	0	10	10
<b>Total</b>	<b>14</b>	<b>141</b>	<b>155</b>

Source: Ministry of Health Niamey, 8/01/2010 update.

## NEONATAL TETANUS IN THE WHO AFRICAN REGION: A CALL FOR INTENSIFIED ACTION

Beyond the borders of Niger, neonatal and maternal tetanus remain a public health problem in the Region. Most of the countries have reported cases, with a relatively poor response rate (Table 3).

**Table 3. Performance of neonatal tetanus surveillance in the WHO African Region, Jan–Dec 2009**

Country	Total number of cases	Cases responded to	Mothers were vaccinated	Mothers were adequately vaccinated	Delivery by physician or midwife	Sterilized blade used to cut cord	Cases that died
Algeria	0	0	0	0	0	0	0
Angola	15	0	3	2	1	1	15
Benin	3	0	1	0	0	1	2
Botswana	0	0	0	0	0	0	0
Burkina Faso	1	0	1	1	0	0	1
Burundi	10	3	5	2	0	2	6
Cameroon	39	7	16	3	8	20	20
Cape Verde	0	0	0	0	0	0	0
Central African Republic	9	5	5	4	1	6	5
Comoros	0	0	0	0	0	0	0
Congo	2	0	1	0	0	1	2
Cote d'Ivoire	8	3	4	3	0	5	2
DR Congo	96	13	42	16	0	40	58
Equatorial Guinea	1	0	0	0	0	0	1
Eritrea	0	0	0	0	0	0	0
Ethiopia	35	35	19	19	7	7	24
Gabon	5	3	1	0	0	2	2
The Gambia	0	0	0	0	0	0	0
Ghana	0	0	0	0	0	0	0
Guinea	0	0	0	0	0	0	0
Guinea-Bissau	1	1	1	1	0	1	0
Kenya	0	0	0	0	0	0	0
Lesotho	0	0	0	0	0	0	0
Liberia	4	0	0	0	0	2	4
Madagascar	1	1	0	0	0	0	0
Malawi	5	5	2	2	2	2	5
Mali	11	5	4	1	0	8	5
Mauritania	0	0	0	0	0	0	0
Mauritius	0	0	0	0	0	0	0
Mozambique	2	2	1	1	1	1	0
Namibia	7	7	4	4	1	1	3
Niger	9	4	6	2	2	5	5
Nigeria	49	9	14	6	0	21	25
Rwanda	11	1	9	4	0	2	8
Sao Tome and Principe	0	0	0	0	0	0	0
Senegal	16	4	3	2	0	3	9
Seychelles	0	0	0	0	0	0	0
Sierra Leone	12	4	7	5	0	4	5
South Africa	0	0	0	0	0	0	0
Swaziland	0	0	0	0	0	0	0
Tanzania	0	0	0	0	0	0	0
Togo	6	1	3	2	0	2	6
Uganda	43	43	21	21	7	7	31
Zambia	2	2	1	1	0	0	2
Zimbabwe	0	0	0	0	0	0	0
<b>Total</b>	<b>403</b>	<b>113</b>	<b>152</b>	<b>80</b>	<b>23</b>	<b>137</b>	<b>213</b>
<b>Proportion of all cases</b>		<b>28%</b>	<b>38%</b>	<b>20%</b>	<b>6%</b>	<b>34%</b>	<b>53%</b>

Source: Ministries of Health, IDSR case-based Data.

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# IDSR MONTHLY REPORTS FINDINGS IN BOTSWANA DURING THE YEAR 2009

With technical support from WHO/AFRO, Botswana has computerized its IDS Monthly Disease Report form. Jan 2004 to Nov 2009 data have been entered at Ministry of Health level using EpiInfo. The following table derives from the analysis of this very rich data set.

**Table 4. Disease cases and deaths in Botswana as reported using the IDS monthly aggregated data**

Disease	Outpatient cases	Outpatient deaths	Inpatient cases	Inpatient deaths
Acute flaccid paralysis	1	0	0	0
AIDS, new case	1 871	4	11	1
Cholera	0	0	11	1
Diarrhoea with blood	3 260	0	126	2
Diarrhoea with severe dehydration in the under 5 year-old	1 408	3	370	18
Diarrhoea with some dehydration in the under 5 year-old	13 741	5	1 369	21
Hepatitis B	14	0	3	0
HIV infection	12 352	2	330	17
Human rabies	0	0	0	0
Malaria in the 5 + year-old	7 270	0	200	1
Malaria in the 5 + year-old, laboratory confirmed	331	1	82	3
Malaria in the under 5 year-old	3 900	0	110	0
Malaria in the under 5 year-old, laboratory confirmed	184	0	41	0
Malaria in the under 5 year-old, with severe anaemia	17	0	3	1
Measles	199	0	33	0
Meningitis	0	0	0	0
Neonatal tetanus	0	0	0	0
Plague	0	0	0	0
Pneumonia in the under 5 year-old	2 970	0	121	4
Pneumonia in the under 5 year-old, severe	507	1	8	4
Rabies	1 221	1	9	1
STI genital ulcer in females	3 080	0	16	0
STI genital ulcer in males	3 304	0	25	0
STI pelvic inflammatory disease	7 879	0	112	13
STI urethral discharge in males	9 332	0	68	0
STI vaginal discharge	20 837	1	175	0
STI other	4 964	2	41	13
Typhoid fever	2	0	0	0
Viral haemorrhagic fever	0	0	0	0
Yellow fever	0	0	0	0
<b>Expected monthly reports (24 districts over 11 months): 264</b>				
<b>Monthly reports received: 234</b>				
<b>Completeness of Districts Reporting to Ministry of Health: 89%</b>				

Source: Ministries of Health, IDSR case-based Data.

# HOW GOOD CAN TIMELINESS AND COMPLETENESS OF REPORTING BE IN AFRICAN COUNTRIES?

Timeliness and completeness of reporting are core IDSR indicators. When they are high, they facilitate early detection of and timely response to priority health events. With regard to all reporting sites, completeness measures the representativeness of the reported facts.

From the national (MoH) level, both indicators can be measured using for numerator the number of districts that have sent reports on-time on one hand, late or on-time on the other hand. These numerators are divided by the number of districts that have the duty to report to MoH). Measured this way, timeliness and completeness of reporting have limited value. Each of the two indicators is most of the time above 80% despite low reporting by some health facilities to their districts.

The most robust measurement of timeliness and completeness of reporting uses in its numerator and denominator the most peripheral reporting sites (clinics, dispensaries, hospitals and other health facilities) of each country's health system (Table 5). Any silent peripheral reporting site lowers the indicators away from the acceptable threshold (set at 80%). The following table shows the recent performance of Tanzania's weekly surveillance of disease system.

**Table 5. Summary of epidemiological situation in the United Republic of Tanzania by the 6th week, 2009**

Total no. of districts	No. of expected reports	No. of timely reports	No. of reports received	% of reports received	Timeliness	Completeness
126	4 628	3 243	3 243	70%	76.2 %	76.2%

Source: IDWE, MoH Dar Es Salaam, 24/2/2010.

**Table 6. Summary of key notifiable diseases in Tanzania during the year 2010 as of 24/2/2010**

Disease	Week 6 (18 Jan, 2010 – 24 Jan, 2010)		Cumulative (Week 1 & 6)	
	Cases	Deaths	Cases	Deaths
Cholera	214	2	1 133	10
Plague	0	0	2	1
Rabies	3	2	10	7
Acute flaccid paralysis	2	0	9	0
Cerebrospinal meningitis	9	1	19	2
Measles	7	0	25	0

*Nota bene:* At the surveillance data aggregation level (district, province, ministry of health), failure to report cases and to detect an epidemic may in fact be due to low completeness of reporting surveillance data. Completeness of reporting comforts us in our conclusions regarding the magnitude of the health conditions being monitored and their geographical representativeness. As such it is used for the interpretation of the findings of surveillance: in any given country, poor completeness of reporting is a confounder for the observed situations. Finally silent and other poorly performing districts are lowering the national score of completeness and timeliness of reporting: given the importance of these IDSR indicators they should be supported to improve.

**Table 7. Confirmed cases of pandemic AH1N1 influenza by country of the WHO African Region, 2009**

Country	Jan– May	June	July	Aug	Sept	Oct	Nov	Dec	Jan–Dec 2009 Cases	Jan–Dec 2009 Deaths	Jan 10 cases	Jan 10 deaths
Algeria	—	5	11	31	1	179	49	200	476	24	431	33
Angola	—	—	—	—	13	—	25	—	38	—	—	—
Botswana	—	—	23	—	—	—	—	—	23	—	—	—
Burundi	—	—	—	—	—	—	7	—	7	—	—	—
Cameroon	—	—	—	4	—	—	—	—	4	—	—	—
Cape Verde	—	3	3	31	25	—	—	32	94	—	24	—
Chad	—	—	—	—	—	—	—	—	—	—	1	—
Congo	—	—	—	—	—	6	28	—	34	—	—	—
Cote d'Ivoire	—	2	—	—	—	1	—	1	4	—	—	—
DR Congo	—	—	—	7	215	—	—	—	222	—	—	—
Ethiopia	—	3	1	—	—	—	2	—	6	—	—	—
Gabon	—	—	1	—	—	—	2	—	3	—	1	—
Ghana	—	—	—	8	5	3	35	3	54	—	—	—
Kenya	—	1	29	89	87	211	—	—	417	1	—	—
Lesotho	—	—	—	8	55	2	—	11	76	—	—	—
Madagascar	—	—	—	6	10	407	404	50	877	3	—	—
Malawi	—	—	—	—	4	—	—	—	4	—	—	—
Mali	—	—	—	—	—	—	—	1	1	—	8	—
Mauritania	—	—	—	—	—	—	—	—	—	—	2	—
Mauritius	—	—	2	67	—	—	—	—	69	—	—	—
Mozambique	—	—	—	23	45	33	—	—	101	2	—	—
Namibia	—	—	7	47	12	4	2	—	72	1	—	—
Nigeria	—	—	—	—	—	—	2	—	2	—	9	2
Rwanda	—	—	—	—	—	173	149	22	344	—	17	—
Sao Tome & Principe	—	—	—	—	1	40	—	—	41	2	25	—
Seychelles	—	—	17	8	6	2	—	—	33	—	—	—
South Africa	—	17	1 227	8 984	1 501	869	28	10	12 636	92	4	—
Swaziland	—	—	2	—	—	—	—	—	2	—	—	—
Tanzania	—	—	9	44	117	333	96	156	755	1	—	—
Uganda	—	—	9	2	24	101	94	31	261	—	1	—
Zambia	—	—	4	5	49	21	21	6	106	—	—	—
Zimbabwe	—	—	—	5	7	—	29	—	41	—	—	—
<b>TOTAL</b>	<b>—</b>	<b>31</b>	<b>1 345</b>	<b>9 369</b>	<b>2 177</b>	<b>2 385</b>	<b>973</b>	<b>523</b>	<b>16 803</b>	<b>134</b>	<b>523</b>	<b>35</b>

*Nota bene:*

— = zero.

Senegal data are not included in this table. This country has recently reported laboratory confirmed cases. Influenza reporting has shifted to routine monitoring of Influenza-like illnesses and severe acute respiratory infections, from mostly the network of influenza surveillance laboratories including FluNet.

Source: Member States daily Reports to WHO. 9 Feb 2009 update, DPC Afro.