

2016  
Quarter 3  
Week  
27 – 39  
27 June 2016  
—  
25 Septembre 2016

# MenAfriNet Surveillance Annual Feedback Bulletin

Annual feedback bulletin on bacterial meningitis in MenAfriNet countries

**Table 1: Epidemiological situation, Week: 27-39**

95% of suspect cases reported in the MenAfriNet database had a lumbar puncture, 18% of whom were classified as probable bacterial meningitis. 1% of cases with a specimen collected tested positive for meningococcal meningitis. Vaccination status was complete (yes or no) for 12% of all suspect cases in MenAfriNet countries.

Caractéristiques	Burkina Faso	Mali	Niger	Tchad*	Togo	MenAfriNet
	N (%)					
<b>Demographiques</b>						
Population**	19,034,397 (100)	3,823,714 (21)	6,854,881 (36)	677,783 (5)	415,487 (6)	30,806,262 (40)
MenAfriNet District†	29 /70 (41)	3/10 (30)	2/16 (13)	1/4 (25)	2/2 (100)	36/102 (35)
Cas suspects hebdomadaire	231	116	9	0	0	356
Cas suspects MenAfriNet	116	92	6	47	7	238
Décès	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Age (ans)						
<1	16 (14)	22 (24)	1 (17)	7 (43)	1 (14)	47 (20)
1-4	56 (49)	38 (42)	2 (33)	1 (6)	1 (14)	98 (42)
5-9	21 (18)	15 (16)	1 (17)	0 (0)	1 (14)	38 (16)
10-14	10 (9)	5 (5)	0 (0)	4 (25)	0 (0)	19 (8)
15-29	6 (5)	5 (5)	1 (17)	4 (25)	3 (43)	19 (8)
≥30	5 (4)	6 (7)	1 (17)	0 (0)	1 (14)	13 (6)
Sexe						
Male	60 (52)	59 (64)	6 (100)	6 (60)	3 (43)	134 (58)
Statut vaccinal connu	0 (0)	13 (14)	2 (33)	11 (65)	3 (43)	29 (12)
MenAfriVac§	0 (0)	0 (0)	0 (0)	0 (0)	1 (33)	1 (3)
<b>Laboratoire ††</b>						
PL effectués	103 (89)	92 (100)	6 (100)	17 (100)	7 (100)	225 (95)
Aspect	70 (68)	78 (85)	6 (100)	16 (94)	7 (100)	177 (79)
Méningite bactérienne probable	15 (15)	19 (21)	3 (50)	3 (18)	1 (14)	41 (18)
Méningite à méningocoque probable	0 (0)	0 (0)	0 (0)	0 (0)	1 (14)	1 (0)
Méningite bactérienne confirmée	8 (8)	9 (10)	0 (0)	0 (0)	1 (14)	18 (8)
Méningite à méningocoque confirmée	1 (1)	0 (0)	0 (0)	0 (0)	1 (14)	2 (1)

**Abbreviation:** CSF, cerebrospinal fluid;

\*Chad data will be presented in Table 1 and 2. Performance indicators will not be presented as the country has not started implementing activities.

\*\*Population of MenAfriNet supported districts—number of districts: Burkina Faso: 70; Mali: 10; Niger: 16; Tchad: 4; Togo: 2;

§Denominator = number of cases with known (yes or no) vaccine status

††Identification by culture, PCR, latex ou test de diagnostic rapide

Laboratory classification definitions (denominator = CSF collected):

1. Probable bacterial meningitis: cloudy appearance, or white blood cell count > 10 cells/mm<sup>3</sup> or any positive Gram stain test result
2. Probable meningococcal meningitis: gram negative diplococci only
3. Confirmed bacterial meningitis]: cases confirmed, regardless of the germ
4. Confirmed meningococcal meningitis: laboratory confirmation of *N. meningitidis* serogroup A, C, W, Y or X

**Table 2. Laboratory results, Week: 27-39**

96% des LCR prélevés dans l'ensemble des pays MenAfriNet ont été analysés par culture, PCR, latex ou TDR. *S. pneumoniae* était le pathogène prédominant (5%).

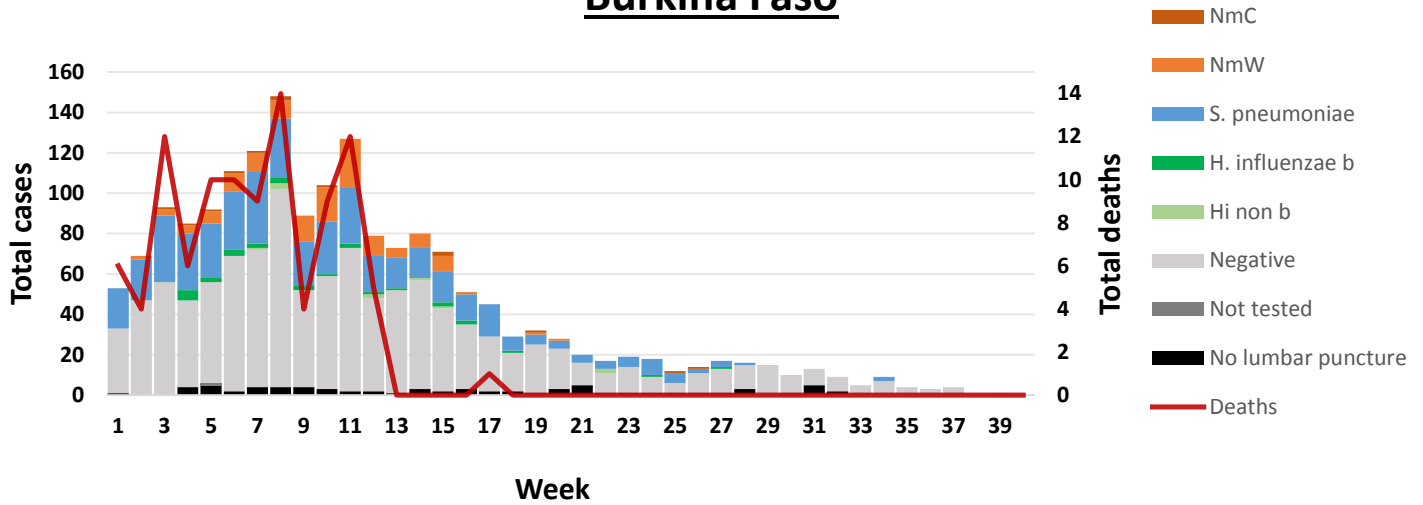
Results	Burkina Faso	Mali	Niger	Tchad	Togo	MenAfriNet
	N (%)					
<b>CSF collected</b>	103 (89)	92 (100)	6 (100)	17 (100)	7 (100)	225 (95)
<b>Gram Stain</b>	25 (24)	0 (0)	0 (0)	0 (0)	6 (86)	31 (14)
<b>CSF received at the NRL</b>	103 (100)	90 (98)	0 (0)	17 (100)	6 (86)	216 (96)
<b>CSF analyzed by a confirmatory test</b>	103 (100)	90 (98)	0 (0)	17 (100)	6 (86)	216 (96)
Culture	17 (17)	87 (97)	0 (0)	15 (88)	6 (100)	125 (58)
PCR†	97 (94)	77 (86)	0 (0)	0 (0)	0 (0)	174 (81)
Real-time PCR	97 (94)	77 (86)	0 (0)	0 (0)	0 (0)	174 (81)
Conventional	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Latex	0 (0)	77 (86)	0 (0)	2 (12)	6 (100)	85 (39)
RDT	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
<b>Résultat final</b>						
<b><i>N. meningitidis</i></b>						
<i>NmA</i>	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
<i>NmC</i>	1 (1)	0 (0)	0 (0)	0 (0)	0 (0)	1 (0)
<i>NmW</i>	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
<i>NmX</i>	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
<i>Nm ind</i>	0 (0)	0 (0)	0 (0)	0 (0)	1 (17)	1 (0)
<b><i>S. pneumoniae</i></b>	6 (6)	4 (4)	0 (0)	0 (0)	0 (0)	10 (5)
<b><i>H. influenzae</i></b>						
<i>b</i>	1 (1)	2 (2)	0 (0)	0 (0)	0 (0)	3 (1)
<i>Non-b</i>	0 (0)	3 (3)	0 (0)	0 (0)	0 (0)	3 (1)
<b>Other germs</b>	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
<b>Negative§</b>	95 (92)	79 (88)	0 (0)	15 (88)	5 (83)	194 (90)

**Abbreviation:** CSF, cerebrospinal fluid; NRL, national reference laboratory; NP, Test not performed; *Nm Ind.*, *Nm indeterminate*; RDT, rapid diagnostic test;

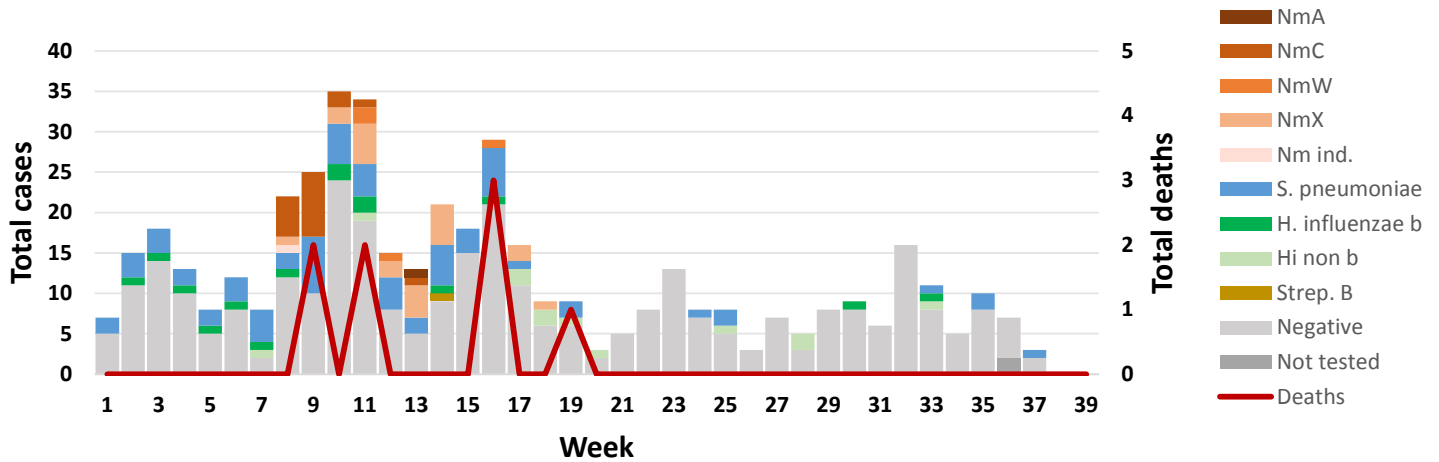
§ Tested negative for all pathogens and serogroups

Figure 1: Epidemic curve, Week: 1-39

### Burkina Faso



### Mali



### Niger

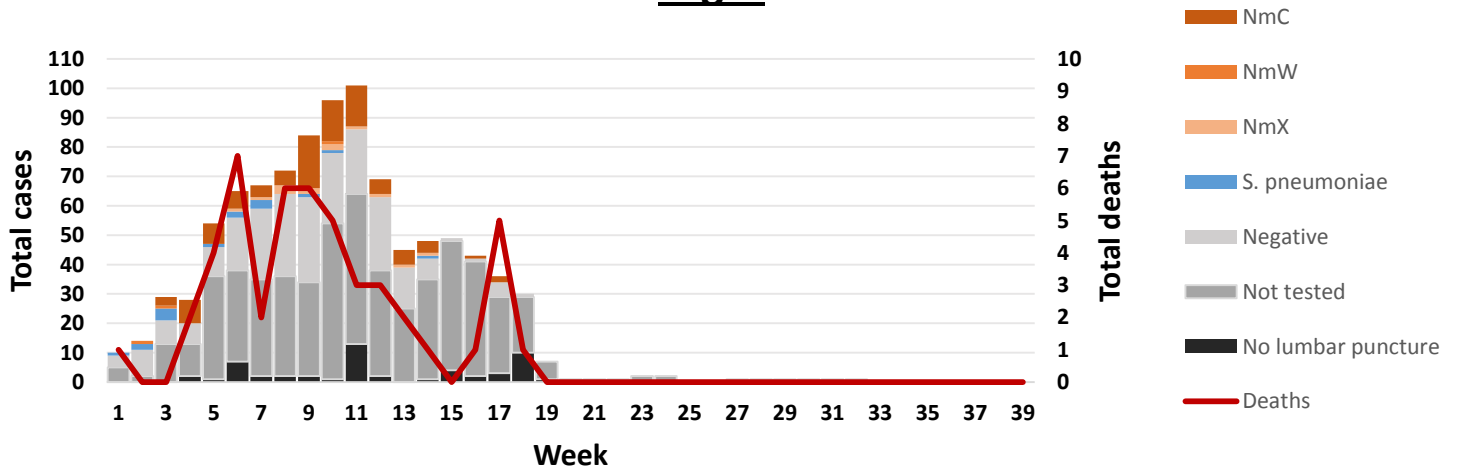
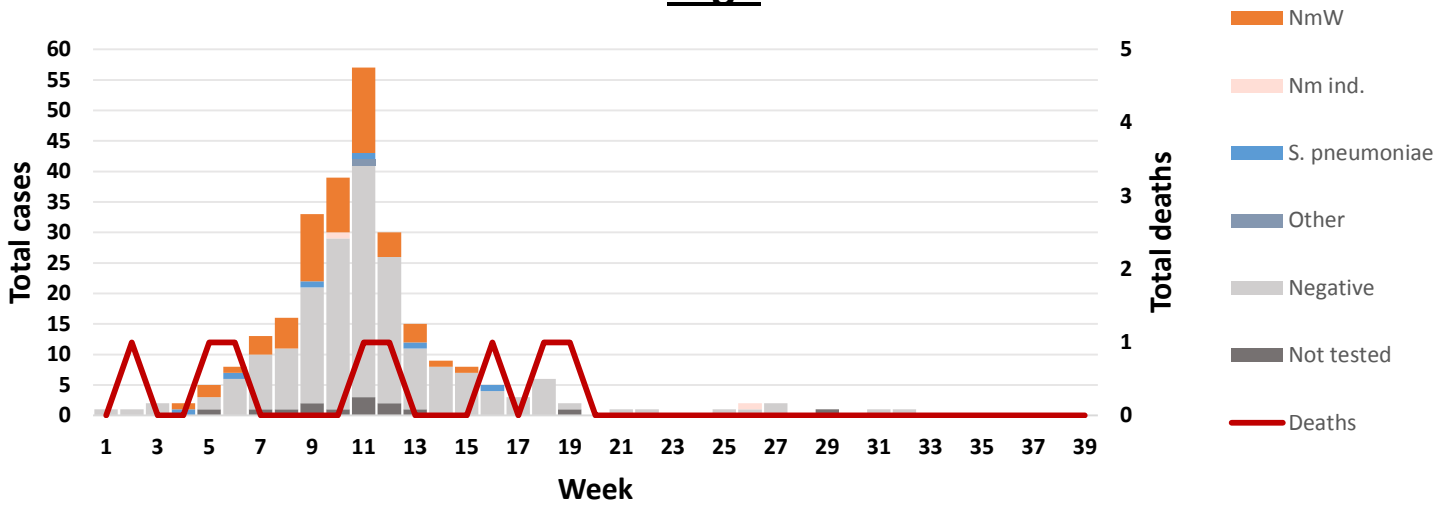
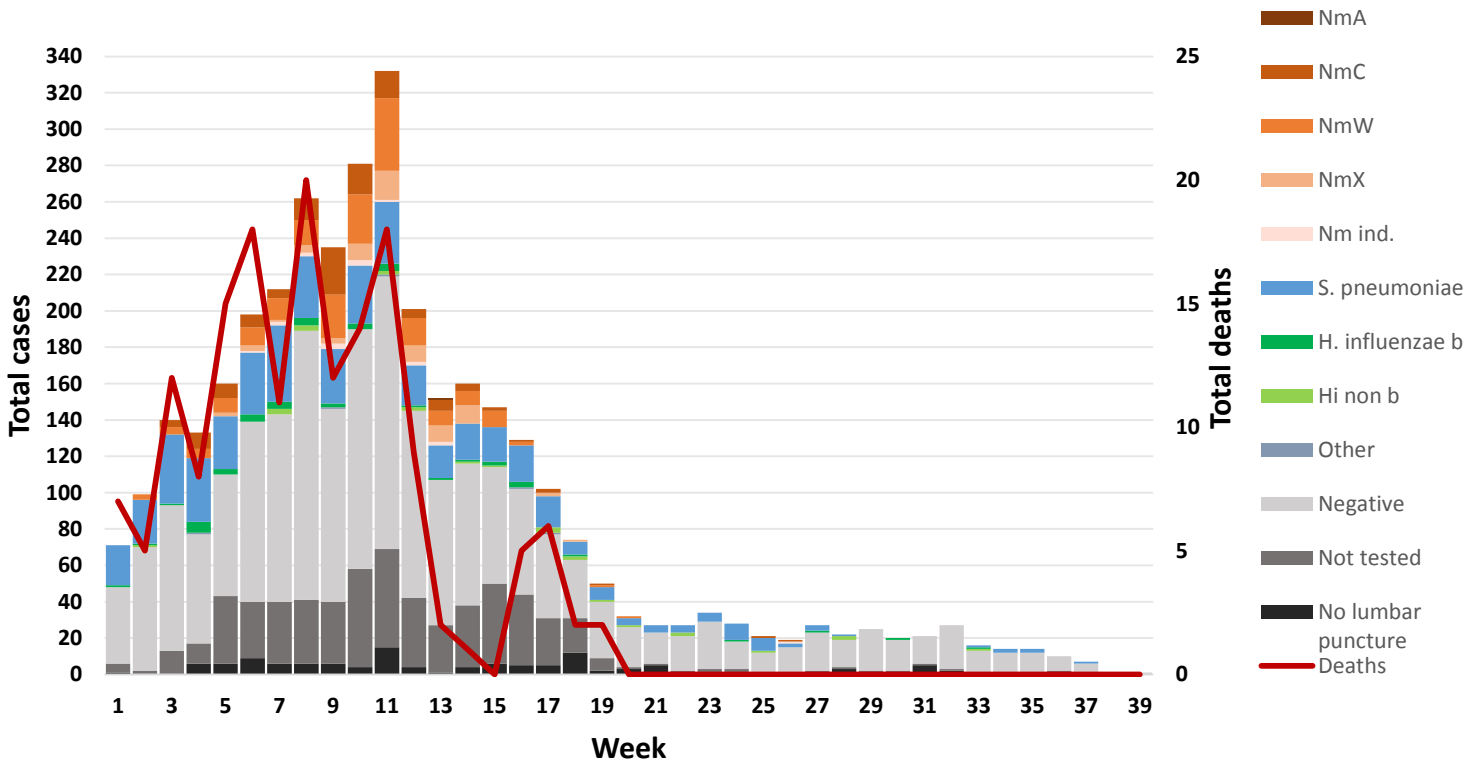


Figure 1: Epidemic curve, Week: 1-39

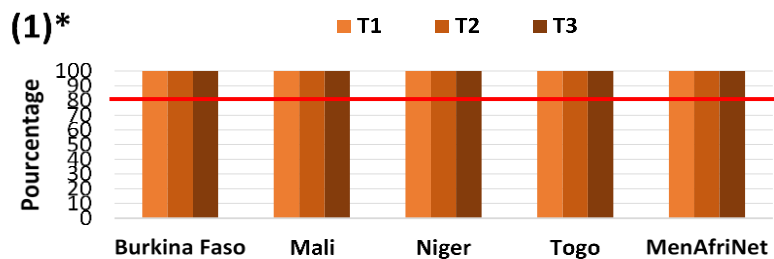
Togo



MenAfriNet



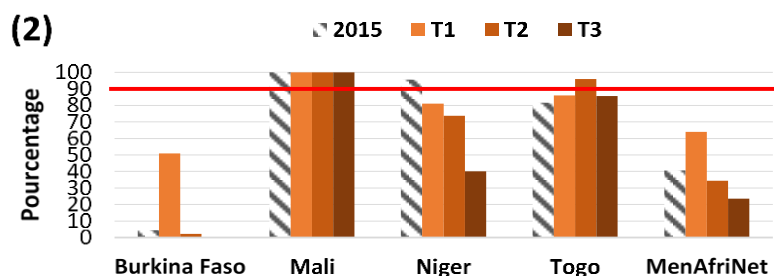
**Figure 2. Annual and quarterly trends of surveillance and laboratory performance indicators, 2015 and quarter 1, 2 and 3 of 2016**



**(1)\*** — Percentage of months that data were submitted on time to WHO-IST/WA by the 7th day of each month

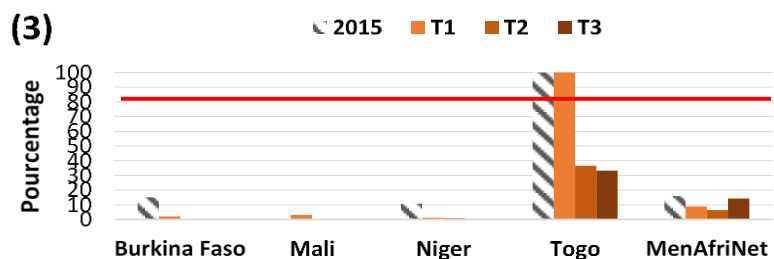
Threshold: >80%

\*Indicator was modified to allow the project to evaluate the timely submission of data at the regional level



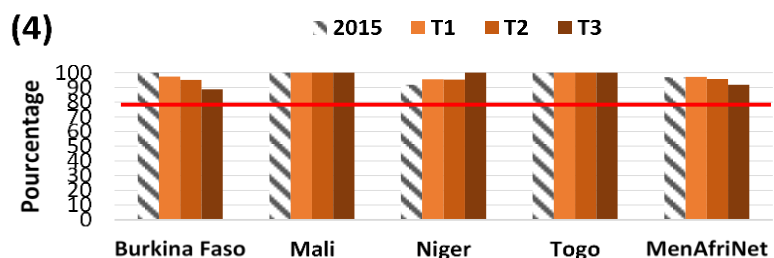
**(2)** — Percentage of cases with outcome known

Threshold: > 90%



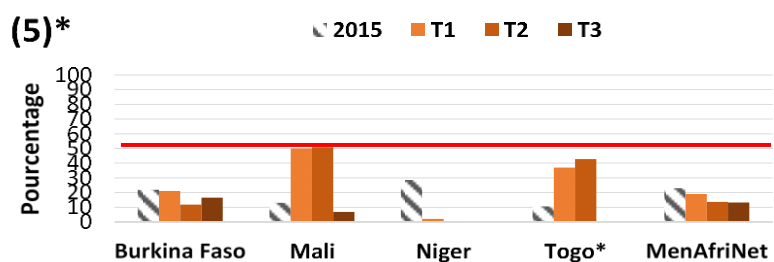
**(3)** — Percentage of cases vaccinated with MenAfriVac among those with known (yes or no) vaccine status

Threshold: > 80%



**(4)** — Percentage of cases with CSF collected

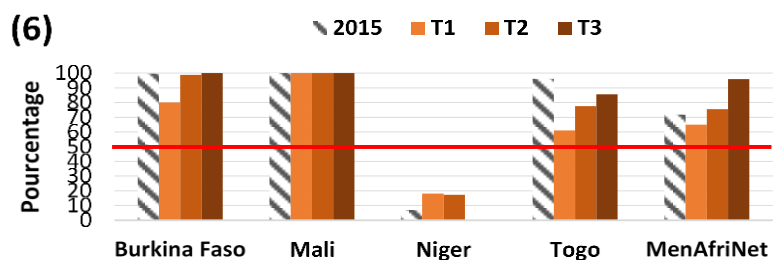
Threshold: > 80%



**(5)\*** — Percentage of CSF specimen received at any lab in trans-isolate (T-I)

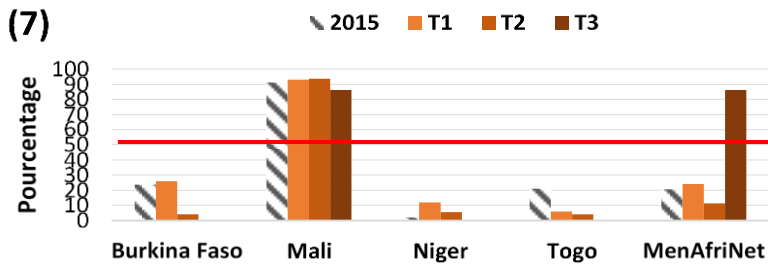
Threshold: > 50%

\*Togo: the protocol does not require the use of TI for 3 of the 4 hospitals because of their proximity to the lab.



**(6)** — Percentage of CSF specimens received at the NRL

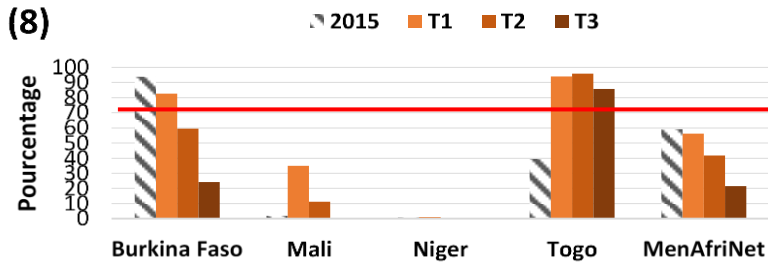
Threshold: > 70%



**(7)** — Percentage of cases with a delay of <7 days between CSF collection date and date CSF received at NRL

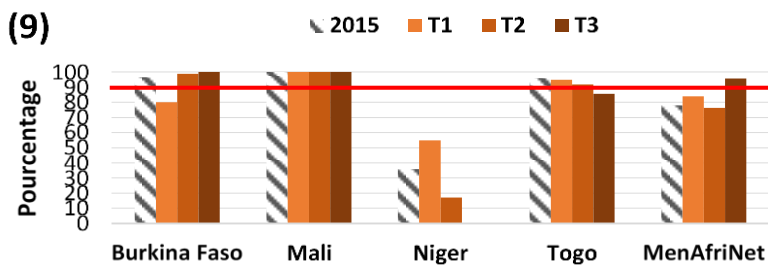
Threshold: > 50%

\*Some delays were not calculated because date of collection and/or date of reception at NRL were missing—116 (100%); Mali—2 (2%); Niger—6 (100%); Togo—7 (100%); MenAfriNet—131 (55%)



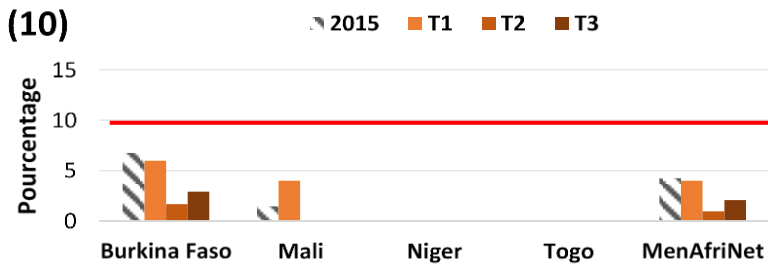
**(8)** —Percentage of CSF specimen tested at labs other than the NRL by a Gram stain test

Threshold: > 7%



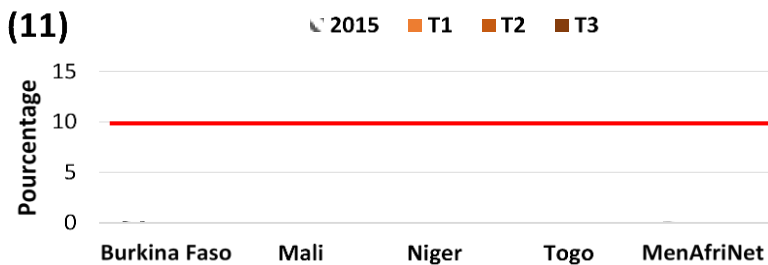
**(9)** —Percentage of CSF specimen received at the NRL and analyzed by a confirmatory test (culture, PCR, latex or rapid diagnostic test)

Threshold: > 90%



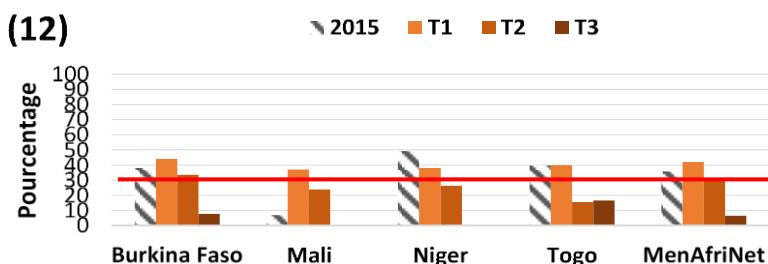
**(10)** —Percentage of CSF specimen contaminated for culture procedure at the NRL

Threshold: < 10 %



**(11)** —Percentage of CSF specimen contaminated for PCR procedure at the NRL

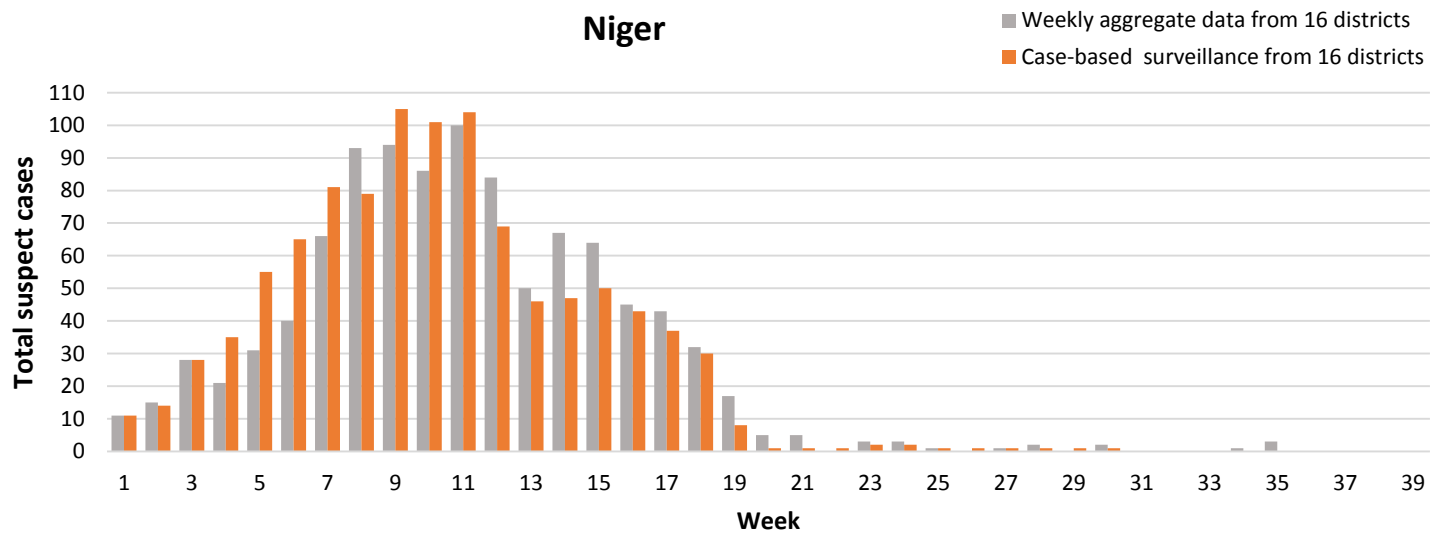
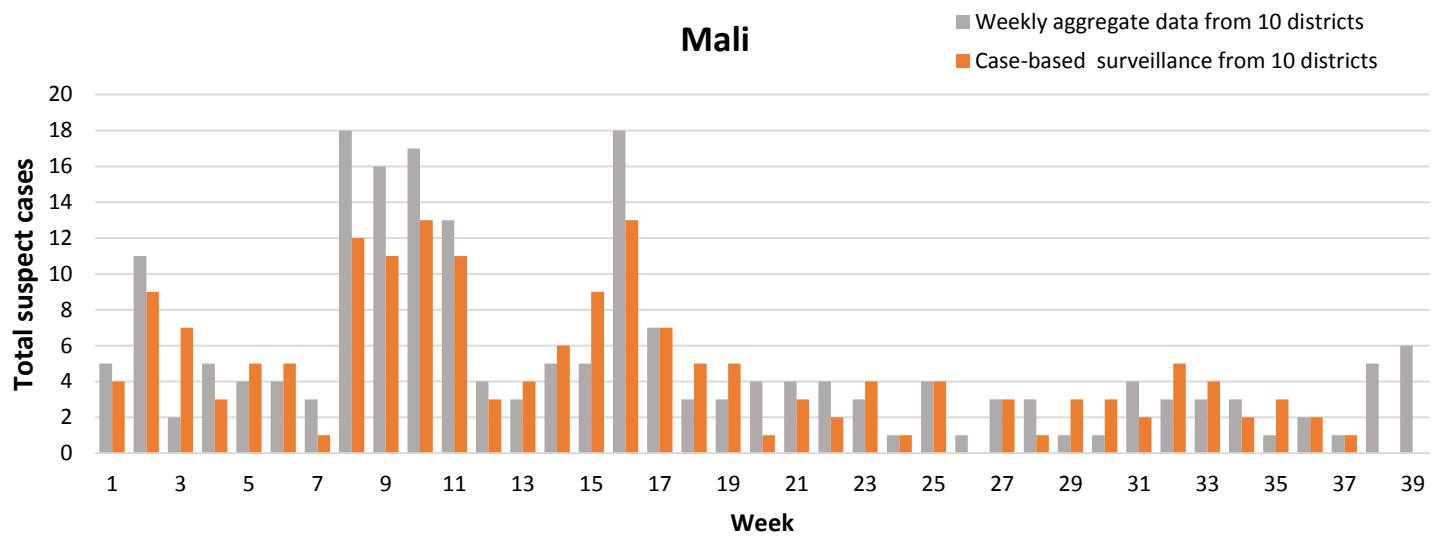
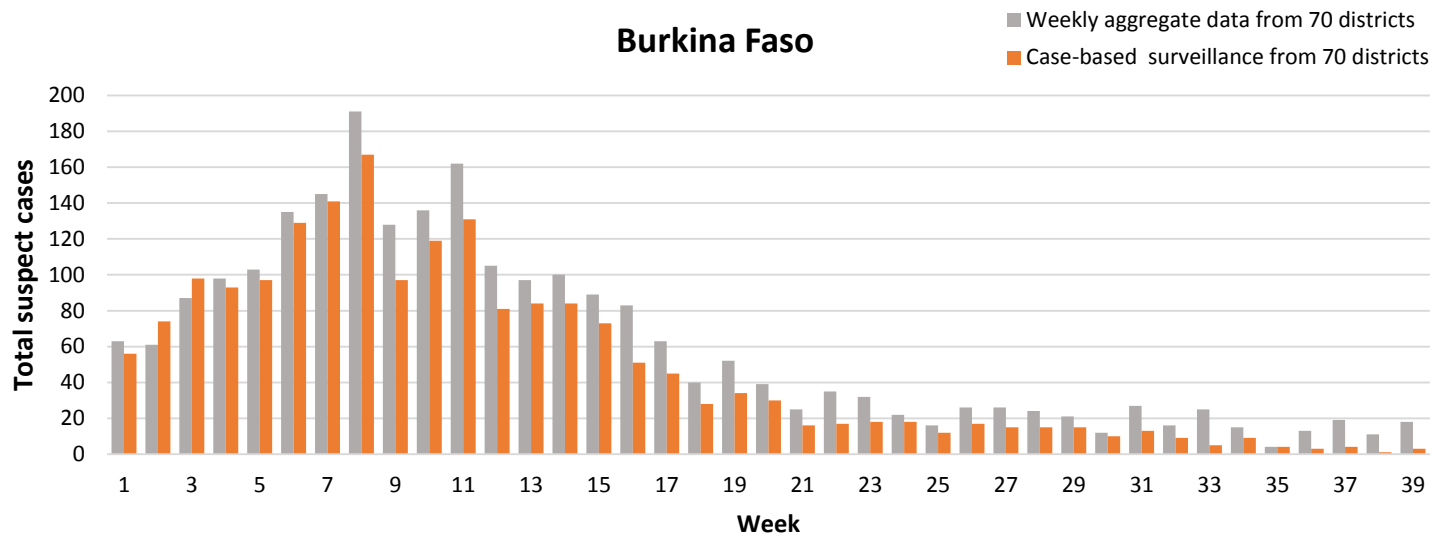
Threshold: < 10 %

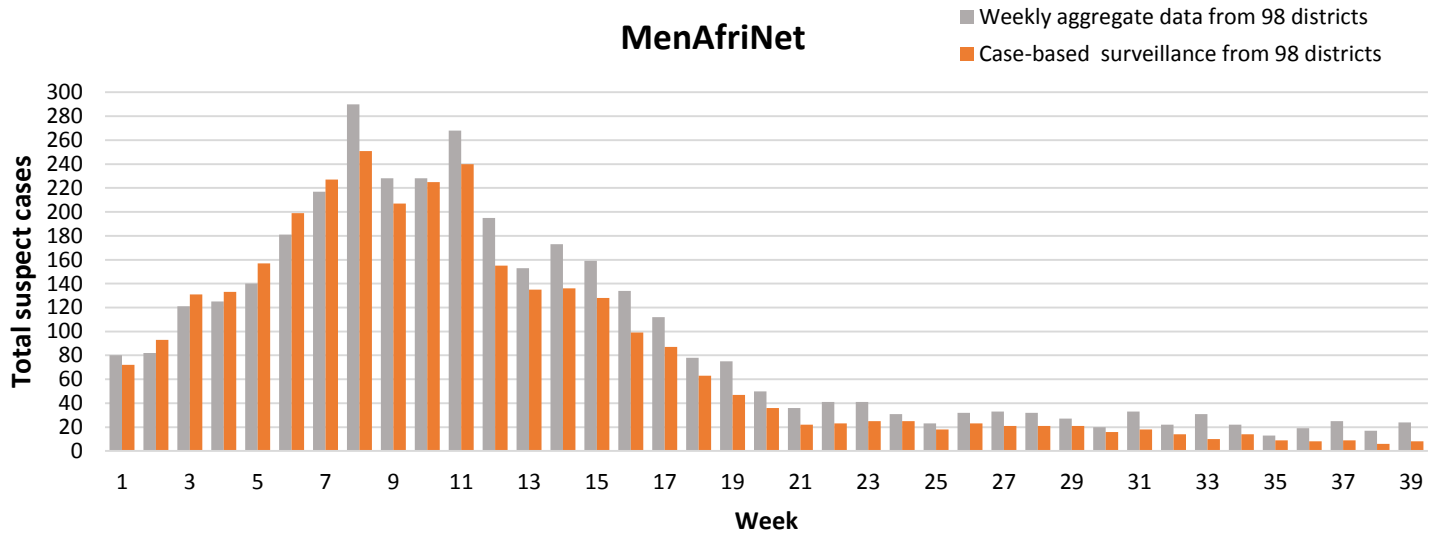
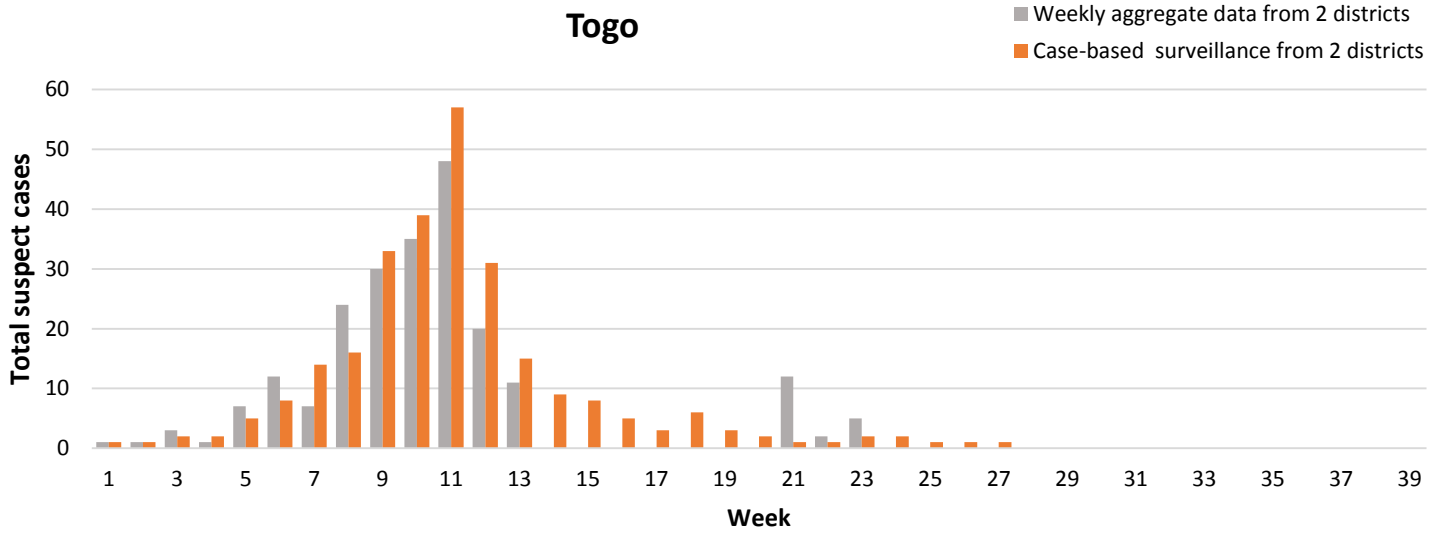


**(12)** —Percentage of CSF confirmed at the NRL for Hi, Sp and Nm and other pathogens

Threshold: > 30%

**Table 3. Comparison of cumulative weekly suspect cases with total suspect cases of the case-based surveillance data from MenAfriNet supported districts (Week: 1-39)**





**MenAfriNet** is a partnership between the CDC, WHO, Agence de Médecine Préventive and other international partners in collaboration with the Ministries of Health of Burkina Faso, Chad, Mali, Niger and Togo to strengthen case-based meningitis surveillance and laboratory capacity confirm cases of meningitis. 2016 is MenAfriNet’s first year of implementation.

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