Table 1. Epidemiological situation, week 01 - 52

98% of suspect cases reported in the MenAfriNet database had a lumbar puncture, 13% of whom were classified as probable bacterial meningitis. 25% of cases with a specimen collected tested positive for meningitis. Vaccination status was complete (yes or no) for 41% of all suspect cases in MenAfriNet countries.

Characteristics	Burkina Faso£	Mali	Niger	Tchad*	Togo	MenAfriNet
			N (%)			
Demographics						
Population**	20,244,079 (100)	12,805,246 (66)	13,986,624 (65)	847,057 (5)	1,413,472 (19)	49,296,478 (58)
MenAfriNet District†	68/70 (97)	28/33 (85)	39/43 (91)	3/4 (75)	7/7 (100)	145/157 (92)
Weekly suspected cases	2 422	659	1095	200	302	4 678
MenAfriNet suspected cases	2671	577	896	218	299	4 661
Death	54 (2)	2 (2)	53 (6)	17 (8)	13 (4)	139 (3)
Age (year)						
<1	638 (36)	191 (33)	118 (13)	80 (37)	43 (14)	1,070 (29)
1-4	577 (32)	165 (29)	213 (24)	46 (21)	90 (30)	1,091 (29)
5-9	246 (14)	90 (16)	199 (23)	20 (9)	48 (16)	603 (16)
10-14	162 (9)	27 (5)	180 (20)	19 (9)	21 (7)	409 (11)
15-29	87 (5)	39 (7)	122 (14)	24 (11)	47 (16)	319(9)
≥30	68 (4)	59 (10)	50 (6)	29 (13)	50 (17)	256 (7)
Sex						
Male	914 (54)	316 (55)	548 (62)	118 (54)	160 (54)	2,056 (56)
Vaccination status known	871 (33)	322 (56)	374 (42)	194 (89)	142 (48)	1,903 (41)
MenAfriVac§	17 (2)	66 (20)	15 (4)	12 (6)	5 (3)	115 (6)
Laboratory ††						
CSF collected	2,633 (99)	574 (99)	860 (96)	215 (99)	277 (93)	4,559 (98)
Probable bacterial meningitis	275 (10)	101 (18)	111 (12)	77 (35)	60 (20)	624 (13)
Probable meningococcal meningitis	37 (1)	22 (4)	6 (2)	1 (0)	2 (1)	68 (1)
Confirmed bacterial meningitis	269 (10)	82 (14)	317 (35)	60 (28)	53 (18)	781 (17)
Confirmed meningoccal meningitis	50 (2)	11 (2)	247 (28)	14 (6)	5 (2)	327 (7)

Abbreviation: CSF, cerebrospinal fluid;

*Chad's performance indicators will be now presented, following the support mission of WHO and Davycas International in the country in december 2018.

**Population of MenAfriNet supported districts—number of districts: Burkina Faso: 70; Mali: 33; Niger: 43; Tchad: 4; Togo: 7

†Supported MenAfriNet districts submitting case-based data (denominator = Total number of supported MenAfriNet districts)

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

††Identification by culture, PCR, latex or rapid diagnostic tests

£Missing values for age and sex variables in Burkina Faso: Age: n = 1778 (67%); Sex: n = 1680 (63%). Case base surveillance data in Burkina Faso are providing by a Cloud-Based Meningitis Surveillance and Specimen Tracking System (STELab).

Laboratory classification definitions (denominator = CSF collected):

1. Probable bacterial meningitis: cloudy appearance, or white blood cell count > 10 cells/mm3 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 01 - 52

68% of specimens collected in MenAfriNet countries were tested by culture, PCR, Latex or a rapid diagnostic test. Among these samples, 25% were positive. S. Pneumoniae (12%) and Neisseria meningitidis (11%) were the predominant pathogens.
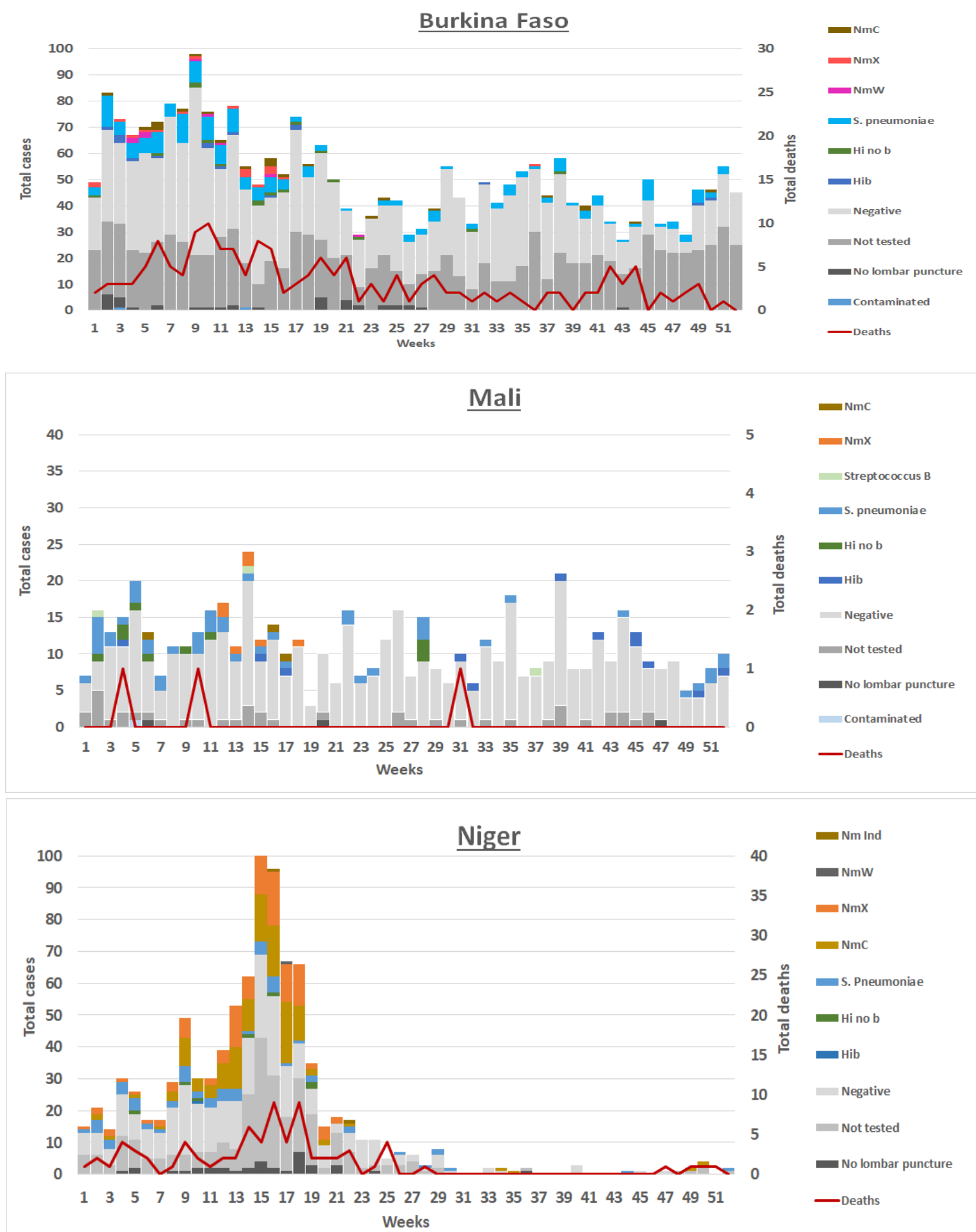
Results	Burkina Faso	Mali	Niger	Tchad	Togo	MenAfriNet
			N (%)			
CSF Collected	2,633 (99)	574 (99)	860 (96)	215 (99)	277 (93)	4,559 (98)
Aspect	1,036 (39)	560 (98)	733 (85)	215 (100)	267 (96)	2,811 (62)
Gram stain	1,040 (39)	188 (33)	54 (6)	183 (85)	101 (36)	1,566 (34)
CSF received at the LNR	1,661 (63)	539 (94)	627 (73)	145 (67)	213 (77)	3,185(70)
CSF analysed by confirmatory test*	1,595 (61)	533 (93)	627 (73)	145 (67)	210 (76)	3,110 (68)
Culture	481 (30)	530 (99)	32 (5)	69 (48)	210 (100)	1,322 (43)
PCR	1,595 (96)	533 (99)	578 (92)	143 (99)	210 (99)	3,059 (96)
Real Time-PCR	1,595 (100)	533 (100)	578 (100)	143 (100)	210 (100)	3,059 (100)
Conventional-PCR	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Latex	187 (7)	530 (92)	36 (4)	43 (20)	45 (16)	841 (18)
RDT	83 (0)	0 (0)	70 (8)	0 (0)	2 (1)	155 (3)
Final Result						
N. meningitis	50 (3)	0 (0)	247 (39)	14 (10)	5 (2)	327 (11)
NmA	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
NmC	23 (1)	3 (1)	126 (20)	0 (0)	0 (0)	152 (5)
NmW	9 (1)	1 (0)	2 (0)	3 (2)	3 (1)	18 (1)
NmX	18 (1)	7 (1)	117 (19)	11 (8)	2 (1)	155 (5)
Nm ind	0 (0)	0 (0)	2 (0)	0 (0)	0 (0)	2 (0)
S. pneumoniae	186 (12)	46 (9)	62 (10)	34 (23)	48 (23)	376 (12)
H. influenzae	32 (2)	22 (4)	8 (1)	12 (8)	0 (0)	74 (2)
b	16 (1)	12 (2)	1 (0)	9 (6)	0 (0)	38 (1)
Non-b	16 (1)	10 (2)	7 (1)	3 (2)	0 (0)	36 (1)
Other germs	0 (0)	3 (1)	0 (0)	0 (0)	0 (0)	3 (0)
Negative**	1,324 (83)	451 (85)	310 (49)	85 (59)	157 (75)	2,327 (75)

Abbreviation: b, *H. influenzae* serotype b; CSF, cerebrospinal fluid; Hi, *H. influenzae*, NmA, *N. meningitidis* serogroup A; NmC, *N. meningitidis* serogroup C; NmW, *N. meningitidis* serogroup W; NmX, *N. meningitidis* serogroup X; non-b, *H. influenzae* serotype non-b; NRL, national reference laboratory; Nm Ind, *N. meningitidis* indeterminate; Sp, *S. pneumoniae*; RDT, rapid diagnostic test;

*Identification by : Culture, PCR, latex or RDT
**Tested negative for all pathogens and serogroups
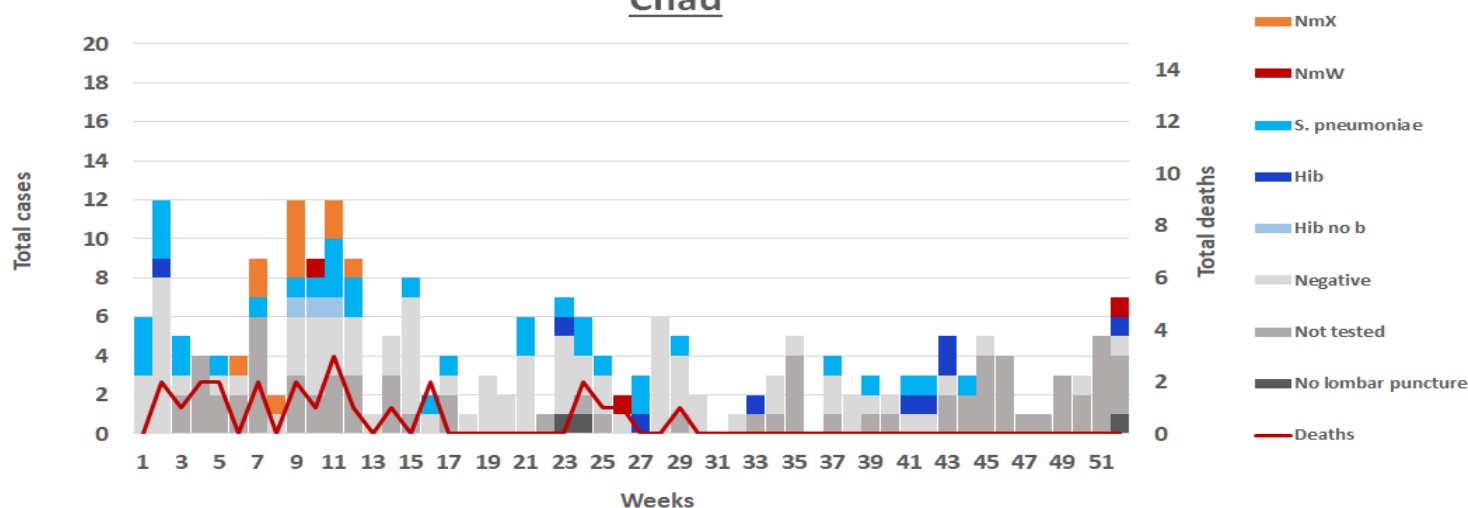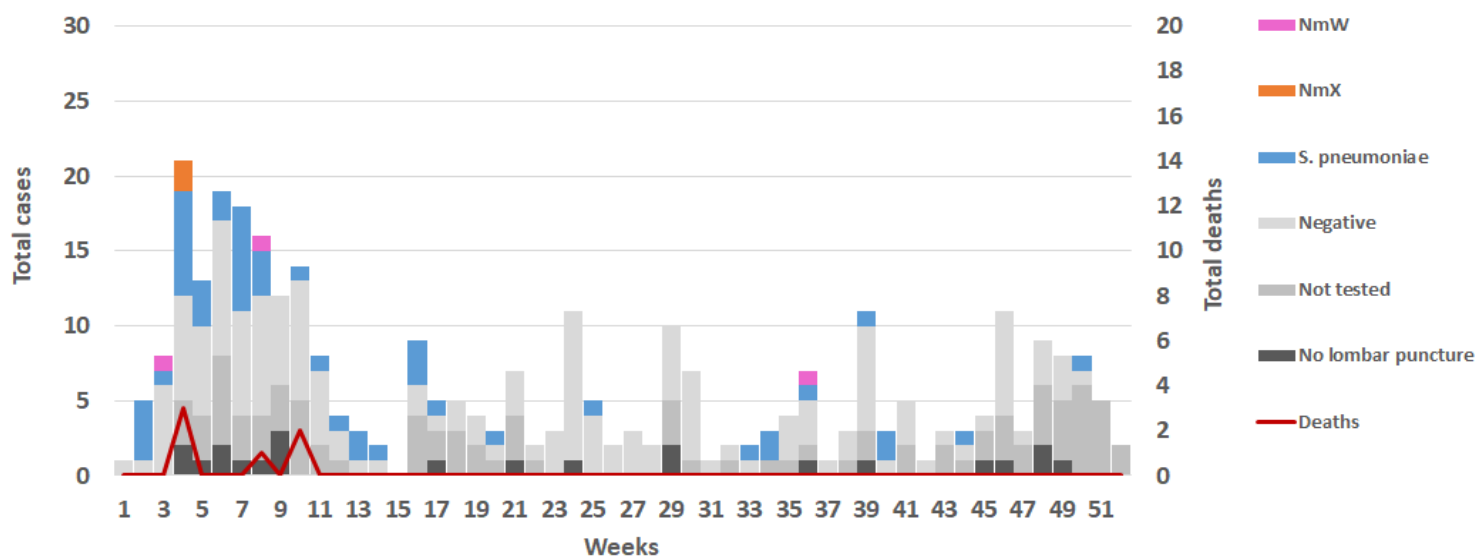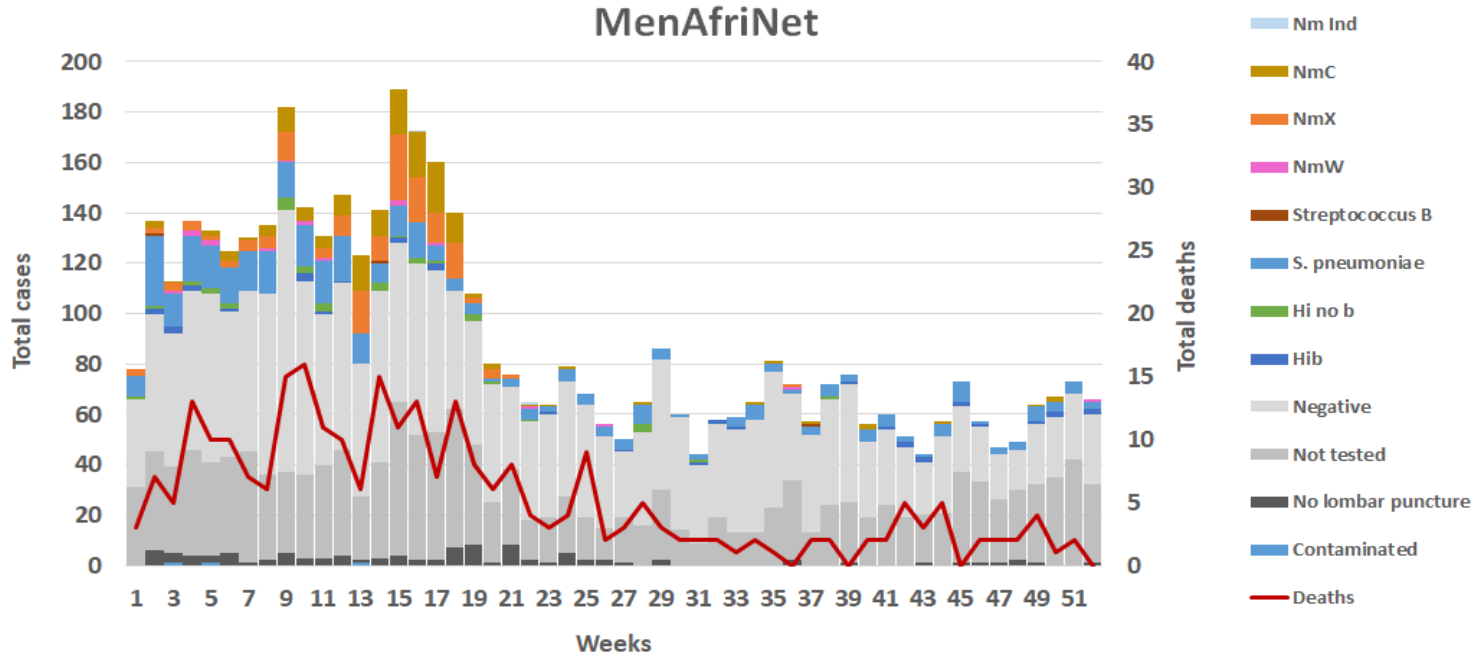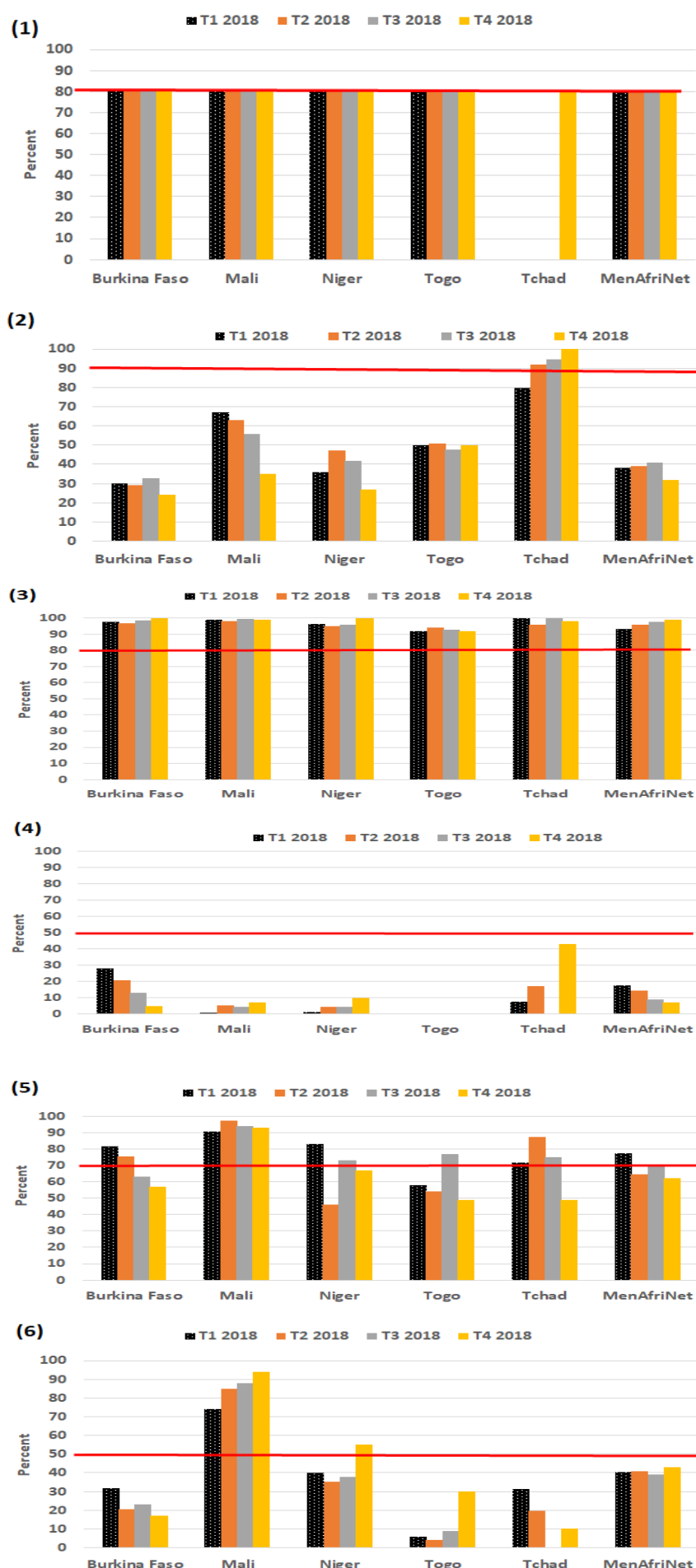
Figure 1. Epedemic Curve, Week 01 - 52

Burkina Faso

Legend: NmC, NmX, NmW, S. pneumoniae, Hi no b, Hib, Negative, Not tested, No lombar puncture, Contaminated, Deaths

Mali

Legend: NmC, NmX, Streptococcus B, S. pneumoniae, Hi no b, Hib, Negative, Not tested, No lombar puncture, Contaminated, Deaths

Niger

Legend: Nm Ind, NmW, NmX, NmC, S. Pneumoniae, Hi no b, Hib, Negative, Not tested, No lombar puncture, Deaths

Chad

Legend: NmX, NmW, S. pneumoniae, Hib, Hib no b, Negative, Not tested, No lombar puncture, Deaths

Togo

Legend: NmW, NmX, S. pneumoniae, Negative, Not tested, No lombar puncture, Deaths

MenAfriNet

Legend: Nm Ind, NmC, NmX, NmW, Streptococcus B, S. pneumoniae, Hi no b, Hib, Negative, Not tested, No lombar puncture, Contaminated, Deaths

Figure 2. Quarterly Trends of Surveillance and Laboratory Performance Indicators, 2018

(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 in 2016 to allow the project to evaluate the timely submission of data at the regional level

(2) — Percentage of cases with vaccination status known

Threshold: > 90%

(3) — Percentage of cases with CSF collected

Threshold: > 80%

(4)* —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.

(5) —Percentage of CSF specimens received at the NRL

Threshold: > 70%

(6) — Percentage of cases with a delay of <7 days between CSF collection date and date CSF received at NRL
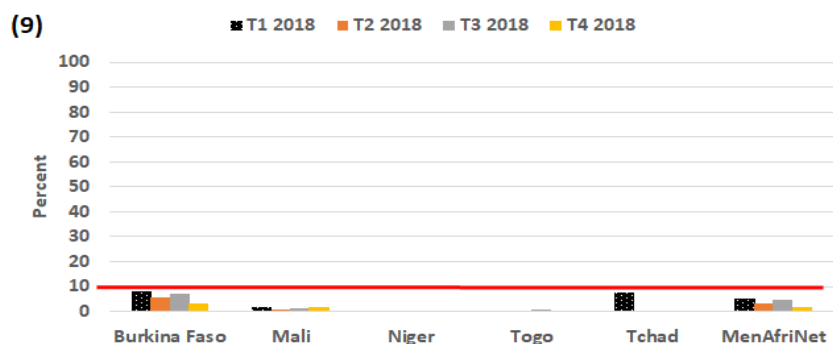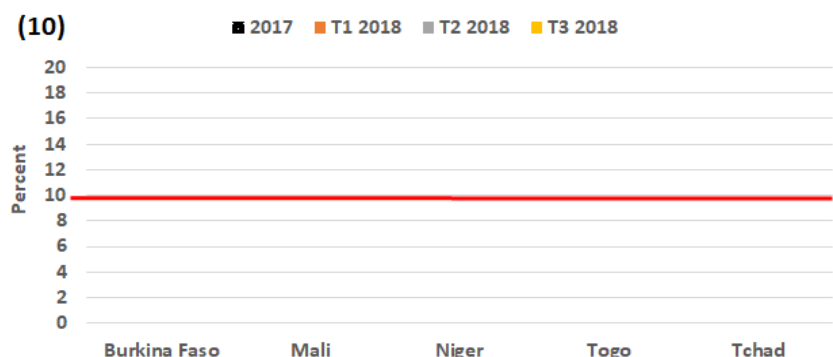Threshold: > 50%

(7)
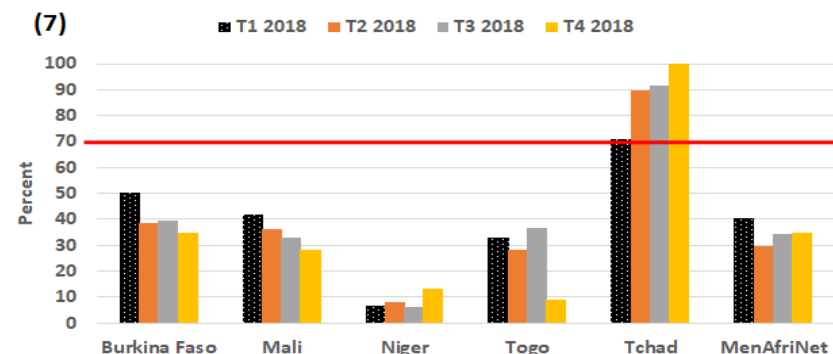
(7) —Percentage of CSF specimen tested at labs other than the NRL by a Gram stain test
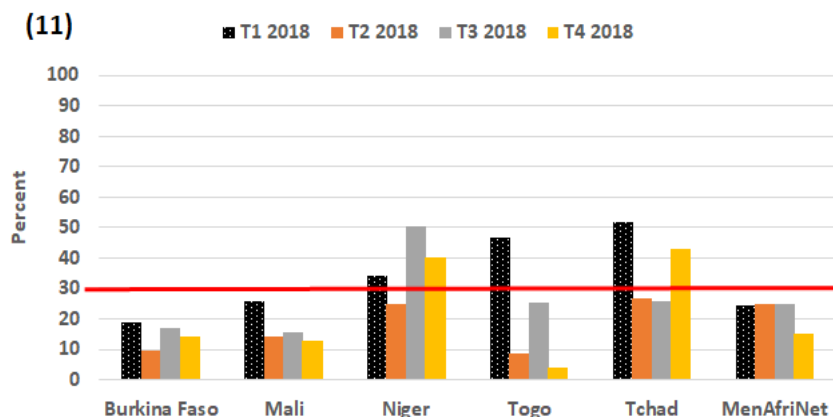Threshold: > 70%

(8)
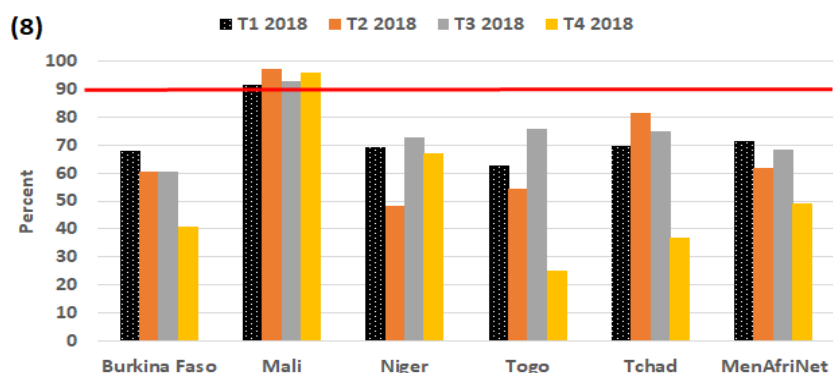
(8) — Percentage of CSF specimen received at the NRL and analyzed by a confirmatory test (culture, PCR, latex or rapid diagnostic test)

Threshold: > 90%

(9)

(9) — Percentage of CSF specimen contaminated for culture procedure at the NRL
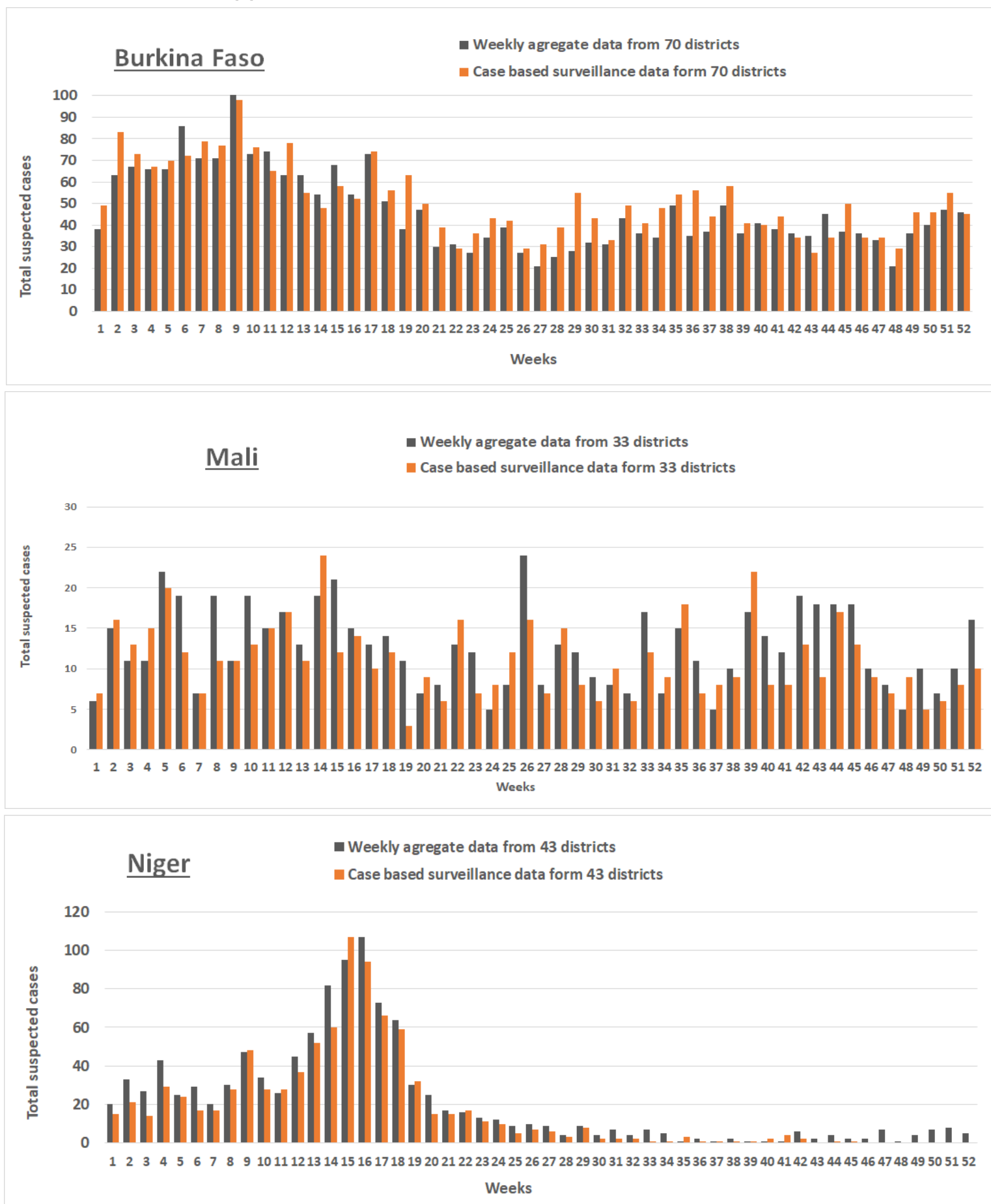
Threshold: < 10%

(10)

(10) — Percentage of CSF specimen contaminated for PCR procedure at the NRL
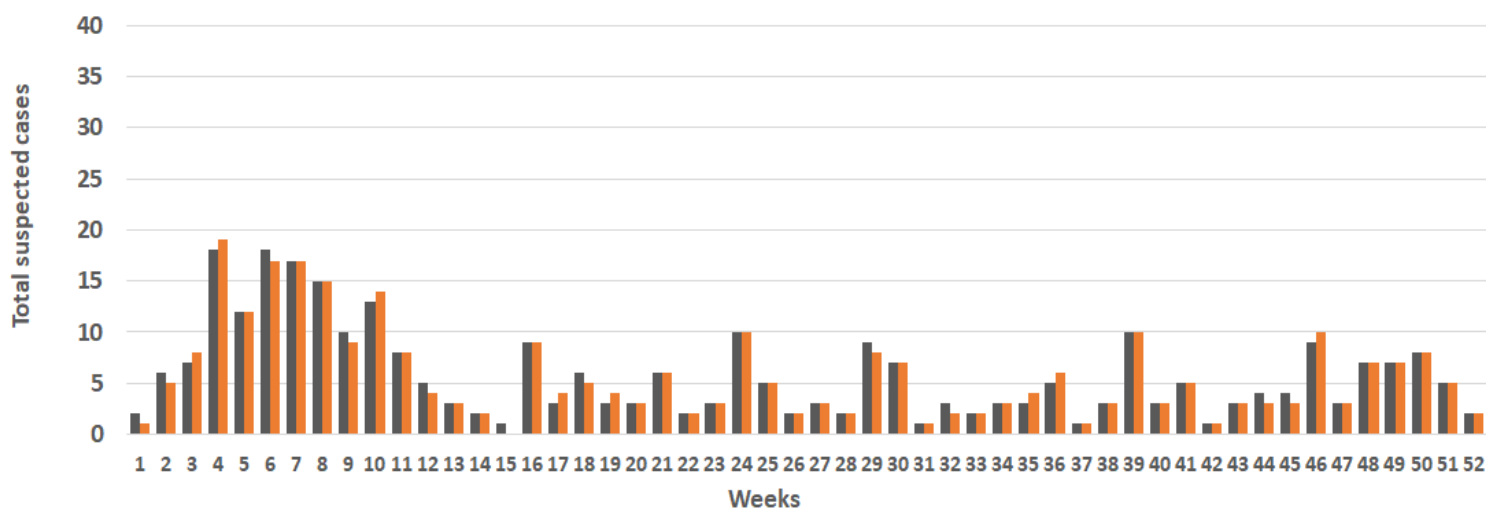
Threshold: < 10%

(11)

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

Threshold: > 30%

Figure 3. Comparison between aggregate reporting and case-based surveillance data from MenAfriNet supported districts
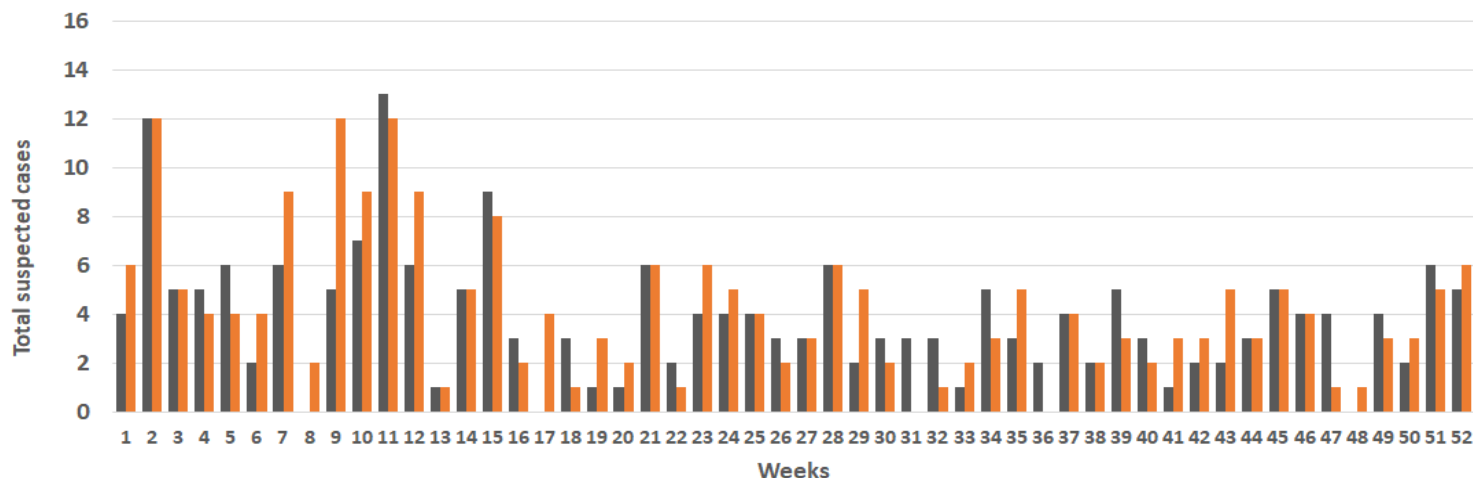
Togo

Legend:
- Weekly agregate data from 7 districts
- Case based surveillance data form 7 districts

Chad

Legend:
- Weekly agregate data from 4 districts
- Case based surveillance data form 4 districts

MenAfriNet

Legend:
- Weekly agregate data from 157 districts
- Case based surveillance data form 157 districts