



Republic of Kenya
Ministry of Public Health and Sanitation

WEEKLY EPIDEMIOLOGICAL BULLETIN

Week 32

Week ending 15th August 2010

Provincial & national surveillance indicators for week 32

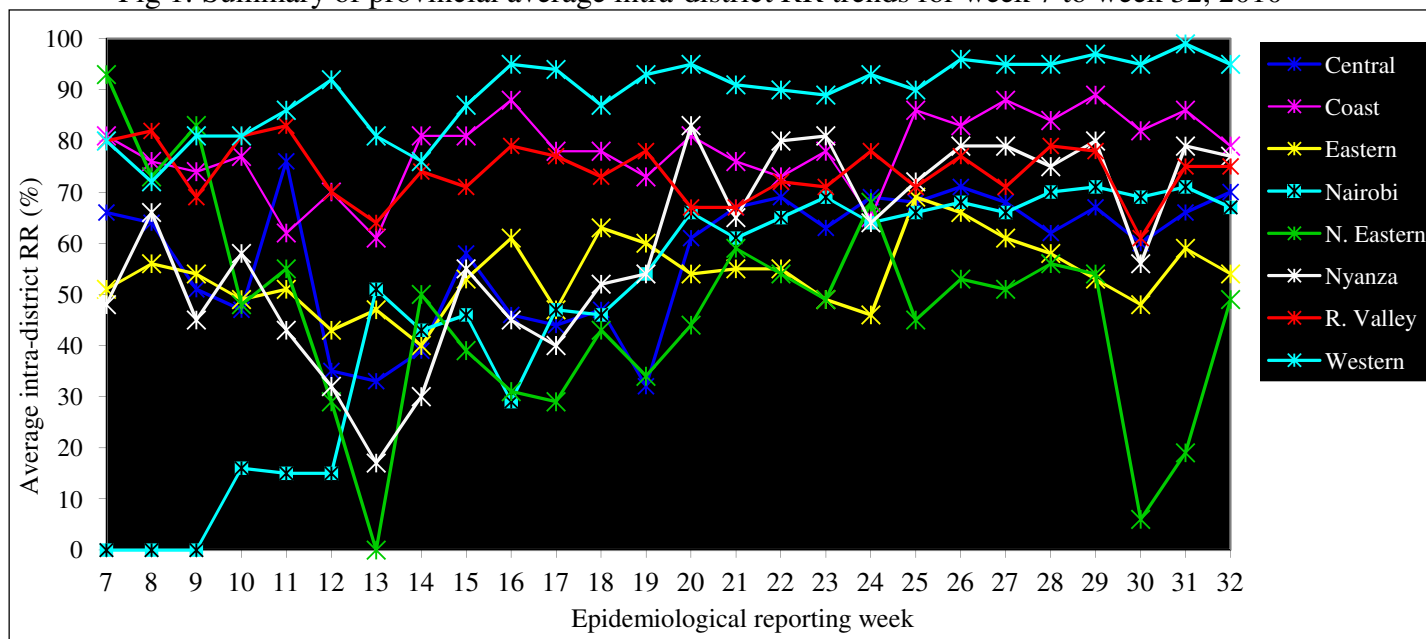
Province	No. of Districts	Reporting on time	Complete reports	Intra-district facility RR (%)	Timeliness (%)	Completeness of reports (%)	Weighted aggregate score (%)
Central	11	11	11	70	100	100	90
Coast	13	11	11	79	85	100	85
Eastern	28	22	22	54	79	100	74
Nairobi	3	3	3	67	100	100	89
N. Eastern	11	10	10	49	91	100	78
Nyanza	21	20	20	77	95	100	90
R. Valley	43	40	40	75	93	100	88
Western	19	19	19	95	100	100	98
National	149	136	136	71	91	100	86

✦ The national average district reporting rate improved to 91%

✦ The national weighted aggregate score also improved to 86%

✦ All districts in Central, Nairobi and Western provinces reported

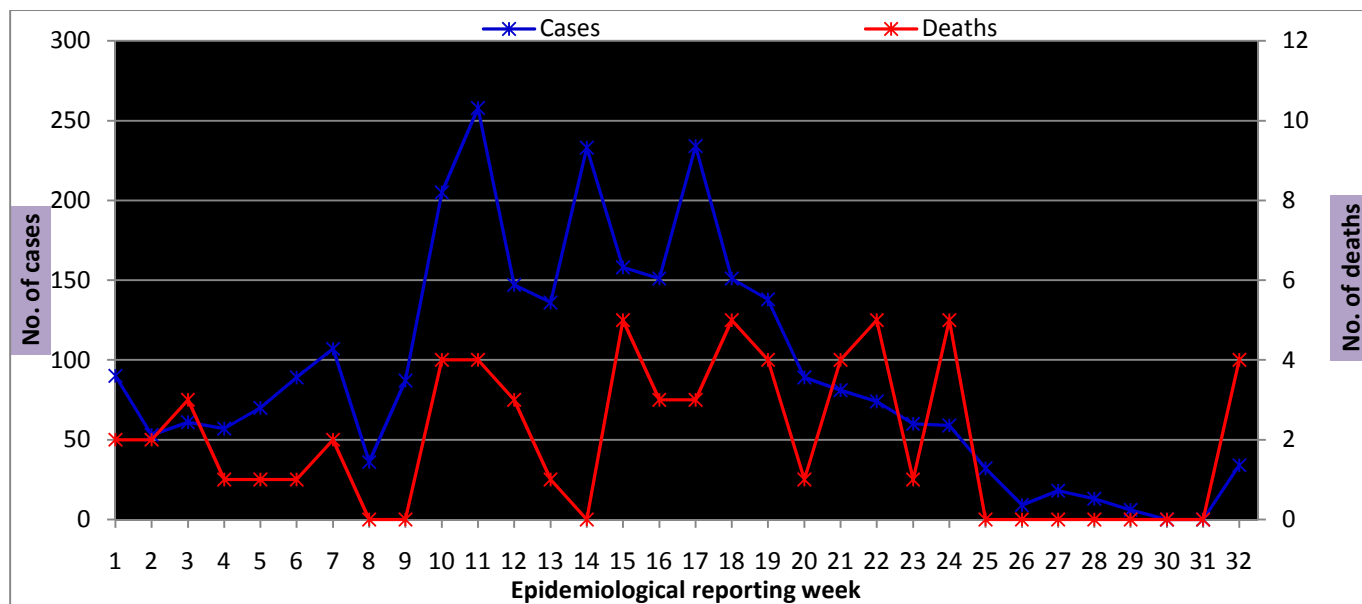
Fig 1: Summary of provincial average intra-district RR trends for week 7 to week 32, 2010



Reports not received from the following 13 Districts

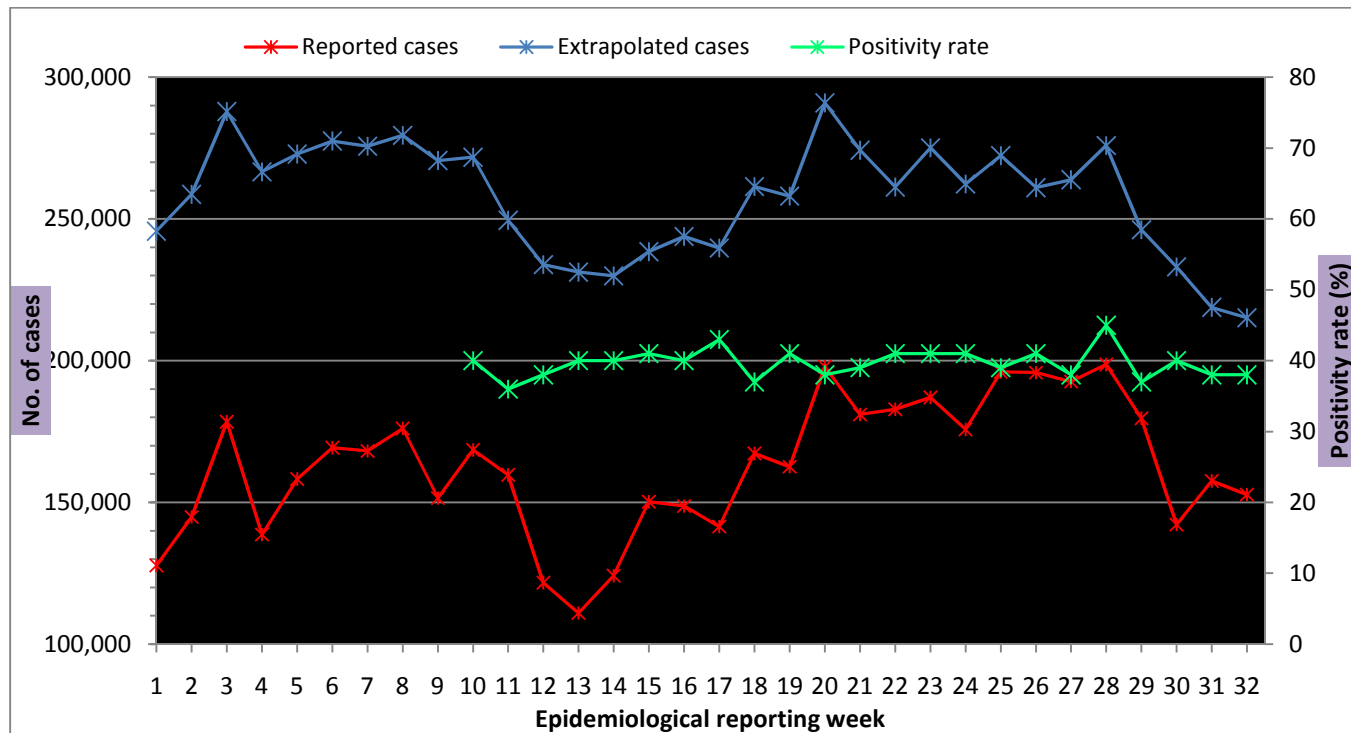
Kaloleni, Kwale, Imeni South, Isiolo, Laisamis, Machakos, Makueni, Marsabit, Fafi, Homa Bay, Baringo, Samburu East, Samburu North

Fig. 2: Cholera** cases and deaths from week 1 to week 32



** Derived from daily updates (line-lists and active DDSR inquiry). A national DDSR officer calls districts in cholera outbreak every morning to get updates. Therefore figures might not be same as those from routine weekly data reports

Fig. 3: Malaria cases (reported* and extrapolated**) and positivity rate, week 1 to week 32



* Cases reported by health facilities that submitted weekly reports during the reporting week

** Extrapolated from reported cases considering the intra-district reporting rate for the week

Highlights for the week

	Disease specific reports
<p>⊕ Nationally:</p> <ul style="list-style-type: none"> The surveillance weighted aggregate score improved from 85% in week 31 to 86% in week 32 The number of districts that submitted reports on time rose from 133 (89%) to 136 (91%) The intra-district average reporting rate declined from 72% to 71% <p>⊕ Best performing provinces in week 32:</p> <ul style="list-style-type: none"> Western (98%), Central (90%) and Nyanza (90%) provinces had the highest surveillance weighted aggregate score while Eastern (74%) and North Eastern (78%) province had the lowest score All districts in Central, Nairobi and Western provinces reported in week 32 while only 79% of the districts in Eastern province reported Western (95%) province had the highest intra-district facility reporting rate while North Eastern (49%) and Eastern (54%) had the lowest rates <p>⊕ Most improved provinces in week 32:</p> <ul style="list-style-type: none"> Intra-district facility RR: North Eastern (19% to 49%) and Central (66% to 70%) are the only provinces that improved while Coast (86% to 79%) and Eastern (59% to 54%) provinces declined the most District reporting rate: North Eastern (36% to 91%) and Central provinces improved the most while Coast (92% to 85%) and Eastern (86% to 79%) provinces posted a decline <p>⊕ Stability: Western and Nairobi (for 12 weeks now) are the most stable provinces while North Eastern and Eastern are the most unstable provinces</p> <p>⊕ The following 29 (19%), up from 28 (19%) in week 31, attained 100% intra-district reporting rate: Kiambu East, Kilindini, Taveta, Maara, Meru South, Gucha, Kisii South, Kuria East, Masaba, Nyamira, Rarienda, Suba, Laikipia East, Sotik, Trans Nzoia East, Trans Nzoia West, Wareng, Busia, Butere, East Bungoma, Emuhaya, Kakamega East, Kakamega North, Kakamega South, Lugari, Mt Elgon, Mumias, North Bungoma, Samia</p>	<p>Cholera</p> <ul style="list-style-type: none"> ⊕ Zero cholera cases (same as in week 29, 30 and 31) were reported in week 32 ⊕ Kuria West district notified of a diarrheal disease outbreak with initial tests ruling out cholera <p>Measles</p> <ul style="list-style-type: none"> ⊕ Nineteen suspected cases (a rise from 6 cases in week 31) were reported with no death ⊕ The cases were reported from Kitui (7), Nakuru (3), Kirinyaga (2), Rarieda (2), Siaya (2), Molo (1), Naivasha (1), Busia (1) districts ⊕ The lab surveillance system investigated 9 case specimen from 8 districts <ul style="list-style-type: none"> ⊕ None of the specimen was classified positive for measles ⊕ Two (22%) tested positive for rubella <p>Malaria</p> <ul style="list-style-type: none"> ⊕ Reported cases declined from 157,544 in week 31 to 152,754 ⊕ Mortality also declined from 25 to 10 cases ⊕ Overall, 55,331 cases (36%) were laboratory tested, yielding a positivity rate of 38% <p>Dysentery</p> <ul style="list-style-type: none"> ⊕ The number of reported cases rose from 812 in week 31 to 915 in week 32 with 1 death from Tana Delta district <p>Typhoid fever</p> <ul style="list-style-type: none"> ⊕ Reported cases rose from 3,268 in week 31 to 4,077 in week 32 with no death <p>AFP</p> <ul style="list-style-type: none"> ⊕ Two suspected cases were reported from Meru South (1) and Molo (1). ⊕ Results tested negative for polio virus <p>Meningococcal Meningitis</p> <ul style="list-style-type: none"> ⊕ Two cases were reported from Laikipia East district with no death <p>NNT</p> <ul style="list-style-type: none"> ⊕ Zero suspected cases were reported <p>Influenza surveillance weekly laboratory information</p> <ul style="list-style-type: none"> ⊕ 37 (67%) out of the 55 specimen received in the week processed ⊕ Ten (27%) tested positive for influenza A (H3) ⊕ None tested positive for Pandemic A (H1N1), Influenza A (H1), Influenza A (H5) or Influenza B

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Summary of Weekly Integrated Disease Surveillance and Response Report for week 32

Province	District	Reports Expected	% RR	Cholera	Dysentery	Malaria	Malaria Tested	Malaria Positive	Measles	MM	Typhoid	NNT	AFP	VHF	Plague	Yellow Fever
Central																
	Gatundu	43	88	0(0)	0(0)	348(0)	0	0	0(0)	0(0)	10(0)	0(0)	0(0)	0(0)	0(0)	0(0)
	Kiambu East	34	100	0(0)	0(0)	1218(0)	1637	283	0(0)	0(0)	182(0)	0(0)	0(0)	0(0)	0(0)	0(0)
	Kiambu West	54	67	0(0)	0(0)	371(0)	626	136	0(0)	0(0)	85(0)	0(0)	0(0)	0(0)	0(0)	0(0)
	Kirinyaga	87	67	0(0)	0(0)	1268(0)	598	66	2(0)	0(0)	7(0)	0(0)	0(0)	0(0)	0(0)	0(0)
	Murang'a North	4	50	0(0)	0(0)	104(0)	0	0	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)
	Murang'a South	40	45	0(0)	0(0)	527(0)	39	6	0(0)	0(0)	27(0)	0(0)	0(0)	0(0)	0(0)	0(0)
	Nyandarua North	30	90	0(0)	0(0)	513(0)	0	0	0(0)	0(0)	105(0)	0(0)	0(0)	0(0)	0(0)	0(0)
	Nyandarua South	22	91	0(0)	0(0)	222(0)	115	27	0(0)	0(0)	45(0)	0(0)	0(0)	0(0)	0(0)	0(0)
	Nyeri North	70	80	0(0)	0(0)	346(0)	220	49	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)
	Nyeri South	52	38	0(0)	0(0)	116(0)	21	6	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)
	Thika	100	67	0(0)	0(0)	1519(0)	750	39	0(0)	0(0)	29(0)	0(0)	0(0)	0(0)	0(0)	0(0)
Coast																
	Kaloleni	14	0	DNR	DNR	DNR	0	0	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR
	Kilifi	39	85	0(0)	44(0)	1859(0)	608	53	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)
	Kilindini	40	100	0(0)	11(0)	1630(0)	1675	676	0(0)	0(0)	29(0)	0(0)	0(0)	0(0)	0(0)	0(0)
	Kinango	21	76	0(0)	10(0)	1673(0)	298	48	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)
	Kwale	20	0	DNR	DNR	DNR	0	0	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR
	Lamu	33	88	0(0)	0(0)	1190(0)	341	44	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)
	Malindi	37	92	0(0)	68(0)	1203(0)	765	101	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)
	Mombasa	30	97	0(0)	0(0)	1132(0)	1112	117	0(0)	0(0)	19(0)	0(0)	0(0)	0(0)	0(0)	0(0)
	Msambweni	26	65	0(0)	1(0)	113(0)	858	48	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)
	Taita	44	98	0(0)	0(0)	670(0)	988	135	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)
	Tana Delta	16	88	0(0)	12(1)	819(0)	112	9	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)
	Tana River	21	62	0(0)	1(0)	370(0)	300	116	0(0)	0(0)	4(0)	0(0)	0(0)	0(0)	0(0)	0(0)
	Taveta	12	100	0(0)	2(0)	476(0)	412	118	0(0)	0(0)	3(0)	0(0)	0(0)	0(0)	0(0)	0(0)
Eastern																
	Chalbi	12	17	0(0)	2(0)	9(0)	0	0	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)
	Embu	70	56	0(0)	0(0)	2423(0)	1868	988	0(0)	0(0)	66(0)	0(0)	0(0)	0(0)	0(0)	0(0)

[illegible]

Province	District	Reports Expected	% RR	Cholera	Dysentery	Malaria	Malaria Tested	Malaria Positive	Measles	MM	Typhoid	NNT	AFP	VHF	Plague	Yellow Fever
North Eastern																
	Fafi	9	0	DNR	DNR	DNR	0	0	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR
	Garissa	23	43	0(0)	0(0)	801(0)	775	468	0(0)	0(0)	40(0)	0(0)	0(0)	0(0)	0(0)	0(0)
	Ijara	9	56	0(0)	5(0)	252(0)	0	0	0(0)	0(0)	5(0)	0(0)	0(0)	0(0)	0(0)	0(0)
	Lagdera	13	77	0(0)	4(0)	447(0)	128	9	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)
	Mandera Central	9	67	0(0)	0(0)	317(0)	0	0	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)
	Mandera East	8	50	0(0)	2(0)	279(0)	0	0	0(0)	0(0)	12(0)	0(0)	0(0)	0(0)	0(0)	0(0)
	Mandera West	8	75	0(0)	0(0)	796(0)	0	0	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)
	Wajir West	8	50	0(0)	0(0)	185(0)	0	0	0(0)	0(0)	3(0)	0(0)	0(0)	0(0)	0(0)	0(0)
	Wajir East	13	69	0(0)	4(0)	314(0)	0	0	0(0)	0(0)	22(0)	0(0)	0(0)	0(0)	0(0)	0(0)
	Wajir North	8	50	0(0)	0(0)	101(0)	0	0	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)
	Wajir South	38	34	0(0)	0(0)	274(0)	0	0	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)
Nyanza																
	Bondo	26	85	0(0)	42(0)	2325(0)	597	355	0(0)	0(0)	58(0)	0(0)	0(0)	0(0)	0(0)	0(0)
	Borabu	27	41	0(0)	0(0)	1349(0)	1124	535	0(0)	0(0)	1(0)	0(0)	0(0)	0(0)	0(0)	0(0)
	Gucha	35	100	0(0)	0(0)	1943(0)	746	207	0(0)	0(0)	34(0)	0(0)	0(0)	0(0)	0(0)	0(0)
	Homa Bay	40	0	DNR	DNR	DNR	0	0	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR
	Kisii Central	42	95	0(0)	16(0)	2362(0)	1017	67	0(0)	0(0)	143(0)	0(0)	0(0)	0(0)	0(0)	0(0)
	Kisii South	11	100	0(0)	0(0)	558(0)	391	59	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)
	Kisumu East	54	83	0(0)	0(0)	4486(0)	1453	603	0(0)	0(0)	20(0)	0(0)	0(0)	0(0)	0(0)	0(0)
	Kisumu West	22	91	0(0)	27(0)	2359(0)	462	201	0(0)	0(0)	14(0)	0(0)	0(0)	0(0)	0(0)	0(0)
	Kuria East	13	100	0(0)	4(0)	566(0)	0	0	0(0)	0(0)	18(0)	0(0)	0(0)	0(0)	0(0)	0(0)
	Kuria West	24	92	0(0)	1(0)	1450(0)	106	38	0(0)	0(0)	1(0)	0(0)	0(0)	0(0)	0(0)	0(0)
	Manga	17	94	0(0)	0(0)	185(0)	143	45	0(0)	0(0)	8(0)	0(0)	0(0)	0(0)	0(0)	0(0)
	Masaba	32	100	0(0)	0(0)	947(1)	368	28	0(0)	0(0)	18(0)	0(0)	0(0)	0(0)	0(0)	0(0)
	Migori	42	69	0(0)	13(0)	2026(0)	187	71	0(0)	0(0)	24(0)	0(0)	0(0)	0(0)	0(0)	0(0)
	Nyamira	45	100	0(0)	1(0)	1248(1)	380	44	0(0)	0(0)	13(0)	0(0)	0(0)	0(0)	0(0)	0(0)
	Nyando	42	86	0(0)	3(0)	1689(0)	429	336	0(0)	0(0)	22(0)	0(0)	0(0)	0(0)	0(0)	0(0)
	Rachuonyo	34	79	0(0)	3(0)	1996(0)	0	0	0(0)	0(0)	26(0)	0(0)	0(0)	0(0)	0(0)	0(0)
	Rarienda	19	100	0(0)	4(0)	2578(0)	967	676	2(0)	0(0)	49(0)	0(0)	0(0)	0(0)	0(0)	0(0)

Province	District	Reports Expected	% RR	Cholera	Dysentery	Malaria	Malaria Tested	Malaria Positive	Measles	MM	Typhoid	NNT	AFP	VHF	Plague	Yellow Fever
	Rongo	32	66	0(0)	16(0)	1453(0)	94	32	0(0)	0(0)	45(0)	0(0)	0(0)	0(0)	0(0)	0(0)
	Siaya	72	42	0(0)	60(0)	3592(0)	748	220	2(0)	0(0)	51(0)	0(0)	0(0)	0(0)	0(0)	0(0)
	South Gucha	19	84	0(0)	0(0)	782(0)	196	86	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)
	Suba	41	100	0(0)	55(0)	1449(0)	190	65	0(0)	0(0)	30(0)	0(0)	0(0)	0(0)	0(0)	0(0)
Rift Valley																
	Baringo	50	0	DNR	DNR	DNR	0	0	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR
	Baringo North	36	58	0(0)	0(0)	643(0)	0	0	0(0)	0(0)	17(0)	0(0)	0(0)	0(0)	0(0)	0(0)
	Bomet	38	95	0(0)	0(0)	1364(0)	186	27	0(0)	0(0)	10(0)	0(0)	0(0)	0(0)	0(0)	0(0)
	Bureti	32	88	0(0)	0(0)	1828(0)	0	0	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)
	East Pokot	9	33	0(0)	0(0)	532(0)	0	0	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)
	Eldoret East	36	97	0(0)	0(0)	1447(0)	644	163	0(0)	0(0)	32(0)	0(0)	0(0)	0(0)	0(0)	0(0)
	Eldoret West	40	70	0(0)	4(0)	1420(0)	489	125	0(0)	0(0)	51(0)	0(0)	0(0)	0(0)	0(0)	0(0)
	Kajiado	35	49	0(0)	36(0)	823(0)	121	77	0(0)	0(0)	23(0)	0(0)	0(0)	0(0)	0(0)	0(0)
	Keiyo	36	83	0(0)	0(0)	634(0)	168	19	0(0)	0(0)	24(0)	0(0)	0(0)	0(0)	0(0)	0(0)
	Kericho	30	90	0(0)	0(0)	667(0)	192	11	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)
	Kipkelion	38	95	0(0)	0(0)	651(0)	0	0	0(0)	0(0)	10(0)	0(0)	0(0)	0(0)	0(0)	0(0)
	Koibatek	31	84	0(0)	0(0)	541(0)	268	74	0(0)	0(0)	26(0)	0(0)	0(0)	0(0)	0(0)	0(0)
	Kwanza	17	88	0(0)	0(0)	929(0)	95	30	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)
	Laikipia East	14	100	0(0)	1(0)	357(0)	0	0	0(0)	2(0)	7(0)	0(0)	0(0)	0(0)	0(0)	0(0)
	Laikipia North	9	89	0(0)	2(0)	136(0)	0	0	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)
	Laikipia West	25	92	0(0)	0(0)	1011(0)	0	0	0(0)	0(0)	22(0)	0(0)	0(0)	0(0)	0(0)	0(0)
	Loitokitok	23	61	0(0)	41(0)	496(0)	0	0	0(0)	0(0)	43(0)	0(0)	0(0)	0(0)	0(0)	0(0)
	Marakwet	54	81	0(0)	18(0)	1367(0)	374	264	0(0)	0(0)	56(0)	0(0)	0(0)	0(0)	0(0)	0(0)
	Molo	34	79	0(0)	0(0)	777(0)	0	0	1(0)	0(0)	36(0)	0(0)	1(0)	0(0)	0(0)	0(0)
	Naivasha	35	86	0(0)	12(0)	1437(0)	0	0	1(0)	0(0)	122(0)	0(0)	0(0)	0(0)	0(0)	0(0)
	Nakuru	45	93	0(0)	0(0)	382(1)	689	60	3(0)	0(0)	45(0)	0(0)	0(0)	0(0)	0(0)	0(0)
	Nakuru North	32	91	0(0)	0(0)	1089(0)	476	195	0(0)	0(0)	118(0)	0(0)	0(0)	0(0)	0(0)	0(0)
	Nandi Central	22	41	0(0)	0(0)	547(0)	0	0	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)
	Nandi East	32	78	0(0)	19(0)	933(0)	311	44	0(0)	0(0)	14(0)	0(0)	0(0)	0(0)	0(0)	0(0)
	Nandi North	20	90	0(0)	0(0)	601(0)	0	0	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)
	Nandi South	18	89	0(0)	0(0)	1089(0)	63	32	0(0)	0(0)	28(0)	0(0)	0(0)	0(0)	0(0)	0(0)

[illegible]

Province	District	Reports Expected	% RR	Cholera	Dysentery	Malaria	Malaria Tested	Malaria Positive	Measles	MM	Typhoid	NNT	AFP	VHF	Plague	Yellow Fever
	Lugari	24	100	0(0)	2(0)	2219(0)	423	240	0(0)	0(0)	91(0)	0(0)	0(0)	0(0)	0(0)	0(0)
	Mt Elgon	16	100	0(0)	6(0)	2130(0)	0	0	0(0)	0(0)	156(0)	0(0)	0(0)	0(0)	0(0)	0(0)
	Mumias	26	100	0(0)	0(0)	2278(0)	1044	450	0(0)	0(0)	42(0)	0(0)	0(0)	0(0)	0(0)	0(0)
	North Bungoma	18	100	0(0)	32(0)	1410(0)	968	547	0(0)	0(0)	79(0)	0(0)	0(0)	0(0)	0(0)	0(0)
	Samia	9	100	0(0)	9(0)	585(0)	83	39	0(0)	0(0)	6(0)	0(0)	0(0)	0(0)	0(0)	0(0)
	South Bungoma	22	64	0(0)	0(0)	2000(0)	670	269	0(0)	0(0)	73(0)	0(0)	0(0)	0(0)	0(0)	0(0)
	Teso	20	90	0(0)	11(0)	2512(0)	657	211	0(0)	0(0)	2(0)	0(0)	0(0)	0(0)	0(0)	0(0)
	Vihiga	21	90	0(0)	0(0)	2421(0)	765	351	0(0)	0(0)	66(0)	0(0)	0(0)	0(0)	0(0)	0(0)
	West Bungoma	20	95	0(0)	24(0)	2145(0)	1099	611	0(0)	0(0)	47(0)	0(0)	0(0)	0(0)	0(0)	0(0)

	Cholera	Dysentery	Malaria	Malaria Tested*	Malaria Positive*	Measles	MM	Typhoid	NNT	AFP	VHF	Plague	Yellow Fever
Week 32 summary	0 (0)	915 (1)	152,754 (10)	55,331	20,799	19 (0)	2 (0)	4,077 (0)	0 (0)	2 (0)	0 (0)	0 (0)	0 (0)
Years cumulative summary	1,782 (27)	38,304 (22)	5,208,150 (1,199)	1,221,944	484,170	600 (0)	92 (15)	119,425 (9)	2 (1)	26 (0)	0 (0)	0 (0)	0 (0)

* From week 10 of 2010 (Excludes week 1 up to week 9)

Key:

DNR: District did not report for this disease

AFP: Acute Flaccid Paralysis

NNT: Neonatal Tetanus

HF: Health Facilities

MM: Meningococcal Meningitis

VHF: Viral Hemorrhagic Fever

NEP: North Eastern Province

% RR: Health Facility reporting rate for this week

Timely reports: Reports received before Wednesday

Intra-district: Proportion of health facilities reporting in a district

Timeliness: Proportion of districts in a province/country reporting on time

Weighted Aggregate Score: Composite Surveillance Score (3 for Timeliness, 2 for Completeness and 1 for Complete reports)

Editorial: Dr. D. Mutonga, Dr. C. Nzioka, Dr. M. Ope, Dr. D. Langat, Dr. P. Muthoka, Dr. O. Shikanga, C. Njuguna, J. Njau, J. Njoroge, H. Limo, Z. Irura, M. Badel, C. Maina, E. Kathini, R. Kalani, D. Mwangi, A. Muange, J. Ayaga, P. Njiru