

Update
Weekly Measles
Surveillance Report
Sudan
((Northern states))
Up to
Week 42
(Ending On 22/10/10)

Figure (1): Distribution of Fever and rash Cases, (outbreak data excluded) by State Up to W.42 (2009 -2010)

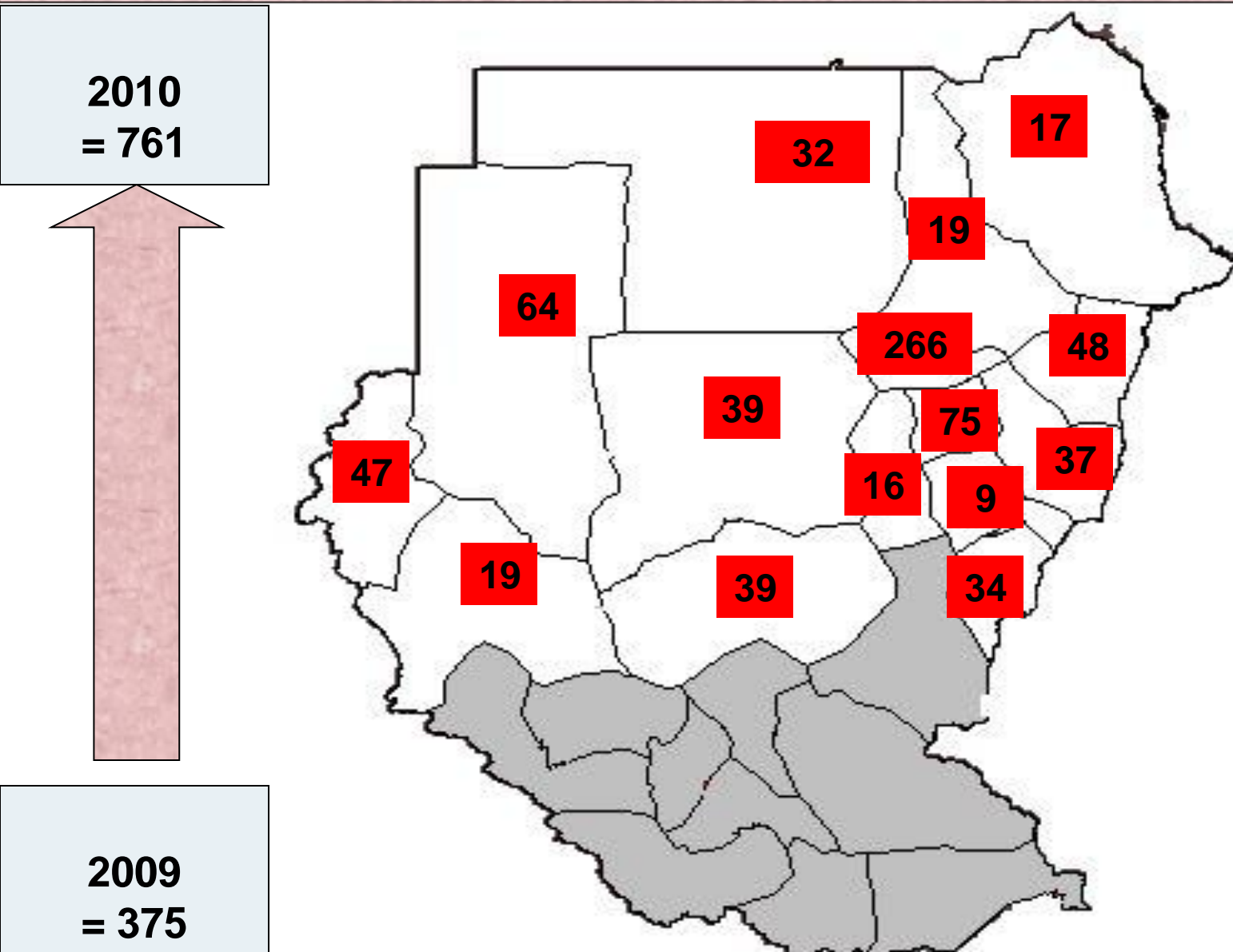
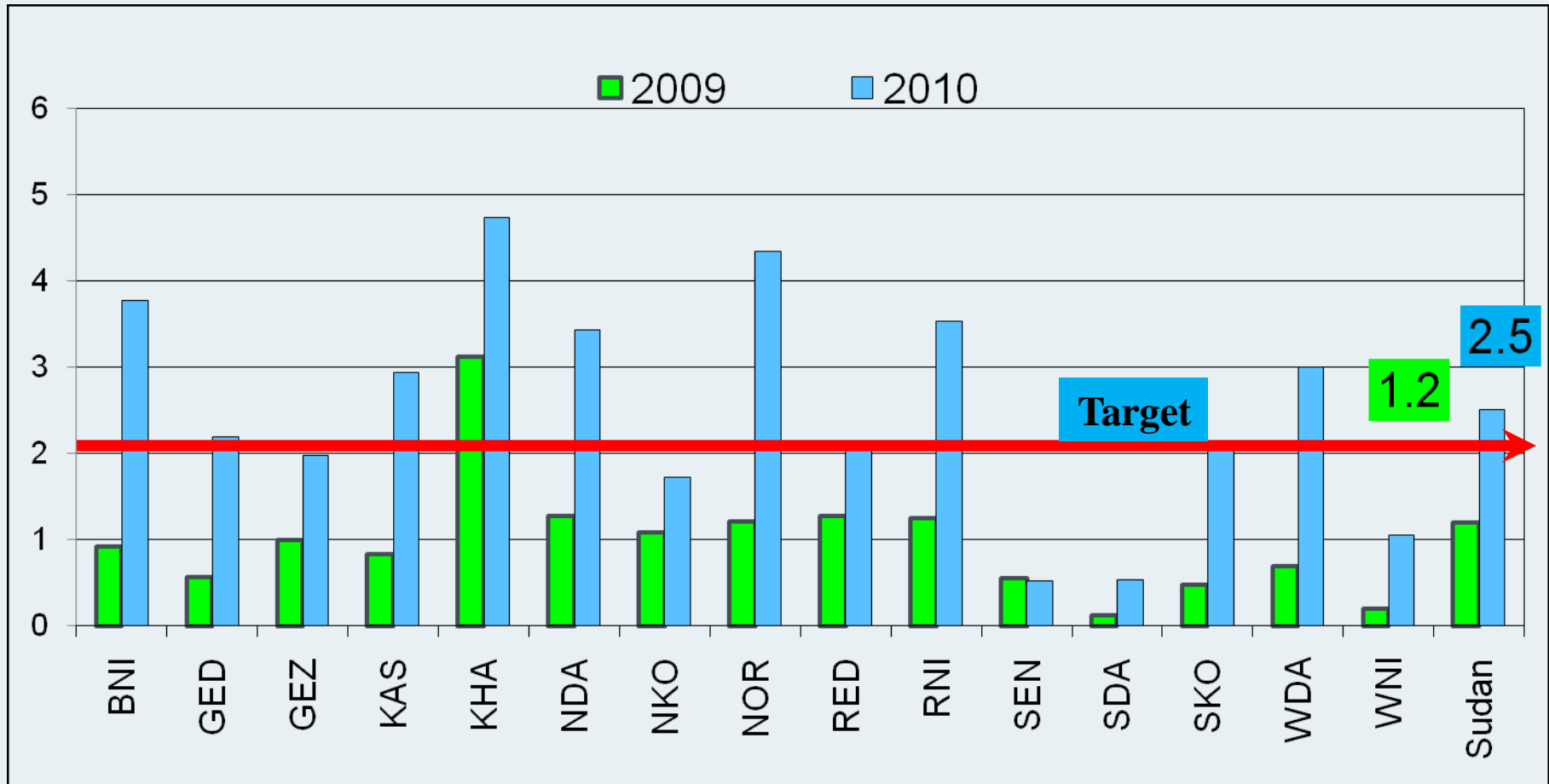


Figure (2): Rate of Non-Measles Cases /100,000 Population (outbreak data excluded) by State Up to W.42 (2009 -2010)

Target = 2/100,000 pop.



**Table (1):Type of Samples Collected Form Fever and rash Cases
(outbreak data excluded)
by State Up to W.42 2010**

State	Fever & rash cases	blood samples	Oral fluid	Urine samples	Throat swap	Dry Blood
Blue Nile	34	22	12	29	7	0
Gadarif	37	34	2	33	8	0
Gazira	75	57	14	18	0	0
Kassala	48	37	11	38	13	0
Khartoum	266	177	79	85	6	6
N. Darfur	64	56	6	43	0	0
N. Kordofan	39	33	6	31	0	0
Northern	19	19	0	8	1	0
Red Sea	17	7	9	8	1	0
River Nile	32	27	5	24	0	0
Sennar	9	7	0	0	0	0
S.Darfur	19	14	4	1	2	0
S.Kordofan	39	38	1	18	0	0
W.Darfur	47	47	0	34	0	0
White Nile	16	14	1	7	1	0
Total	761	589	133	358	38	6

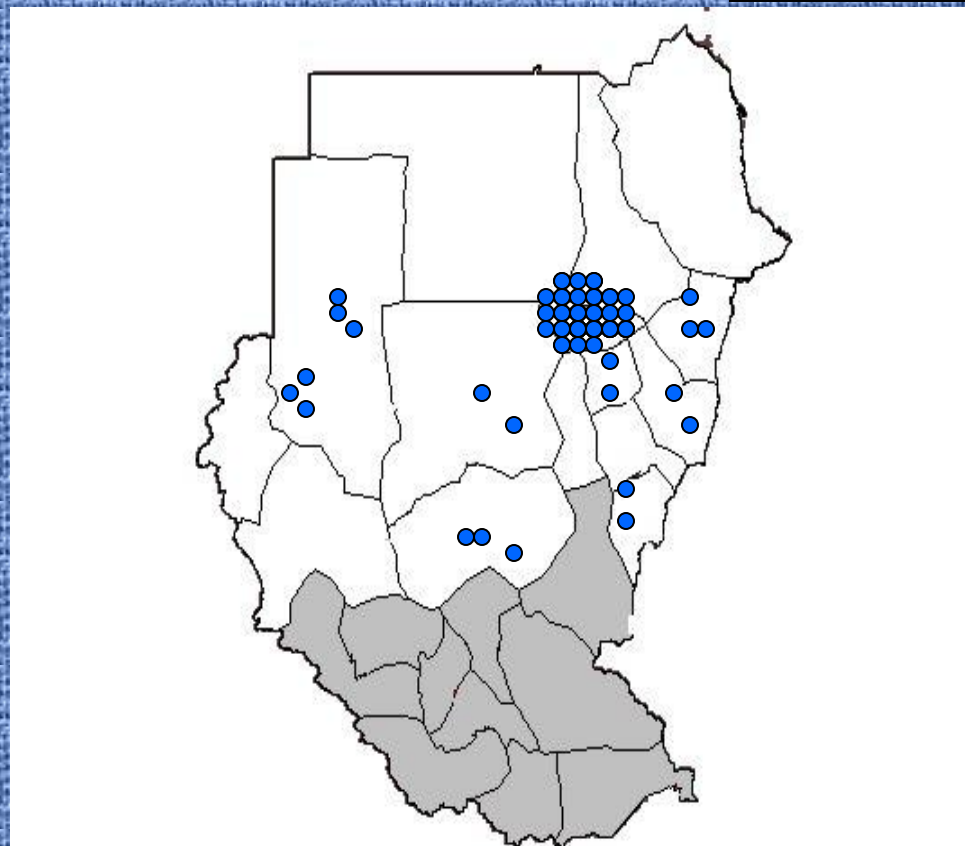
**Table (2): Classification of Fever and rash Up to W.42 - 2010
(outbreak data excluded)**

State	Reported cases	Samples for Antibody titre	M.	R.	Discarded	Clinically Diagnosed Measles	Total Measles Cases	Pending
Blue Nile	34	34	2	5	26	0	2	0
GEDARIF	37	36	2	16	19	1	3	0
GEZAIRA	75	71	2	28	39	4	6	3
KASSALA	48	48	3	15	30	0	3	1
KHARTOUM	266	262	25	6	221	4	29	10
N. Darfur	64	62	6	16	38	2	8	2
N. Kordofan	39	39	2	7	30	0	2	1
NORTHERN	19	19	0	2	13	0	0	4
RED SEA	17	16	0	2	10	1	1	4
REVER NILE	32	32	0	13	19	0	0	0
SENNAR	9	7	0	5	2	2	2	0
SOUTH DAR.	19	18	0	6	12	1	1	0
SOUTHKOR.	39	39	3	12	25	0	3	0
WEST DAR.	47	47	0	0	46	0	0	1
White Nile	16	15	0	8	8	1	1	0
Total	761	745	45	141	538	16	61	26

Figure (3): Distribution of sporadic Lab. Confirmed Measles Cases by States and locality up to W42 2010

State	Localities	No of lab confirmed cases
BNI	Eldamazin	1
	Elrusirs	1
GED	Mid -Gedarif	1
	Gala alnahal	1
GEZ	Madani	2
KSA	West Kassala	1
	Reifiy Halfa	2
KHA	karay	3
	Khartoum	3
	Bahry	10
	Sherg Alniel	4
	Umdorman	3
KHA	Jabel Awlia	2
NDA	Elfashir	3
	Saraf Omra	3
NKO	Gabrat Elshekh	1
	Abu Zabed	1
SKO	Habella	1
	Abogebeha	2
	Total	45

N = 45



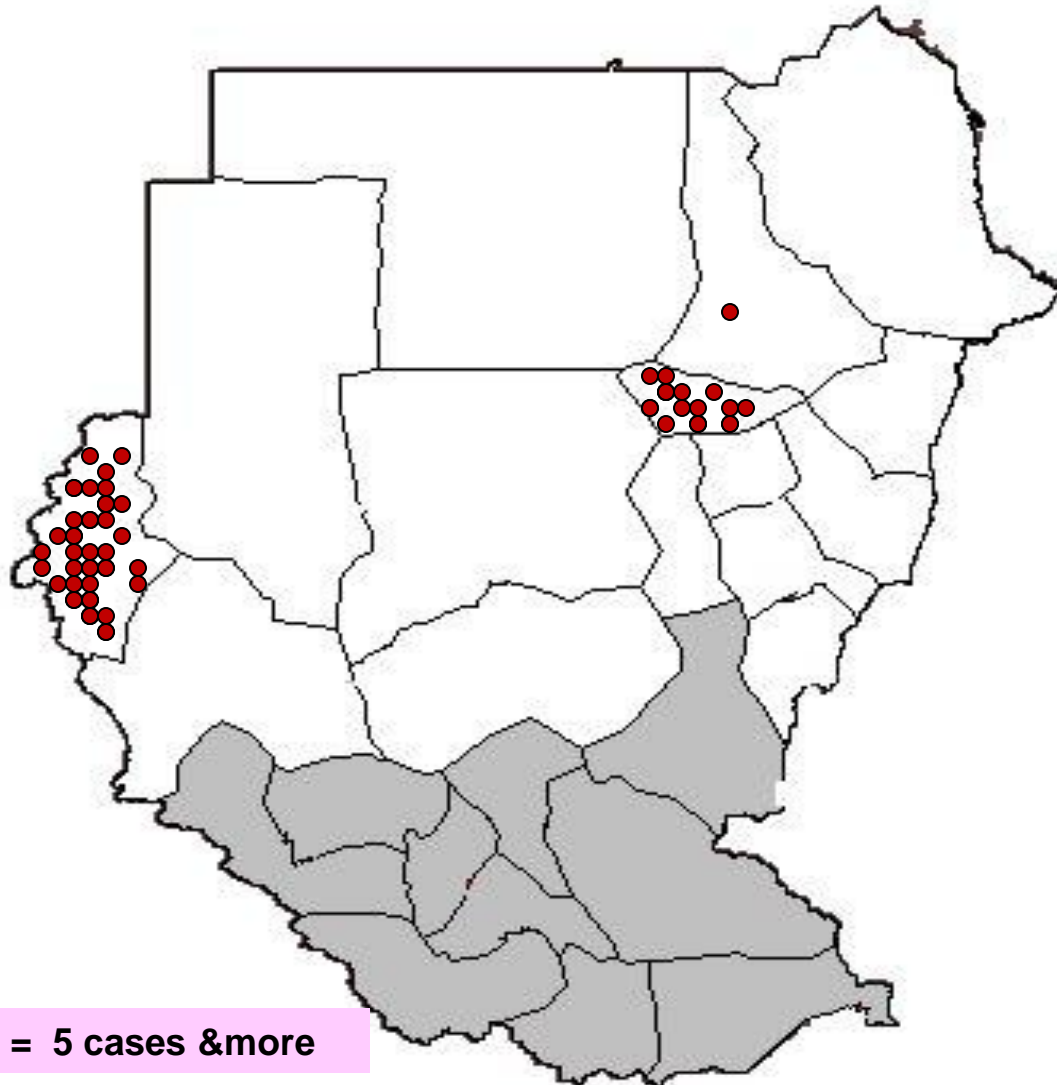
● 1 dot = 1 case

Table (3): Confirmed Measles outbreaks up to W.42 2010

State	Total Reported cases	Lab Confirmed Cases	EPI-LINK Cases	Size of the outbreak	D. Of Onset of the 1st case	D. Of Onset of the latest case
KHA (Umbada)	17	15	2	17	03-07-10	01-10-10
KHA (Karay)	25	9	16	25	06-08-2010	22-09-10
KHA (Umdorman -Khalwat Alimam Almahdi)	5	2	2	4	13-09-10	14-09-10
RNI (Eldamer)	5	4	0	4	05-8-2010	17-08-10
KHA (Umdorman-Fatasha Military camp)	7	5	1	6	26-7-2010	14-08-10
KHA (Bahry)	20	11	8	19	17-04-10	21-05-10
WDA	458	44	369	413	02-01-10	25-08-10
Total	537	90	398	488		

Figure (4): Distribution of Measles outbreak Cases by States and locality up to W₄₂ 2010

N = 488



**Table (6) : Field Surveillance Indicators By State Up to W.42
2010 (Target = >80%)**

State	Fever & Rash cases	%investigated within <48 h	% Notification<7 days of rash onset
Blue Nile	34	100%	100%
Gadarif	37	100%	94%
Gazira	75	100%	98%
Kassala	48	100%	100%
Khartoum	266	92%	90%
N. Darfur	64	100%	89%
N. Kordofan	39	100%	92%
Northern	19	83%	91%
Red Sea	17	93%	100%
River Nile	32	100%	93%
Sennar	9	83%	100%
S.Darfur	19	100%	73%
S.Kordofan	39	95%	71%
W.Darfur	47	94%	87%
White Nile	16	91%	100%
Total	761	96%	90%

Table (7) : Field Surveillance Indicators by State up to W.42 2010 (Target = >80%)

State	Fever & Rash cases	% of samples collected for IGM testing	% adequacy
Blue Nile	34	100	100
Gadarif	37	97	92
Gazira	75	92	97
Kassala	48	100	98
Khartoum	266	97	98
N. Darfur	64	96	90
N. Kordofan	39	100	100
Northern	19	100	100
Red Sea	17	83	87.5
River Nile	32	100	100
Sennar	9	86	100
S.Darfur	19	91	89
S.Kordofan	39	100	95
W.Darfur	47	100	95
White Nile	16	93	93
Total	761	97	97

Table (8): (%) of localities/sates that reported at least one suspected case with sample for IGM testing - Up to w.42 2010

State	Total No.of localities	Reporting localities	%
Blue Nile	6	5	83
Gadarif	10	10	100
Gazira	7	7	100
Kassala	11	11	100
Khartoum	7	7	100
N. Darfur	16	6	38
N. Kordofan	13	9	69
Northern	7	6	86
Red Sea	10	3	30
River Nile	7	6	86
Sennar	7	5	71
S.Darfur	15	7	47
S.Kordofan	18	12	67
W.Darfur	15	10	67
White Nile	8	3	38
Total	157	107	68

**Table(9) : Measles Field Surveillance Indicators Up to W.41
2009 - 2010**

Indicators	2009	2010
Rate of Non- Measles Cases/100,000pop	1.2	2.5
Confirmed	33	61
Clinically Diagnosed	25	16
Lab confirmed	8	45
% samples for IGM testing	95	97
% Adequacy of samples	98	95
% Notification<7 days of rash onset	86	90
%Investigated within 48 hrs	95	96
% results reported to EPI =< 7 days from received	97	96
(%) Proportion of localities that reported at least one suspected case with sample for IGM testing	34%	68% (ann 84%)¹²

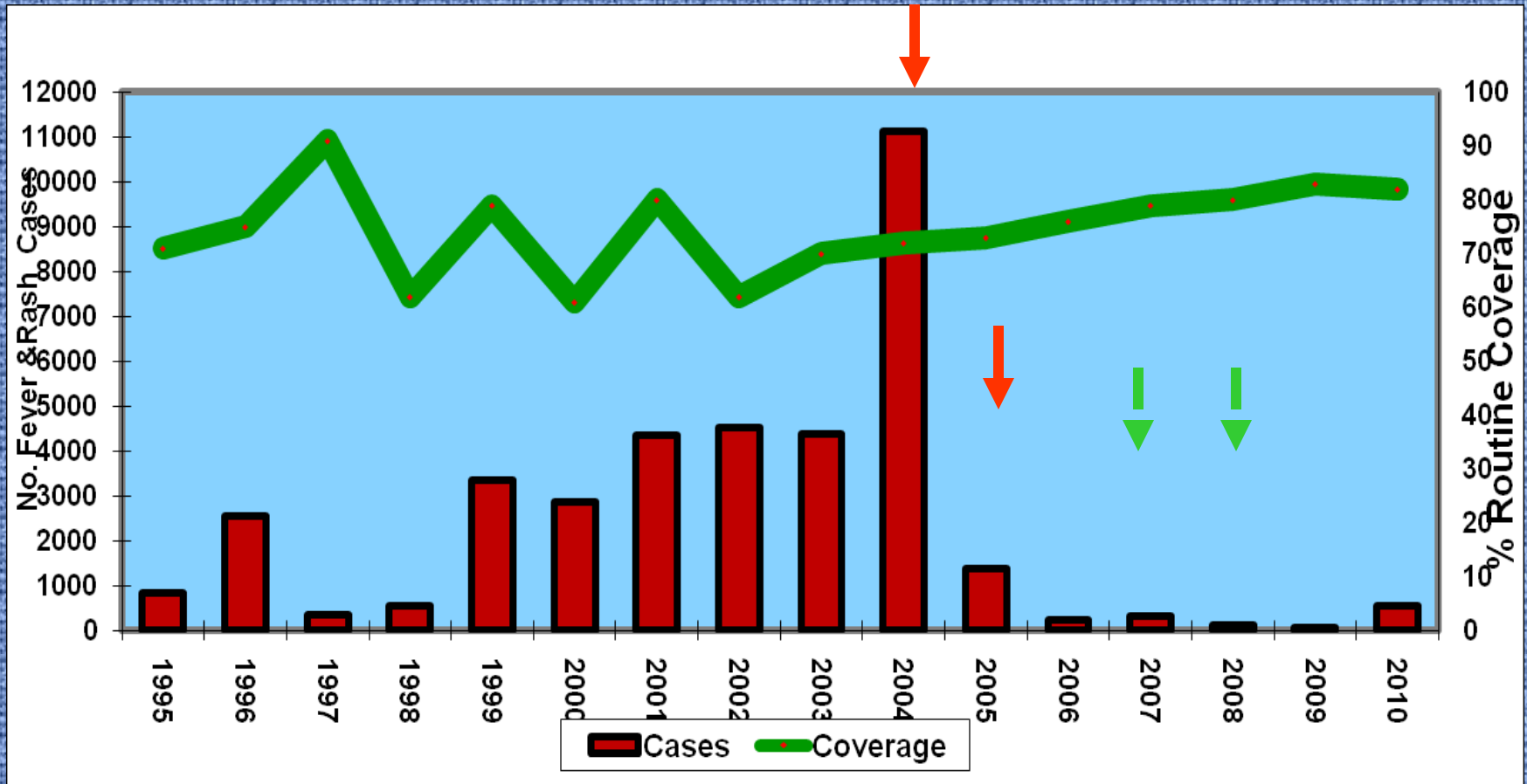
**Table(10) : Measles Field Surveillance Indicators Up to W.42
2010**

Indicator	#	%
%Outbreaks detected timely	7	100
%Outbreaks investigated timely	6	86
%Outbreaks Documented	7	100
%Outbreaks size less than 10 cases	3	43

Table (11) : Incidence Rate of Confirmed Measles Cases up to W. 42 2009-2010 (per /1,000,000)

Target =< 1/1000,000 pop.		Annualized Measles Incidence/1,000,000 2009	Annualized Measles incidence /1,000,000 2010
State			
Blue Nile		1.3	2.4
Gadarif		0.0	1.9
Gazira		1.1	1.7
Kassala		0.0	1.9
Khartoum		0.7	20.4
N. Darfur		0.0	4.9
N. Kordofan		9.5	0.9
Northern		0.0	0.0
Red Sea		0.0	1.3
River Nile		1.1	5.5
Sennar		0.8	1.5
S.Darfur		0.0	0.3
S.Kordofan		0.6	1.7
W.Darfur		12.1	263.6
White Nile		0.7	0.7
Total		1.9	19.7

Figure (4): Measles Cases Vs Measles vaccine Coverage 1995 – 2010*



Catch up campaign



Follow up campaign

* Ann Up to Aug 2010

Figure (5): Measles Out breaks 2006- 2010

413 cases in West Darfur
19 cases in Bahry
17 cases in Umbada
6 cases in Umdurman
25 cases in Karary
4 cases in Eldamer

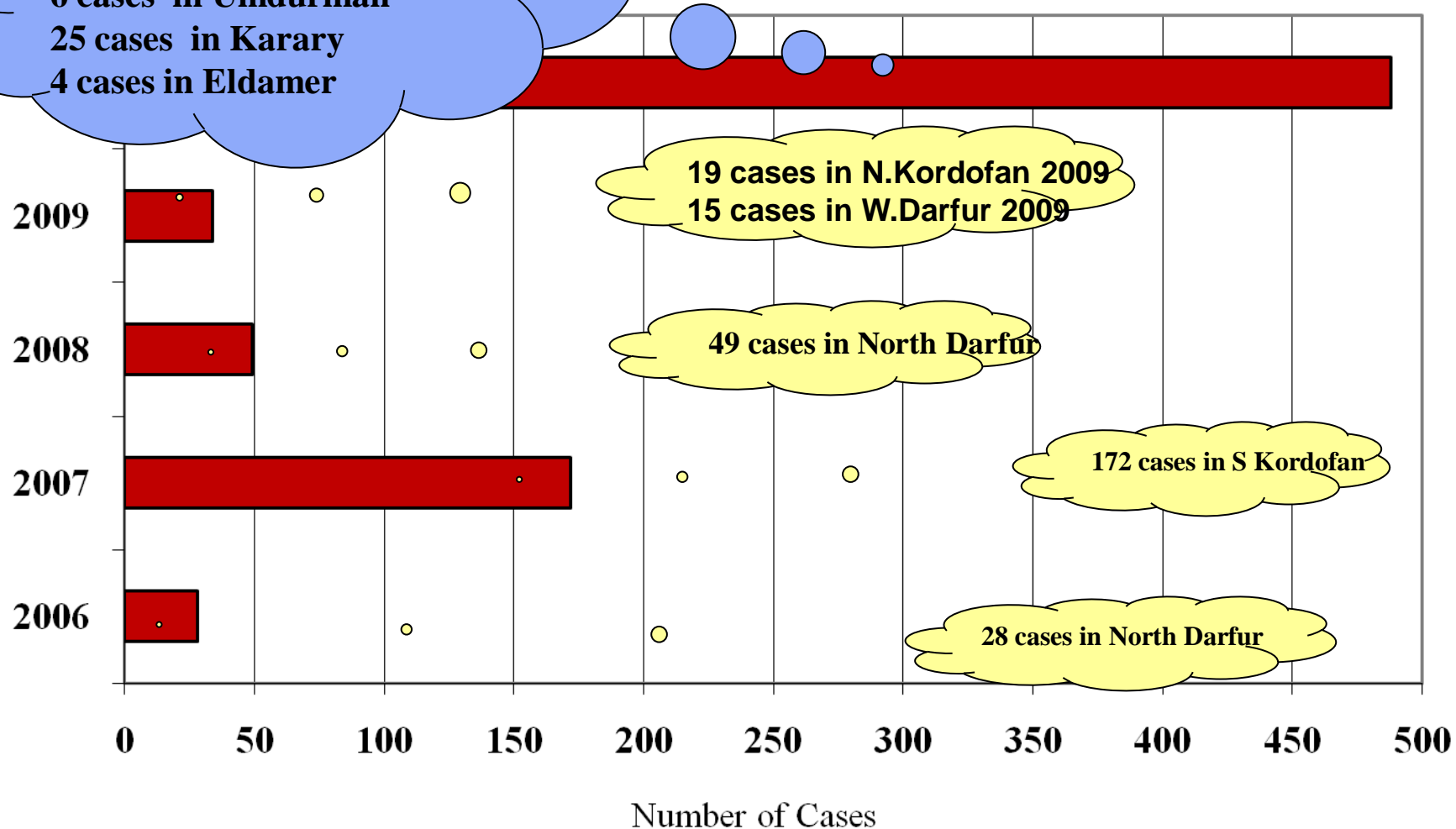
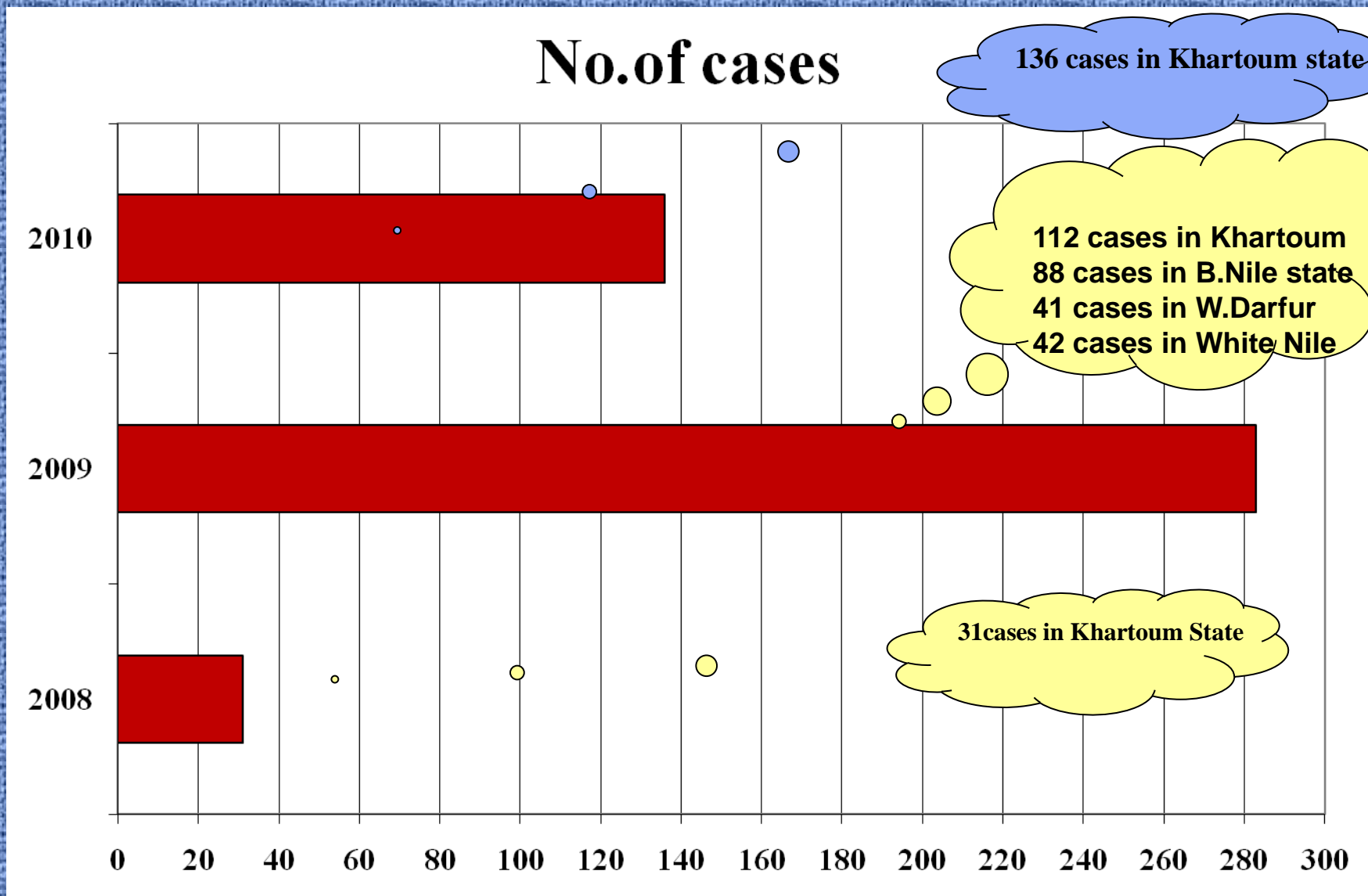


Figure (6): Rubella Out breaks 2008 - 2010



Follow up Eastern & Northern states Campaign Coverage

States	Target (9m-5 yrs)	# Vaccinated	Unvaccinated	%
KHA	900,421	810,314	90,107	90
NOR	78,186	78,861		101
RNI	187,989	188,395		100
GED	326,434	317,576	8,858	97
RED	127,804	119,657	8,147	94
KAS	248,640	246,022	2,618	99
Total	1,869,475	1,760,825	109,731	94

Follow up Eastern & Northern states

Campaign Coverage

- Classification of localities according to coverage:

	<90 %	90-95 %	> =95%	Total
#	6	6	40	52
%	12	12	76	100

Follow up Eastern & Northern states Campaign Coverage

- localities Less than 95%:

	<90 %	90-95 %
KHA	Khartoum	Um Durman
	Gebal Awleya	Umbada
	Karary	Sharg Elneel
	Bahry	
GED	Gala alnahal	Elbotana
RED	Portsudan	Dordaib
KAS		Wed Helio

Summery

- **System Sensitivity (Reporting Rate) :**
 - **National level:** above the target (2.5 / 100000)
 - **State level :** Four states (NKO,SDA,SEN,WNI) , reporting rate less than the target (2/100000 population)
 - **Locality level :** 68% of localities reported at least one fever and rash case and collect from them sample for IGM testing

Summery

- **Measles incidence /1000000 population:**
- **National** :Annualized measles incidence 19.7 per million , above the target (target : < 1:1000000 pop)
- **States** : the incidence is high specially in states (GED, KAS,BNI , KHA ,GEZ, , NDA, RED,SKO,RNI &WDA ,WNI)

Summery

- **Measles Outbreaks:**
- **Confirmed outbreaks :**
- **Measles outbreak in West Darfur state :**the total number of cases reach 413 cases.
- **Measles outbreak in Khartoum , Bahry locality :** 19 cases
- **Measles outbreak in Khartoum , Umbada locality :** 17 cases
- **Measles outbreak in Khartoum , Musker Fatasha Umdurman locality :** 6 cases
- **Measles outbreak in Khartoum , Karary locality :** 25 cases
- **Measles outbreak in RNI, Eldamer locality :** 4 cases

Summery

- **Measles surveillance performance indicators:**
 - **All** surveillance were above the target ($>80\%$) except for the indicator of proportion of localities that reported at least one fever and rash case with sample for IGM testing

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Action taken

- **Response campaign around outbreak foci**
- **Orientation sessions in S.Darfur state**

Further Action Needed

- **After Conducting the follow up campaign still there is need to trace defaulters in the coming two weeks , especially in Khartoum and Red Sea States**
- **Enhance system sensitivity through conducting Excessive orientation session in above mentioned six states, specially Red sea , S.Darfur and White Nile states .**
- **Scaling up of routine activities in high risk localities specially using remaining of campaign vaccine in Red Sea and Khartoum state**

Thank You