

Measles and rubella surveillance summary and data analysis of selected performance indicators -EMR, Week 53 2016

As of December 2016, case-based surveillance with laboratory confirmation of measles and rubella is functional in 22 EMR member states but operating nation wide in 21 countries of the EMR (Somalia is sentinel site surveillance).

A. Measles reported data January to December 2015 and January to December 2016

Country	Reported cases of measles suspects		No.cases tested for measles		Total Measles cases		Measles Laboratory confirmed		Measles incidence		Total Rubella cases	
	2015	2016	2015	2016	2015	2016	2015	2016	2015	2016	2015	2016
Afghanistan	2017	1121	1973	1120	1191	641	1154	641	36.89	19.86	60	42
Bahrain	365	398	365	398	0	0	0	0	0.00	0.00	0	0
Djibouti*	33		14		30		11		34.68		0	
Iran	6552	4482	6186	4374	646	83	563	63	8.21	1.05	45	18
Iraq	1949	359	1473	326	1455	27	1011	27	43.79	0.81	1	1
Jordan	91	36	91	36	0	0	0	0	0.00	0.00	0	0
Egypt	7291	2528	5381	2424	5431	225	3521	122	60.94	2.52	53	28
Kuwait	251	176	244	174	18	8	18	8	4.96	2.20	0	3
Lebanon	92	127	53	94	39	44	6	13	9.15	7.66	0	10
Libya	102	48	102	43	87	28	87	28	14.97	4.82	0	0
Morocco	327	191	323	186	17	4	17	4	0.53	0.12	6	0
Oman	1468	1844	1445	1817	0	153	0	114	0.00	34.66	0	7
Pakistan	1394	5871	1394	5871	337	2845	337	2845	1.90	16.06	226	645
Palestine	186	192	186	191	0	0	0	0	0.00	0.00	0	0
Qatar	337	251	327	246	18	30	18	27	10.39	17.31	7	20
Saudi Arabia	1100	944	1056	942	219	112	219	112	7.72	3.95	4	24
Somalia	119	35	87	35	112	29	80	29	12.88	3.33	1	0
Sudan	6824	4533	4502	3572	3585	1767	1416	863	87.12	42.94	1050	996
Syria	678	586	678	586	45	66	45	66	2.01	2.95	0	1
Tunisia	238	238	210	212	16	7	11	5	1.52	0.66	23	19
UAE	1004	835	897	736	337	219	250	137	40.78	23.92	175	138
Yemen	2417	3430	2010	1173	468	143	89	97	16.82	5.14	78	56
Total EMR	34835	28225	28997	24556	14051	6431	8853	5201	22.92	10.36	1729	2008

B. Surveillance performance indicators:

Measles suspected cases tested between January to December 2016 were 24556 cases compared to 28997 between January to December 2015. The target of 80% of suspected cases tested for measles and rubella was met in 19 countries of the 22 countries reported between January to December 2016, 19 countries met this indicator between January to December 2015.

The indicator of 80% of measles cases with complete investigation was met in 14 countries between January to December 2016.

C. Measles Laboratory performance:

The target of 80% and more of the results reported back within 4 days between January to December 2016 was met in 13 countries of the 22 reported countries.

The target of 80% and more of the specimens to be received at the lab within 5 days of specimen collection date between January to December 2016 was met in 12 of the 22 reported countries.

The target of 80% and more of the specimens received at the Lab in good condition between January to December 2016 was met in 21 countries of the 22 reported countries.

Notes:

*Djibouti did not report for 2016

EMR cumulative indigenous measles/rubella case counts and surveillance indicators

Between 01/01/2016 and 31/12/2016

Country	Measles case finding report							Rubella case finding report						Measles incidence /1000,000 *	Rubella incidence /1000,000 **	Reporting rate ***	Indicators : target ≥80%					Last Date reported	Genotypes reported
	Total suspected cases for M/R	specimens tested for measles	Measles Lab confirmed	Measles Epi-Linked	Measles clinically compatible	Total measles	Measles discarded cases	specimens tested for rubella	Rubella lab confirmed	Rubella Epi-Linked	Rubella clinically	Total Rubella	Rubella discarded cases				suspects tested for measles ****	cases with complete investigation	specimens received at the lab within 5days	specimens with adequate condition	results reported back within 4days		
Afghanistan	1121	1120	641	0	0	641	480	485	42	0	0	42	443	19.86	1.30	1.36	100%		58%	99%	40%	31/12/2016	
Bahrain	398	398	0	0	0	0	398	398	0	0	0	0	398	0.00	0.00	32.23	100%	100%	100%	100%	99%	29/12/2016	D8, B3
Iran	4482	4374	63	8	12	83	4399	4374	15	0	3	18	4356	1.05	0.19	5.57	98%	99%	93%	100%	96%	31/12/2016	B3
Iraq	359	326	27	0	0	27	332	346	1	0	0	1	345	0.81	0.03	1.00	91%	76%	41%	100%	89%	31/12/2016	
Jordan	36	36	0	0	0	0	36	36	0	0	0	0	36	0.00	0.00	0.59	100%	86%	86%	100%	58%	21/09/2016	
Egypt	2528	2424	122	60	43	225	2303	2422	28	0	0	28	2394	2.52	0.31	2.55	98%	86%	94%	100%	93%	31/12/2016	
Kuwait	176	174	8	0	0	8	168	174	3	0	0	3	171	2.20	0.83	4.54	99%	97%	88%	100%	9%	31/12/2016	
Lebanon	127	94	13	0	31	44	83	83	4	0	6	10	73	7.66	0.70	1.38	74%	97%	70%	97%	96%	29/12/2016	D8
Libya	48	43	28	0	0	28	20	43	0	0	0	0	43	4.82	0.00	0.34	90%		8%	85%	89%	04/11/2016	
Morocco	191	186	4	0	0	4	187	154	0	0	0	0	154	0.12	0.00	0.58	97%	97%	84%	100%	48%	25/12/2016	
Oman	1844	1817	114	7	32	153	1691	1818	7	0	0	7	1811	34.66	1.59	38.15	99%	69%	74%	100%	100%	31/12/2016	D8 ,D4 ,B3
Pakistan	5871	5871	2845	0	0	2845	3026	5871	645	0	0	645	5226	16.06	3.64	1.34	100%		68%	100%	74%	31/12/2016	B3
Palestine	192	191	0	0	0	0	192	190	0	0	0	0	190	0.00	0.00	4.61	99%	99%	83%	100%	95%	25/12/2016	
Qatar	251	246	27	3	0	30	221	171	20	0	0	20	151	17.31	11.54	11.60	99%	100%	100%	100%	86%	30/12/2016	
Saudi Arabia	944	942	112	0	0	112	832	664	24	0	0	24	640	3.95	0.85	2.85	100%	96%	99%	100%	100%	30/12/2016	
Somalia	35	35	29	0	0	29	6	8	0	0	0	0	8	3.33	0.00	0.07	100%	74%	94%	100%	57%	24/12/2016	
Sudan	4533	3572	863	896	8	1767	2766	3571	935	60	1	996	2575	42.94	22.72	4.30	100%	100%	80%	98%	95%	31/12/2016	
Syria	586	586	66	0	0	66	520	548	1	0	0	1	547	2.95	0.04	2.32	100%	97%	70%	97%	99%	31/12/2016	
Tunisia	238	212	5	0	2	7	231	205	15	0	4	19	186	0.66	1.42	2.05	89%	28%	62%	100%	76%	25/12/2016	
UAE	835	736	137	6	76	219	616	711	129	7	2	138	573	23.92	14.09	5.24	90%	91%	89%	100%	82%	31/12/2016	
Yemen	3430	1173	97	46	0	143	3287	1408	54	2	0	56	1352	5.14	1.94	11.61	35%	96%	71%	100%	35%	18/12/2016	
Total EMR	28225	24556	5201	1026	204	6431	21794	23680	1923	69	16	2008	21672	10.36	3.23	3.19	91%	76%	77%	99%	77%		

*The sum of the measles lab confirmed cases +measles epi-linked cases + measles clinically compatible cases/million population
 **The sum of the rubella lab confirmed cases +rubella epi-linked cases + rubella clinically compatible cases/million population
 ***Reporting rate of discarded non-measles non-rubella cases at the national level per 100,000 total population
 ****Excluding measles and rubella epi-linked cases

Green cells= indicator met.
 Yellow cells=indicator not met.
 Red cells=missing data for calculating indicator.

Adequate investigation includes the following data elements:
 -District.
 -Age.
 -Gender.
 -Date of rash onset, case notification and investigation
 -Vaccination status.
 -Date of last vaccination with measles containing vaccine
 -Date specimen collected.
 -Travel history

Countries that did not report

Djibouti

Measles final classification and distribution by Month

Between 01/01/2016 and 31/12/2016

Country	Total Suspected cases for measles	Total specimens tested	Measles imported cases *	Measles import related* *	Vaccine related ***	Measles lab confirmed	Measles Epi-Linked	Measles clinically comp.	Total confirmed cases #	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec
Afghanistan	1121	1120	0	0	0	641	0	0	641	8	62	52	79	66	99	40	26	22	35	35	117
Bahrain	398	398	3	13	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Iran	4482	4374	0	0	157	63	8	12	83	5	10	4	3	5	1	3	2	1	3	9	37
Iraq	359	326	0	0	0	27	0	0	27	4	2	2	1	3	4	3	5	2	0	1	0
Jordan	36	36	4	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Egypt	2528	2424	0	0	4	122	60	43	225	31	13	35	57	25	23	20	12	2	4	1	2
Kuwait	176	174	0	0	4	8	0	0	8	2	2	0	1	1	1	0	0	0	1	0	0
Lebanon	127	94	0	0	0	13	0	31	44	2	0	6	4	9	6	3	6	3	3	1	1
Libya	48	43	0	0	0	28	0	0	28	0	0	0	4	17	5	0	0	0	2	0	0
Morocco	191	186	0	0	0	4	0	0	4	1	0	1	1	1	0	0	0	0	0	0	0
Oman	1844	1817	0	0	70	114	7	32	153	4	5	5	5	12	4	7	7	22	31	30	21
Pakistan	5871	5871	0	0	0	2845	0	0	2845	104	151	301	453	470	194	122	138	128	188	193	403
Palestine	192	191	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Qatar	251	246	0	0	15	27	3	0	30	2	1	1	11	5	0	0	2	1	2	3	2
Saudi Arabia	944	942	0	0	10	112	0	0	112	6	8	8	0	7	4	18	19	7	12	8	15
Somalia	35	35	0	0	0	29	0	0	29	2	0	5	0	0	0	0	0	0	11	4	7
Sudan	4533	3572	0	0	0	863	896	8	1767	82	178	481	330	295	99	69	58	37	40	48	50
Syria	586	586	0	0	34	66	0	0	66	0	1	2	4	12	5	9	3	0	4	9	17
Tunisia	238	212	0	0	0	5	0	2	7	1	0	1	3	0	0	0	1	1	0	0	0
UAE	835	736	0	0	0	137	6	76	219	22	23	29	33	30	16	15	14	10	8	15	4
Yemen	3430	1173	0	0	0	97	46	0	143	23	25	36	0	0	4	14	2	0	17	22	0
Total	28225	24556	7	13	316	5201	1026	204	6431	299	481	969	989	958	465	323	295	236	361	379	676

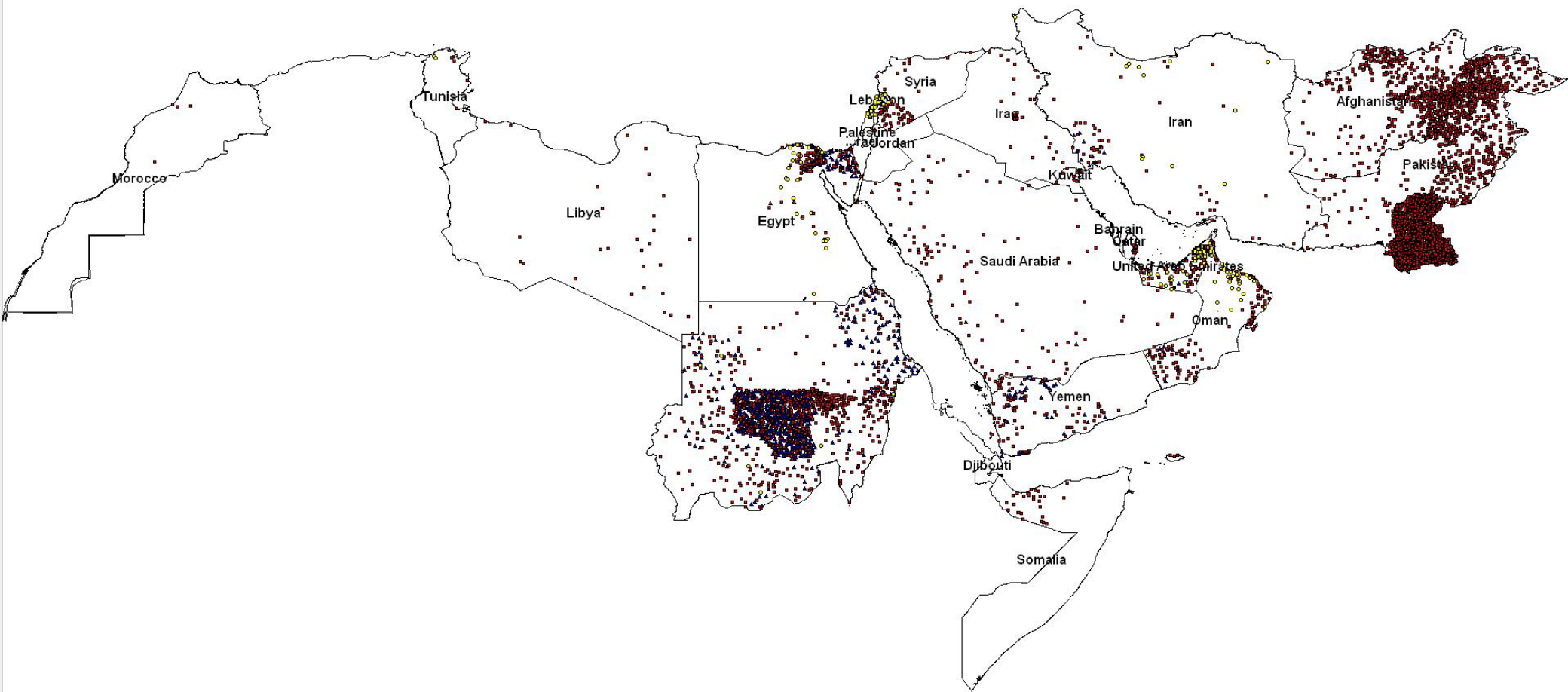
* Imported measles/rubella case – a case exposed to measles outside the country during the 7-21 days prior to rash onset and supported by epidemiological or virological evidence (for rubella the exposure would be during the 12-23 days prior to rash onset)

** Importation related measles/rubella case – a locally acquired infection occurring as part of a chain of transmission originating from an imported case as supported by epidemiological or virological evidence

***Vaccine related case – a suspect case that has a rash like illness without respiratory symptoms and the rash had onset 7-14 days following vaccination and the lab detected IgM in the blood specimen that was collected 8-56 days after vaccination and there were no secondary cases identified. OR any suspect case from which virus is isolated and genotyping test reveals the virus to be a vaccine strain

Total confirmed cases; include all cases confirmed by laboratory testing or epi linkage, plus those clinical cases that were reported without a laboratory specimen or epi linkage

Cumulative geographic distribution of Measles cases in the EMR countries year 2016



■ Measles Lab confirmed	N=5201
▲ Measles Epi Linked	N=1026
● Measles Clinically compatible	N=204

Rubella final classification and distribution by Month

Between 01/01/2016 and 31/12/2016

Country	Total Suspected cases for rubella	Total specimens tested	Rubella imported*	Rubella import related**	Rubella vaccine related**	Rubella lab confirmed	Rubella Epi-Linked	Rubella clinically comp.	Total confirmed cases #	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec
Afghanistan	1121	485	0	0	0	42	0	0	42	1	6	5	7	6	7	1	0	1	2	1	5
Bahrain	398	398	1	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Iran	4482	4374	0	0	157	15	0	3	18	3	1	3	2	0	1	0	1	1	1	3	2
Iraq	359	346	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
Jordan	36	36	0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Egypt	2528	2422	0	0	4	28	0	0	28	5	0	1	6	0	1	3	4	1	4	2	1
Kuwait	176	174	0	0	4	3	0	0	3	0	0	0	0	1	0	0	0	0	2	0	0
Lebanon	127	83	0	0	0	4	0	6	10	1	1	0	0	1	0	2	0	0	1	4	0
Libya	48	43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Morocco	191	154	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Oman	1844	1818	0	0	70	7	0	0	7	1	0	0	1	1	0	1	0	0	0	0	3
Pakistan	5871	5871	0	0	0	645	0	0	645	8	68	144	183	185	37	10	1	3	0	1	5
Palestine	192	190	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Qatar	251	171	0	0	15	20	0	0	20	0	1	0	3	8	3	2	2	1	0	0	0
Saudi Arabia	944	664	0	0	10	24	0	0	24	0	0	0	0	2	0	5	6	4	1	2	4
Somalia	35	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sudan	4533	3571	0	0	0	935	60	1	996	163	348	173	93	68	46	17	8	8	24	22	26
Syria	586	548	0	0	34	1	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0
Tunisia	238	205	0	0	0	15	0	4	19	1	3	1	2	2	2	1	0	1	4	2	0
UAE	835	711	0	0	0	129	7	2	138	2	10	12	30	28	23	8	4	9	4	4	4
Yemen	3430	1408	0	0	0	54	2	0	56	8	19	8	5	0	2	11	3	0	0	0	0
Total	28225	23680	1	0	316	1923	69	16	2008	193	457	347	333	302	122	61	29	29	43	41	51

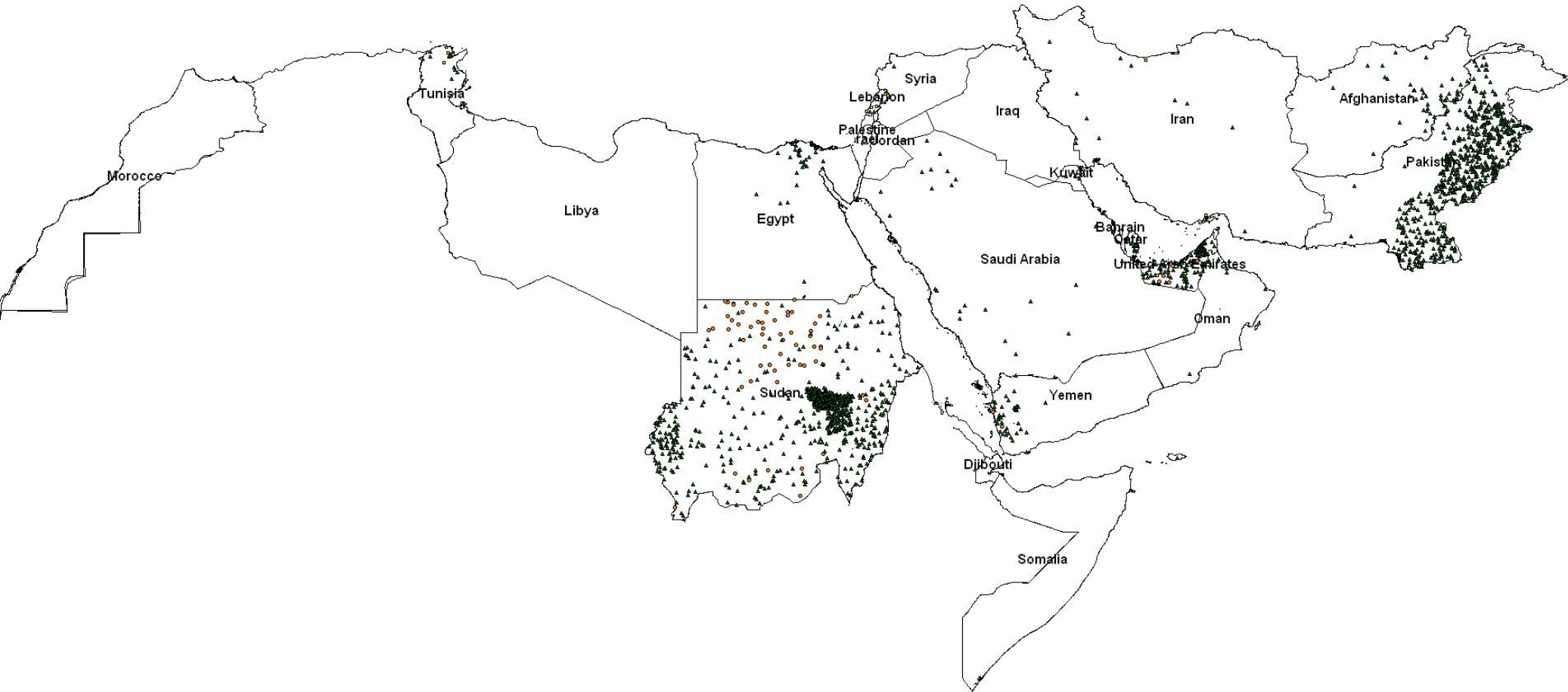
* Imported measles/rubella case – a case exposed to measles outside the country during the 7-21 days prior to rash onset and supported by epidemiological or virological evidence (for rubella the exposure would be during the 12-23 days prior to rash onset)




** Importation related measles/rubella case – a locally acquired infection occurring as part of a chain of transmission originating from an imported case as supported by epidemiological or virological evidence

***Vaccine related case – a suspect case that has a rash like illness without respiratory symptoms and the rash had onset 7-14 days following vaccination and the lab detected IgM in the blood specimen that was collected 8-56 days after vaccination and there were no secondary cases identified. OR any suspect case from which virus is isolated and genotyping test reveals the virus to be a vaccine strain

Total confirmed cases; include all cases confirmed by laboratory testing or epi linkage, plus those clinical cases that were reported without a laboratory specimen or epi linkage

Cumulative geographic distribution of Rubella cases in the EMR countries year 2016



	Rubella Lab confirmed	N=1923
	Rubella Epi Linked	N=69
	Rubella clinically compatible	N=16

Measles and Rubella laboratory summary report

Between 01/01/2016 and 31/12/2016

Country	Total Suspected cases M/R	Measles								Rubella								Reported to EPI within 4days
		specimens tested	%	Positive	%	Negative	%	Equivocal	%	specimens tested	%	Positive	%	Negative	%	Equivocal	%	
Afghanistan	1121	1120	100%	641	57%	479	43%	0	0%	485	43%	51	11%	434	89%	0	0%	40%
Bahrain	398	398	100%	20	5%	373	94%	5	1%	398	100%	4	1%	393	99%	1	0%	99%
Iran	4482	4374	98%	167	4%	4206	96%	1	0%	4374	98%	103	2%	4270	98%	1	0%	96%
Iraq	359	326	91%	27	8%	299	92%	0	0%	346	96%	1	0%	345	100%	0	0%	89%
Jordan	36	36	100%	10	28%	24	67%	2	6%	36	100%	2	6%	34	94%	0	0%	58%
Egypt	2528	2424	96%	125	5%	2299	95%	0	0%	2422	96%	32	1%	2390	99%	0	0%	93%
Kuwait	176	174	99%	12	7%	162	93%	0	0%	174	99%	3	2%	171	98%	0	0%	9%
Lebanon	127	94	74%	13	14%	81	86%	0	0%	83	65%	4	5%	75	90%	4	5%	96%
Libya	48	43	90%	28	65%	13	30%	2	5%	43	90%	0	0%	43	100%	0	0%	89%
Morocco	191	186	97%	4	2%	180	97%	2	1%	154	81%	0	0%	153	99%	1	1%	48%
Oman	1844	1817	99%	144	8%	1637	90%	36	2%	1818	99%	40	2%	1764	97%	14	1%	100%
Pakistan	5871	5871	100%	2845	48%	3026	52%	0	0%	5871	100%	645	11%	5226	89%	0	0%	74%
Palestine	192	191	99%	5	3%	186	97%	0	0%	190	99%	4	2%	183	96%	3	2%	95%
Qatar	251	246	98%	40	16%	206	84%	0	0%	171	68%	19	11%	147	86%	5	3%	86%
Saudi Arabia	944	942	100%	120	13%	822	87%	0	0%	664	70%	31	5%	633	95%	0	0%	100%
Somalia	35	35	100%	29	83%	6	17%	0	0%	8	23%	0	0%	8	100%	0	0%	57%
Sudan	4533	3572	79%	863	24%	2708	76%	1	0%	3571	79%	1023	29%	2548	71%	0	0%	95%
Syria	586	586	100%	86	15%	489	83%	11	2%	548	94%	19	3%	523	95%	6	1%	99%
Tunisia	238	212	89%	8	4%	204	96%	0	0%	205	86%	19	9%	186	91%	0	0%	76%
UAE	835	736	88%	138	19%	572	78%	26	4%	711	85%	133	19%	574	81%	4	1%	82%
Yemen	3430	1173	34%	70	6%	1074	92%	29	2%	1408	41%	22	2%	1352	96%	34	2%	35%
Total	28225	24556	87%	5395	22%	19046	78%	115	0%	23680	84%	2155	9%	21452	91%	73	0%	77%