Measles and rubella surveillance summary and data analysis of selected performance indicators -EMR, Week 52 2017

As of December 2017, 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 except Somalia.

A. Measles reported data January to December 2016 and January to December 2017

Country	Reported cases of measles suspects		No.cases tested for measles		Total Measles cases		Measles Laboratory confirmed		Measles incidence		Total Rubella cases	
	2016	2017	2016	2017	2016	2017	2016	2017	2016	2017	2016	2017
Afghanistan	1121	2321	1120	2321	641	1511	641	1511	19.86	46.81	42	53
Bahrain	398	610	398	610	0	0	0	0	0.00	0.00	0	0
Djibouti*												
Iran	4482	6039	4374	5883	83	52	63	40	1.05	0.66	18	20
Iraq	359	404	326	398	27	21	27	21	0.81	0.63	1	6
Jordan	36	86	36	86	0	0	0	0	0.00	0.00	0	0
Egypt	2528	3180	2424	3165	225	24	122	10	2.52	0.25	28	34
Kuwait	176	151	174	138	8	13	8	13	2.20	3.58	3	1
Lebanon	127	221	94	149	44	126	13	54	7.66	21.94	10	10
Libya	48	220	43	210	28	8	28	8	4.82	1.38	0	7
Morocco	191	285	186	281	4	4	4	4	0.12	0.12	0	7
Oman	1844	2874	1817	2874	153	9	114	4	34.66	2.04	7	3
Pakistan	5871	10540	5871	10540	2845	6494	2845	6494	16.06	36.67	645	376
Palestine	192	484	191	484	0	61	0	61	0.00	14.63	0	0
Qatar	251	105	246	104	30	6	27	6	17.31	3.46	20	1
Saudi Arabia	944	1297	942	1289	112	402	112	402	3.95	14.17	24	52
Somalia	35	23353	35	256	29	23244	29	146	3.33	1671.27	0	5
Sudan	4533	2203	3572	1875	1767	665	863	356	42.94	16.16	996	259
Syria	586	1463	586	1238	66	738	66	513	2.95	32.94	1	1
Tunisia	238	245	212	215	7	5	5	4	0.66	0.44	19	11
UAE	835	649	736	618	219	121	137	87	23.92	13.21	138	38
Yemen	3430	3524	1173	1630	143	436	97	166	5.14	15.67	56	44
Total EMR	28225	60254	24556	34364	6431	33940	5201	9900	10.36	53.63	2008	928

B. Surveillance performance indicators:

Measles suspected cases tested between January to December 2017 were 34364 cases compared to 24556 between January to December 2016. 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 2017, 19 countries met this indicator between January to December 2016.

The indicator of 80% of measles cases with complete investigation was met in 18 countries between January to December 2017.

C. Measles Laboratory performance:

The target of 80% and more of the results reported back within 4 days between January to December 2017 was met in 14 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 2017 was met in 13 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 2017 was met in 21 countries of the 22 reported countries.

Notes:

*Djibouti did not report for 2016 and 2017

EMR cumulative indigenous Measles/Rubella cases counts and surveillance indicators
Between 01/01/2017 and 31/12/2017

Country	Measles case finding report							Rubella case finding report						Measles incidence/1000,000 *	Rubella incidence/100 0,000 **	Reporting rate ***	Indicators: target ≥80%					Last date reported	Genotypes reorted
	Total suspected cases for M/R	Specimens tested for Measles	Measles lab confirmed	Measles Epi-Linked	Measles clinicaly compatible	Total Measles	Measles discarded cases	Specimns tested for Rubella	Rubella lab confirmed	Rubella Epi-Linked	Rubella clinically compatable	Total Rubella	Rubella discarded				suspects tested for Measles ****	cases with complete investigation	specimens received at the lab within 5 days	specimens with adequate condition	results reported back within 4 days		
Afghanistan	2321	2321	1511	0	0	1511	810	811	53	0	0	53	758	46.81	1.64	2.34	100%	0%	54%	99%	98%	31/12/2017	B3
Bahrain	610	610	0	0	0	0	610	610	0	0	0	0	610	0.00	0.00	49.39	100%	100%	100%	100%	97%	31/12/2017	D8 ,B3
Iran	6039	5883	40	1	11	52	5987	5883	17	1	2	20	5863	0.66	0.25	7.59	97%	99%	93%	100%	95%	31/12/2017	B3
Iraq	404	398	21	0	0	21	383	394	6	0	0	6	388	0.63	0.18	1.13	99%	76%	52%	100%	87%	26/12/2017	
Jordan	86	86	0	0	0	0	86	86	0	0	0	0	86	0.00	0.00	1.41	100%	85%	87%	100%	27%	24/11/2017	
Egypt	3180	3165	10	0	14	24	3156	3163	34	0	0	34	3129	0.25	0.35	3.24	100%	99%	100%	100%	87%	31/12/2017	B3
Kuwait	151	138	13	0	0	13	138	137	1	0	0	1	136	3.58	0.28	3.77	91%	95%	99%	100%	12%	29/11/2017	
Lebanon	221	149	54	13	59	126	95	94	5	0	5	10	84	21.94	1.74	1.57	72%	95%	54%	100%	85%	28/12/2017	D8
Libya	220	210	8	0	0	8	212	210	7	0	0	7	203	1.38	1.20	3.53	95%	93%	40%	98%	93%	30/12/2017	B3
Morocco	285	281	4	0	0	4	281	260	7	0	0	7	253	0.12	0.22	0.85	99%	96%	94%	100%	82%	28/12/2017	
Oman	2874	2874	4	0	5	9	2865	2874	2	0	1	3	2871	2.04	0.68	64.86	100%	91%	80%	100%	93%	31/12/2017	D8 ,D4 ,B3
Pakistan	10540	10540	6494	0	0	6494	4046	10540	376	0	0	376	10164	36.67	2.12	2.07	100%	0%	75%	100%	54%	31/12/2017	
Palestine	484	484	61	0	0	61	423	484	0	0	0	0	484	14.63	0.00	10.15	100%	92%	85%	100%	93%	27/12/2017	B3
Qatar	105	104	6	0	0	6	99	65	1	0	0	1	64	3.46	0.58	5.65	99%	100%	99%	100%	78%	25/08/2017	
Saudi Arabia	1297	1289	402	0	0	402	895	1023	52	0	0	52	971	14.17	1.83	2.97	99%	93%	98%	100%	98%	30/12/2017	
Somalia ★	23353	256	146	1	23097	23244	109	200	5	0	0	5	195	1671.27	0.36	0.75	1.10%	1.10%	80%	100%	42%	31/12/2017	
Sudan	2203	1875	356	275	34	665	1538	1874	256	0	3	259	1615	16.16	6.29	3.12	97%	100%	83%	97%	95%	30/12/2017	
Syria	1463	1238	513	225	0	738	725	789	1	0	0	1	788	32.94	0.04	3.23	100%	93%	58%	98%	94%	31/12/2017	
Tunisia	245	215	4	0	1	5	240	212	8	0	3	11	201	0.44	0.96	2.03	88%	93%	65%	100%	76%	27/12/2017	
UAE	649	618	87	3	31	121	528	578	33	1	4	38	540	13.21	4.15	5.39	96%	96%	95%	100%	89%	27/12/2017	
Yemen	3524	1630	166	175	95	436	3088	1806	19	0	25	44	1762	15.67	1.58	11.03	49%	91%	60%	98%	19%	31/12/2017	
Total	60254	34364	9900	693	23347	33940	26314	32093	883	2	43	928	31165	53.64	1.47	4.09	94%	85%	79%	99%	76%		

*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 MCV
-Date specimen collected.
-Travel history

Countries that did not report   ★ **Somalia reported aggregate data**

Djibouti

Measles final classification and distribution by Month

Between 01/01/2017 and 31/12/2017

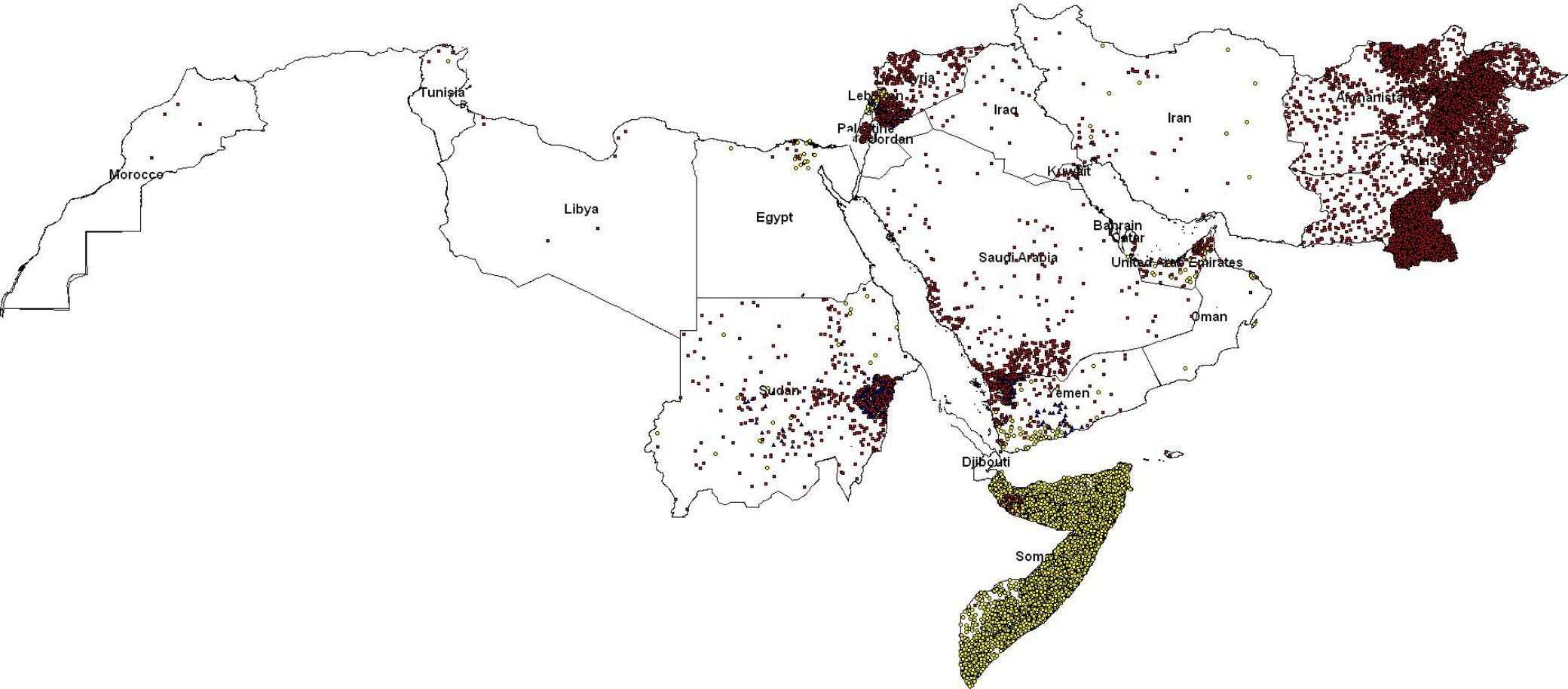| Country	Total Suspected cases for measles	Total specimens tested	Imported Measles cases	Measles import related	Vaccine related	Measles Lab confirmed	Measles Epi-Linked	Measles clinically compatible	Total Measles	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Afghanistan	2321	2321	0	0	0	1511	0	0	1511	209	213	201	180	144	89	88	32	30	61	85	179
Bahrain	610	610	6	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Iran	6039	5883	14	6	4	40	1	11	52	13	10	9	5	3	1	6	0	1	2	0	2
Iraq	404	398	0	0	0	21	0	0	21	0	0	0	1	3	2	0	1	5	1	3	5
Jordan	86	86	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Egypt	3180	3165	0	0	0	10	0	14	24	0	4	9	3	2	0	2	1	0	1	1	1
Kuwait	151	138	0	0	4	13	0	0	13	0	3	4	4	0	1	1	0	0	0	0	0
Lebanon	221	149	0	0	0	54	13	59	126	6	8	29	10	17	11	8	4	2	6	8	17
Libya	220	210	0	0	0	8	0	0	8	0	0	0	0	1	0	0	3	1	3	0	0
Morocco	285	281	0	0	0	4	0	0	4	0	0	2	0	0	1	0	0	0	1	0	0
Oman	2874	2874	7	81	46	4	0	5	9	3	0	1	2	0	3	0	0	0	0	0	0
Pakistan	10540	10540	0	0	0	6494	0	0	6494	550	300	308	1049	1240	701	524	324	234	416	389	459
Palestine	484	484	0	0	7	61	0	0	61	0	0	7	27	18	6	3	0	0	0	0	0
Qatar	105	104	14	0	0	6	0	0	6	2	0	1	1	0	1	1	0	0	0	0	0
Saudi Arabia	1297	1289	0	0	5	402	0	0	402	76	84	33	2	9	5	18	15	26	27	48	59
Somalia	23353	256	0	0	0	146	1	23097	23244	1150	1427	1892	2522	2772	2513	2033	1595	1239	2063	2091	1947
Sudan	2203	1875	0	0	0	356	275	34	665	78	93	126	112	84	27	33	36	11	18	18	29
Syria	1463	1238	0	0	22	513	225	0	738	25	77	136	169	124	40	50	40	18	14	11	34
Tunisia	245	215	0	0	0	4	0	1	5	0	0	1	0	0	1	2	0	0	0	1	0
UAE	649	618	0	0	3	87	3	31	121	17	12	17	15	15	9	7	7	10	2	5	5
Yemen	3524	1630	0	0	0	166	175	95	436	81	120	97	38	26	3	0	1	23	29	6	12
Total	60254	34364	41	87	97	9900	693	23347	33940	2210	2351	2873	4140	4458	3414	2776	2059	1600	2644	2666	2749

* 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 December 2017

■ Measles Lab confirmed   N=9900

▲ Measles Epi Linked   N=693

● Measles Clinically compatible   N=23347

Rubella final classification and distribution by Month

Between 01/01/2017 and 31/12/2017

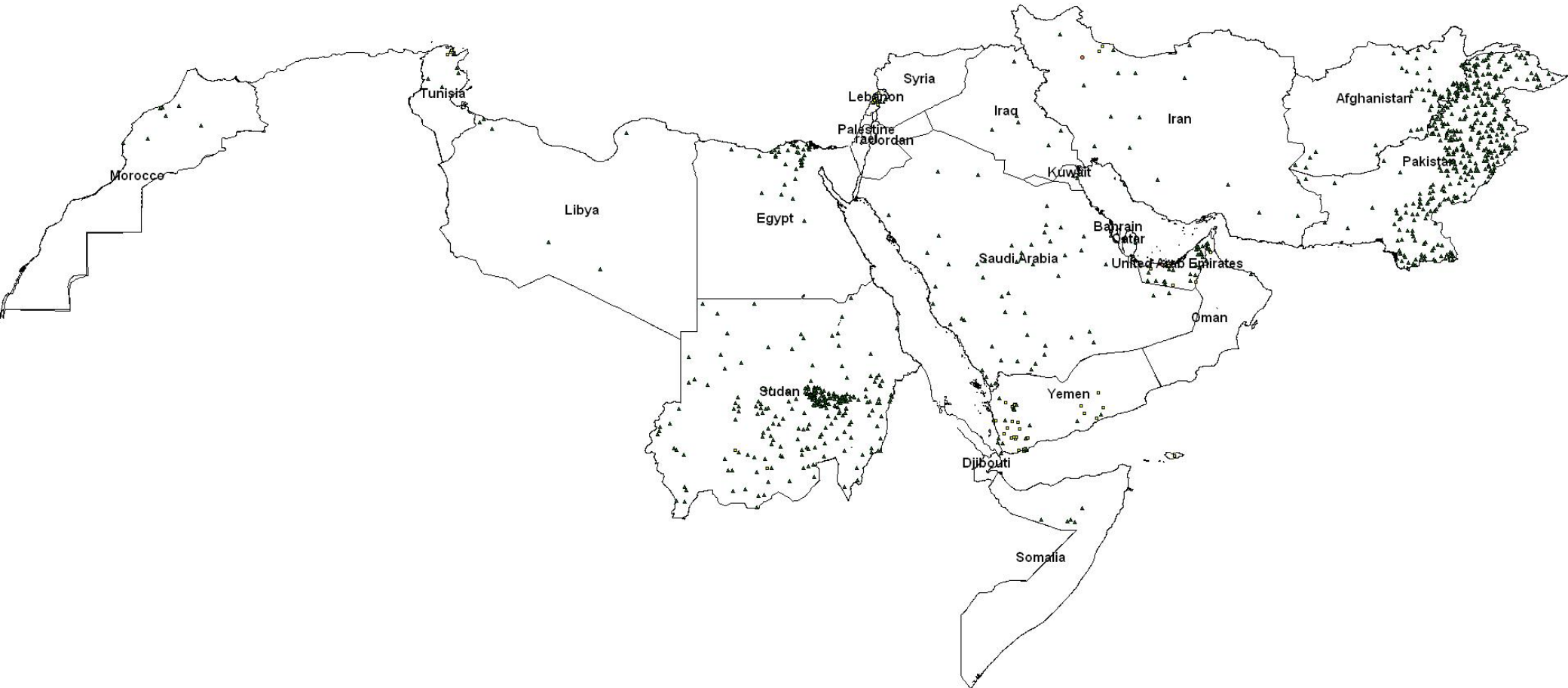| Country	Total Suspected cases for Rubella	Total specimens tested	Imported Rubella cases	Rubella import related	Vaccine related	Rubella Lab confirmed	Rubella Epi-Linked	Rubella clinically compatible	Total Rubella	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Afghanistan	2321	811	0	0	0	53	0	0	53	8	7	13	8	3	3	3	0	0	1	4	3
Bahrain	610	610	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Iran	6039	5883	0	6	0	17	1	2	20	0	1	2	2	3	0	0	1	1	2	4	4
Iraq	404	394	0	0	0	6	0	0	6	1	0	0	1	1	1	1	0	0	0	0	1
Jordan	86	86	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Egypt	3180	3163	0	0	0	34	0	0	34	0	6	7	3	2	1	1	2	3	3	3	3
Kuwait	151	137	0	0	0	1	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0
Lebanon	221	94	0	0	0	5	0	5	10	0	1	0	0	4	1	2	1	1	0	0	0
Libya	220	210	0	0	0	7	0	0	7	0	0	0	0	1	0	0	0	3	3	0	0
Morocco	285	260	0	0	0	7	0	0	7	0	0	0	1	1	2	0	0	0	2	1	0
Oman	2874	2874	0	81	0	2	0	1	3	0	0	0	0	0	1	0	2	0	0	0	0
Pakistan	10540	10540	0	0	0	376	0	0	376	1	10	10	60	136	84	27	6	5	14	14	9
Palestine	484	484	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Qatar	105	65	0	0	2	1	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0
Saudi Arabia	1297	1023	0	0	0	52	0	0	52	3	2	1	0	0	0	1	3	11	18	5	8
Somalia	23353	200	0	0	0	5	0	0	5	0	0	1	0	0	0	0	0	0	4	0	0
Sudan	2203	1874	0	0	0	256	0	3	259	43	70	62	26	16	6	1	2	2	7	13	11
Syria	1463	789	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0
Tunisia	245	212	0	0	0	8	0	3	11	1	1	1	2	2	1	0	0	0	1	1	1
UAE	649	578	0	0	0	33	1	4	38	2	3	5	2	5	6	6	1	4	2	1	1
Yemen	3524	1806	0	0	0	19	0	25	44	12	11	7	8	3	3	0	0	0	0	0	0
Total	60254	32093	0	87	4	883	2	43	928	71	112	109	114	177	110	42	18	31	57	46	41

* 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 December 2017

▲ Rubella Lab confirmed   N=883

● Rubella Epi Linked   N=2

▢ Rubella clinically compatible   N=43

Measles and Rubella laboratory summary report

Between 01/01/2017 and   31/12/2017

Country	Measles								Rubella								Reported to EPI within 4days
	specimens tested	%	Positive	%	Negative	%	Equivocal	%	specimens tested	%	Positive	%	Negative	%	Equivocal	%	
Afghanistan	2321	100%	1511	65%	810	35%	0	0%	811	35%	57	7%	754	93%	0	0%	98%
Bahrain	610	100%	15	2%	590	97%	5	1%	610	100%	9	1%	594	97%	7	1%	97%
Iran	5883	97%	247	4%	5635	96%	1	0%	5883	97%	84	1%	5799	99%	0	0%	95%
Iraq	398	99%	21	5%	377	95%	0	0%	394	98%	6	2%	388	98%	0	0%	87%
Jordan	86	100%	0	0%	85	99%	1	1%	86	100%	0	0%	86	100%	0	0%	27%
Egypt	3165	100%	20	1%	3145	99%	0	0%	3163	99%	54	2%	3109	98%	0	0%	87%
Kuwait	138	91%	17	12%	121	88%	0	0%	137	91%	1	1%	136	99%	0	0%	12%
Lebanon	149	67%	54	36%	91	61%	4	3%	94	43%	5	5%	88	94%	1	1%	85%
Libya	210	95%	8	4%	200	95%	2	1%	210	95%	7	3%	199	95%	4	2%	93%
Morocco	281	99%	4	1%	275	98%	2	1%	260	91%	7	3%	249	96%	4	2%	82%
Oman	2874	100%	111	4%	2720	95%	43	1%	2874	100%	55	2%	2783	97%	36	1%	93%
Pakistan	10540	100%	6494	62%	4046	38%	0	0%	10540	100%	376	4%	10164	96%	0	0%	54%
Palestine	484	100%	71	15%	401	83%	12	2%	484	100%	4	1%	469	97%	11	2%	93%
Qatar	104	99%	18	17%	86	83%	0	0%	65	62%	3	5%	62	95%	0	0%	78%
Saudi Arabia	1289	99%	408	32%	881	68%	0	0%	1023	79%	57	6%	966	94%	0	0%	98%
Somalia	256	100%	148	58%	108	42%	0	0%	200	78%	5	3%	195	98%	0	0%	42%
Sudan	1875	85%	356	19%	1519	81%	0	0%	1874	85%	284	15%	1589	85%	1	0%	95%
Syria	1238	85%	529	43%	702	57%	7	1%	789	54%	13	2%	763	97%	13	2%	94%
Tunisia	215	88%	4	2%	211	98%	0	0%	212	87%	8	4%	204	96%	0	0%	76%
UAE	618	95%	89	14%	519	84%	10	2%	578	89%	35	6%	542	94%	1	0%	89%
Yemen	1630	46%	166	10%	1412	87%	52	3%	1806	51%	19	1%	1755	97%	32	2%	19%