

Measles and rubella surveillance summary and data analysis of selected performance indicators -EMR, Week 52 2019

As of December 2019, 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 2018 and January to December 2019

Country	Reported cases of measles suspects		No.cases tested for measles		Total Measles cases		Measles Laboratory confirmed		Measles incidence		Total Rubella cases	
	2018	2019	2018	2019	2018	2019	2018	2019	2018	2019	2018	2019
Afghanistan	2980	626	2980	626	2012	212	2012	212	62.32	6.57	37	59
Bahrain	796	557	796	557	0	0	0	0	0.00	0.00	0	0
Djibouti*												
Iran	6816	5379	6717	5313	203	0	178	0	2.54	0.00	33	16
Iraq	1060	1941	937	1877	489	1177	478	1177	13.17	31.69	21	30
Jordan	132	247	132	246	0	45	0	45	0.00	4.48	0	4
Egypt	3054	3137	3010	3080	23	0	0	0	0.24	0.00	7	3
Kuwait	173	102	159	94	34	12	34	12	8.13	2.87	3	2
Lebanon	1187	1391	792	1062	943	1046	548	687	164.24	182.18	13	29
Libya	1852	646	1036	639	1059	188	339	184	151.93	26.97	24	59
Morocco	463	464	446	451	8	12	8	12	0.23	0.34	10	14
Oman	1326	1248	1285	1224	0	0	0	0	0.00	0.00	0	0
Pakistan	36223	9031	6692	7501	33007	2066	4172	1170	154.45	9.67	564	1370
Palestine	174	649	174	649	0	228	0	228	0.00	48.45	0	0
Qatar	288	134	270	128	2	5	2	5	0.73	1.83	0	1
Saudi Arabia	2546	2565	2536	2565	1161	1035	1147	1035	35.67	31.80	53	62
Somalia	23353	4504	142	313	23237	4482	131	291	1670.77	332.26	0	1
Sudan	7274	5160	4226	3761	4980	3555	1932	2160	107.25	76.56	349	281
Syria	1220	1027	1130	1025	329	27	237	24	13.47	1.11	6	4
Tunisia	321	6728	318	3344	12	4669	12	1263	1.05	407.92	21	302
UAE	499	735	463	670	172	186	126	102	18.86	20.39	12	116
Yemen	15407	9819	2653	350	10640	1162	1369	109	387.95	42.37	712	301
Total EMR	107144	56090	36894	35475	78311	20107	12725	8716	95.09	29.78	1865	2654

B. Surveillance performance indicators:

Measles suspected cases tested between January to December 2019 were 35475 cases compared to 36894 between January to December 2018. The target of 80% of suspected cases tested for measles and rubella was met in 18 countries of the 22 countries reported between January to December 2019, 17 countries met this indicator between January to December 2018.

The indicator of 80% of measles cases with complete investigation was met in 17 countries between January to December 2019.

C. Measles Laboratory performance:

The target of 80% and more of the results reported back within 4 days between January to December 2019 was met in 12 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 2019 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 2017 was met in 21 countries of the 22 reported countries.

Notes:

*Djibouti did not report for 2016, 2017, 2018 and 2019

EMR cumulative indigenous Measles/Rubella cases counts and surveillance indicators

Between 01/01/2019 and 31/12/2019

Country	Measles case finding report							Rubella case finding report							Measles incidence/100,000*	Rubella incidence/100,000**	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 compatible	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	626	626	212	0	0	212	355	391	59	0	0	59	332	6.57	1.83	1.10	100%	9%	50%	94%	93%	24/12/2019	B3	
Bahrain	557	557	0	0	0	0	540	557	0	0	0	0	557	0.00	0.00	37.11	100%	100%	100%	100%	92%	30/12/2019	D8, B3 imp.	
Djibouti																								
Iran	5379	5313	0	0	0	0	5237	5313	16	0	0	16	5297	0.00	0.20	6.71	99%	99%	96%	100%	97%	31/12/2019	D8, B3 imp.	
Iraq	1941	1877	1177	0	0	1177	745	1907	30	0	0	30	1877	31.69	0.81	1.98	97%	63%	58%	100%	41%	31/12/2019	D8, B3	
Jordan	247	246	45	0	0	45	194	109	2	0	2	4	105	4.48	0.40	1.99	100%	13%	81%	100%	2%	29/12/2019	B3	
Egypt	3137	3080	0	0	0	0	2985	3060	0	0	3	3	3057	0.00	0.03	3.25	98%	99%	99%	100%	81%	30/12/2019	B3 imp.	
Kuwait	102	94	12	0	0	12	88	85	2	0	0	2	83	2.87	0.48	2.10	92%	92%	78%	100%	34%	30/12/2019		
Lebanon	1391	1062	687	8	351	1046	316	345	19	0	10	29	316	182.18	5.05	5.68	77%	98%	3%	100%	15%	28/12/2019	D8	
Libya	646	639	184	0	4	188	427	639	59	0	0	59	580	26.97	8.46	5.72	99%	100%	31%	99%	92%	30/12/2019	B3	
Morocco	464	451	12	0	0	12	444	427	14	0	0	14	413	0.34	0.40	1.26	97%	98%	90%	100%	77%	30/12/2019		
Oman	1248	1224	0	0	0	0	1194	1222	0	0	0	0	1222	0.00	0.00	27.37	98%	98%	92%	100%	93%	29/12/2019	D8, B3 imp.	
Pakistan	9031	7501	1170	197	699	2066	5595	7102	1367	3	0	1370	5732	9.67	6.41	2.62	85%	92%	80%	98%	53%	28/12/2019	B3	
Palestine	649	649	228	0	0	228	414	600	0	0	0	0	600	48.45	0.00	8.95	100%	100%	90%	100%	94%	30/12/2019	D8, B3	
Qatar	134	128	5	0	0	5	108	85	1	0	0	1	84	1.83	0.37	4.70	96%	99%	92%	100%	80%	23/12/2019	B3	
Saudi Arabia	2565	2565	1035	0	0	1035	1478	2565	62	0	0	62	2503	31.80	1.90	4.51	100%	100%	100%	100%	100%	28/12/2019	B3	
Somalia ★	4504	313	291	0	4191	4482	22	7	1	0	0	1	6	322.26	0.07	0.15	7%	7%	95%	98%	26%	31/12/2019	B3	
Sudan	5160	3761	2160	1385	10	3555	1324	3761	279	1	1	281	3480	76.56	6.05	2.85	100%	97%	77%	96%	24%	31/12/2019		
Syria	1027	1025	24	2	1	27	955	1010	4	0	0	4	1006	1.11	0.16	4.08	100%	100%	61%	100%	98%	30/12/2019		
Tunisia	6728	3344	1263	1155	2251	4669	1832	3316	287	0	15	302	3014	407.92	26.38	15.48	60%	52%	56%	100%	86%	31/12/2019	B3	
UAE	735	670	102	31	53	186	429	625	103	3	10	116	509	20.39	12.72	4.86	96%	99%	89%	100%	83%	30/12/2019	D8, B3	
Yemen	9819	350	109	1053	0	1162	197	351	33	249	19	301	50	42.37	10.97	30.54	4%	88%	42%	99%	8%	31/12/2019		
Total	56090	35475	8716	3831	7560	20107	24879	33477	2338	256	60	2654	30823	29.78	3.93	5.37	74%	86%	74%	98%	65%			

*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

“Yemen reported 4% testing cases due to shortage of M/R kits and all pending cases are converted to clinically compat

Measles final classification and distribution by Month

Between 01/01/2019 and 31/12/2019

Country	Total Suspected cases for measles	Total specimens tested	Measles positive ELISA	Imported Measles cases	Measles import related	Unknown source	Vaccine related	Pending result	Measles Lab confirmed	Measles Epi-Linked	Measles clinically compatible	Total Measles	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Afghanistan	626	626	212	0	0	0	0	0	212	0	0	212	18	27	28	29	32	17	7	12	10	4	11	17
Bahrain	557	557	27	2	1	0	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Djibouti																								
Iran	5379	5313	100	6	8	2	83	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Iraq	1941	1877	1177	0	0	0	0	0	1177	0	0	1177	58	96	204	190	202	157	100	35	19	15	41	60
Jordan	247	246	48	0	0	0	4	0	45	0	0	45	0	0	0	3	11	1	14	13	0	1	1	1
Egypt	3137	3080	123	5	79	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Kuwait	102	94	12	0	0	0	0	0	12	0	0	12	0	3	2	0	1	0	2	2	2	0	0	0
Lebanon	1391	1062	676	0	0	0	0	0	687	8	351	1046	126	155	264	292	136	31	12	12	5	5	2	6
Libya	646	639	184	0	0	0	0	0	184	0	4	188	14	8	13	8	6	28	39	27	22	12	5	6
Morocco	464	451	12	0	0	0	0	0	12	0	0	12	0	0	3	1	1	1	1	1	1	3	0	0
Oman	1248	1224	63	5	15	0	31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pakistan	9031	7501	1171	0	0	0	0	0	1170	197	699	2066	286	259	264	263	248	220	119	85	68	75	81	98
Palestine	649	649	232	0	0	0	5	0	228	0	0	228	0	1	6	2	13	6	3	7	1	1	38	150
Qatar	134	128	20	12	0	0	3	0	5	0	0	5	4	0	0	0	0	0	0	0	0	0	0	1
Saudi Arabia	2565	2565	1035	0	0	0	0	0	1035	0	0	1035	302	420	161	67	16	18	17	14	3	7	6	4
Somalia	4504	313	291	0	0	0	0	0	291	0	4191	4482	482	324	380	304	334	206	357	408	314	480	483	410
Sudan	5160	3761	2160	0	0	0	0	0	2160	1385	10	3555	521	642	952	546	294	213	140	32	44	43	66	62
Syria	1027	1025	30	0	0	0	9	0	24	2	1	27	2	2	4	4	1	7	5	0	1	0	0	1
Tunisia	6728	3344	1312	5	0	0	45	0	1263	1155	2251	4669	177	866	1078	1211	788	313	111	34	37	21	25	8
UAE	735	670	103	0	0	0	8	0	102	31	53	186	16	34	19	41	24	13	5	5	7	6	5	11
Yemen	9819	350	109	0	0	0	0	8173	109	1053	0	1162	484	416	120	60	9	31	18	11	13	0	0	0
Total	56090	35475	9097	35	103	14	201	8173	8716	3831	7560	20107	2490	3253	3498	3021	2116	1262	950	698	547	673	764	835

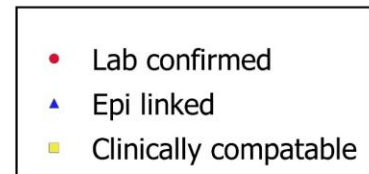
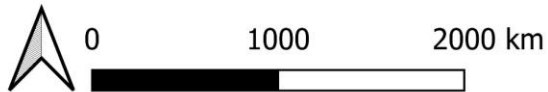
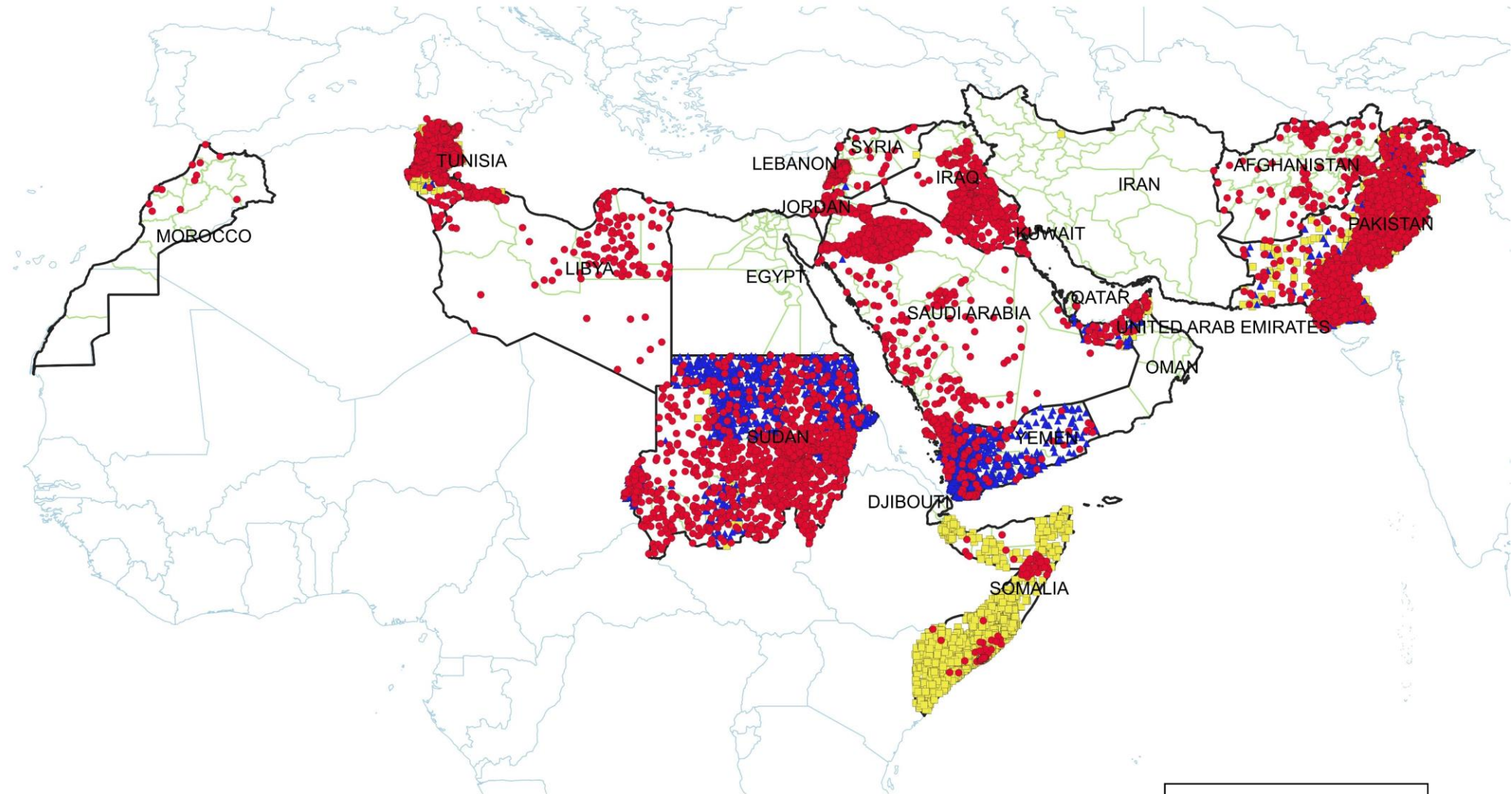
* Imported measles/rubella case – a case exposed to measles outside the country during the 7-21 days prior to rash onset and supported by epidemiological or virological evidence (for rubella the exposure would be during the 12-23 days prior to rash onset)

** 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 2019



Rubella final classification and distribution by Month

Between 01/01/2019 and 31/12/2019

Country	Total Suspected cases for Rubella	Total specimens tested	Rubella positive ELISA	Imported Rubella cases	Rubella import related	Unknown source	Vaccine related	Pending result	Rubella Lab confirmed	Rubella Epi-Linked	Rubella clinically compatible	Total Rubella	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Afghanistan	626	391	59	0	0	0	0	0	59	0	0	59	10	2	8	9	18	8	2	0	0	1	1	0
Bahrain	557	557	12	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Djibouti																								
Iran	5379	5313	51	0	0	0	31	0	16	0	0	16	0	2	1	7	2	1	0	0	1	1	1	0
Iraq	1941	1907	30	0	0	0	0	0	30	0	0	30	0	1	3	8	3	0	1	3	2	4	2	3
Jordan	247	109	4	0	0	0	0	0	2	0	2	4	0	0	0	0	0	2	1	0	0	1	0	0
Egypt	3137	3060	36	0	0	4	0	0	0	0	3	3	0	0	0	0	0	0	1	0	1	1	0	0
Kuwait	102	85	2	0	0	0	0	0	2	0	0	2	0	0	0	1	1	0	0	0	0	0	0	0
Lebanon	1391	345	19	0	0	0	0	0	19	0	10	29	2	8	5	7	1	2	1	0	2	0	1	0
Libya	646	639	59	0	0	0	0	0	59	0	0	59	4	2	2	3	4	2	7	10	7	8	3	7
Morocco	464	427	14	0	0	0	0	0	14	0	0	14	0	2	4	1	2	1	0	0	2	2	0	0
Oman	1248	1222	27	1	0	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pakistan	9031	7102	1395	0	0	0	0	0	1367	3	0	1370	29	57	185	344	378	214	77	24	23	15	13	11
Palestine	649	600	2	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Qatar	134	85	7	5	0	0	1	0	1	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0
Saudi Arabia	2565	2565	62	0	0	0	0	0	62	0	0	62	10	5	4	10	4	3	3	8	3	1	5	6
Somalia	4504	7	1	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
Sudan	5160	3761	479	0	0	0	0	0	279	1	1	281	21	48	64	29	12	5	17	4	8	19	24	30
Syria	1027	1010	22	0	0	0	33	0	4	0	0	4	0	1	0	1	0	1	0	0	1	0	0	0
Tunisia	6728	3316	310	0	0	0	19	0	287	0	15	302	2	6	12	118	60	39	20	5	12	8	14	6
UAE	735	625	105	0	0	0	2	0	103	3	10	116	5	7	19	26	21	11	7	4	5	5	3	3
Yemen	9819	351	33	0	0	0	0	8173	33	249	19	301	43	78	39	7	1	11	54	37	25	6	0	0
Total	56090	33477	2729	6	0	4	106	8173	2338	256	60	2654	126	219	346	571	508	300	191	95	92	72	67	67

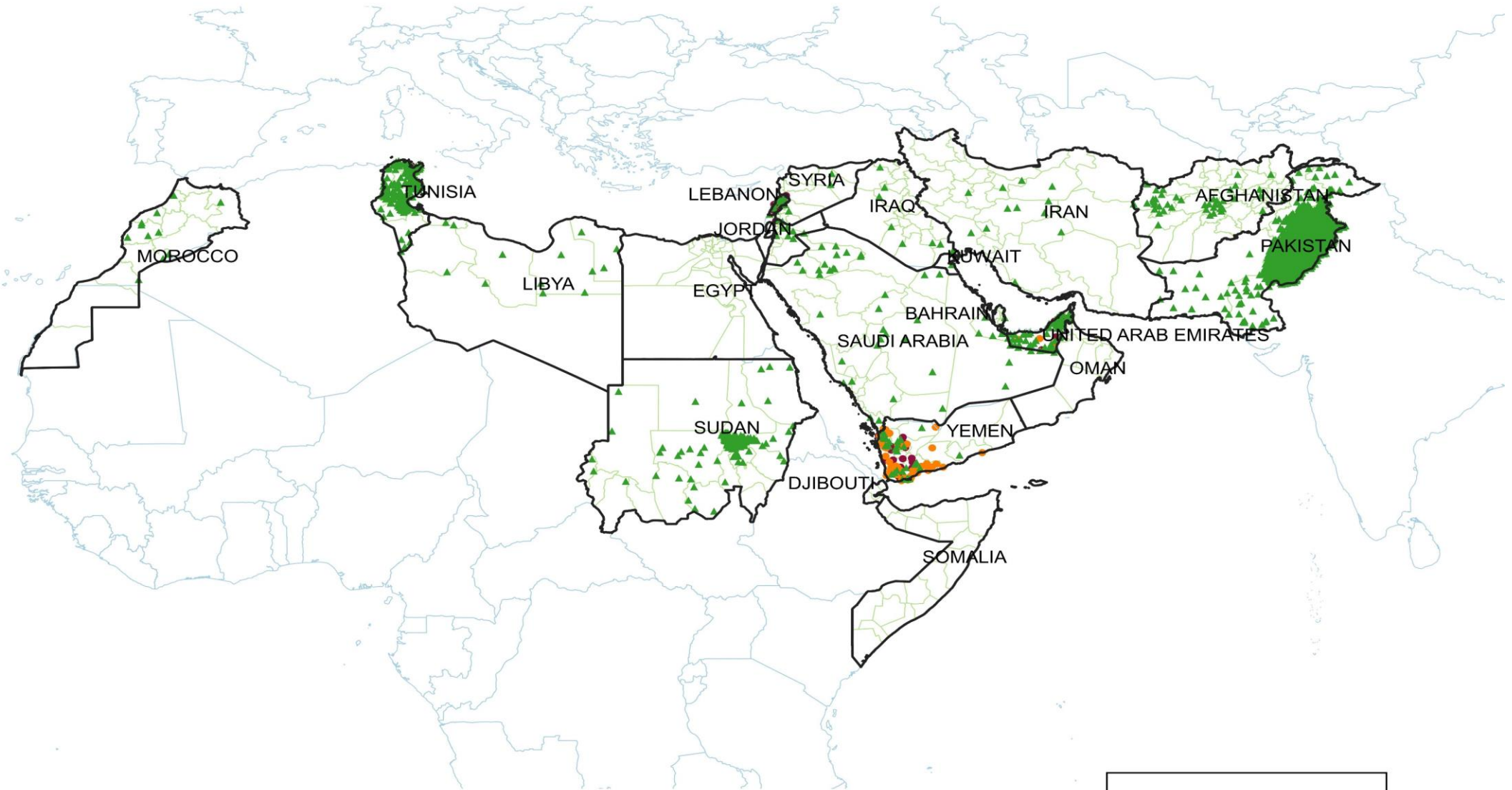
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** Importation related measles/rubella case – a locally acquired infection occurring as part of a chain of transmission originating from an imported case as supported by epidemiological or virological evidence

***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 2019



- ▲ Lab confirmed
- Epi linked
- Clinically compatible

Measles and Rubella laboratory summary report

Between 01/01/2019 and 31/12/2019

Country	Measles								Rubella								Reported to EPI within 4days
	specimens tested	%	Positive	%	Negative	%	Equivocal	%	specimens tested	%	Positive	%	Negative	%	Equivocal	%	
Afghanistan	626	100%	212	34%	414	66%	0	0%	391	62%	59	15%	332	85%	0	0%	93%
Bahrain	557	100%	27	5%	529	95%	1	0%	557	100%	12	2%	543	97%	2	0%	92%
Iran	5313	99%	100	2%	5212	98%	1	0%	5313	99%	51	1%	5262	99%	0	0%	97%
Iraq	1877	97%	1177	63%	700	37%	0	0%	1907	98%	30	2%	1877	98%	0	0%	41%
Jordan	246	100%	48	20%	191	78%	7	3%	109	44%	4	4%	102	94%	3	3%	2%
Egypt	3080	98%	123	4%	2949	96%	8	0%	3060	98%	36	1%	2999	98%	25	1%	81%
Kuwait	94	92%	12	13%	82	87%	0	0%	85	83%	2	2%	83	98%	0	0%	34%
Lebanon	1062	76%	676	64%	344	32%	42	4%	345	25%	19	6%	316	92%	10	3%	15%
Libya	639	99%	184	29%	436	68%	19	3%	639	99%	59	9%	541	85%	39	6%	92%
Morocco	451	97%	12	3%	436	97%	3	1%	427	92%	14	3%	406	95%	7	2%	77%
Oman	1224	98%	63	5%	1147	94%	14	1%	1222	98%	27	2%	1188	97%	7	1%	93%
Pakistan	7501	83%	1171	16%	6330	84%	0	0%	7102	79%	1395	20%	5707	80%	0	0%	53%
Palestine	649	100%	232	36%	413	64%	4	1%	600	92%	2	0%	597	100%	1	0%	94%
Qatar	128	96%	20	16%	108	84%	0	0%	85	63%	7	8%	76	89%	2	2%	80%
Saudi Arabia	2565	100%	1035	40%	1530	60%	0	0%	2565	100%	62	2%	2503	98%	0	0%	100%
Somalia	313	100%	291	93%	22	7%	0	0%	7	2%	1	14%	6	86%	0	0%	26%
Sudan	3761	73%	2160	57%	1601	43%	0	0%	3761	73%	479	13%	3280	87%	2	0%	24%
Syria	1025	100%	30	3%	987	96%	8	1%	1010	98%	22	2%	968	96%	20	2%	98%
Tunisia	3344	50%	1312	39%	1964	59%	68	2%	3316	49%	310	9%	2920	88%	86	3%	86%
UAE	670	91%	103	15%	543	81%	24	4%	625	85%	105	17%	512	82%	8	1%	83%
Yemen	350	4%	109	31%	238	68%	3	1%	351	4%	33	9%	282	80%	36	10%	8%