

- Task 1. Flag all the suspicious values. (Outliers, repetitions, etc.) (spend max 15 minutes)
- Answer:

1. Flag all montly values that look suspicious

MR1 - doses	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	2017	Pop
District 1	541	474	474	507	330	395	416	374	134	471	533	533	5,182	3,650
District 2	380	327	327	298	301	297	314	294	248	275	353	391	3,805	7,964
District 3	827	896	896	1,007	1,189	894	919	884	533	501	1,351	980	10,877	4,266
District 4	674	717	717	711	9,008	703	640	746	511	847	951	927	17,152	8,745
District 5	394	432	432	414	338	306	273	205	222	369	327	280	3,992	6,833
District 6	180	250	250	302	220	190	180	150	180	240	460	340	2,942	2,948
District 7	883	792	792	635	791	555	568	705	591	577	790	607	8,286	9,441
District 8	611	643	643	608	463	542	431	543	280	362	570	550	6,246	7,433
District 9	544	498	498	578	487	459	433	476	416	381	639	546	5,955	6,113
District 10	908	748	748	992	516	642	680	667	573	624	811	642	8,551	6,311
District 11	559	525	525	532	552	398	497	379	312	441	447	429	5,596	4,883
District 12	276	204	204	581	209	253	280	205	139	246	255	259	3,111	3,010
District 13	503	483	196	696	275	120	471	393	329	405	72	322	4,265	4,278
District 14	603	583	583	509	509	199	279	296	445	303	303	319	4,931	2,406
District 15	558	366	366	849	509	442	420	562	591	403	620	498	6,184	4,367
Grandtown	8,441	7,938	7,651	9,219	15,697	6,395	6,801	6,879	5,504	6,445	8,482	7,623	97,075	82,648

- Task 2. Review the national and subnational coverage for MR1. Your data manager produces the following tables. What can you conclude from the administrative data?
- Answer:

MR1 Coverage	2011	2012	2013	2014	2015	2016	2017
Alu	103%	102%	100%	98%	96%	105%	97%
Eastan	89%	88%	90%	90%	92%	100%	97%
Grandtown	121%	122%	118%	117%	115%	114%	117%
Nemo	72%	72%	70%	71%	71%	75%	72%
Remo	118%	116%	106%	100%	98%	107%	102%
Chello	73%	75%	80%	80%	81%	85%	82%
Grandtan	85%	67%	77%	97%	81%	92%	85%
Westtan	61%	64%	68%	71%	73%	82%	75%
National	91%	91%	90%	90%	89%	95%	92%

- From the year 2011 onwards, the National MR1 coverage is maintained more than 90%
- The surviving infant No. is increasing gradually from 2011 to 2015. It has decreased in the year 2016 & 2017.
- Nemo, chello, westtan subnational MR1 Coverage is consistently below 85%
- Alu, Grandtan subnational MR1 Coverage is consistently showing more than 100%

- Task 3. Review coverage evaluation survey data. You remember that in 2013, there was a coverage evaluation survey. You pull up the data for that. Does this change your view about coverage at national level? For any of the regions?

Answer:

2013 DHS MR1	Estimate	95% Confidence Interval	
		Lower Limit	Upper Limit
Alu	83.1%	75.6%	90.6%
Eastan	92.5%	87.0%	98.1%
Grandtown	89.0%	80.1%	97.9%
Nemo	91.9%	78.1%	100.0%
Remo	84.6%	77.8%	91.4%
Chello	93.6%	85.2%	100.0%
Grandtan	82.1%	73.1%	91.1%
Westtan	92.4%	81.3%	100.0%
National	89.2%	86.5%	91.9%

- There is no significance difference between the coverage evaluation and Coverage in the year of 2013.
- There is defenately discrepencies among the subnational level notably in Grandtown,
- Alu, Grandtown, Remo shows high coverage but does not match with Evaluation survey.
- Nemo, Chello, westtan shows low coverage with high coverage evaluation in survey.
- Easttan, Grandtan appears to be appropriate for the coverage and evaluation survey.

Task 4. Review the chart with the age distribution of measles cases. Does that tell you anything additional about coverage?

Answer:

- The age distribution of Measles cases reveals that the normal MR1& MR2 coverage at 9Months and 15Months were not up to the expected levels because no. of cases between age group 1-4 years is 26% which is more.

Part 2. Brief the Minister

- Task 5. Brief the Minister (spend max 1/2 hour on this section). Summarize the situation in three bullet points.
 - Answer:
 - Measles cases in the country is on rise and needs an intervention to increase the coverage.
 - Sub national level data discrepencies in the coverage and survey is more concerned at this stage of disease occurrence.
 - Alternative independent monitoring to be planned on fixed interval basis for the disease valuation.

Task 6. Brief the Minister. Propose three actions to respond to the outbreak.

Answer:

- Separate Rapid Response Teams to be identified.
- All regions with low coverage should be on priority for cases identification.
- Separate Outbreak guide lines to be released at national level and to adhere it at all levels in the country.

Task 7. Formulate recommendations. List your top 3-5 recommendations specific to data strengthening you would prioritize as the EPI and surveillance teams in Vacciland

Answer:

- Reviewing and optimizing health facility systems for immunization so that waiting times are minimized and process of vaccination is simple and easy.
- Developing realistic microplans to make sure that immunization services are offered where people live and work and evaluating their usefulness to tailor them as needed. Geographical information systems (GIS) and even simple technologies like Google Maps can help with mapping of outreach sessions; • providing adequate resources such as transport for outreach services; • finding so-called invisible children left out of any system (migrants, minorities, etc.) through outreach;
- Reviewing the scheduling and timing of vaccination services at health facilities and ensuring that the target population can attend planned sessions at convenient times.