A Dynamic Sensing Report of Notifiable Infectious Diseases Data in Mainland, China

2023 June

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Monthly Report -- 2023 June

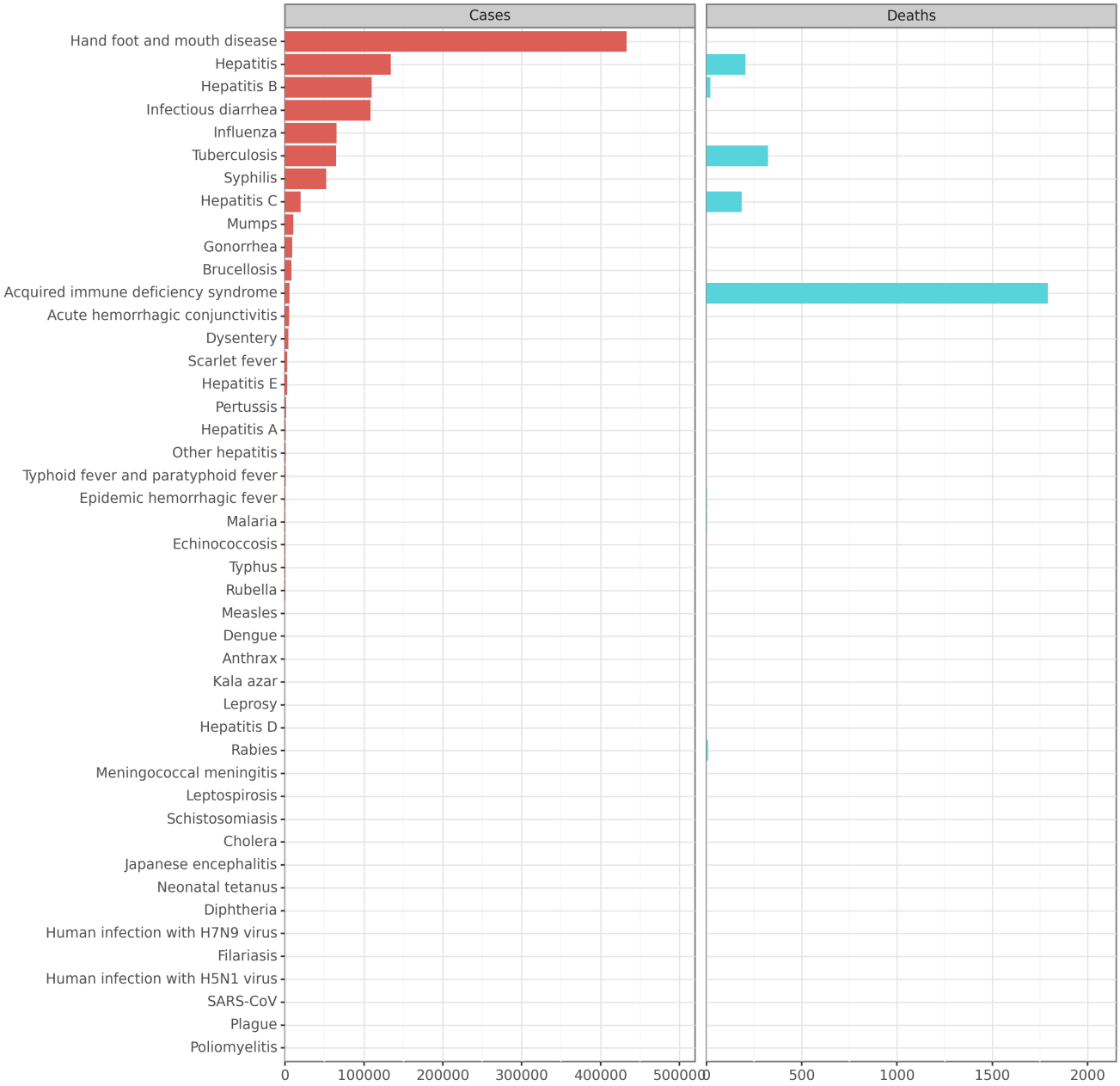

Figure 1: Monthly Notifiable Infectious Diseases Reports in 2023 June

The data presented here show the monthly incidence and death of different diseases in June 2023. Overall, the total number of cases increased by 24.61% compared to May 2023, with a total of 906,707 cases reported. However, when compared to June 2022, there was a significant decrease of 29.49% in the total number of cases.

The incidence of some diseases increased significantly in June 2023. Acute hemorrhagic conjunctivitis had the highest increase in cases, with a 115.71% increase compared to May 2023. Hand foot and mouth disease also had a substantial increase in cases, with a 374.57% increase compared to May 2023 and a 207.89% increase compared to June 2022.

In contrast, some diseases showed a decrease in incidence in June 2023. For example, poliomyelitis, plague, and SARS-CoV had no reported cases in June 2023. Cholera, epidemic hemorrhagic fever, and leptospirosis had a decrease in cases compared to May 2023 and June 2022.
Regarding the different types of hepatitis, hepatitis A, D, and E had a decrease in incidence in June 2023 compared to May 2023, whereas hepatitis B and C had a decrease in incidence compared to June 2022.
Influenza had a significant decrease in the number of cases reported, with a 69.33% decrease compared to May 2023 and a 91.26% decrease compared to June 2022. In contrast, the number of cases of malaria increased by 24.53% compared to May 2023 and 325.81% compared to June 2022.
Overall, these data suggest that while some diseases are showing a decrease in incidence, others are still causing significant health problems. The increase in cases of diseases such as acute hemorrhagic conjunctivitis and hand foot and mouth disease requires further investigation to identify potential risk factors and to develop preventative measures.

Table 1: Monthly Notifiable Infectious Diseases Cases in 2023 June

Diseases	Cases	Comparison with 2023 May	Comparison with 2022 June
Plague	0	0 (/)	0 (/)
Cholera	3	0 (0.00%)	-3 (-50.00%)
SARS-CoV	0	0 (/)	0 (/)
Acquired immune deficiency syndrome	5,759	304 (5.57%)	133 (2.36%)
Hepatitis	133,888	-7,604 (-5.37%)	2,031 (1.54%)
Hepatitis A	944	-132 (-12.27%)	-94 (-9.06%)
Hepatitis B	110,063	-5,871 (-5.06%)	3,217 (3.01%)
Hepatitis C	19,664	-1,299 (-6.20%)	-1,261 (-6.03%)
Hepatitis D	23	3 (15.00%)	1 (4.55%)
Hepatitis E	2,529	-293 (-10.38%)	118 (4.89%)
Other hepatitis	665	-12 (-1.77%)	50 (8.13%)
Poliomyelitis	0	0 (/)	0 (/)
Human infection with H5N1 virus	0	0 (/)	0 (/)
Measles	89	-20 (-18.35%)	-21 (-19.09%)
Epidemic hemorrhagic fever	365	-34 (-8.52%)	-201 (-35.51%)
Rabies	11	1 (10.00%)	-4 (-26.67%)
Japanese encephalitis	3	3 (/)	-4 (-57.14%)
Dengue	55	34 (161.90%)	54 (5400.00%)
Anthrax	31	6 (24.00%)	2 (6.90%)
Dysentery	4,353	600 (15.99%)	-355 (-7.54%)
Tuberculosis	64,788	-4,280 (-6.20%)	-3,113 (-4.58%)
Typhoid fever and paratyphoid fever	627	80 (14.63%)	-73 (-10.43%)
Meningococcal meningitis	9	7 (350.00%)	3 (50.00%)
Pertussis	1,512	178 (13.34%)	-2,701 (-64.11%)
Diphtheria	1	1 (/)	1 (/)

Neonatal tetanus	1	1 (/)	1 (/)
Scarlet fever	2,684	786 (41.41%)	-212 (-7.32%)
Brucellosis	8,326	-741 (-8.17%)	-1,617 (-16.26%)
Gonorrhea	8,863	-214 (-2.36%)	-125 (-1.39%)
Syphilis	52,007	-1,251 (-2.35%)	3,500 (7.22%)
Leptospirosis	9	1 (12.50%)	-3 (-25.00%)
Schistosomiasis	7	4 (133.33%)	2 (40.00%)
Malaria	264	52 (24.53%)	202 (325.81%)
Human infection with H7N9 virus	0	0 (/)	0 (/)
Influenza	65,289	-147,600 (-69.33%)	-681,749 (-91.26%)
Mumps	10,710	1,780 (19.93%)	-1,235 (-10.34%)
Rubella	110	37 (50.68%)	-57 (-34.13%)
Acute hemorrhagic conjunctivitis	4,985	2,674 (115.71%)	2,080 (71.60%)
Leprosy	24	-3 (-11.11%)	-13 (-35.14%)
Typhus	131	-40 (-23.39%)	7 (5.65%)
Kala azar	25	-7 (-21.88%)	5 (25.00%)
Echinococcosis	252	-62 (-19.75%)	2 (0.80%)
Filariasis	0	0 (/)	0 (/)
Infectious diarrhea	108,442	-7,456 (-6.43%)	13,430 (14.14%)
Hand foot and mouth disease	433,084	341,825 (374.57%)	292,423 (207.89%)
Total	906,707	179,062 (24.61%)	-379,151 (-29.49%)

Table 2: Monthly Notifiable Infectious Diseases Deaths in 2023 June

Diseases	Deaths	Comparison with 2023 May	Comparison with 2022 June
Plague	0	0 (/)	0 (/)
Cholera	0	0 (/)	0 (/)
SARS-CoV	0	0 (/)	0 (/)
Acquired immune deficiency syndrome	1,792	-141 (-7.29%)	145 (8.80%)
Hepatitis	206	36 (21.18%)	155 (303.92%)
Hepatitis A	0	0 (/)	0 (/)
Hepatitis B	20	3 (17.65%)	-15 (-42.86%)
Hepatitis C	186	35 (23.18%)	171 (1140.00%)
Hepatitis D	0	0 (/)	0 (/)
Hepatitis E	0	-2 (-100.00%)	0 (/)
Other hepatitis	0	0 (/)	-1 (-100.00%)
Poliomyelitis	0	0 (/)	0 (/)
Human infection with H5N1 virus	0	0 (/)	0 (/)

Measles	0	0 (/)	0 (/)
Epidemic hemorrhagic fever	2	2 (/)	-4 (-66.67%)
Rabies	9	2 (28.57%)	3 (50.00%)
Japanese encephalitis	0	0 (/)	0 (/)
Dengue	0	0 (/)	0 (/)
Anthrax	0	0 (/)	0 (/)
Dysentery	0	0 (/)	0 (/)
Tuberculosis	324	-19 (-5.54%)	-21 (-6.09%)
Typhoid fever and paratyphoid fever	0	0 (/)	0 (/)
Meningococcal meningitis	0	0 (/)	-1 (-100.00%)
Pertussis	0	0 (/)	0 (/)
Diphtheria	0	0 (/)	0 (/)
Neonatal tetanus	0	0 (/)	0 (/)
Scarlet fever	0	0 (/)	0 (/)
Brucellosis	0	0 (/)	0 (/)
Gonorrhea	0	0 (/)	0 (/)
Syphilis	1	-9 (-90.00%)	-3 (-75.00%)
Leptospirosis	0	0 (/)	0 (/)
Schistosomiasis	0	0 (/)	0 (/)
Malaria	2	2 (/)	2 (/)
Human infection with H7N9 virus	0	0 (/)	0 (/)
Influenza	1	-1 (-50.00%)	-3 (-75.00%)
Mumps	0	0 (/)	0 (/)
Rubella	0	0 (/)	0 (/)
Acute hemorrhagic conjunctivitis	0	0 (/)	0 (/)
Leprosy	0	0 (/)	0 (/)
Typhus	0	0 (/)	0 (/)
Kala azar	0	0 (/)	0 (/)
Echinococcosis	0	0 (/)	0 (/)
Filariasis	0	0 (/)	0 (/)
Infectious diarrhea	0	0 (/)	-1 (-100.00%)
Hand foot and mouth disease	0	0 (/)	-1 (-100.00%)
Total	2,337	-128 (-5.19%)	271 (13.12%)

History Data Analysis2023 June

Total

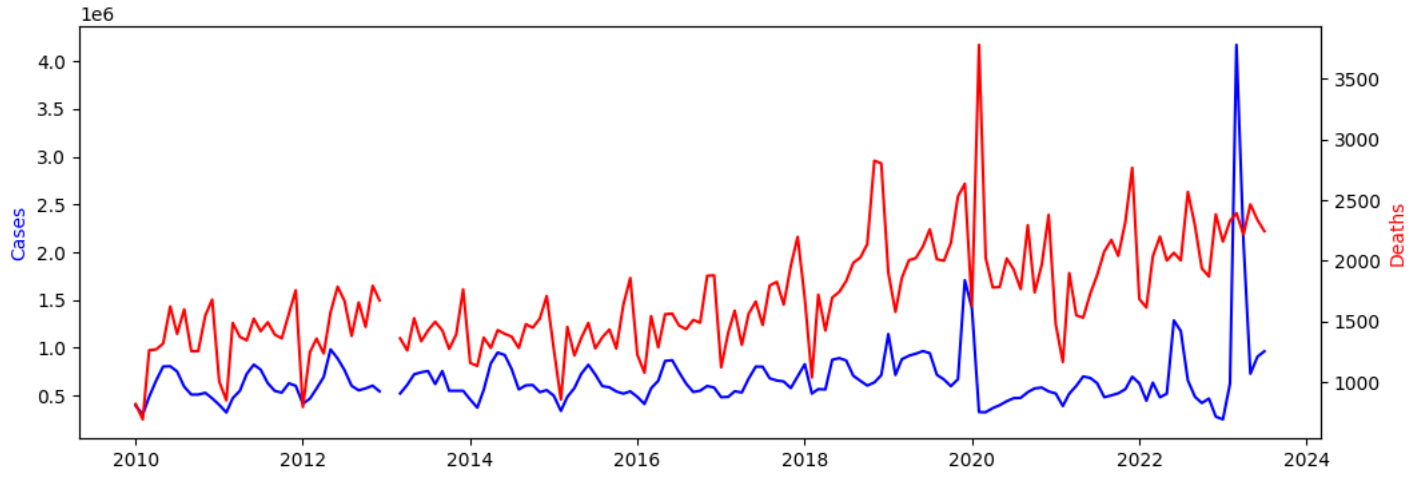

Figure 2: The Change of Total Reports before 2023 June

The data provided represents the monthly incidence and death of different diseases from January 2010 to June 2023. By analyzing the time series data, we can identify patterns and trends in the occurrence of these diseases over time.

Looking at the monthly cases, we can observe fluctuations throughout the years. From 2010 to 2012, there is a general increase in cases, with some variations from month to month. The highest number of cases is recorded in May 2012, with a staggering 982,932 cases reported. Following this peak, there is a gradual decline in cases until 2013, where there seems to be an error in the data, with negative values recorded for January and February. However, from March 2013 onwards, there is a consistent increase in cases, with occasional fluctuations.

In particular, there is a significant spike in cases in March 2023, with a record high of 4,171,295 cases reported. This sudden increase in cases could indicate a major outbreak or an event that led to a surge in disease transmission. Further investigation would be needed to determine the cause of this sharp increase and its implications.

When considering the monthly deaths, we can observe a similar pattern to the cases. There is a general increase in deaths from 2010 to 2012, with some fluctuations along the way. The highest number of deaths is recorded in December 2019, with 2,636 deaths reported. Similar to the cases, there is a decline in deaths after 2012, with occasional increases and decreases over the years.

It is worth noting that the data for January and February 2013 show negative values for deaths,

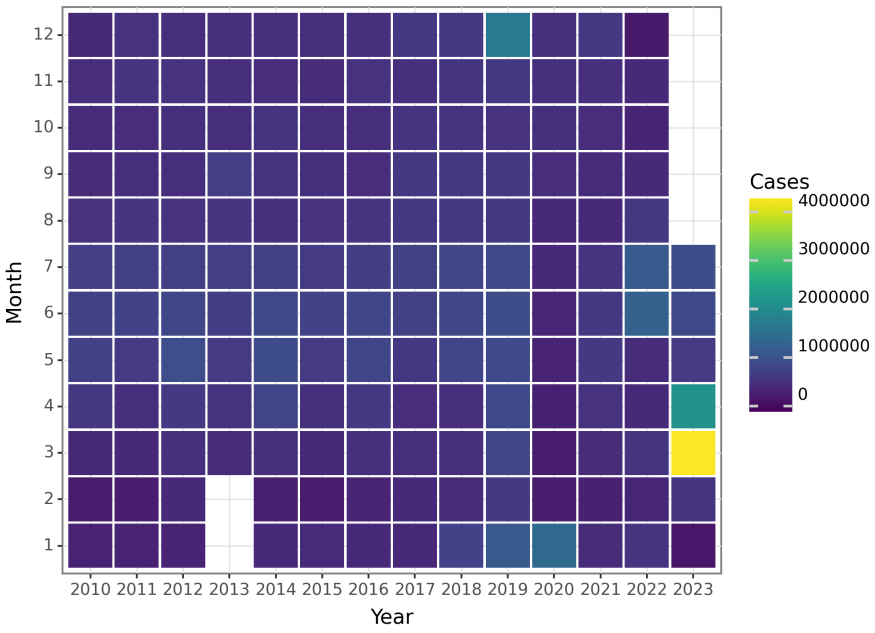

Figure 3: The Change of Total Cases before 2023 June

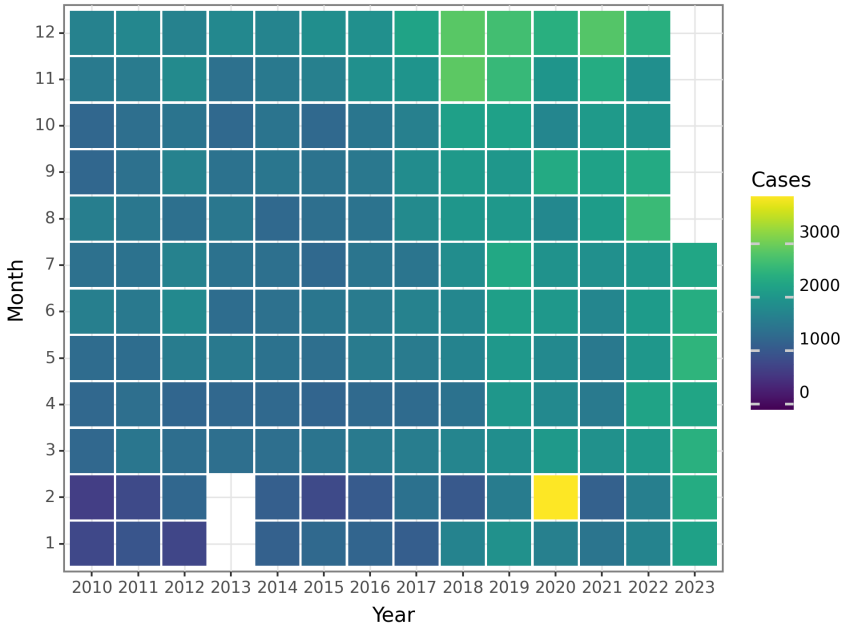

Figure 4: The Change of Total Deaths before 2023 June

Cholera

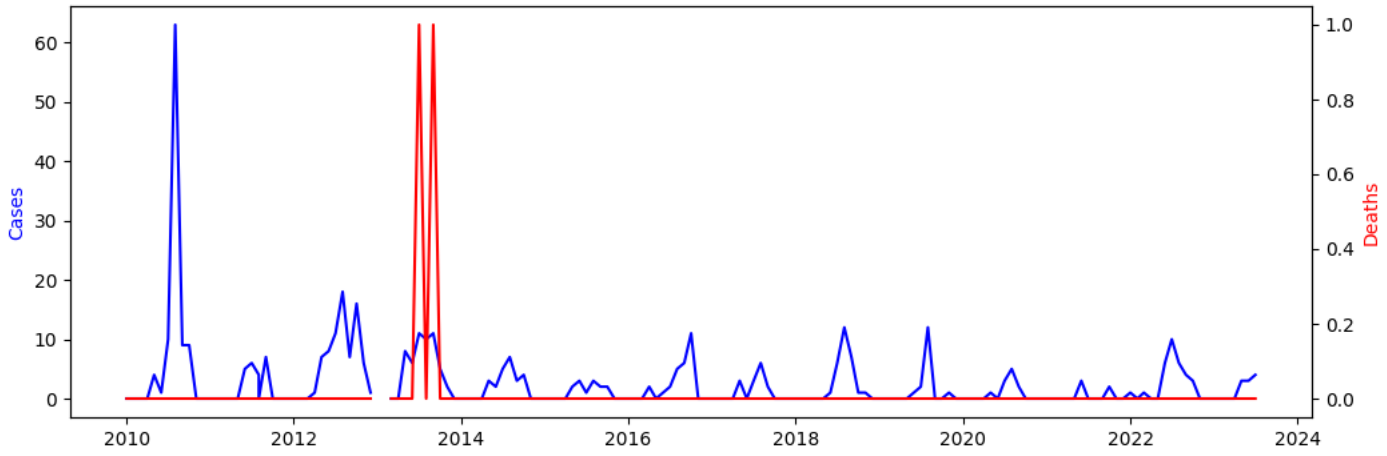

Figure 5: The Change of Cholera Reports before 2023 June

Thank you for sharing the data. Based on the time series data, we can analyze the trend, seasonality, and cyclical patterns in the monthly incidence of cholera cases and deaths from 2010 to 2023.
Firstly, we observed that the incidence of cholera cases remained relatively low from 2010 to 2012. However, there was a sudden increase in cholera cases from August 2012, with a peak in August 2018. After that, the number of cholera cases declined and remained relatively low from 2019 to 2023.
Secondly, we observed a clear seasonal pattern in the incidence of cholera cases and deaths. The number of cholera cases and deaths increased during the summer months, particularly from June to August. This pattern is consistent with the known transmission mechanism of cholera, which is closely related to water and sanitation issues and is more common in warm and wet conditions.
Finally, we also observed a cyclical pattern in the incidence of cholera cases. This pattern was particularly noticeable from 2012 to 2018, with a clear peak in 2018. The cyclical pattern may be related to changes in environmental conditions, water and sanitation infrastructure, and human behavior.
In summary, the time series analysis of the monthly incidence of cholera cases and deaths from 2010 to 2023 revealed a clear seasonal and cyclical pattern. These findings can help public health professionals and policymakers to better understand the dynamics of cholera transmission and develop effective prevention and control strategies.

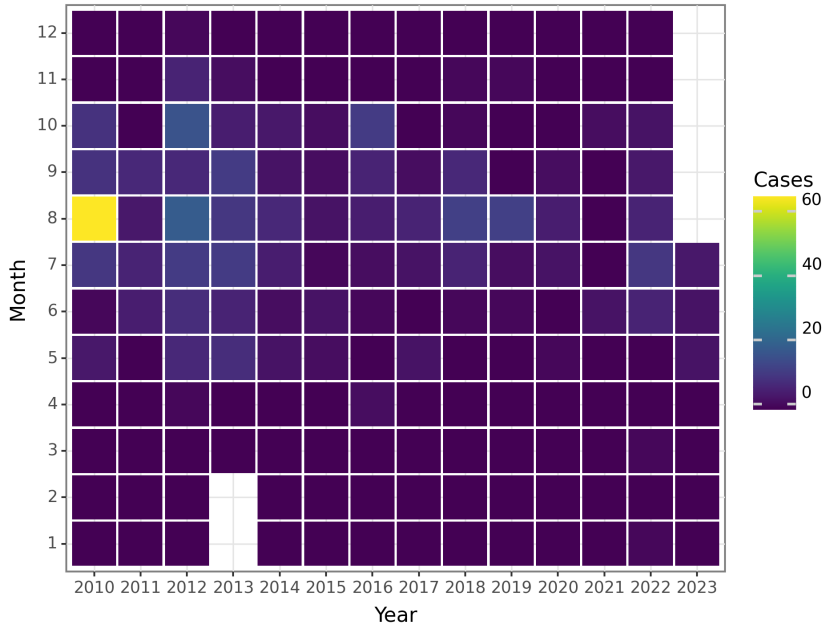

Figure 6: The Change of Cholera Cases before 2023 June

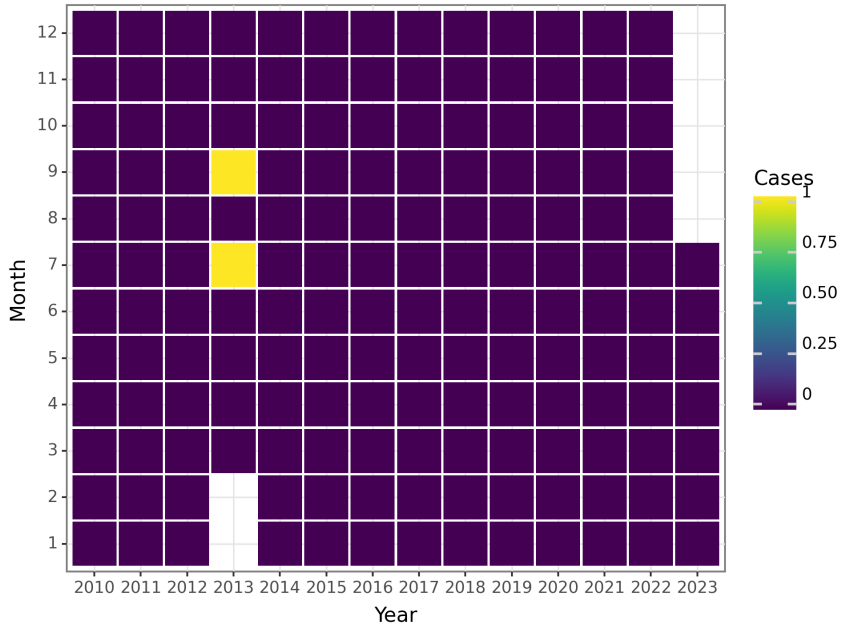

Figure 7: The Change of Cholera Deaths before 2023 June