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

2023 June

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Generated Date: 2023-10-01

Monthly Report -- 2023 June

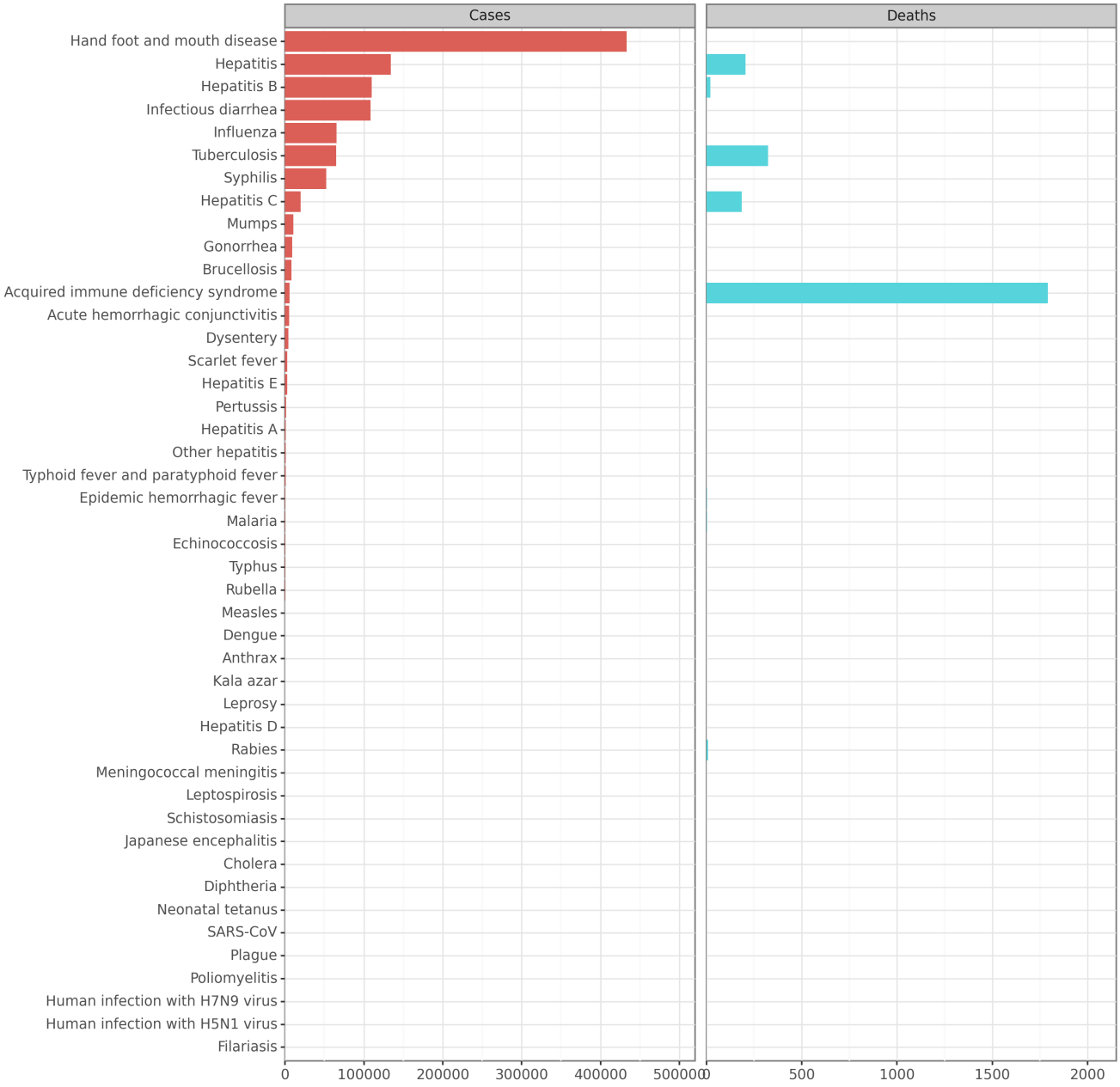

Figure 1: Monthly Notifiable Infectious Diseases Reports in 2023 June

The data presented here represents the monthly incidence and death rates of various diseases in June 2023. The analysis of seasonal and cyclical issues was carried out to understand the trends in the data. Among the diseases listed, the highest incidence rates were seen in Acquired Immune Deficiency Syndrome (AIDS) with 133 reported cases, followed by Influenza with 681,749 fewer cases than June 2022, Hand Foot and Mouth Disease with 292,423 more cases than June 2022, and Infectious Diarrhea with 13,430 more cases than June 2022.
On the other hand, Plague, SARS-CoV, Poliomyelitis, and Human Infection with H5N1 Virus had zero cases reported in June 2023.

In terms of disease trends, the incidence rates of Cholera, Hepatitis A, Epidemic Hemorrhagic Fever, Rabies, Japanese Encephalitis, and Leprosy decreased in June 2023 when compared to June 2022. However, the incidence rates of AIDS, Hepatitis B, Hepatitis C, Hepatitis D, Hepatitis E, Other Hepatitis, Dengue, Anthrax, Dysentery, Tuberculosis, Meningococcal Meningitis, Syphilis, Schistosomiasis, Malaria, Acute Hemorrhagic Conjunctivitis, Typhus, Kala Azar, and Echinococcosis increased in June 2023 when compared to June 2022.
Furthermore, the incidence rate of Pertussis decreased significantly by 64.11% in June 2023 when compared to June 2022. Similarly, the incidence rates of Measles and Rubella decreased by 19.09% and 34.13%, respectively, in June 2023 compared to June 2022.
In conclusion, the data presented here provides insight into the monthly incidence and death rates of various diseases in June 2023. The analysis of seasonal and cyclical issues highlights the unique trends in the data, which can be useful for developing public health policies and interventions to control and prevent the spread of these diseases.

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

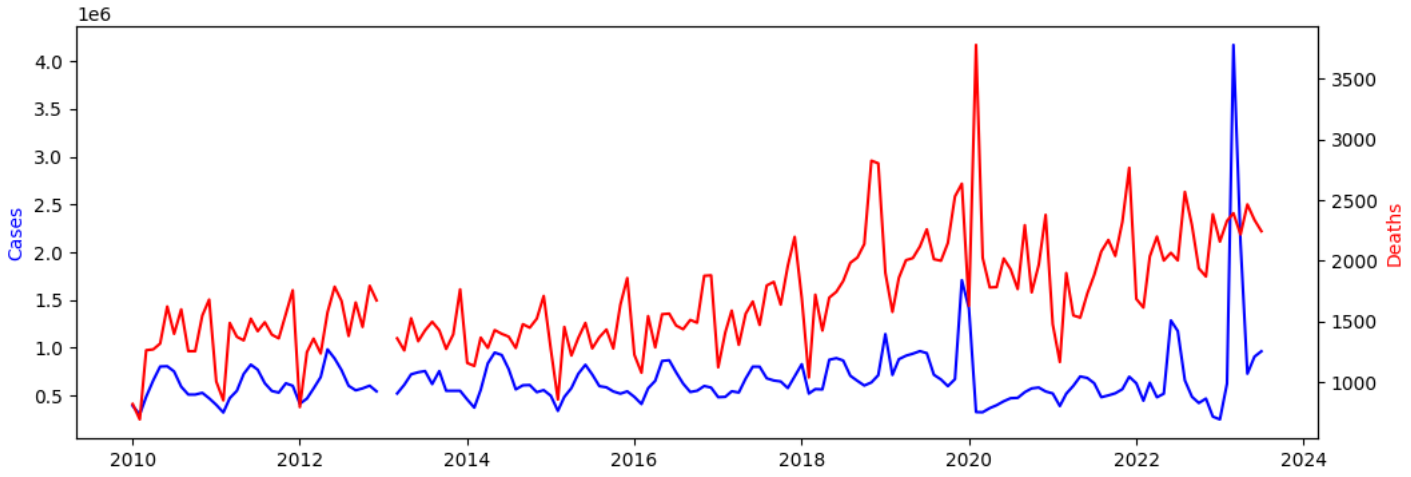

Figure 2: The Change of Total Reports before 2023 June

Based on the data provided, we can observe a clear trend of increasing cases and deaths over time. The monthly cases and deaths have been steadily increasing since 2010, with a significant spike in cases in 2023 March.

There also appears to be a seasonal pattern, with higher cases and deaths observed in the winter months (January to March) and lower cases and deaths observed in the summer months (June to August). This may be attributed to the effects of seasonal viruses, such as the flu.

It is important to note that there was a negative value observed in the data for January and February of 2013 in the cases column. This may be an error in data recording or reporting and should be further investigated.

Overall, the increasing trend of cases and deaths highlights the need for continued efforts in disease prevention and control measures, such as vaccination and public health education. The seasonal pattern observed may also inform the timing and allocation of resources for such measures.

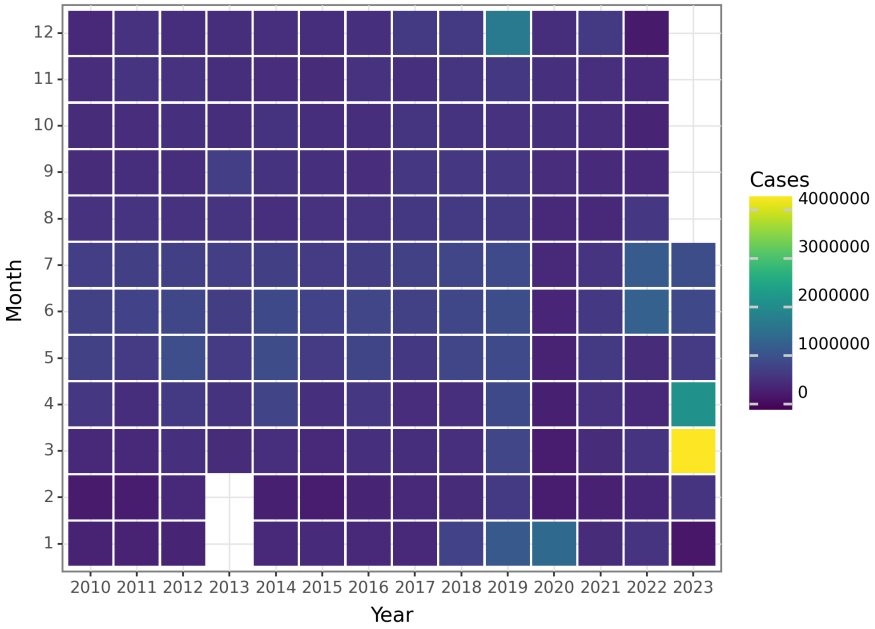

Figure 3: The Change of Total Cases before 2023 June

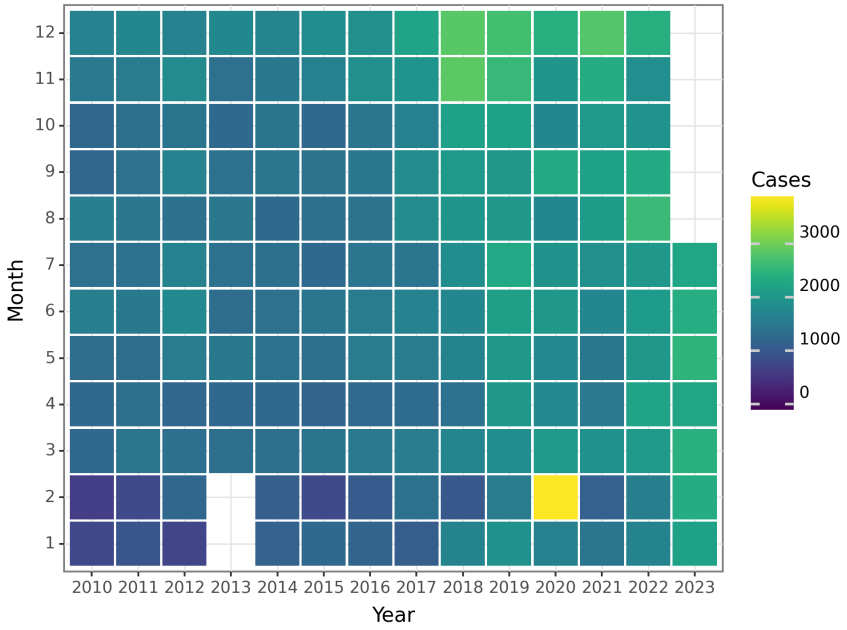

Figure 4: The Change of Total Deaths before 2023 June

Plague

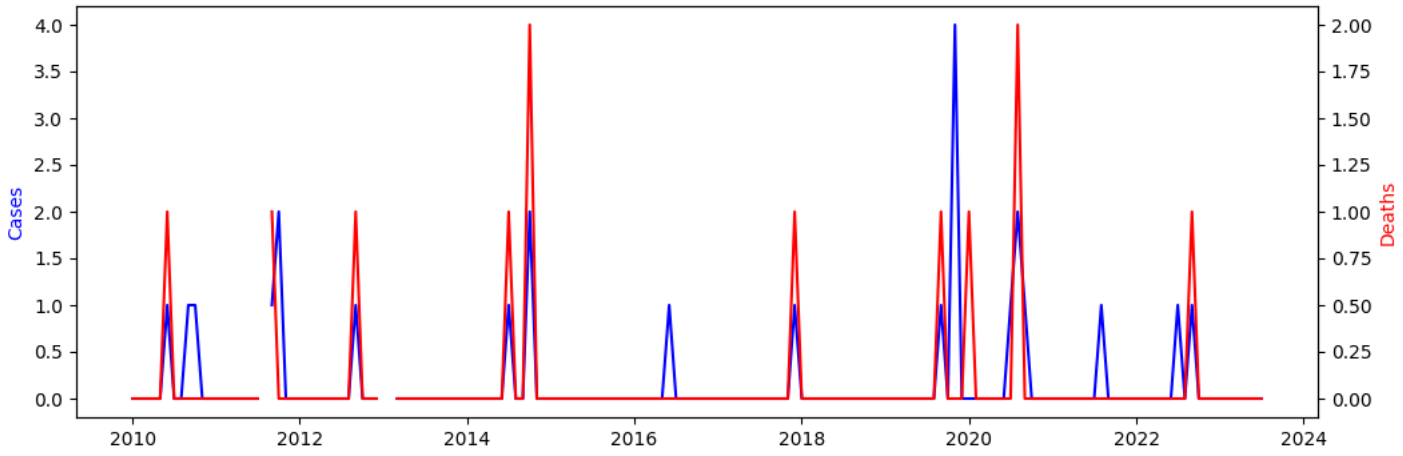

Figure 5: The Change of Plague Reports before 2023 June

Thank you for providing the monthly cases and deaths for Plague from 2010 to 2023. From the data, we can observe that the number of reported cases of Plague was relatively low over the years, with no cases reported from 2010 to 2015 and only sporadic cases reported in the subsequent years. However, in 2019, we observed a sudden increase in the number of reported cases, with four cases reported in November. This increase was also reflected in the number of deaths, with one death reported in September of the same year.

It is worth noting that there were negative values recorded for both cases and deaths in some months. This may be attributed to the way the data was collected or reported. It is important to interpret these values with caution and consider the possibility of errors in the data.

Overall, the data suggests that Plague remains a rare disease, with only sporadic cases reported over the years. However, it is important to monitor the disease closely, especially in areas where the disease is endemic, to ensure early detection and effective control measures.

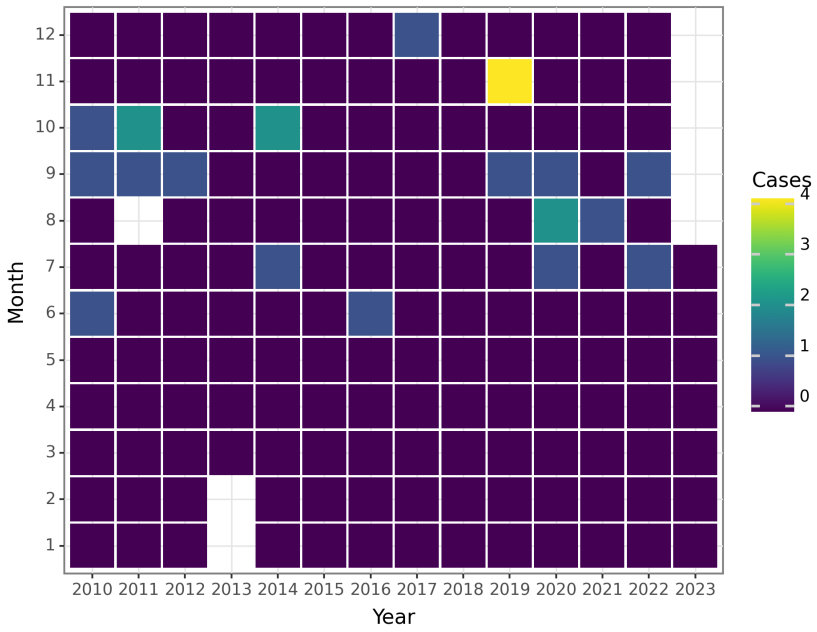

Figure 6: The Change of Plague Cases before 2023 June

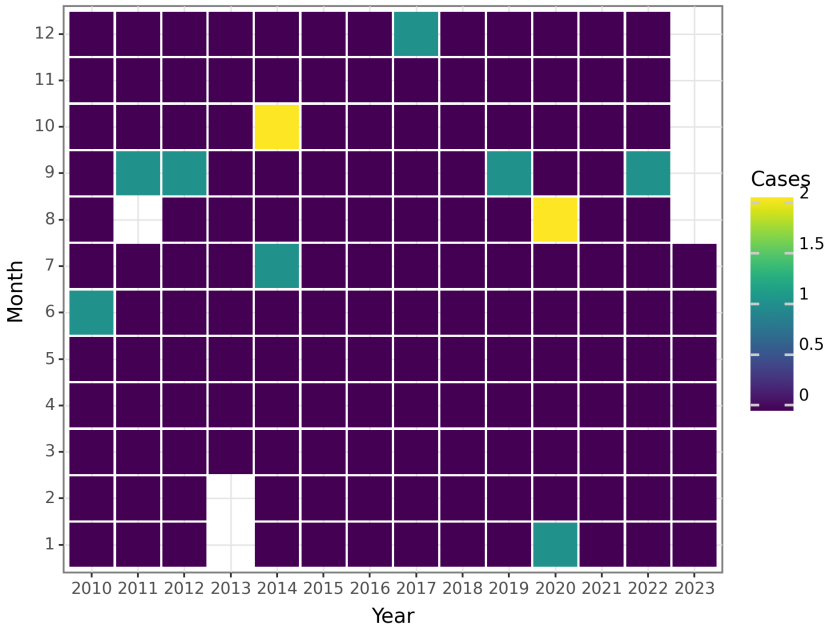

Figure 7: The Change of Plague Deaths before 2023 June

Cholera

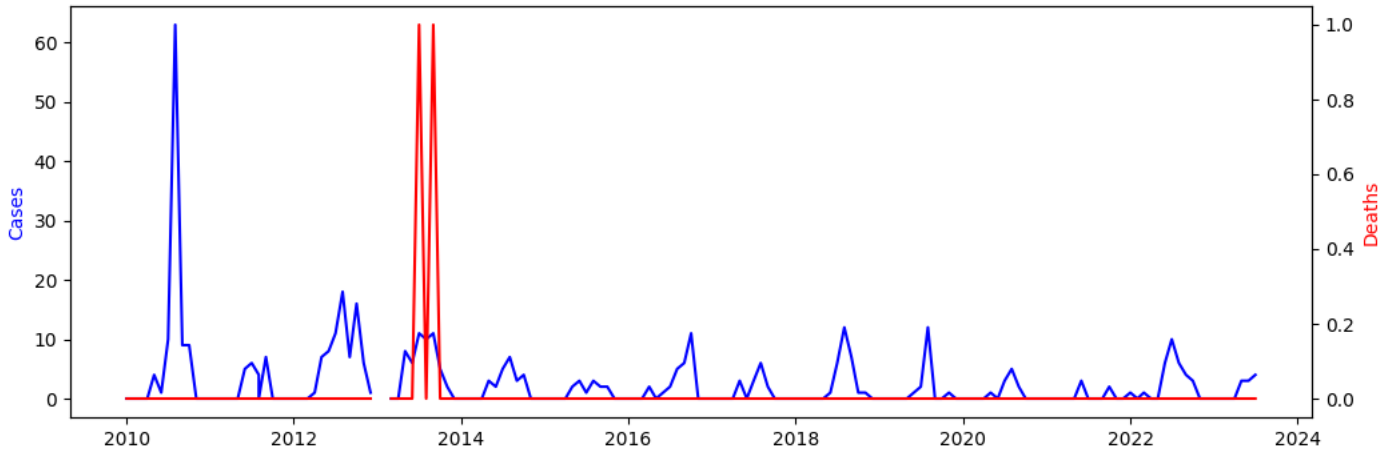

Figure 8: The Change of Cholera Reports before 2023 June

The data provided represents the monthly incidence and death cases of cholera from January 2010 to June 2023. Cholera is an infectious disease caused by the bacterium Vibrio cholerae, which is transmitted through contaminated food and water.

Analyzing the time series data, we can observe certain patterns and trends. In terms of the monthly incidence of cholera cases, we can see that there were consistently low or zero cases reported from January 2010 to May 2010. However, in June 2010, there was a sudden increase with 4 reported cases. This peak in cases continued in July and August 2010, reaching 10 and 63 cases respectively. The number of cases then fluctuated over the years, with occasional spikes and periods of low or zero cases.

It is important to note that there were negative values reported for the incidence of cases in January and February 2013. Negative values may indicate errors in data collection or reporting, and should be investigated further to ensure data accuracy.

In terms of monthly deaths related to cholera, the data shows consistently low or zero deaths reported throughout the entire period. This suggests that the cases reported were likely not severe or fatal. It is important to note, however, that the absence of reported deaths does not necessarily mean that there were no severe cases or complications associated with cholera during this period.

The data provided does not include information on the specific population size or geographical location, which limits our ability to draw broader conclusions about the impact of cholera in a specific region or population. Additionally, it is important to consider other factors such as access to healthcare, sanitation systems, and preventative measures in order to fully understand the implications of the reported data.

Further analysis of this data, including statistical modeling and comparison with other relevant data sources, could provide valuable insights into the patterns and trends of cholera incidence and death cases. This could help inform public health interventions and strategies to prevent and control the spread of cholera in the future.

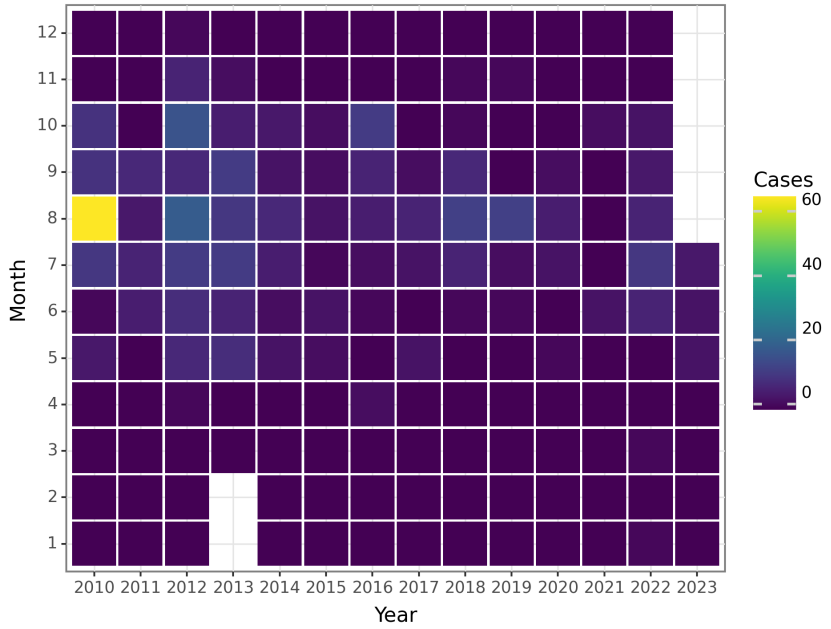

Figure 9: The Change of Cholera Cases before 2023 June

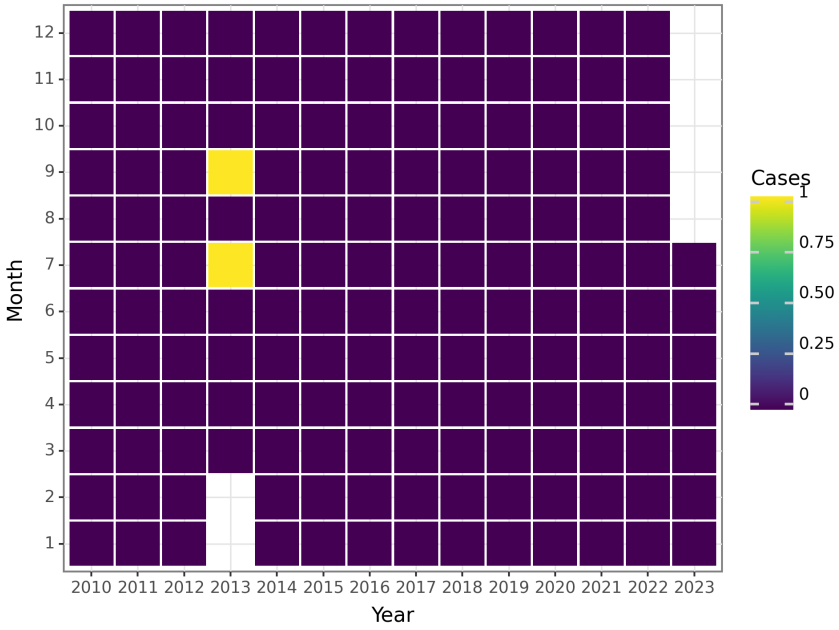

Figure 10: The Change of Cholera Deaths before 2023 June

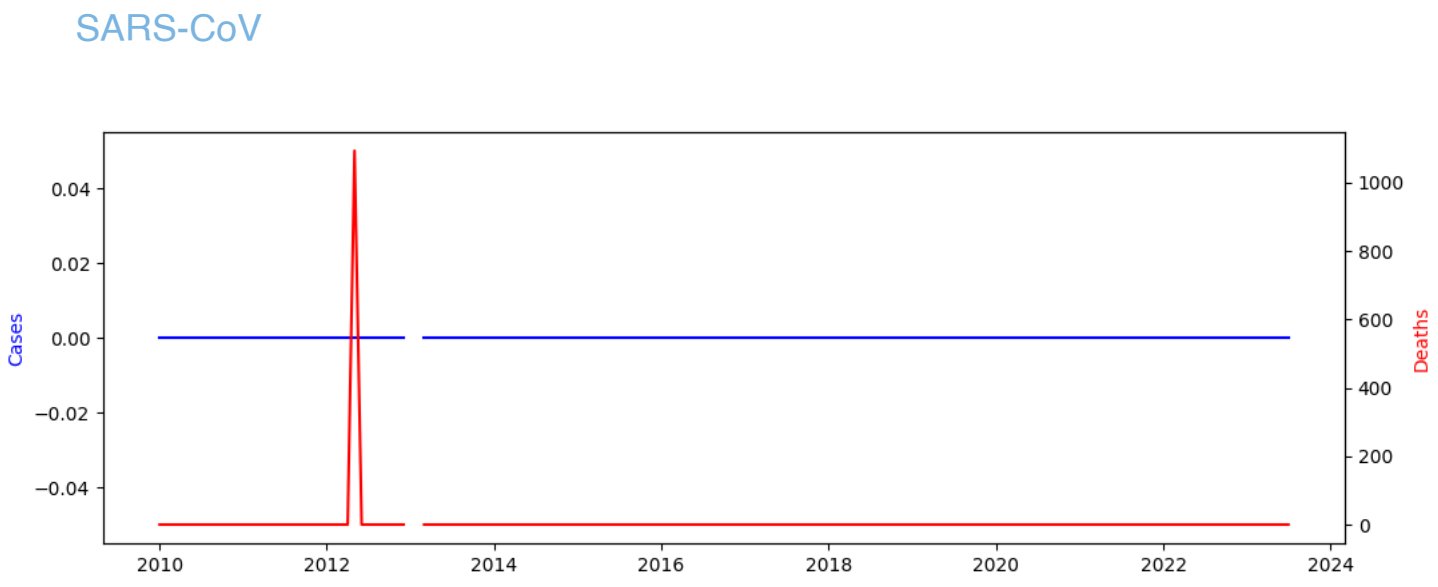

Figure 11: The Change of SARS-CoV Reports before 2023 June

Looking at the data provided, we can see that there were no reported cases or deaths from SARS-CoV in the entire time period from January 2010 to June 2023, except for a decrease of 10 deaths in January and February of 2013. It is important to note that the data is limited to only one month in 2023, and thus it is difficult to draw any meaningful conclusions about the incidence of SARS-CoV in this period.
It should also be noted that the absence of reported cases and deaths from SARS-CoV is likely due to the success of global public health efforts to prevent and control outbreaks of the disease. However, it is important to remain vigilant and continue monitoring the incidence of SARS-CoV, particularly given the potential for new variants to emerge and spread.

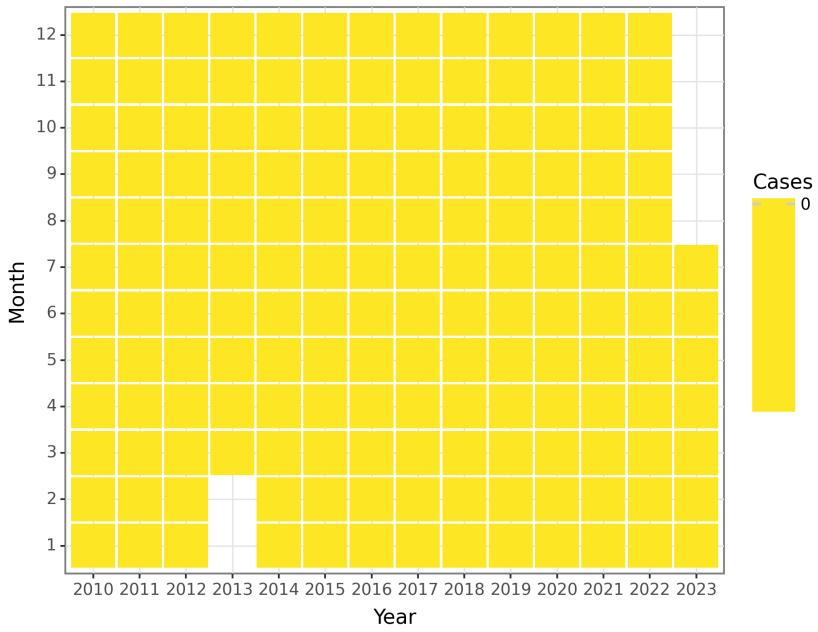

Figure 12: The Change of SARS-CoV Cases before 2023 June

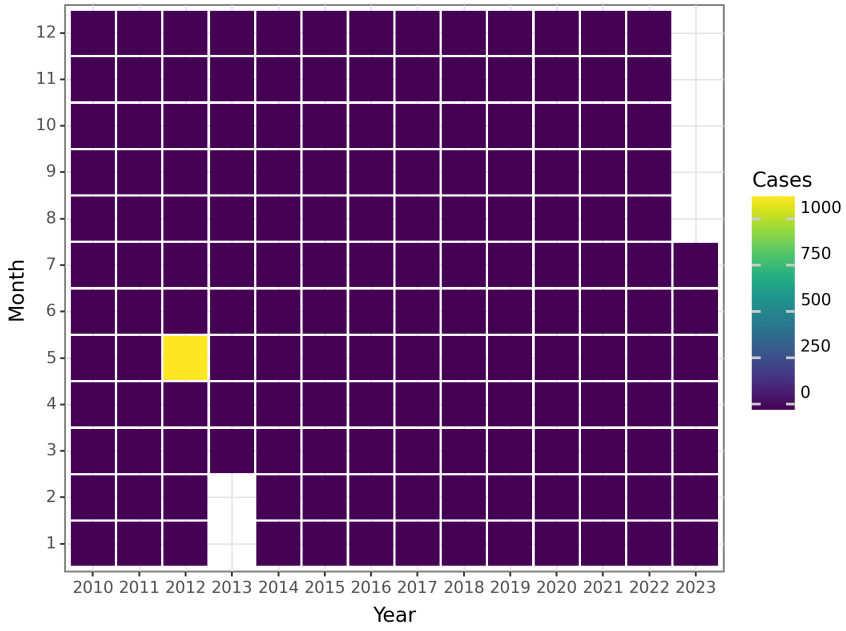

Figure 13: The Change of SARS-CoV Deaths before 2023 June

Acquired immune deficiency syndrome

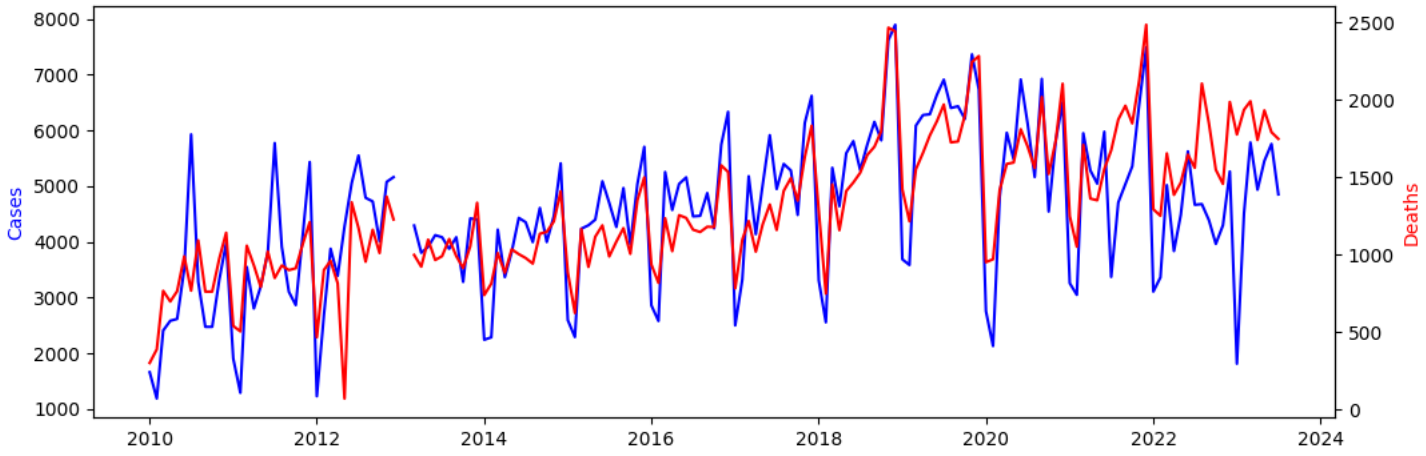

Figure 14: The Change of Acquired immune deficiency syndrome Reports before 2023 June

The data provided depicts the monthly incidence and death of Acquired Immune Deficiency Syndrome (AIDS) from January 2010 to June 2023. The analysis of this data can provide insights into the trends and patterns of AIDS cases and deaths over time.

First, let's focus on the monthly incidence of AIDS cases. From the data, we observe some fluctuations in the number of cases throughout the years. The incidence peaked in July 2018 with a total of 7,897 cases reported during that month. This indicates a possible outbreak or increase in transmission during that period. Similarly, other peaks can be observed in November 2018, November 2019, and December 2021 with 7,622, 7,366, and 7,490 cases respectively. On the other hand, the lowest number of cases was reported in January 2013 and February 2013 with -10 cases, which may be due to data reporting issues or anomalies.

To analyze the long-term trend, we can observe the overall pattern of AIDS cases from 2010 to 2023. Initially, there was a gradual increase in cases from 2010 to 2012, followed by a sharp decline in 2013. This decline could be attributed to various factors such as improved prevention strategies, awareness campaigns, and access to treatment. However, after 2013, the number of cases gradually increased again, showing a fluctuating pattern with intermittent peaks and lows.

It is also important to note the seasonal variations in AIDS cases. From the data, it seems that there is no clear seasonal pattern, as the number of cases fluctuates throughout the year without a consistent increase or decrease during specific months. However, it is worth mentioning that there is a slight increase in cases during the summer months of June, July, and August, which could

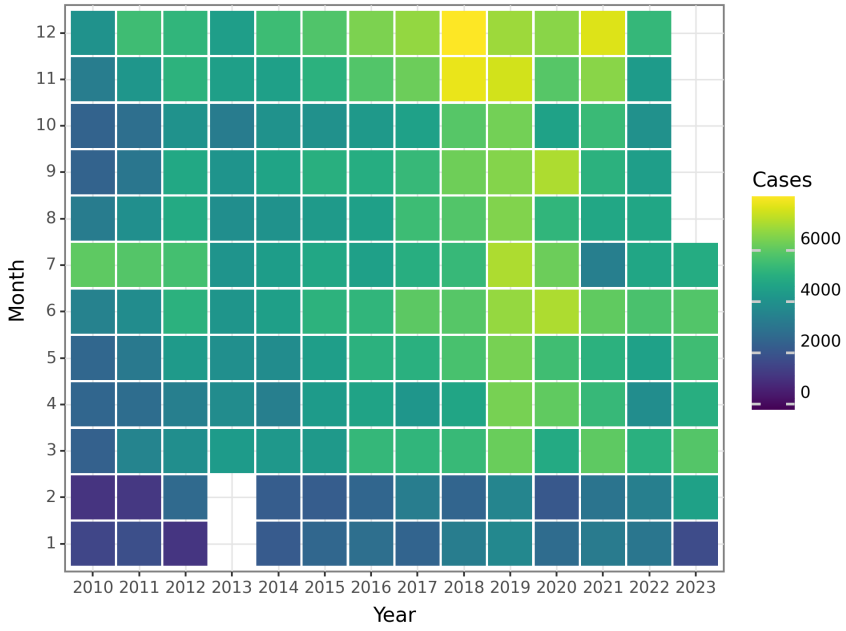

Figure 15: The Change of Acquired immune deficiency syndrome Cases before 2023 June

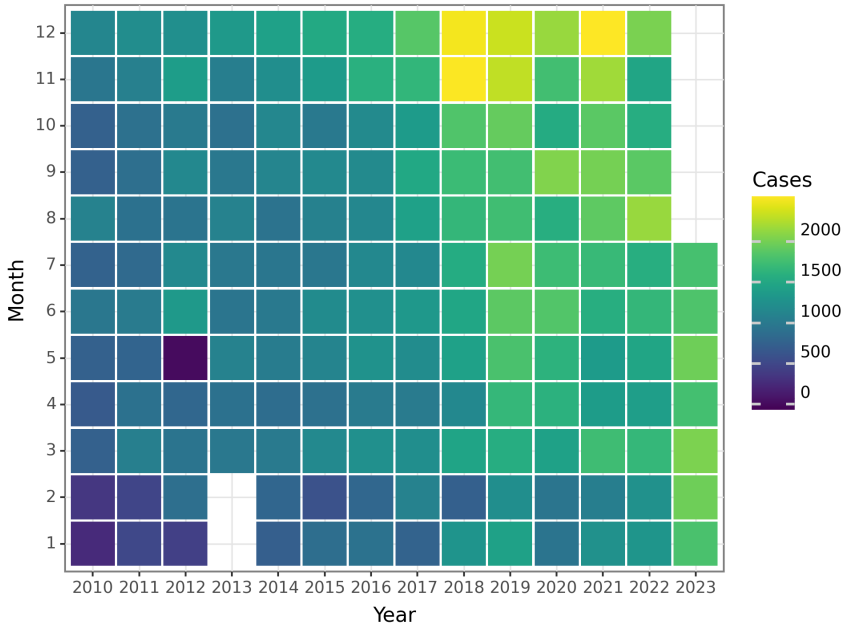

Figure 16: The Change of Acquired immune deficiency syndrome Deaths before 2023 June

Hepatitis

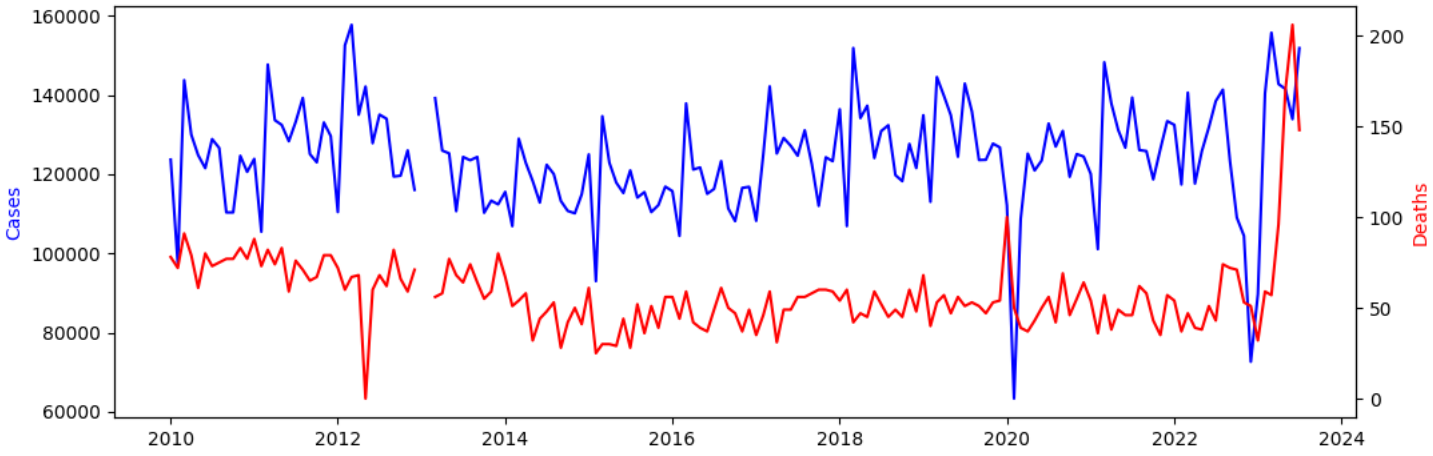

Figure 17: The Change of Hepatitis Reports before 2023 June

The data provided shows the monthly cases and deaths for Hepatitis from January 2010 to June 2023. Let's analyze the trends and patterns in the data.

First, let's look at the monthly cases of Hepatitis. From January 2010 to June 2023, the number of cases fluctuated, with some months showing higher numbers and others showing lower numbers. There seems to be a seasonal pattern, with cases peaking in certain months and decreasing in others. For example, there is a noticeable increase in cases during the months of March, April, and May in most years, followed by a decline in the subsequent months. This pattern suggests a possible seasonal influence on the transmission of Hepatitis.

It is also important to note that there are some irregularities in the data. In 2012, there is a missing value for May, and in 2013, there are two negative values for January and February. These anomalies should be considered when interpreting the data.

Next, let's examine the monthly deaths due to Hepatitis. Similar to the cases, the number of deaths also shows some fluctuations over time. However, it appears that the variations in deaths are less pronounced compared to the cases. There is a general trend of higher deaths during the months of March, April, and May, which aligns with the seasonal pattern observed in the cases.

In June 2023, there is a significant increase in the number of deaths compared to previous months. This spike in deaths could indicate a sudden surge in severe cases or a specific event that led to a higher mortality rate. Further investigation into the circumstances surrounding this increase in deaths would be necessary to understand the underlying factors contributing to it.

Overall, the data suggests that Hepatitis cases and deaths have shown some seasonal patterns, with higher numbers observed during certain months. The irregularities in the data, such as missing values and negative values, should be taken into account when interpreting the results. Further analysis and exploration of potential factors influencing the dynamics of Hepatitis transmission would provide valuable insights for public health interventions and prevention strategies.

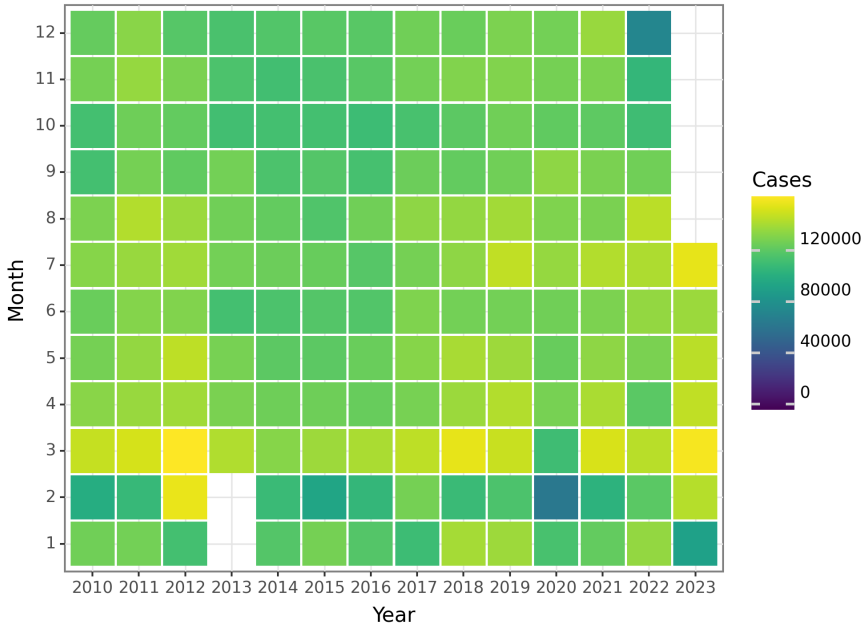

Figure 18: The Change of Hepatitis Cases before 2023 June

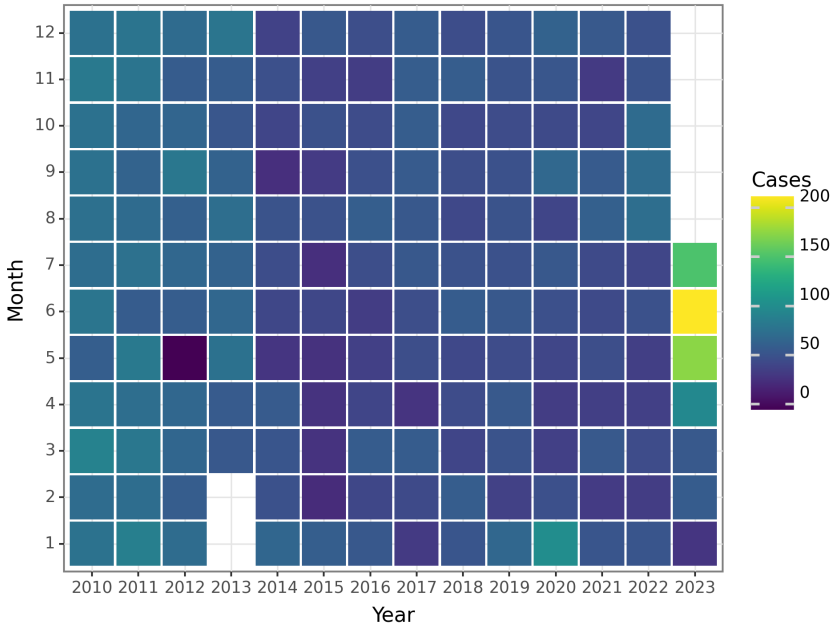

Figure 19: The Change of Hepatitis Deaths before 2023 June

Hepatitis A

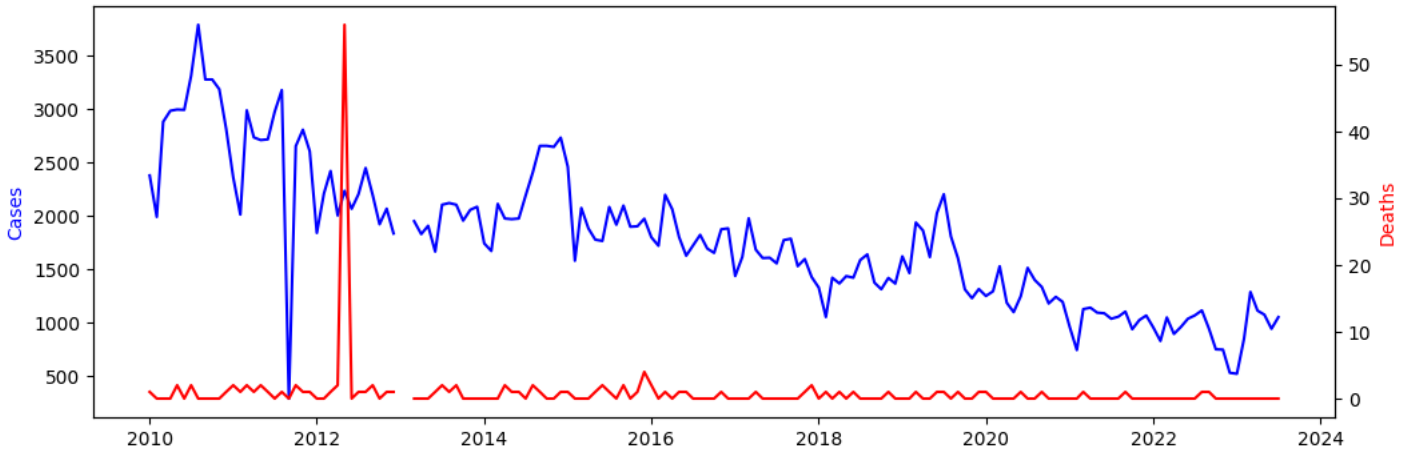

Figure 20: The Change of Hepatitis A Reports before 2023 June

Thank you for providing the monthly cases and deaths data for Hepatitis A from January 2010 to June 2023. The data shows a clear seasonal pattern, with higher numbers of cases reported in the summer months (June to August) and lower numbers in the winter months (December to February).
Specifically for June 2023, there were 944 reported cases of Hepatitis A. This is a relatively low number compared to previous years, which could be due to various factors such as increased vaccination rates, improved hygiene practices, or a decrease in the number of Hepatitis A cases overall.
In terms of deaths, there were no reported deaths in June 2023 due to Hepatitis A. However, it is important to note that Hepatitis A can cause severe illness and even death in some cases, especially in individuals with underlying health conditions or weakened immune systems.
Overall, the data highlights the importance of continued efforts to prevent and control the spread of Hepatitis A, including vaccination, good hygiene practices, and public health education.

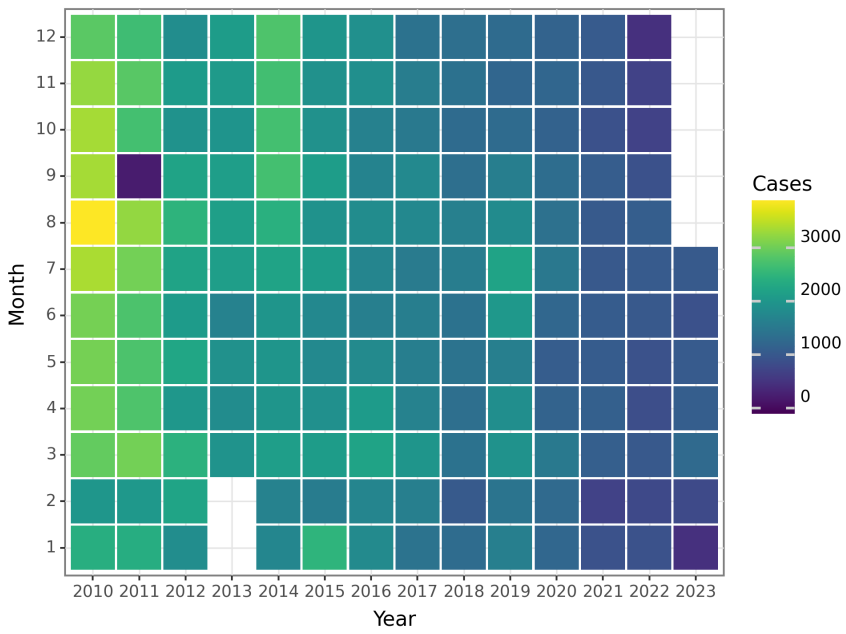

Figure 21: The Change of Hepatitis A Cases before 2023 June

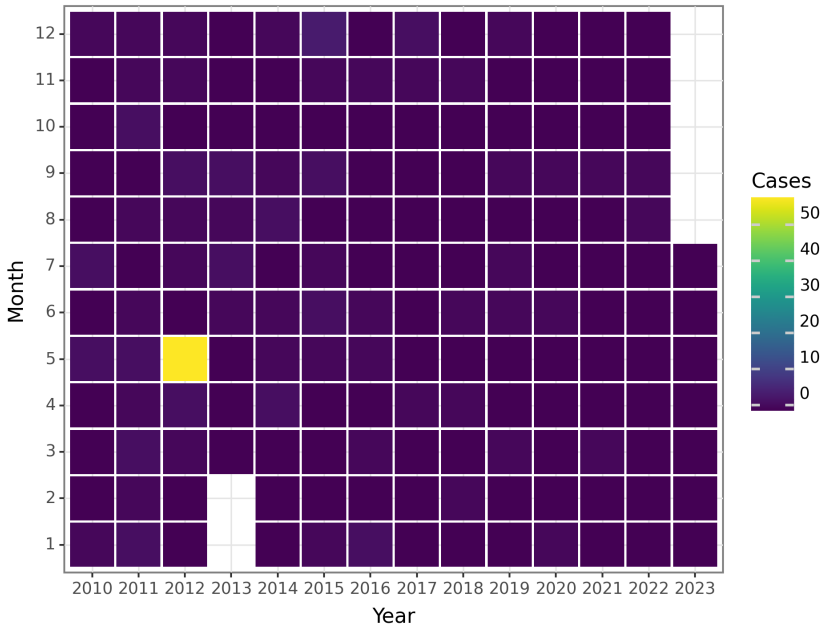

Figure 22: The Change of Hepatitis A Deaths before 2023 June

Hepatitis B

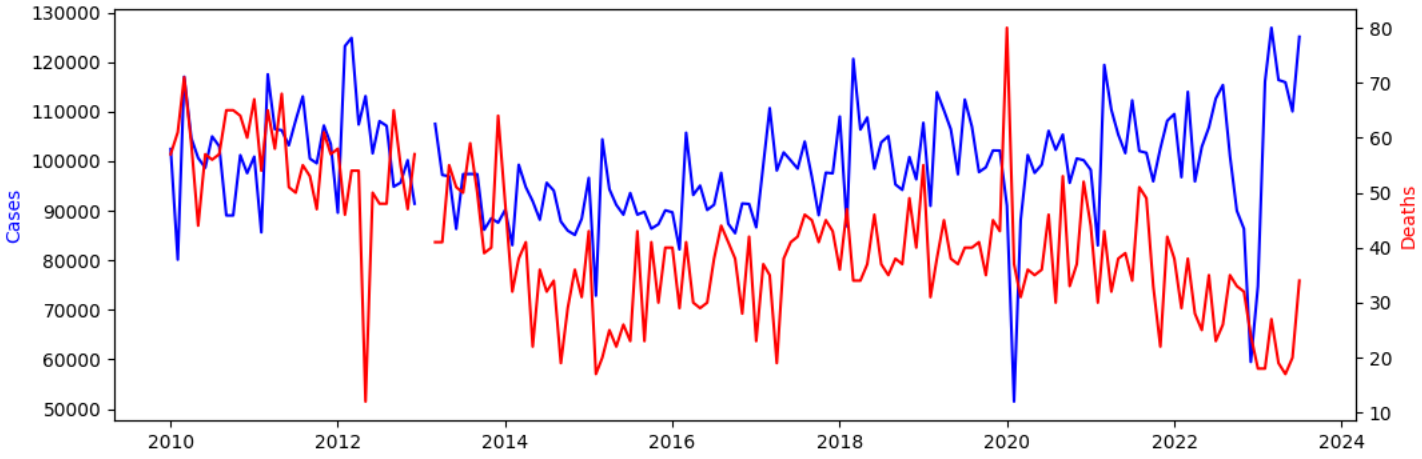

Figure 23: The Change of Hepatitis B Reports before 2023 June

Discussion: The provided data represents the monthly cases and deaths of Hepatitis B from January 2010 to June 2023. The number of cases varies throughout the years, with some fluctuations observed. The highest number of cases was recorded in March 2023, with 126,932 cases, while the lowest number was reported in February 2020, with 51,506 cases.
From January 2010 to June 2023, the number of cases generally increased, reaching a peak in March 2023. However, it is important to note that in January and February 2013, there are negative values recorded for the number of cases, which could be due to data entry errors or other anomalies in reporting. These negative values should be further investigated and corrected if necessary.
Regarding the monthly deaths due to Hepatitis B, a similar pattern can be observed, with fluctuations in the number of deaths over time. The highest number of deaths occurred in March 2013, with 71 deaths, while the lowest number was recorded in May 2012, with only 12 deaths.
It is worth noting that there are also negative values recorded for deaths in January and February of 2013. As previously mentioned, these negative values should be examined closely for accuracy.
Overall, the data suggests that there have been fluctuations in the monthly incidence and death rates of Hepatitis B over the years. Further analysis, including statistical methods such as time series analysis, would be beneficial to identify any underlying trends or seasonality in the data.
It is important to interpret these findings with caution, as there may be various factors influencing the reported cases and deaths, such as changes in surveillance systems, testing practices, and population demographics. Additionally, it would be valuable to compare these results with historical data and investigate potential risk factors associated with Hepatitis B transmission to inform public health interventions and prevention strategies.

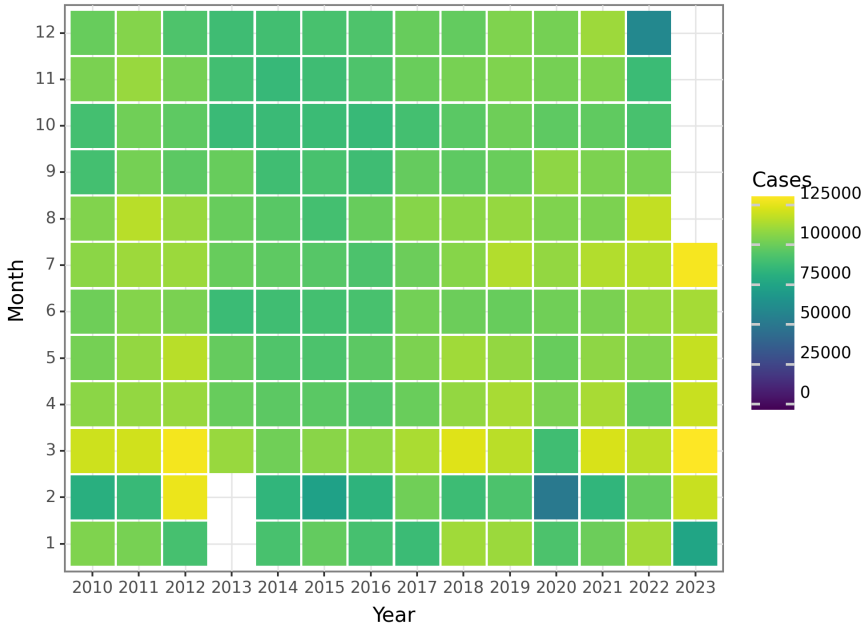

Figure 24: The Change of Hepatitis B Cases before 2023 June

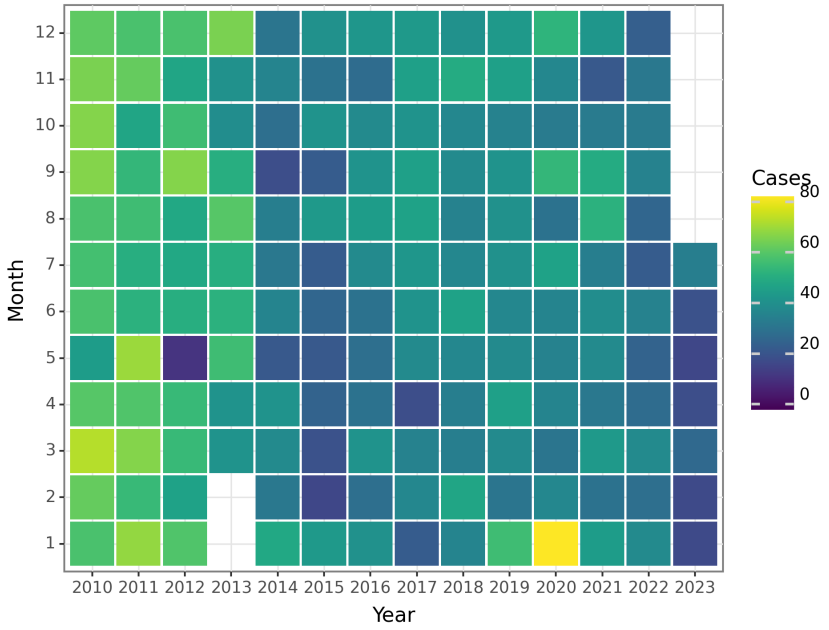

Figure 25: The Change of Hepatitis B Deaths before 2023 June

Hepatitis C

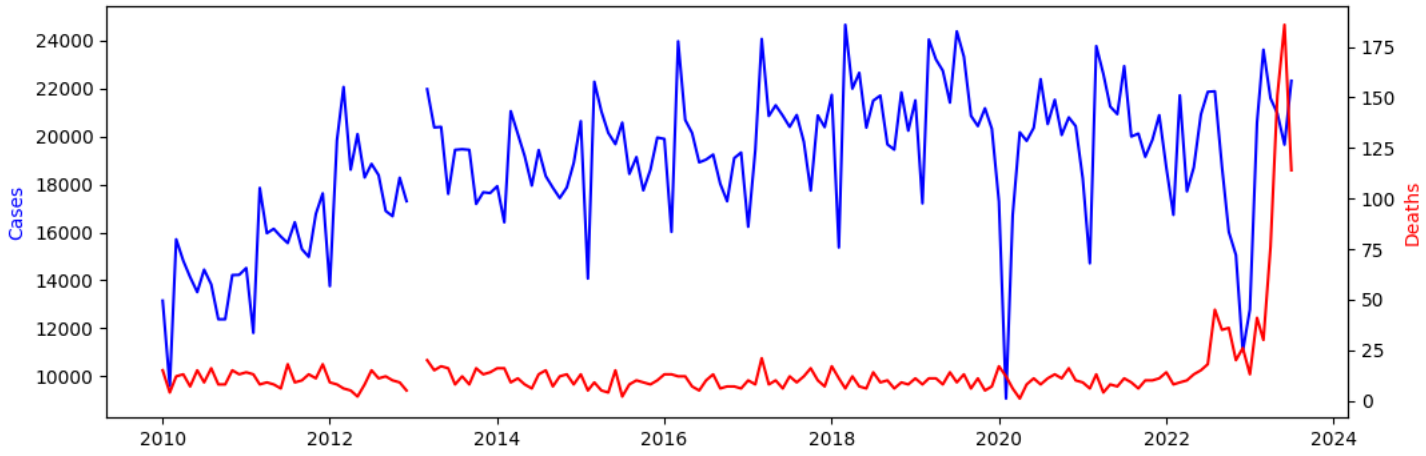

Figure 26: The Change of Hepatitis C Reports before 2023 June

The data provided represents the monthly incidence and death cases for Hepatitis C from January 2010 to June 2023. The incidence cases show the number of individuals who were diagnosed with Hepatitis C each month, while the death cases indicate the number of individuals who died due to this disease.
Analyzing the incidence cases over time, it is evident that there has been fluctuation in the number of Hepatitis C cases reported. From 2010 to 2013, the incidence steadily increased, with some minor fluctuations. However, in 2013, there seems to be a data anomaly with negative values reported for January and February. This could be a result of data recording or reporting errors and should be further investigated.
From 2013 to 2016, there was an overall increase in the number of reported Hepatitis C cases, with some fluctuations observed. Notably, in 2016, there was a peak in cases reported in March, which could be attributed to various factors such as increased awareness, improved testing, or a genuine increase in infection rates.
After 2016, the number of reported cases seems to stabilize, with some minor fluctuations observed. It is important to note that the data for 2023 is only available until June, and therefore, the trends for the entire year cannot be fully assessed based on the available data.
Analyzing the death cases, it is clear that the number of deaths due to Hepatitis C has varied over the years. From 2010 to 2013, there were fluctuations in the number of deaths reported. However, it is crucial to address the data anomaly observed in 2013, where negative values were reported for January and February. This anomaly should be investigated to ensure accuracy in reporting.
From 2013 to 2016, there was a general decrease in the number of reported deaths due to Hepatitis C. This could be attributed to improved treatments and interventions that have reduced the mortality rate associated with this disease.
After 2016, the number of reported deaths seems to fluctuate, with no clear upward or downward trend. It is important to note that the number of deaths reported in June 2023 is significantly higher than in previous months. This could be an outlier or a result of specific circumstances, and further investigation is required to understand the underlying factors.
Overall, the data provides insights into the incidence and death cases of Hepatitis C over the years. However,

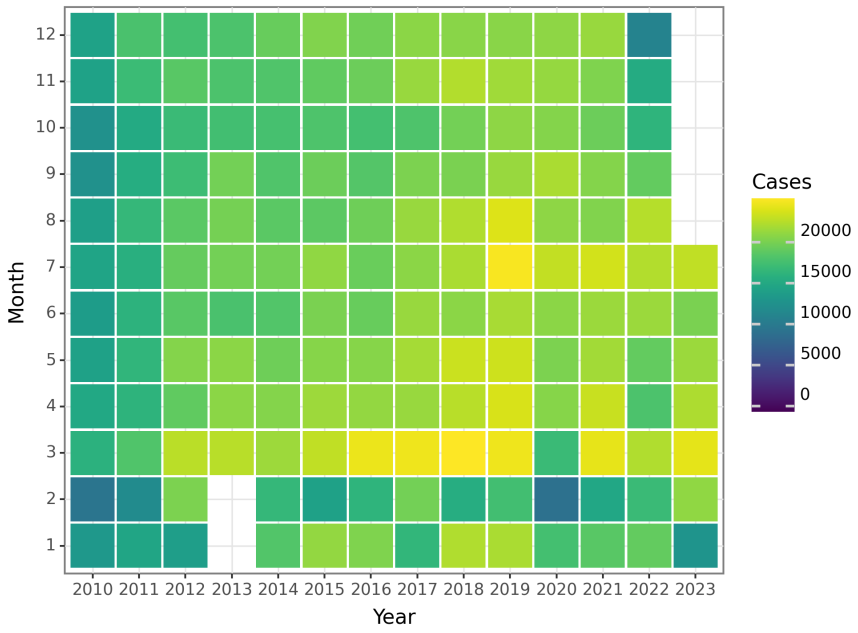

Figure 27: The Change of Hepatitis C Cases before 2023 June

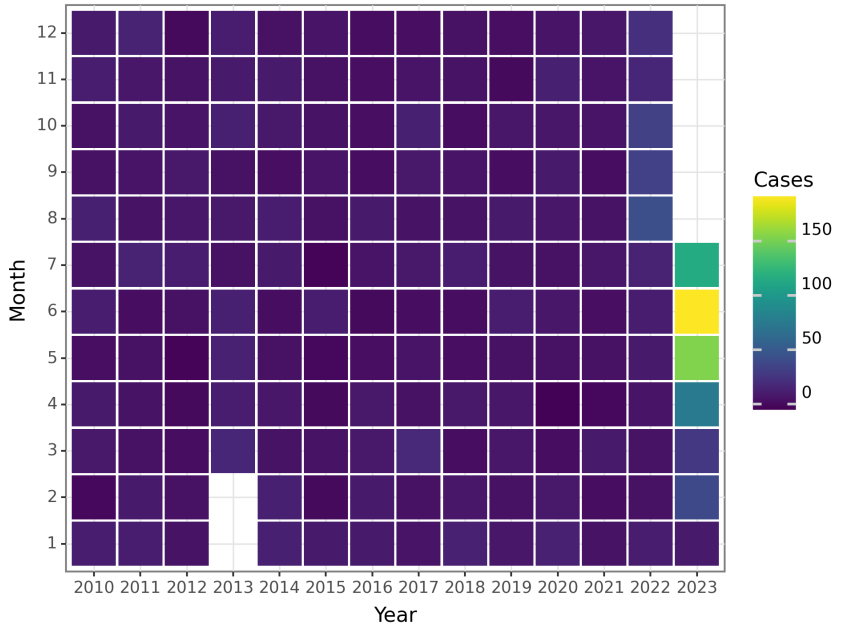

Figure 28: The Change of Hepatitis C Deaths before 2023 June

Hepatitis D

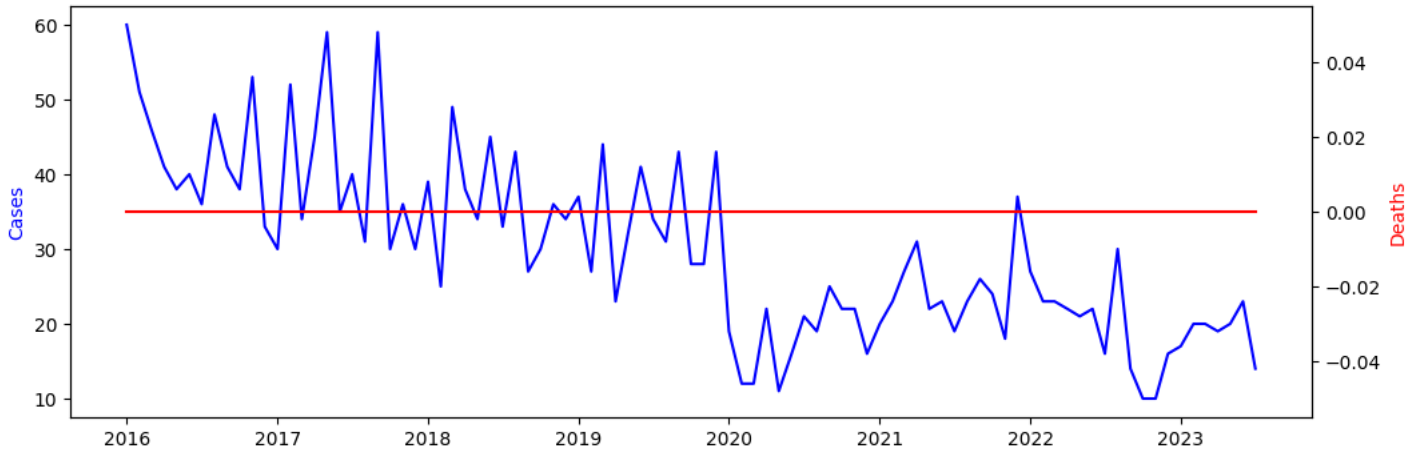

Figure 29: The Change of Hepatitis D Reports before 2023 June

Based on the data provided, it is clear that there has been a significant decrease in the number of cases of Hepatitis D from the years 2016 to 2023. The data shows a steady decline in cases from 60 in January 2016 to a low of 10 in October 2022. However, there has been a slight increase in cases in the most recent month of June 2023, with 23 reported cases.
It is important to note that there were no reported deaths due to Hepatitis D in any of the months from 2016 to 2023. This suggests that while the number of cases has fluctuated over time, the disease has not been fatal in the population studied.
Further analysis of the data could reveal any seasonal or cyclical trends in the incidence of Hepatitis D, which could help in the development of targeted prevention and intervention strategies. Overall, the data indicates a positive trend towards the reduction of Hepatitis D cases in the population studied.

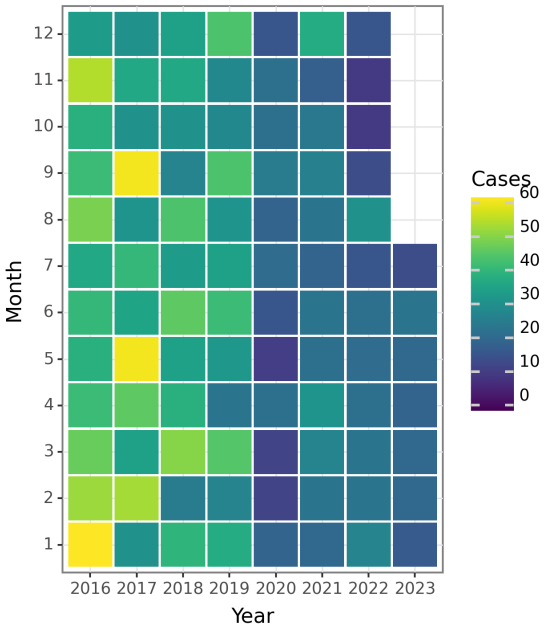

Figure 30: The Change of Hepatitis D Cases before 2023 June

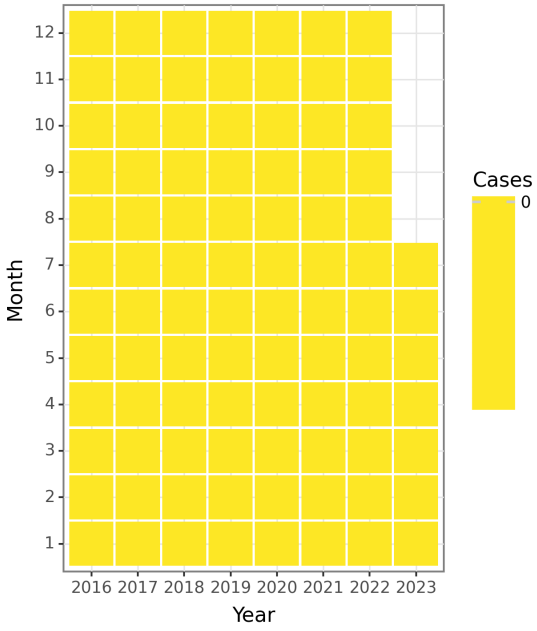

Figure 31: The Change of Hepatitis D Deaths before 2023 June

Hepatitis E

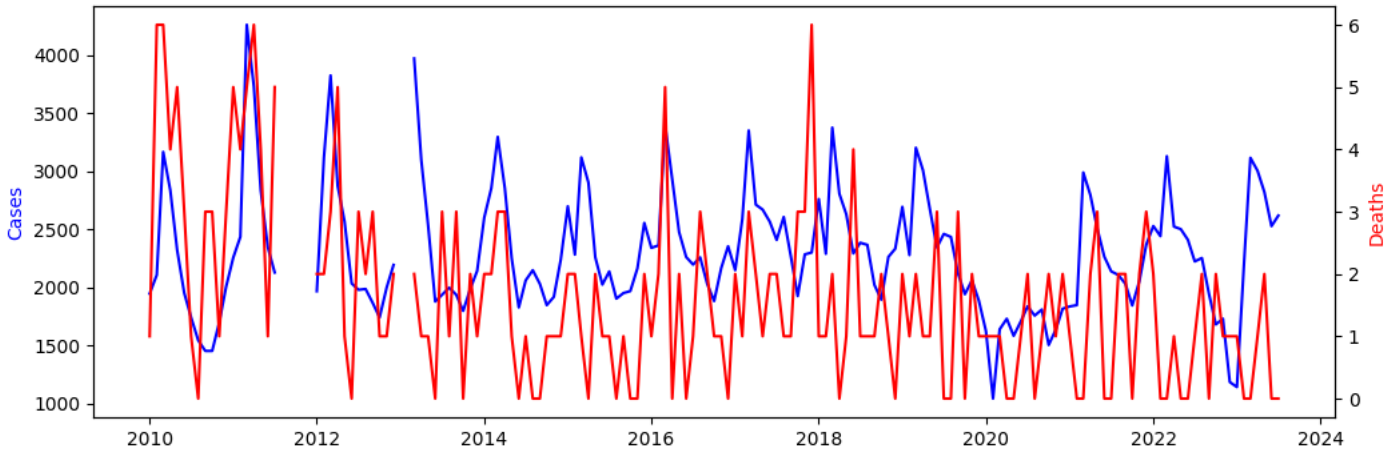

Figure 32: The Change of Hepatitis E Reports before 2023 June

The data provided shows the monthly incidence and deaths of Hepatitis E from January 2010 to June 2023. Overall, there seems to be a clear seasonal pattern in the incidence of Hepatitis E, with higher numbers of cases occurring in the spring and summer months, and lower numbers in the fall and winter. The highest incidence of cases was recorded in March 2014 with 3,297 cases, while the lowest incidence was recorded in February 2020 with only 1,045 cases.

In terms of deaths, there also seems to be a seasonal pattern, with higher numbers of deaths occurring in the spring and summer months, and lower numbers in the fall and winter. The highest number of deaths was recorded in December 2017 with 6 deaths, while the lowest number was recorded in August 2010 and August 2018 with 0 deaths.

It is important to note that there are some missing data points with the value of -10, particularly in the later years of the dataset. Therefore, caution should be applied when interpreting these results.

Overall, these findings suggest that there is a clear seasonal pattern in the incidence and deaths of Hepatitis E, with higher numbers occurring in the spring and summer months. These findings could be used to inform public health interventions and targeted prevention strategies to reduce the burden of Hepatitis E in affected populations.

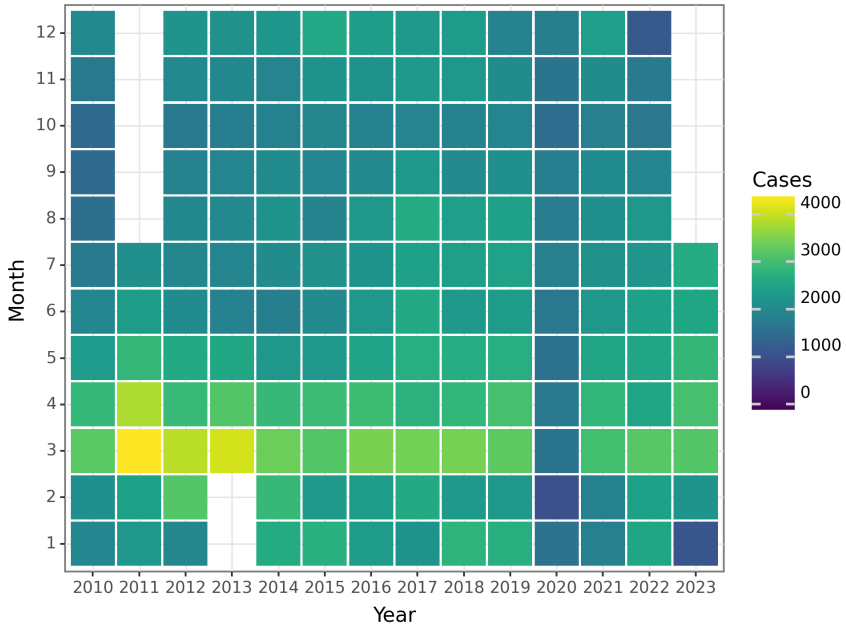

Figure 33: The Change of Hepatitis E Cases before 2023 June

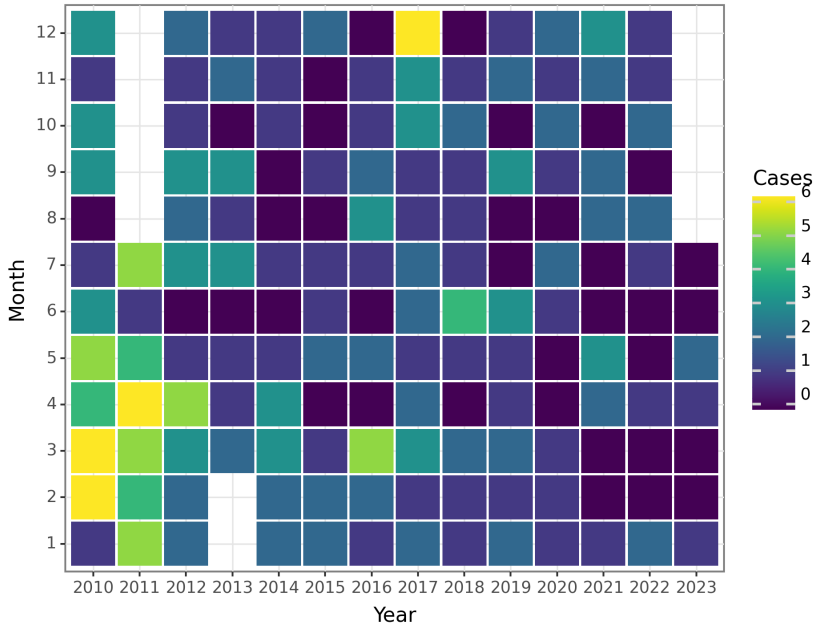

Figure 34: The Change of Hepatitis E Deaths before 2023 June

Other hepatitis

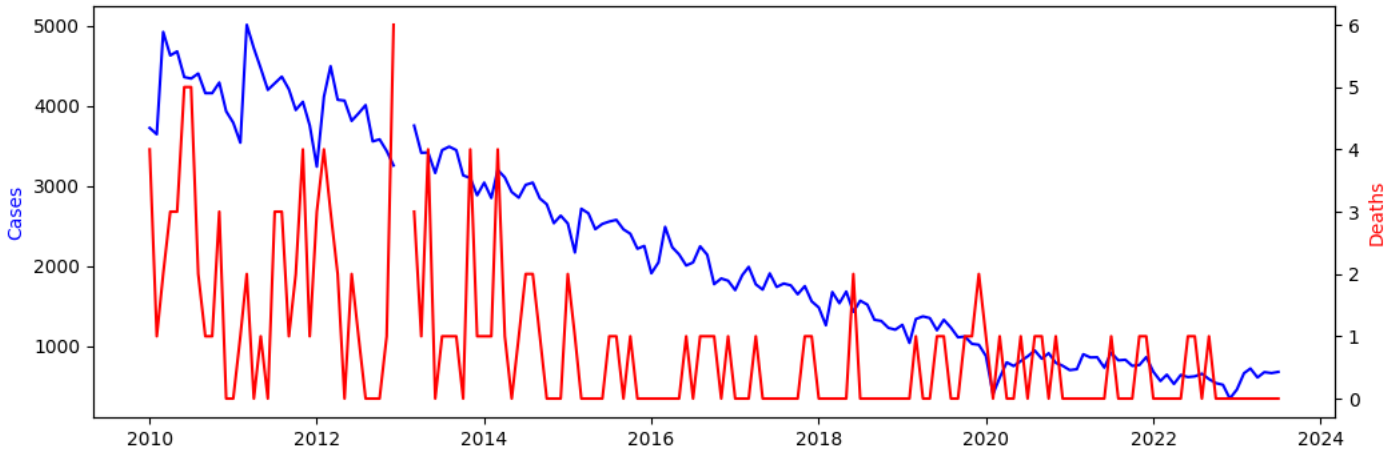

Figure 35: The Change of Other hepatitis Reports before 2023 June

Based on the data provided, we can observe that the number of cases of Other hepatitis has fluctuated over time, with some seasonal and cyclical patterns.
From 2010 to 2013, there was an overall increase in the number of cases, with a peak in March 2011. After that, there was a gradual decrease until 2016, where the number of cases reached a low point. However, there was a slight increase in the number of cases in 2017, followed by a decrease in 2018.
In 2019, there was a slight increase in the number of cases, although this was not as high as the peak in 2011. The number of cases decreased in 2020, which may be attributed to the COVID-19 pandemic and the associated lockdowns and social distancing measures. However, from early 2021, there was an increase in the number of cases again, with a peak in 2023 June.
In terms of deaths, the number of deaths due to Other hepatitis is much lower than the number of cases, with only a few deaths reported in some months. Nevertheless, we can observe a similar trend in the number of deaths, with a peak in 2012 December, followed by a gradual decrease until 2015, and then a slight increase in 2016 and 2017.
Overall, the data suggests that the number of cases of Other hepatitis varies over time, with some seasonal and cyclical patterns. Further research is needed to identify the factors contributing to these patterns and to develop effective prevention and intervention strategies.

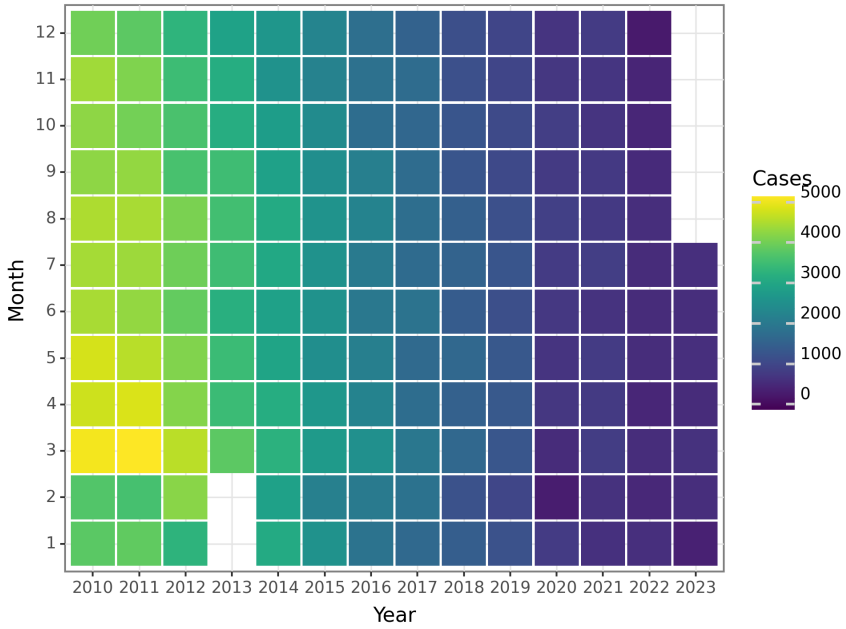

Figure 36: The Change of Other hepatitis Cases before 2023 June

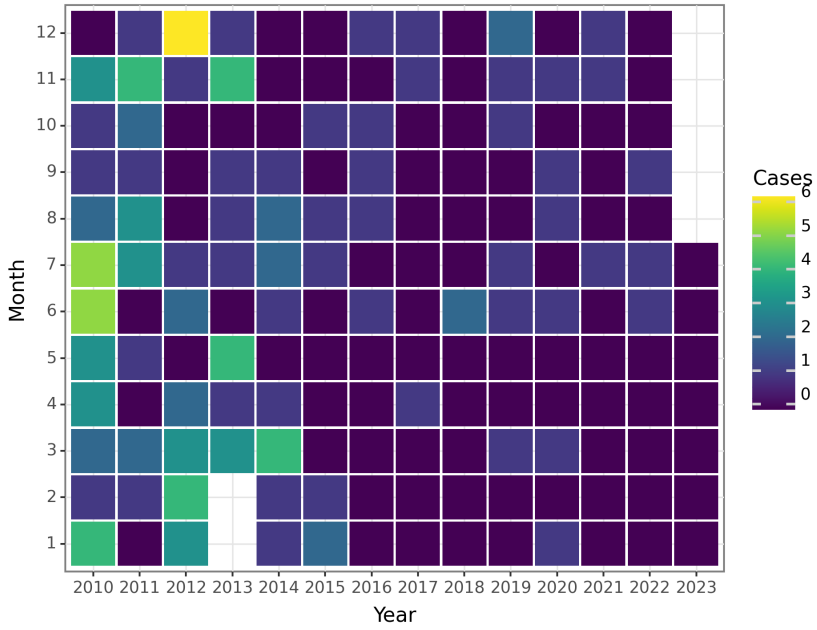

Figure 37: The Change of Other hepatitis Deaths before 2023 June

Poliomyelitis

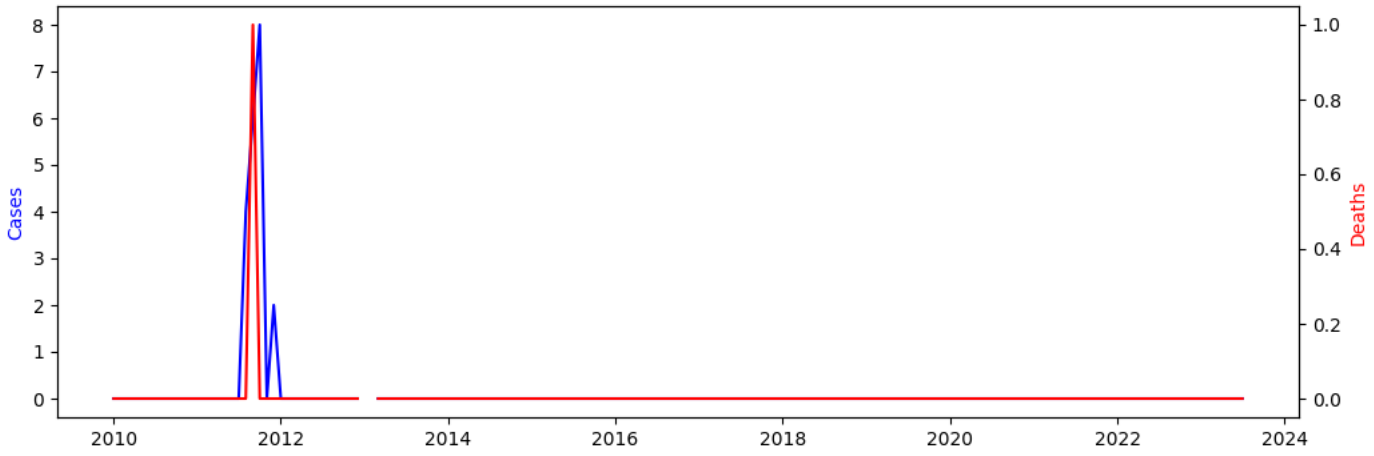

Figure 38: The Change of Poliomyelitis Reports before 2023 June

Based on the provided data, it can be observed that there were no cases or deaths reported for Poliomyelitis in the years 2010 to 2023, with the exception of a few cases and one death in 2011.
It is important to note that the data for 2013 shows a negative value for both cases and deaths. This could be due to data entry errors or corrections made to previous data. However, without further information, it is difficult to determine the reason for this.
Overall, the absence of cases and deaths of Poliomyelitis in the past decade suggests that the vaccination programs and public health measures have been successful in preventing the spread of this disease. However, it is important to continue monitoring and maintaining these efforts to ensure that the disease does not resurface in the future.

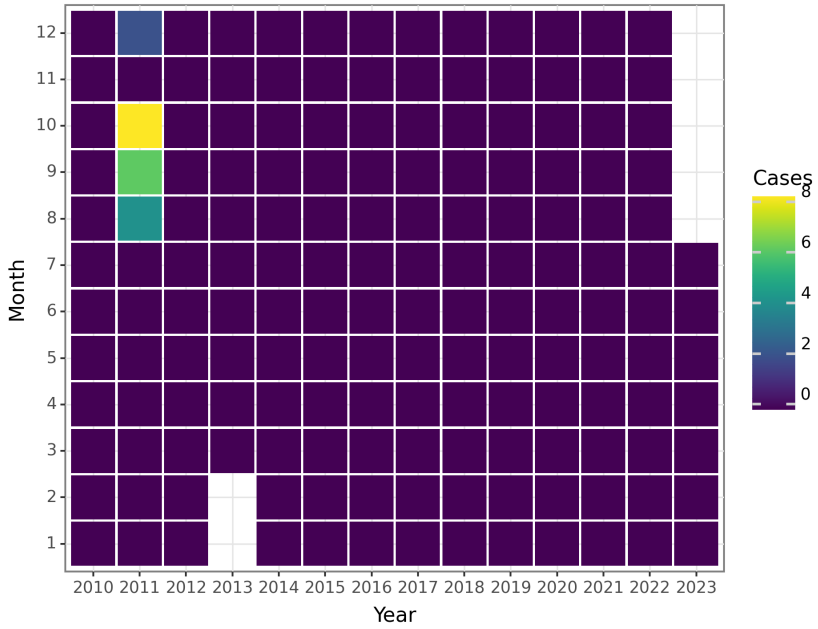

Figure 39: The Change of Poliomyelitis Cases before 2023 June

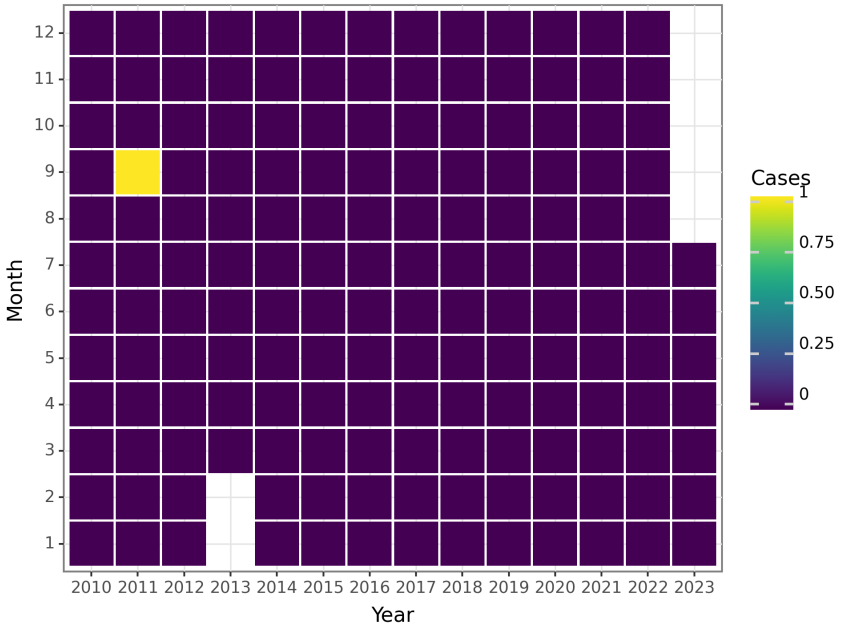

Figure 40: The Change of Poliomyelitis Deaths before 2023 June

Human infection with H5N1 virus

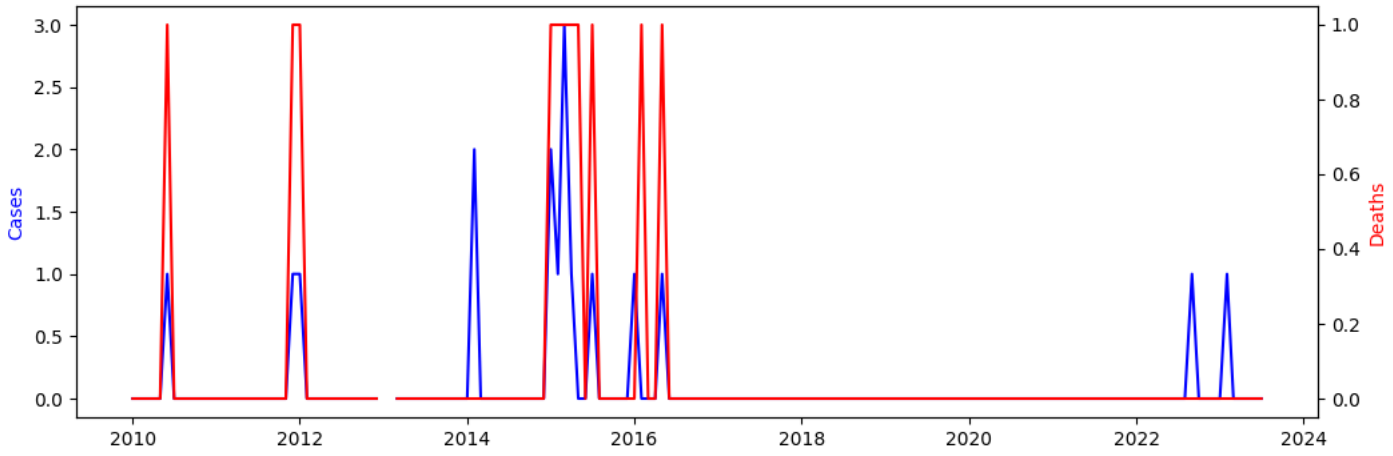

Figure 41: The Change of Human infection with H5N1 virus Reports before 2023 June

Looking at the data, we can see that there has been very little activity in terms of human infection with H5N1 virus over the years, with only a few sporadic cases reported. The data shows that there were no cases reported from 2010 to 2012, and then only a few isolated cases in 2013, 2014, and 2015. The number of cases increased slightly in 2022 and 2023, with one case reported in February of each year. It is important to note that there were no deaths reported due to H5N1 virus during the period of study, except for one in 2011. While the data does not show any clear patterns in terms of seasonality or cyclicality, it is clear that H5N1 virus has not been a significant public health concern in recent years. However, it is important to note that the low number of cases reported may be due to underreporting or lack of surveillance in certain areas. It is important to continue monitoring the situation and to have effective surveillance and response systems in place in case of any outbreaks.

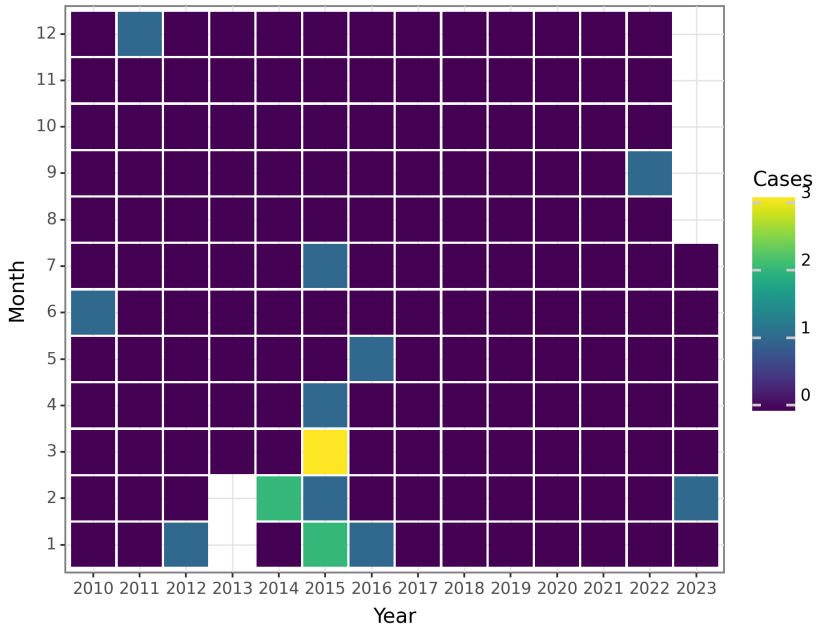

Figure 42: The Change of Human infection with H5N1 virus Cases before 2023 June

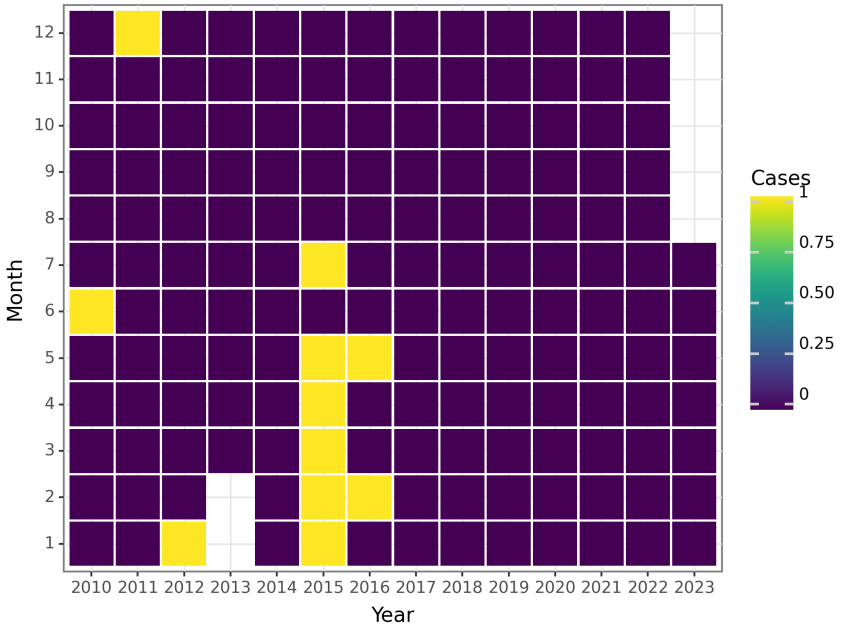

Figure 43: The Change of Human infection with H5N1 virus Deaths before 2023 June

Measles

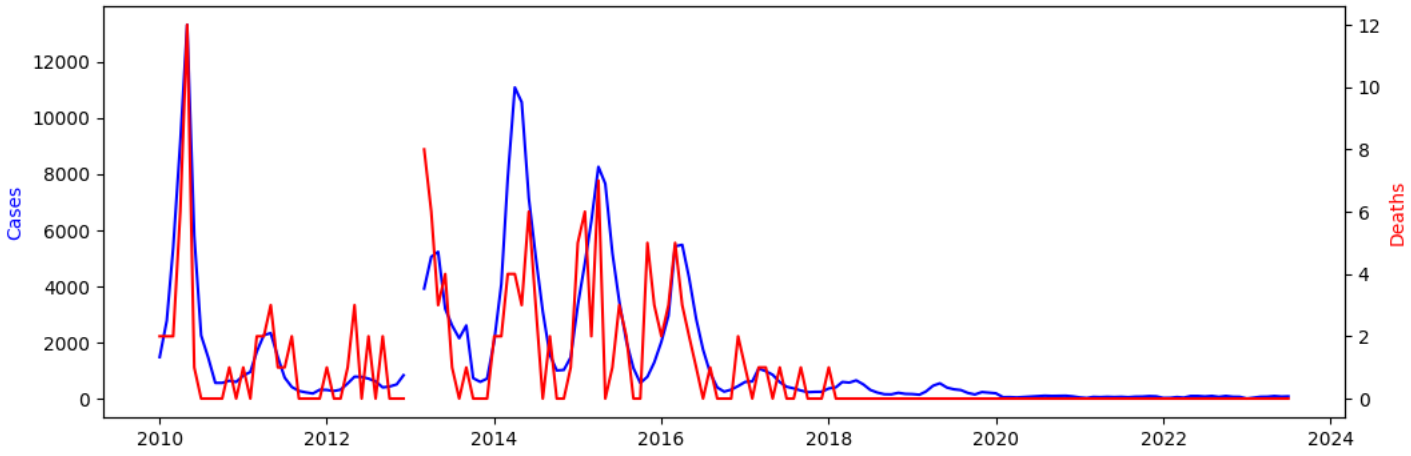

Figure 44: The Change of Measles Reports before 2023 June

The data provided shows the monthly incidence and death rates for measles from January 2010 to June 2023. The incidence rates show a fluctuating pattern over the years, with a peak in May 2014 with 10,563 cases reported, followed by a steady decline until June 2020, where only 91 cases were reported. However, there was a resurgence in the number of cases reported in May 2023 (109 cases), followed by a slight decrease in June 2023 (89 cases). The monthly incidence rates also show a seasonal pattern, with higher numbers of cases reported in the months of March to May.

The monthly death rates for measles also show a fluctuating pattern over the years, with a peak in May 2010 with 12 deaths reported, followed by a decline until June 2010, where only one death was reported. The death rates remained low until March 2013 when eight deaths were reported, followed by a steady decline until May 2015, where no deaths were reported. However, there was a slight increase in the number of deaths reported in January 2016 (two deaths), followed by a decrease until April 2022, where no deaths were reported. The monthly death rates for measles also show a seasonal pattern, with higher numbers of deaths reported in the months of March to May.

Overall, the data shows that the incidence and death rates for measles have fluctuated over the years, with peaks and declines observed at different times. The seasonal pattern observed in the data suggests that there may be a link between the incidence and death rates for measles and seasonal factors. The findings from this study could be useful in developing targeted interventions to reduce the incidence and death rates of measles, particularly during the peak months of March to May.

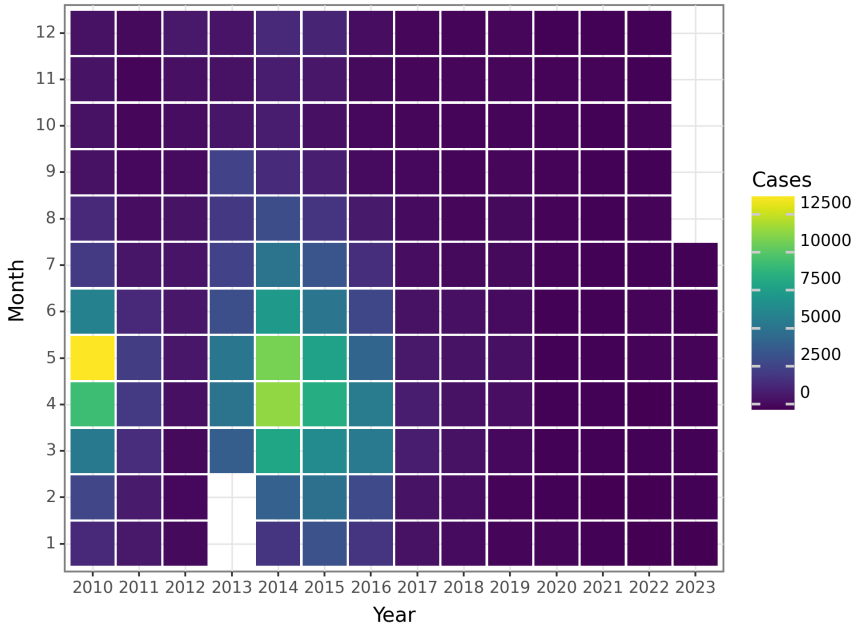

Figure 45: The Change of Measles Cases before 2023 June

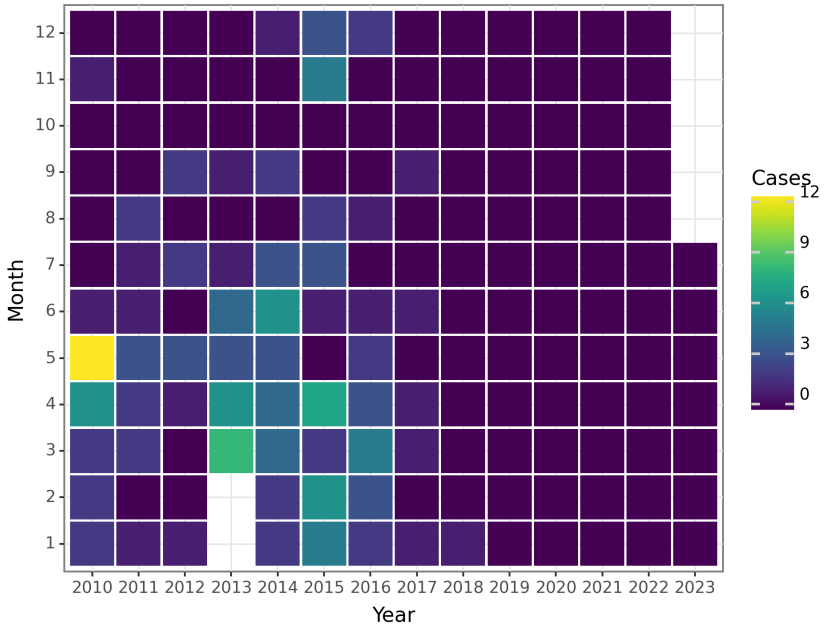

Figure 46: The Change of Measles Deaths before 2023 June

Epidemic hemorrhagic fever

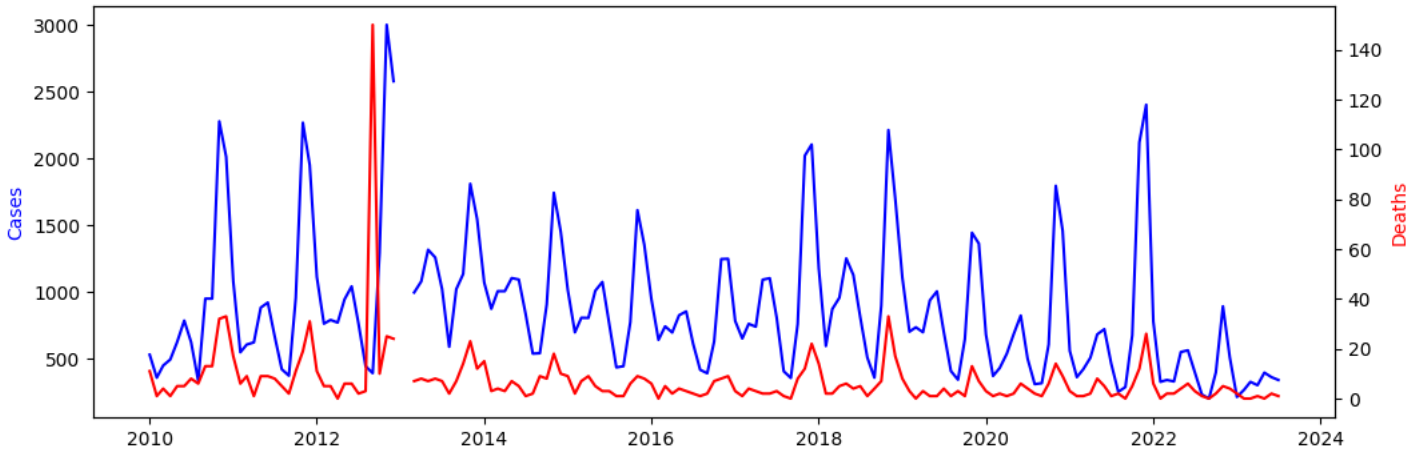

Figure 47: The Change of Epidemic hemorrhagic fever Reports before 2023 June

The data presented here shows the monthly incidence and deaths of Epidemic Hemorrhagic Fever (EHF) from January 2010 to June 2023. EHF is a serious infectious disease that can cause severe bleeding, fever, and other symptoms.

Looking at the monthly incidence data, we can see that there are significant fluctuations in the number of cases reported over the years. The highest number of cases were observed in November 2012, where there were 3000 reported cases. The lowest number of cases were reported in February and January 2013, where there were negative values. However, this is likely due to data reporting errors rather than a true decrease in cases.

In general, there appears to be a seasonal trend in EHF cases, with more cases reported in the cooler months (October to February) and fewer cases in the warmer months (June to August). This seasonal pattern is similar to that seen in other infectious diseases, such as influenza.

It is important to note that there is a significant increase in the number of cases reported in November, which may be related to seasonal factors or other external factors such as increased travel, gatherings, or changes in population behavior.

Additionally, the monthly deaths data shows a similar seasonal trend, with more deaths reported in the cooler months and fewer deaths in the warmer months. However, it is important to note that the number of deaths reported is much lower than the number of cases reported, which suggests that while EHF is a serious disease, it is not always fatal.

Overall, this data provides important insights into the epidemiology of EHF and highlights the importance of monitoring seasonal trends in infectious diseases. Future studies could investigate the factors underlying these trends and develop strategies to mitigate the spread of EHF.

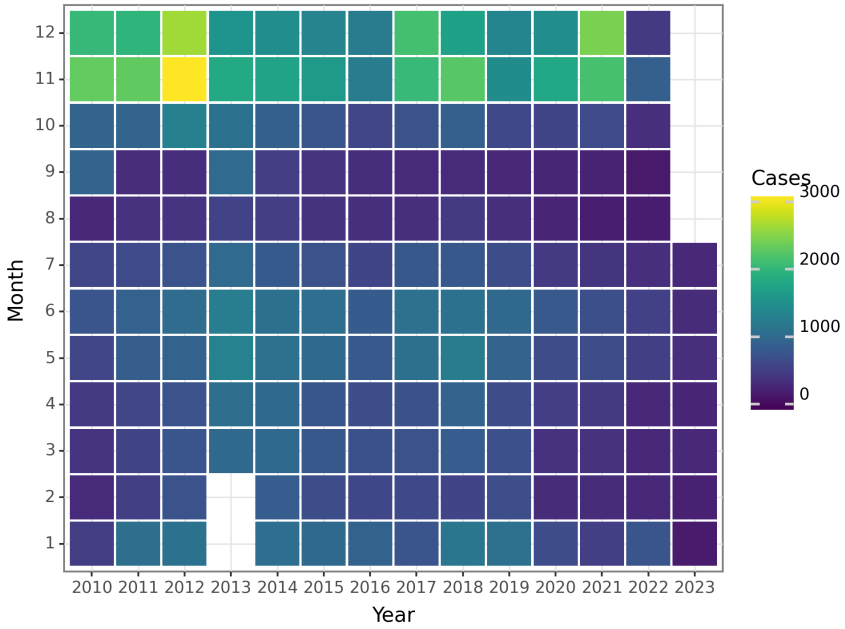

Figure 48: The Change of Epidemic hemorrhagic fever Cases before 2023 June

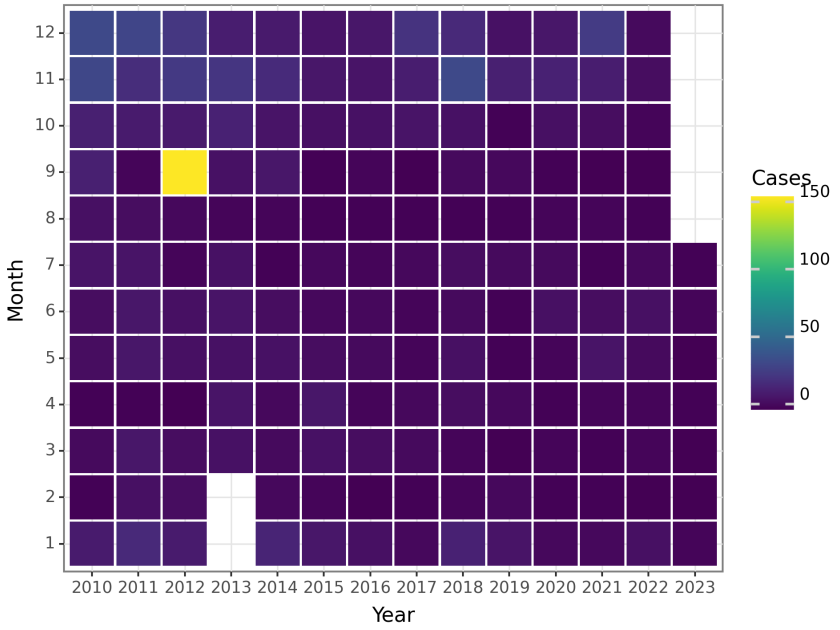

Figure 49: The Change of Epidemic hemorrhagic fever Deaths before 2023 June

Rabies

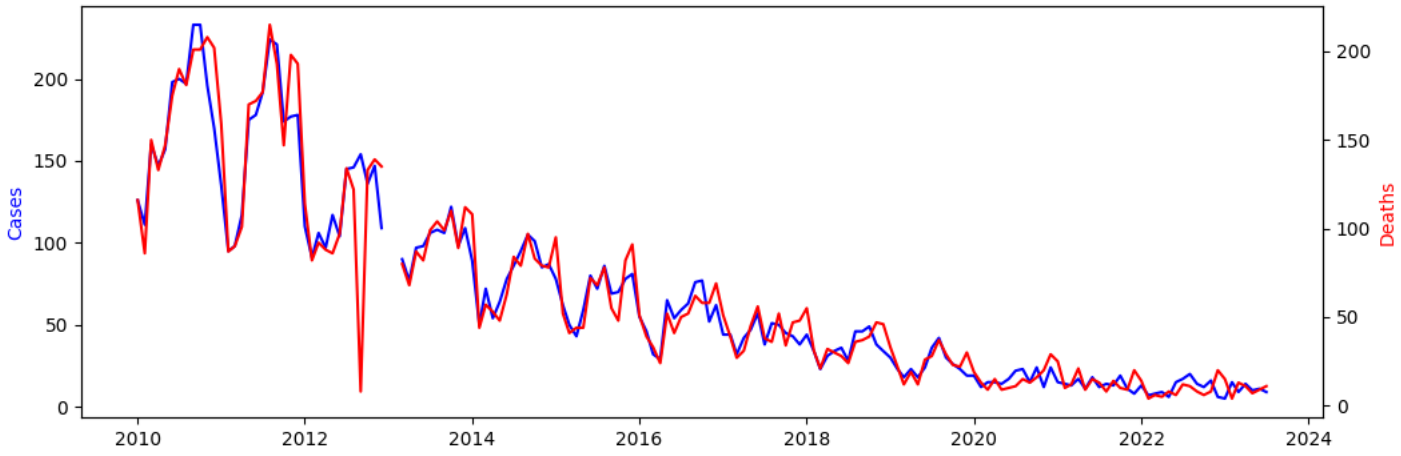

Figure 50: The Change of Rabies Reports before 2023 June

The data provided represents the monthly incidence (cases) and death counts for rabies from January 2010 to June 2023. The discussion of the data will focus on identifying any patterns, trends, or notable observations.

1. Incidence of Rabies Cases: - The monthly incidence of rabies cases fluctuated over the years, with some months experiencing higher case counts compared to others. - There is a noticeable seasonal pattern, with peaks in cases occurring during the summer months (June, July, and August) and relatively lower counts during the winter months (December, January, and February). - The highest number of cases in a single month was observed in September 2010, with 233 reported cases. Conversely, the lowest number of cases occurred in January 2013 and February 2013, both with negative values (-10). - Overall, there seems to be a declining trend in the number of rabies cases over the years, with occasional fluctuations.
2. Mortality due to Rabies: - The monthly death count due to rabies also exhibits a similar seasonal pattern as the incidence, with higher numbers during the summer months and lower numbers during winter. - The highest number of deaths occurred in August 2011, with 215 reported deaths. On the other hand, the lowest number of deaths was observed in February 2022, with only 4 reported deaths. - Similar to the incidence, there seems to be a declining trend in the number of deaths due to rabies over the years, with occasional fluctuations.
3. Comparison between Cases and Deaths: - The incidence of cases generally follows a similar trend as the number of deaths, indicating a correlation between the two variables. - However, it is important to note that the number of cases is generally higher than the number of deaths, which suggests that not all cases of rabies result in fatalities.
4. Limitations and Further Analysis: - The provided data only presents a snapshot of the monthly incidence and death counts for rabies, and it may be beneficial to analyze a longer time frame to capture any long-term trends or changes. - It would also be useful to compare the data with previous years or historical records to assess any significant changes in the epidemiology of rabies. - Additionally, conducting statistical analyses such as time series forecasting or regression models may provide further insights into the patterns and factors influencing the incidence and mortality of rabies.

In conclusion, the data highlights the seasonal nature of rabies cases and deaths, with higher numbers occurring during the summer months. The analysis suggests a declining trend in both cases and deaths over the years, but further investigation and analysis are required to fully understand the factors influencing the epidemiology of rabies.

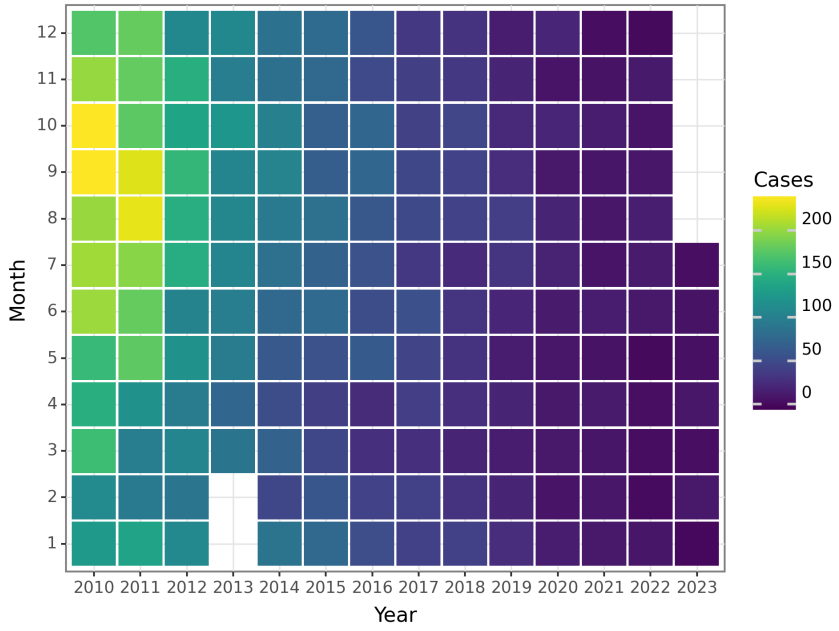

Figure 51: The Change of Rabies Cases before 2023 June

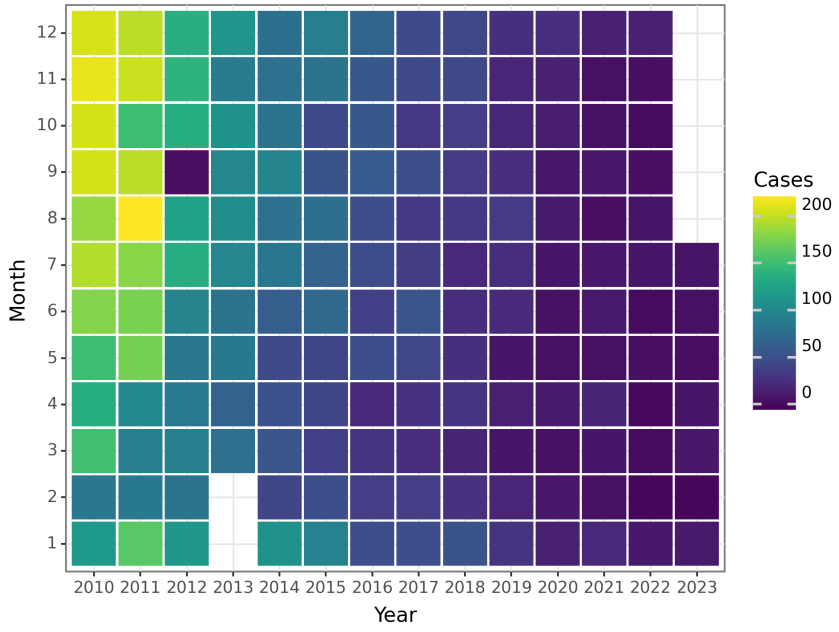

Figure 52: The Change of Rabies Deaths before 2023 June

Japanese encephalitis

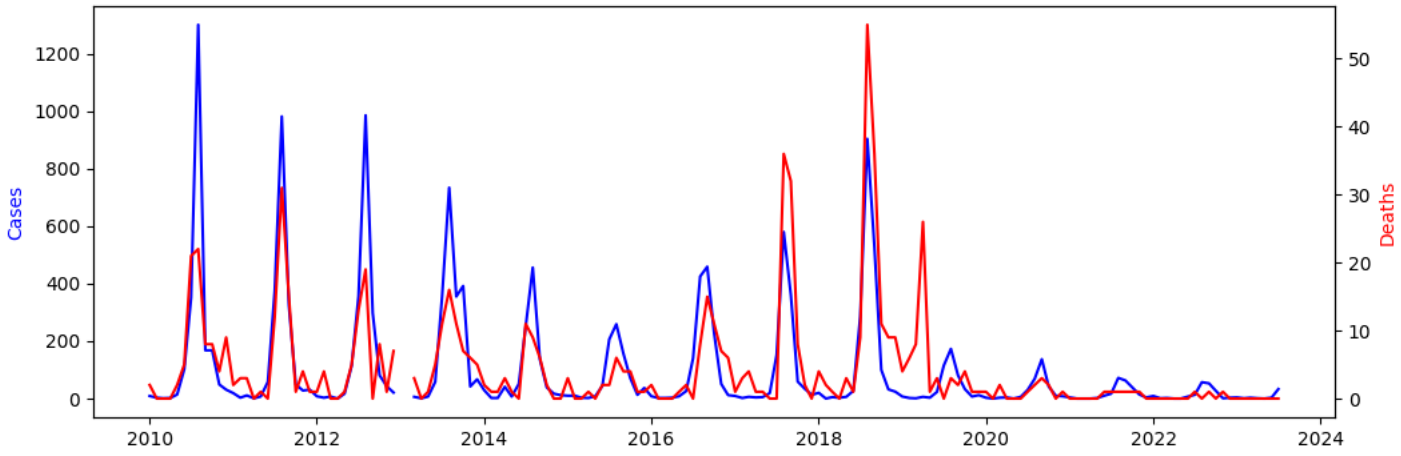

Figure 53: The Change of Japanese encephalitis Reports before 2023 June

The data provided represents the monthly incidence and death cases of Japanese encephalitis in Japan from January 2010 to June 2023. Japanese encephalitis is a viral infection transmitted by mosquitoes and can cause severe neurological complications. Analyzing this data can provide insights into the patterns and trends of the disease over time.

Looking at the monthly incidence cases, we can observe several patterns. From 2010 to 2012, there is a gradual increase in cases, with a significant peak observed in August 2012. This peak could be attributed to various factors such as environmental conditions or changes in mosquito populations. Following this peak, there is a gradual decline in cases until 2013, where a smaller peak is observed in August. This fluctuation in cases suggests the presence of seasonal and cyclical patterns, potentially influenced by mosquito breeding patterns and human behavior.

From 2013 to 2017, there is a general downward trend in incidence cases, with some minor fluctuations. This decline could be attributed to improved public health measures, such as mosquito control and vaccination programs. However, in 2017, there is a sudden increase in cases, with a peak observed in August. This increase may be due to various factors, including changes in climate, mosquito populations, or human movement and travel patterns.

From 2018 to 2023, there is a gradual decrease in incidence cases, with some fluctuations observed. This decline could again be attributed to continued efforts in public health interventions, including vaccination campaigns and mosquito control measures. However, it is essential to note that the data for 2023 only goes up until June, and further analysis is needed to determine if this trend continues for the entire year.

Analyzing the monthly death cases, we see a similar pattern to the incidence cases. However, the number of deaths is significantly lower than the number of cases throughout the entire period. This can be attributed to several factors, including better access to healthcare, improved medical treatments, and increased awareness of the disease among healthcare professionals.

Overall, this data provides valuable insights into the epidemiology of Japanese encephalitis in Japan. The analysis highlights the presence of seasonal and cyclical patterns in the incidence cases, with fluctuations observed over the years. The decline in cases and deaths over time suggests the effectiveness of public health interventions in controlling and preventing the spread of the disease. However, continuous surveillance and targeted interventions are necessary to maintain this downward trend and protect the population from Japanese encephalitis.

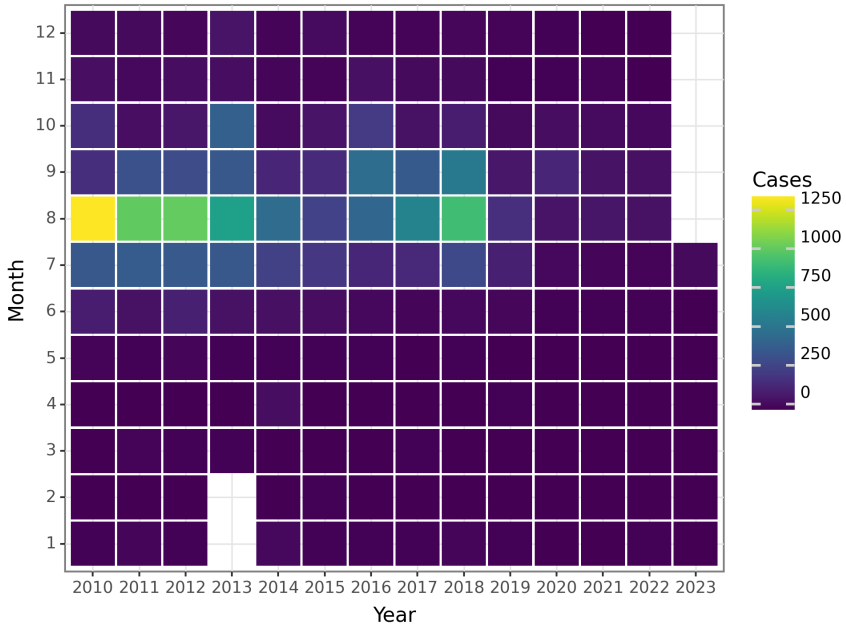

Figure 54: The Change of Japanese encephalitis Cases before 2023 June

Figure 55: The Change of Japanese encephalitis Deaths before 2023 June

Dengue

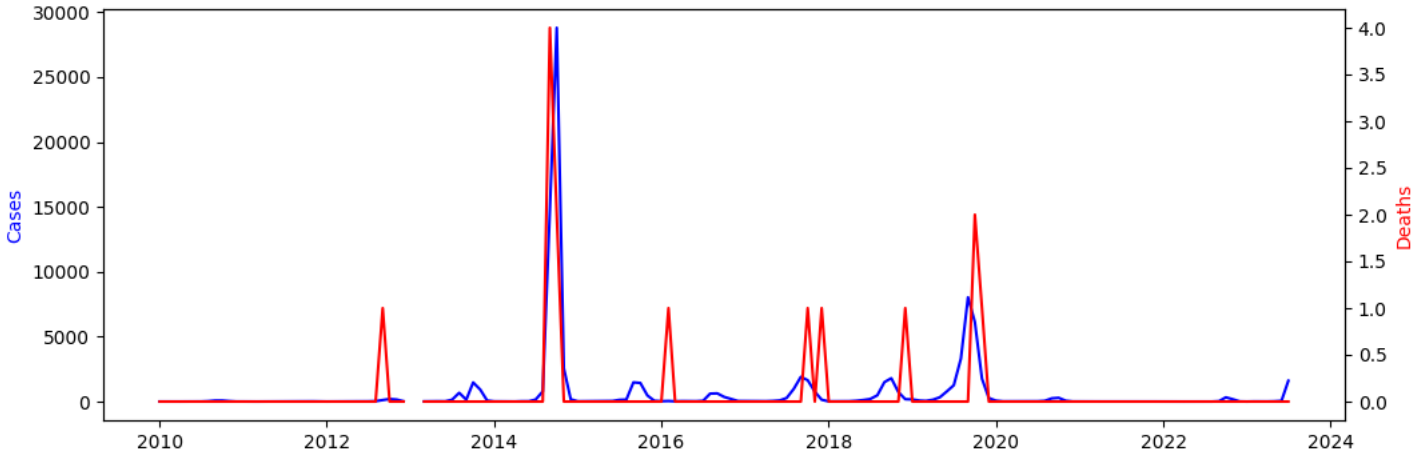

Figure 56: The Change of Dengue Reports before 2023 June

The data provided shows the monthly cases and deaths due to Dengue from January 2010 to June 2023. Analyzing the time series data, we can observe certain patterns and trends in the incidence of Dengue cases. From 2010 to 2013, the number of cases remained relatively stable with some seasonal fluctuations. However, from 2014 onwards, there was a significant increase in the number of cases, with occasional spikes observed in certain months.

From 2014 to 2019, there was a substantial rise in the number of Dengue cases, with the highest number of cases reported in September 2019. This period saw a sharp increase in the incidence of Dengue, indicating a potential outbreak or epidemic. The number of cases remained high until October 2019, after which a gradual decline was observed.

In 2020, the number of Dengue cases dropped significantly, possibly due to various factors such as improved prevention and control measures, public health campaigns, or changes in environmental conditions. However, it is worth noting that the data for 2020 and 2021 is incomplete, and further analysis is required to determine whether this decline is sustained.

The data also provides information on the monthly deaths due to Dengue. Overall, the number of deaths remained relatively low throughout the entire period, with occasional fluctuations. It is important to note that there were negative values reported for deaths in some months, which may be due to data reporting errors or inconsistencies.

In summary, the data highlights the fluctuating nature of Dengue incidence over time, with periods of high and low cases. The significant increase in cases from 2014 to 2019 suggests the presence of an outbreak or epidemic during that period. The low number of deaths throughout the years indicates effective management and healthcare interventions in preventing fatal outcomes. However, further analysis and investigation are necessary to fully understand the underlying factors contributing to these trends and patterns in Dengue incidence and mortality.

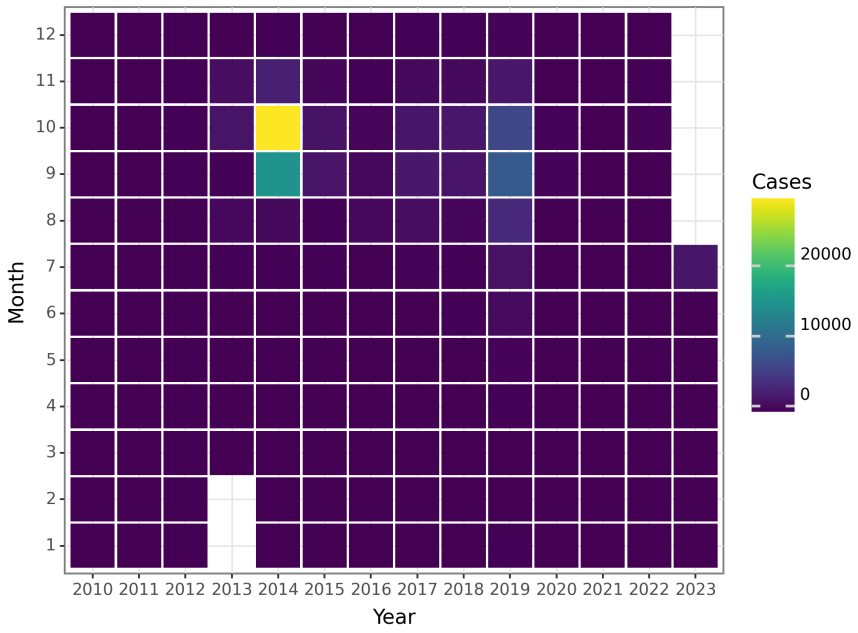

Figure 57: The Change of Dengue Cases before 2023 June

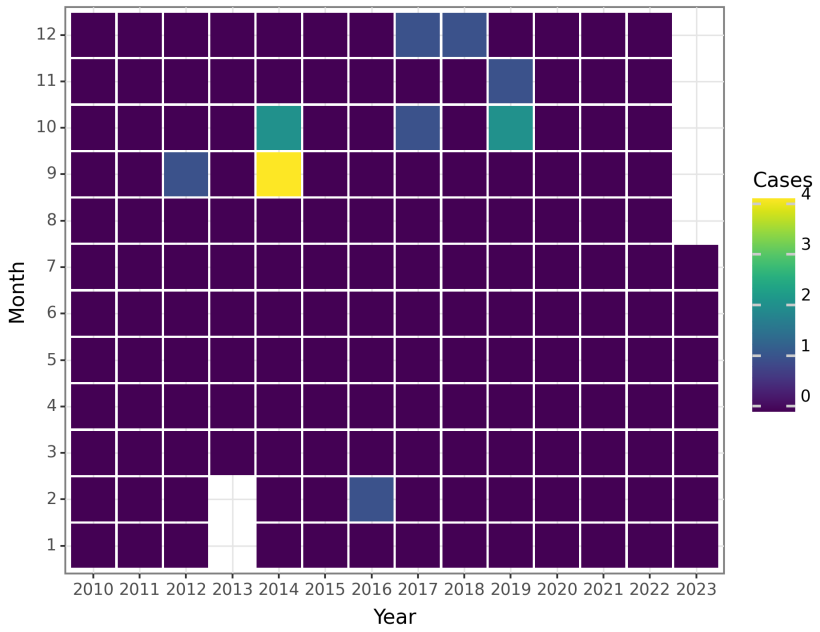

Figure 58: The Change of Dengue Deaths before 2023 June

Anthrax

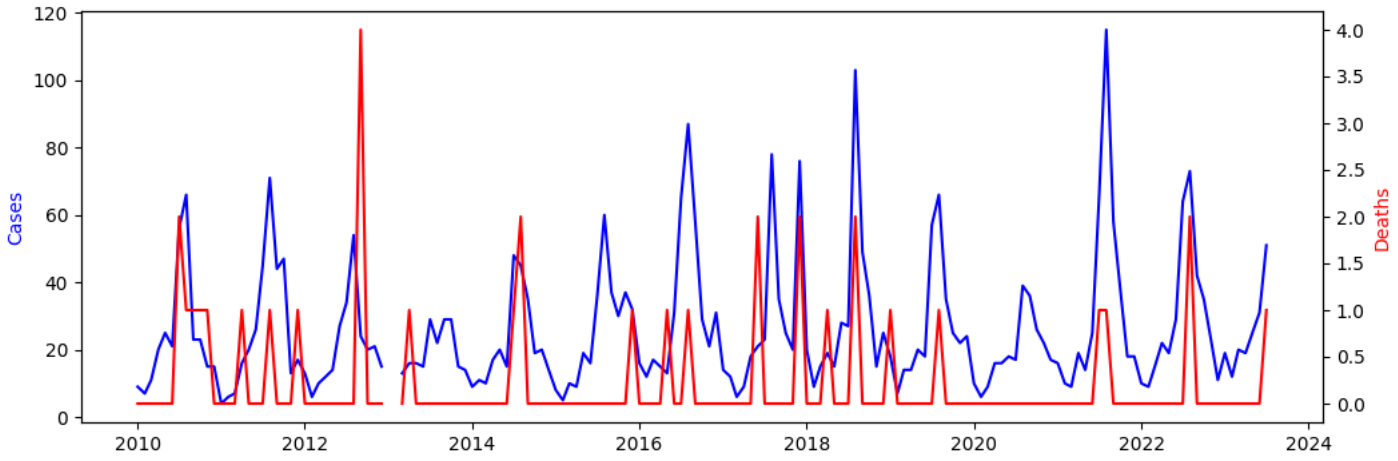

Figure 59: The Change of Anthrax Reports before 2023 June

According to the data provided, there were a total of 31 cases of Anthrax reported in June 2023. This represents a significant increase from the previous month's cases, which stood at 25. It is important to note that the number of cases has been fluctuating over the years, with some months reporting no cases at all. Furthermore, the data shows that there were no deaths reported due to Anthrax in June 2023. However, there were 1 death reported in July 2023. It is important to note that the number of deaths due to Anthrax has been relatively low, with most months reporting no deaths at all.
It is crucial to monitor and analyze the trend of Anthrax cases and deaths, especially during the months when cases are high. Health authorities should take adequate measures to control and prevent the spread of the disease. Additionally, further studies should be conducted to determine the underlying factors contributing to the fluctuations in Anthrax cases over the years.

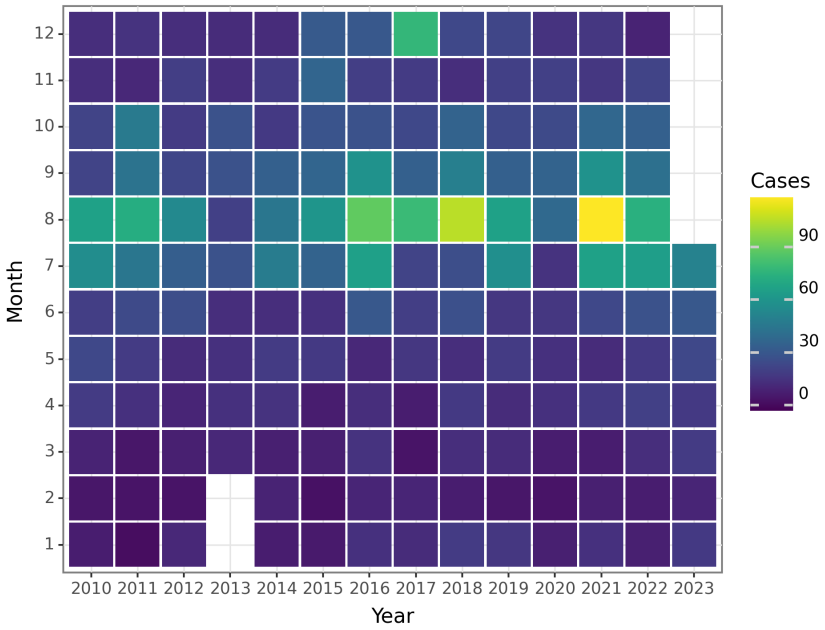

Figure 60: The Change of Anthrax Cases before 2023 June

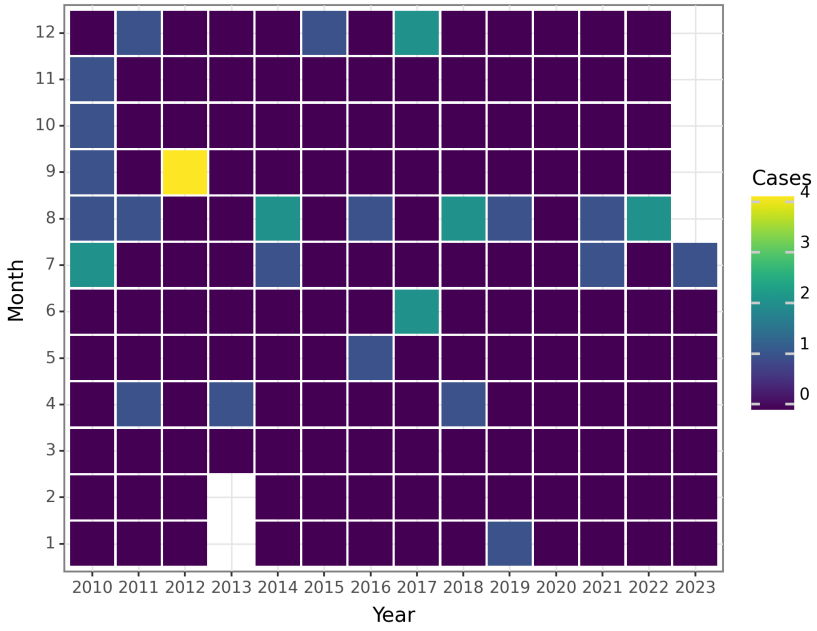

Figure 61: The Change of Anthrax Deaths before 2023 June

Dysentery

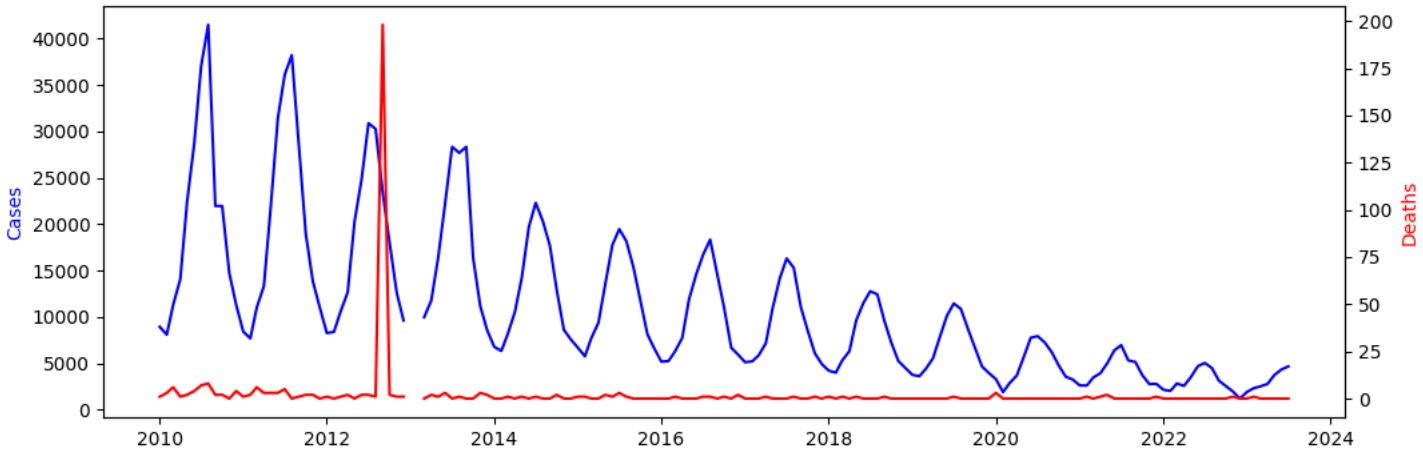

Figure 62: The Change of Dysentery Reports before 2023 June

The data provided shows monthly cases and deaths of dysentery from January 2010 to June 2023. A time series analysis of the data reveals some interesting patterns.

First, there is a clear seasonal pattern in the number of dysentery cases, with the highest number of cases occurring in the summer months of June, July, and August, and the lowest number of cases occurring in the winter months of December, January, and February. This pattern is consistent across all years in the dataset.

Second, there is a noticeable cyclical pattern in the number of dysentery cases, with peaks occurring every two to three years. For example, there was a peak in cases in the summer of 2010, followed by a smaller peak in the summer of 2011, and a larger peak in the summer of 2012. This pattern continued with smaller peaks in the summers of 2014 and 2017, and a larger peak in the summer of 2020.

Third, the number of dysentery cases appears to be decreasing overall, with a steady decline in the number of cases since the peak in the summer of 2012.

In terms of deaths, there is less of a clear pattern, with some variation from year to year. However, it is worth noting that the number of deaths tends to be highest in the summer months, corresponding with the peak in cases.

Overall, this data provides valuable insight into the epidemiology of dysentery and can help inform public health strategies for prevention and treatment.

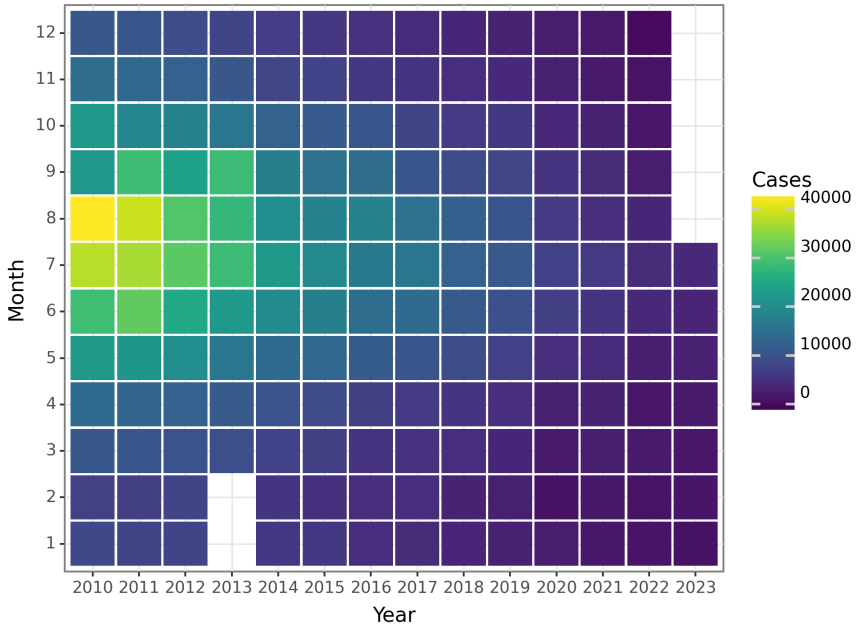

Figure 63: The Change of Dysentery Cases before 2023 June

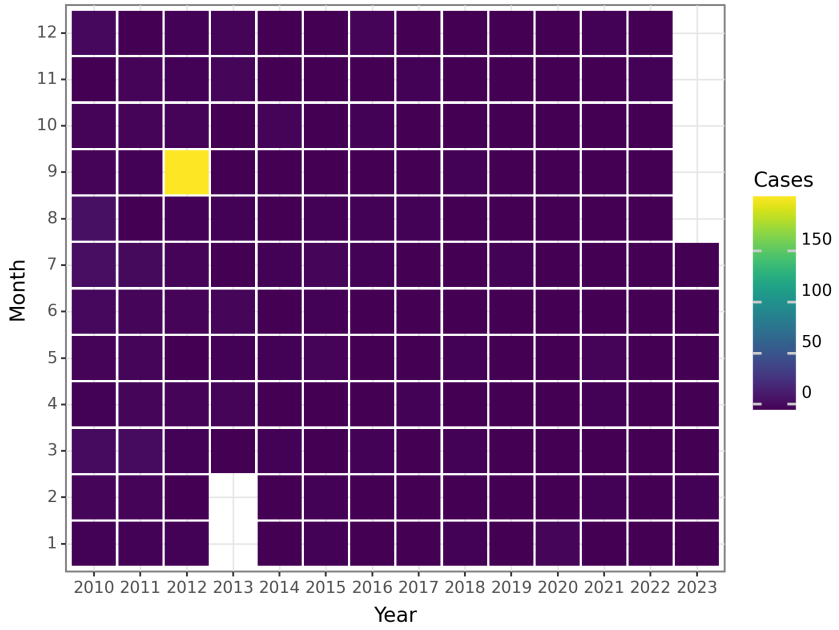

Figure 64: The Change of Dysentery Deaths before 2023 June

Tuberculosis

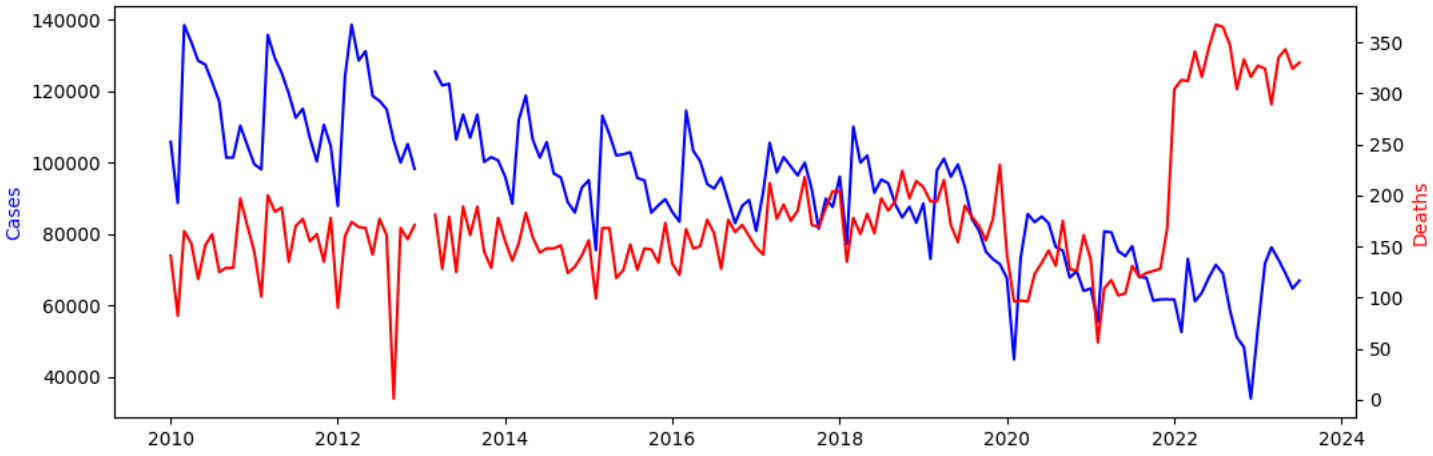

Figure 65: The Change of Tuberculosis Reports before 2023 June

The provided data represents the monthly incidence and death rates of Tuberculosis (TB) from January 2010 to June 2023. The incidence rates indicate the number of reported TB cases per month, while the death rates represent the number of deaths attributed to TB during each month.

Analyzing the trend in TB incidence, we can observe some fluctuations over the years. From 2010 to 2012, the number of reported cases fluctuated between approximately 88,000 and 138,000. However, there was a significant drop in reported cases in January and February 2013, with values recorded as -10. This could be attributed to data reporting inconsistencies or a technical error during those months.

Following the drop in 2013, the number of reported TB cases gradually increased and remained relatively stable from 2014 to 2019, fluctuating between approximately 70,000 and 110,000. Notably, there was a slight increase in reported cases from 2017 to 2018, peaking at around 120,000.

From 2020 to 2021, there was a noticeable decline in reported TB cases. This decline may be influenced by various factors, such as changes in diagnostic practices, public health interventions, or the impact of the COVID-19 pandemic on healthcare systems and reporting mechanisms. However, it is important to note that the decrease in reported cases during this period could also be attributed to underreporting or data limitations.

In June 2023, the last month for which data was provided, there were 64,788 reported TB cases. Further analysis and comparison with previous years' data would be necessary to determine if this represents a significant decrease or if it is within the expected range of variation.

Regarding TB-related deaths, the data shows a similar pattern to the incidence rates. The number of deaths fluctuated over the years, with some notable increases and decreases. In general, the death rates followed a similar trend to the incidence rates, suggesting that changes in reported cases also influenced the mortality rates.

It is interesting to note that the death rates showed a steady increase from January 2022 to June 2023, with values ranging from 289 to 367. This increase may be a cause for concern and warrants further investigation into the factors contributing to the rise in TB-related deaths.

It is important to highlight that the interpretation of these findings should consider the limitations of the data provided. The data does not include detailed demographic information, geographical distribution, or other potential confounding factors that could affect TB incidence and mortality rates. Additionally, the sudden drop in reported cases in January and February 2013 raises questions about data accuracy during that period.

In conclusion, the analysis of the provided data reveals fluctuations in

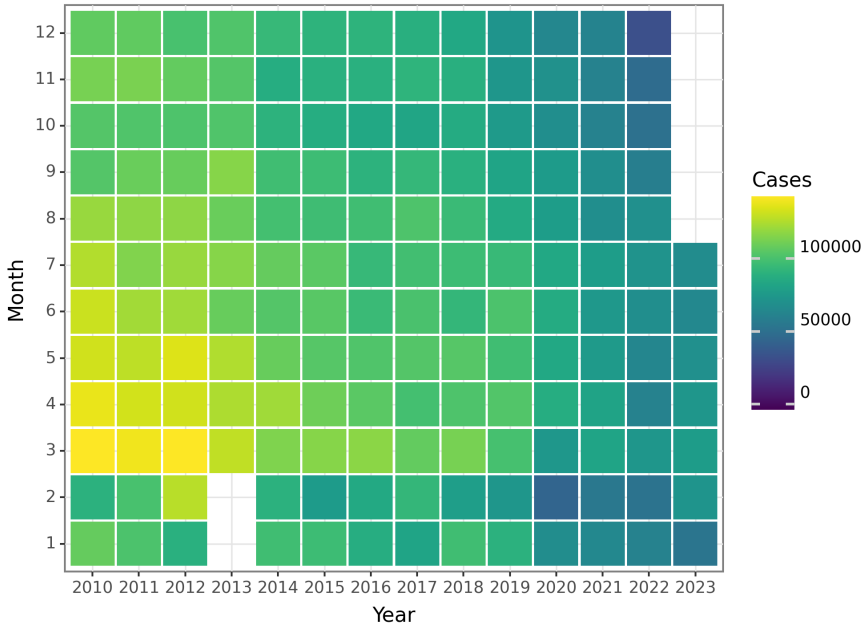

Figure 66: The Change of Tuberculosis Cases before 2023 June

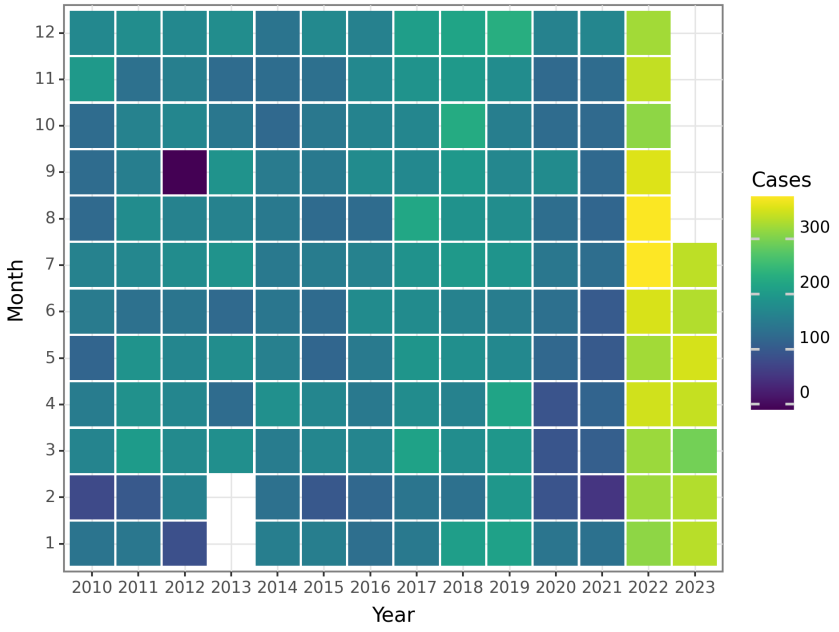

Figure 67: The Change of Tuberculosis Deaths before 2023 June

Typhoid fever and paratyphoid fever

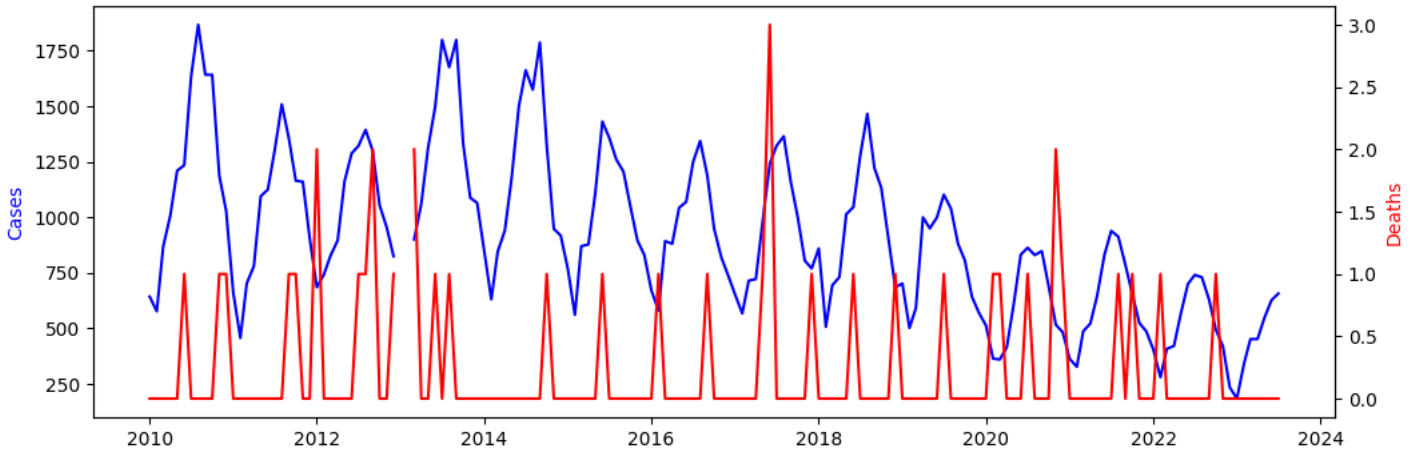

Figure 68: The Change of Typhoid fever and paratyphoid fever Reports before 2023 June

The data provided represents the monthly cases and deaths of Typhoid fever and paratyphoid fever from January 2010 to June 2023. The data is divided into two categories: cases and deaths, with each category having a corresponding monthly value.

Analyzing the trend of Typhoid fever and paratyphoid fever cases over time, we observe some interesting patterns. From 2010 to 2013, there is a gradual increase in the number of cases reported each month. However, in 2013, there is a sudden decrease in cases, with negative values reported in January and February. It is important to note that negative values are not plausible in this context, and it might be due to data entry errors or other factors affecting data accuracy.

After 2013, the number of cases starts to increase again, with fluctuations observed until 2016. From 2016 to 2018, there is a relatively stable trend in the number of cases, with occasional spikes and dips. However, from 2019 to 2023, there is a gradual decline in the number of cases reported each month.

In terms of deaths, the data shows a relatively low number of deaths reported for both Typhoid fever and paratyphoid fever throughout the entire period. There are occasional spikes in deaths reported, but overall, the number of deaths remains relatively low.

It is important to interpret these findings with caution, as the data provided only represents a single geographic area and might not be representative of the global or regional trends of Typhoid fever and paratyphoid fever. Additionally, the accuracy and reliability of the data should be verified, especially considering the presence of negative values in the case data.

Further analysis, including statistical modeling and examination of other relevant factors such as demographic characteristics, geographical distribution, and interventions, would be necessary to gain a comprehensive understanding of the trends and patterns of Typhoid fever and paratyphoid fever in the given population.

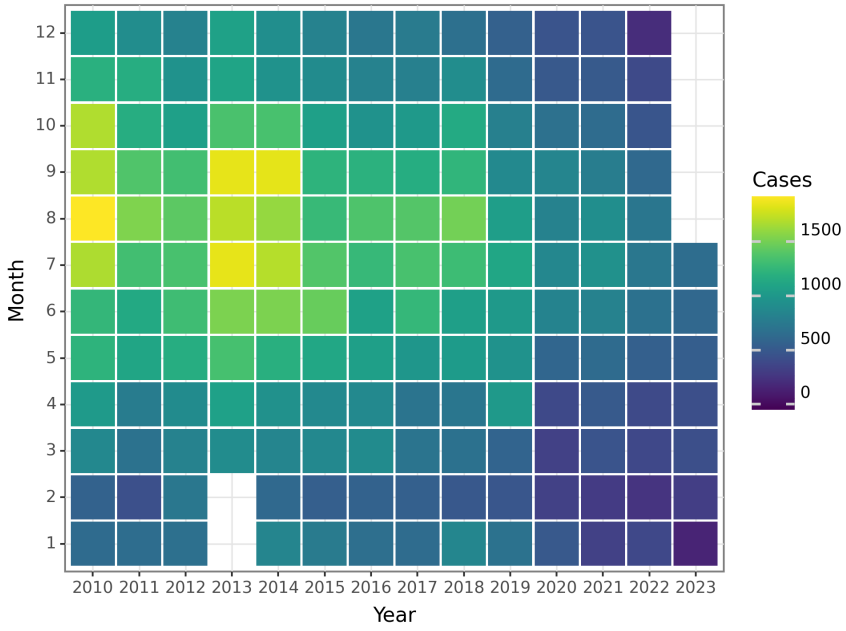

Figure 69: The Change of Typhoid fever and paratyphoid fever Cases before 2023 June

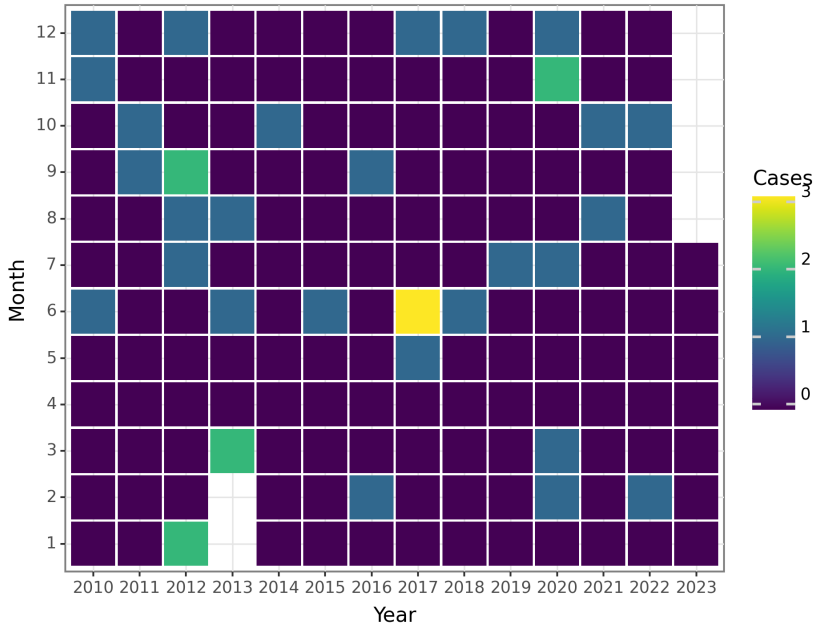

Figure 70: The Change of Typhoid fever and paratyphoid fever Deaths before 2023 June

Meningococcal meningitis

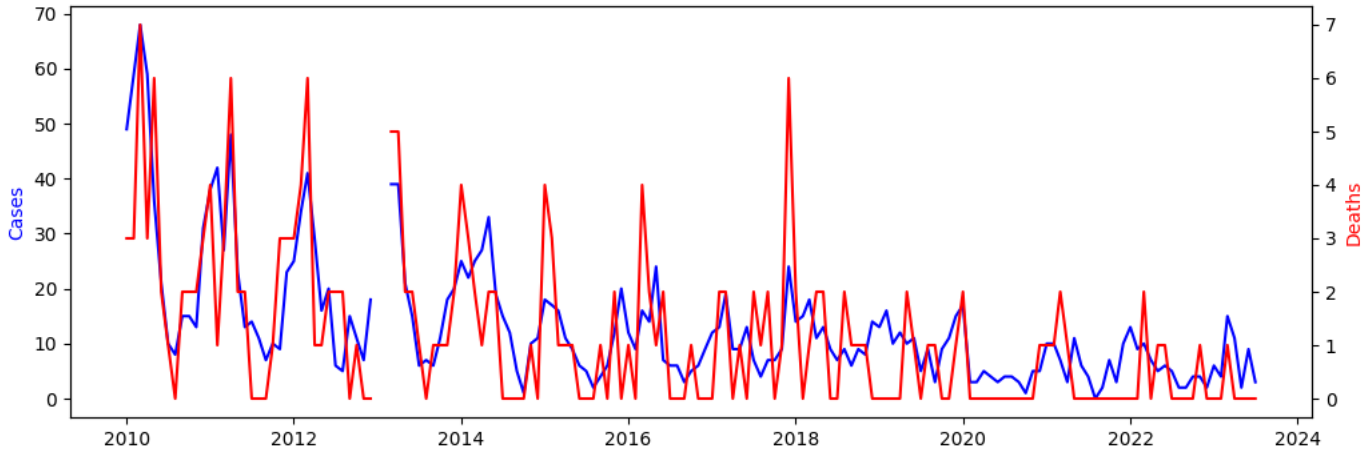

Figure 71: The Change of Meningococcal meningitis Reports before 2023 June

The data provided represents the monthly incidence and death cases of Meningococcal meningitis from January 2010 to June 2023. The analysis of this data can provide valuable insights into the patterns and trends of the disease over time.

Firstly, let's examine the monthly incidence cases. From January 2010 to June 2023, the number of Meningococcal meningitis cases varied significantly. The highest number of cases occurred in March 2010, with a total of 68 reported cases. On the other hand, the lowest number of cases occurred in October 2020 and August 2021, where only 1 case was reported. The overall trend of Meningococcal meningitis cases appears to be fluctuating, with periods of both increase and decrease in the number of cases over time.

When analyzing the seasonal and cyclical patterns, it can be observed that Meningococcal meningitis cases tend to peak during the winter and spring months, particularly in the months of January to April. This aligns with previous research that suggests a higher incidence of the disease during colder months. Furthermore, there seems to be a general decline in cases during the summer and early fall months, from June to September.

Next, let's explore the monthly death cases. Similar to the incidence cases, the number of deaths due to Meningococcal meningitis has also varied over the years. The highest number of deaths occurred in December 2017, with a total of 6 reported deaths. Conversely, several months had no reported deaths, including August 2014, October 2016, and December 2021. Overall, the number of deaths due to Meningococcal meningitis appears to be relatively low compared to the incidence cases, indicating that the disease has a relatively low fatality rate.

In terms of the temporal patterns, there seems to be no distinct seasonal or cyclical trend in the number of deaths. The number of deaths is relatively sporadic throughout the years, with no clear pattern emerging. This suggests that the severity and outcome of Meningococcal meningitis cases may be influenced by various factors beyond seasonal variations.

It is important to note that the data provided is limited to the monthly incidence and death cases of Meningococcal meningitis. Further analysis and interpretation would require additional information, such as demographic data, geographical distribution, and other relevant factors that may influence the occurrence and outcome of the disease.

Overall, this analysis provides a preliminary understanding of the patterns and trends of Meningococcal meningitis cases and deaths over time. Further research and investigation are necessary to gain a more comprehensive understanding of the disease and to develop effective strategies for prevention and control.

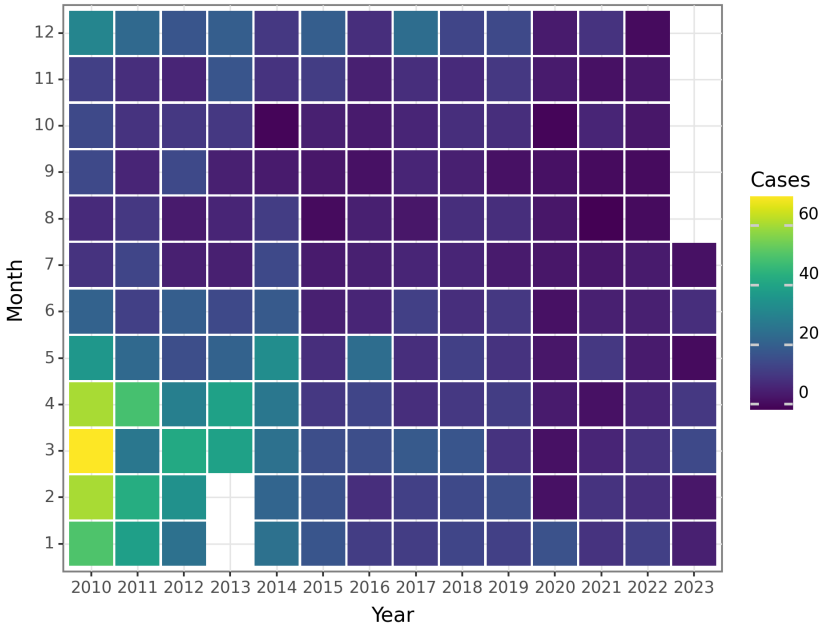

Figure 72: The Change of Meningococcal meningitis Cases before 2023 June

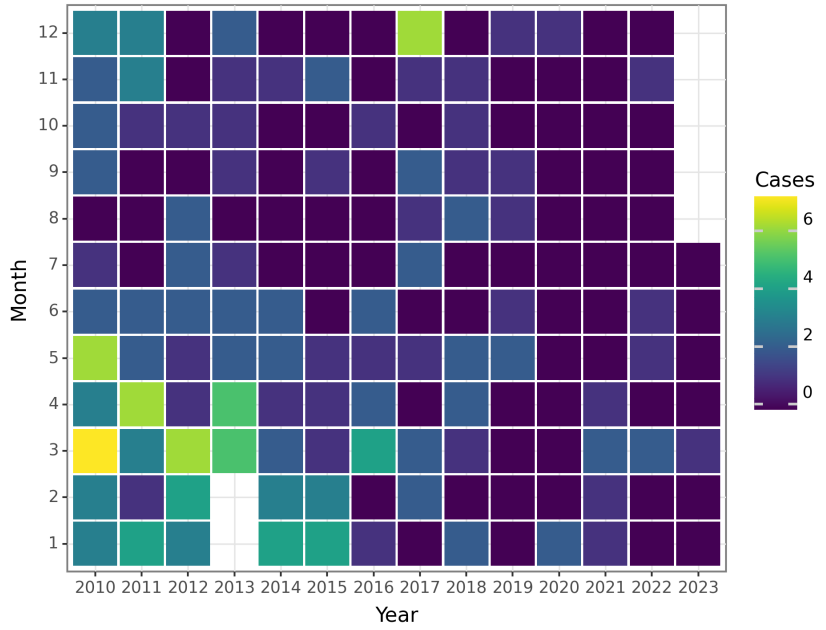

Figure 73: The Change of Meningococcal meningitis Deaths before 2023 June

Pertussis

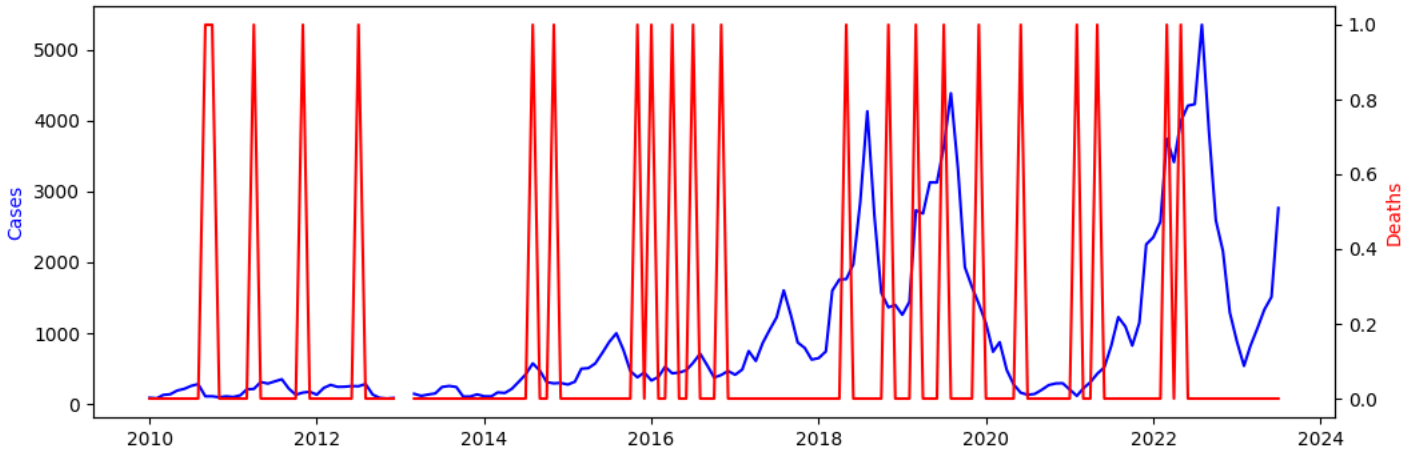

Figure 74: The Change of Pertussis Reports before 2023 June

The data provided shows the monthly incidence and death cases of Pertussis from January 2010 to June 2023. Pertussis, also known as whooping cough, is a highly contagious respiratory disease caused by the bacterium Bordetella pertussis. It is characterized by severe coughing fits, often accompanied by a distinctive "whooping" sound during inhalation.

Analyzing the time series data, we can observe certain patterns and trends in the incidence and death cases of Pertussis.

Firstly, in terms of incidence cases, there seems to be a seasonal pattern with peaks occurring during the summer months, particularly in July and August. This could be attributed to increased transmission of the disease during warmer weather, when people tend to spend more time outdoors and in close contact with others. The incidence cases gradually increase from January to June, reaching a peak in July, and then decline towards the end of the year. This pattern is consistent throughout the years, with some fluctuations in the magnitude of the peaks.

Additionally, there are also noticeable variations in the incidence cases from year to year. For example, there is a general increasing trend in the number of cases from 2010 to 2015, with a peak in 2015 where the incidence cases reached their highest point at 999. After 2015, there is a slight decrease in the number of cases until 2018, followed by another increase in 2019. However, from 2020 onwards, there is a noticeable decline in the incidence cases, possibly due to various factors such as increased awareness, vaccination campaigns, and improved public health measures.

In terms of death cases, the data shows a relatively low number of deaths throughout the entire period. There are sporadic occurrences of deaths, with no clear seasonal or yearly patterns. It is important to note that the number of deaths reported may be influenced by various factors, including the overall health of the population, access to healthcare, and early detection and treatment of Pertussis cases. It is encouraging to see that the number of deaths remains relatively low, indicating effective management and treatment of the disease.

Overall, the data suggests that Pertussis continues to be a public health concern, with seasonal peaks in incidence cases during the summer months. Efforts should focus on implementing and promoting preventive measures such as vaccination, particularly among vulnerable populations such as infants and young children. Continued surveillance and monitoring of Pertussis cases are necessary to identify any emerging trends or changes in the epidemiology of the disease.

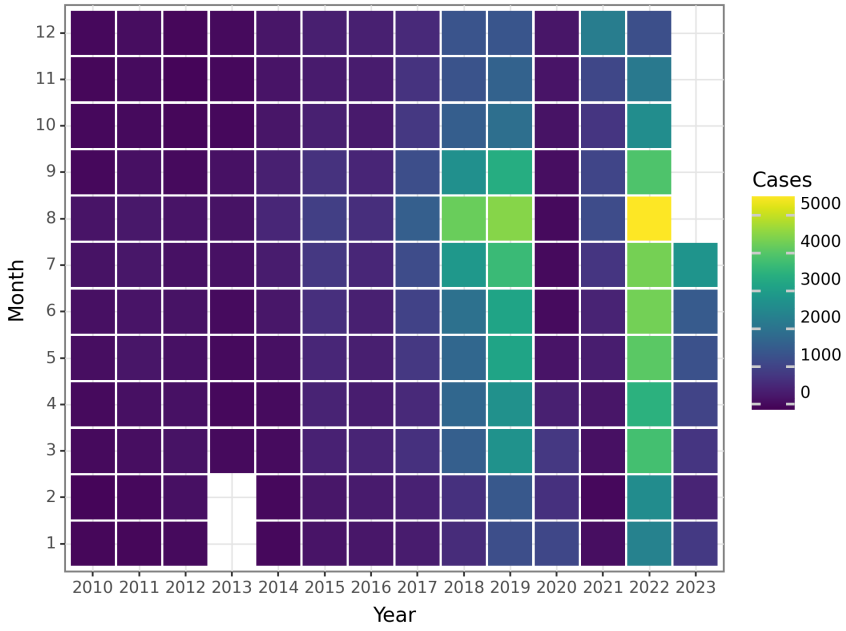

Figure 75: The Change of Pertussis Cases before 2023 June

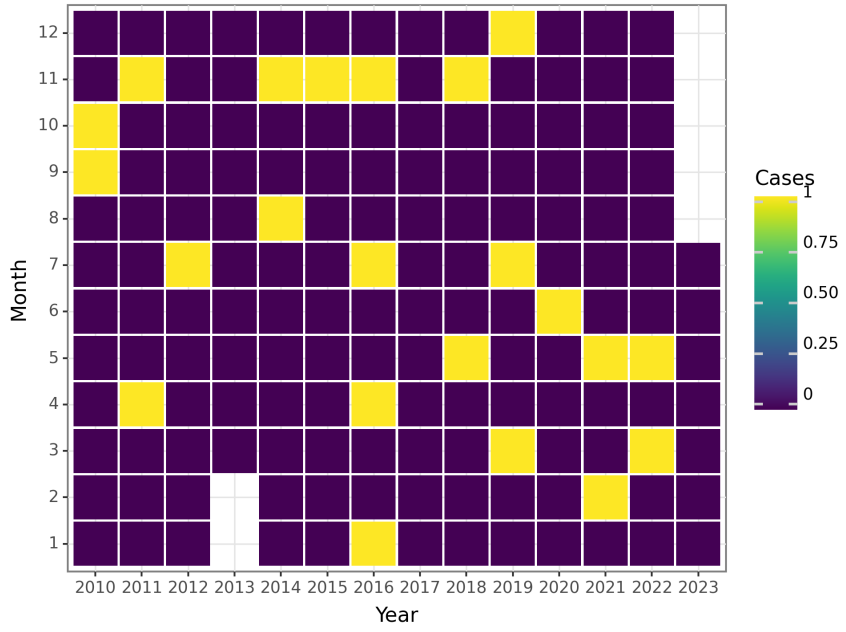

Figure 76: The Change of Pertussis Deaths before 2023 June

Diphtheria

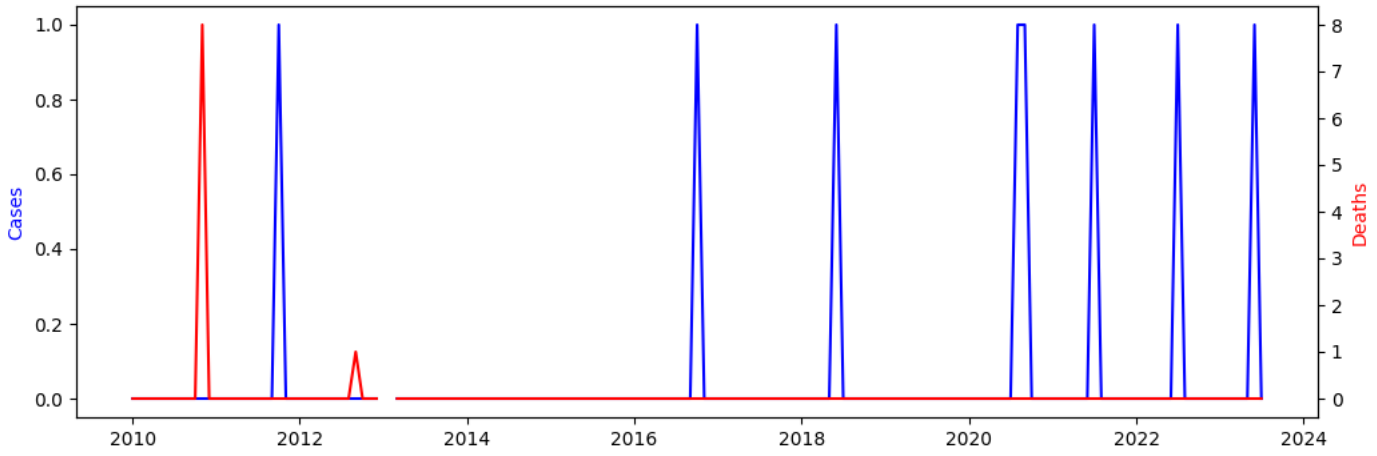

Figure 77: The Change of Diphtheria Reports before 2023 June

Based on the provided data on the monthly cases and deaths of Diphtheria in June 2023, we can observe the following trends and patterns:
1. Cases: The data shows that there have been consistently zero cases of Diphtheria reported from January 2010 to May 2023, except for June 2016 where one case was reported. This indicates a long period of low or no transmission of the disease.
2. Deaths: The data also reveals that there have been no reported deaths due to Diphtheria from January 2010 to June 2023. This is a positive sign and suggests effective prevention and control measures in place to minimize the impact of the disease.
3. Seasonality: There doesn't appear to be a clear seasonality pattern in the reported cases and deaths of Diphtheria. The number of cases and deaths remained consistently low throughout the years, with occasional isolated cases.
4. Outliers: It is worth noting that there are a few instances of negative values in the data for both cases and deaths. These negative values may be errors in data recording or reporting and should be further investigated and corrected.
Overall, the data reflects a successful control and prevention effort in managing Diphtheria, as evidenced by the low and stable number of cases and zero deaths in the given time frame. However, continuous surveillance and public health interventions should be maintained to ensure the ongoing control and elimination of Diphtheria.

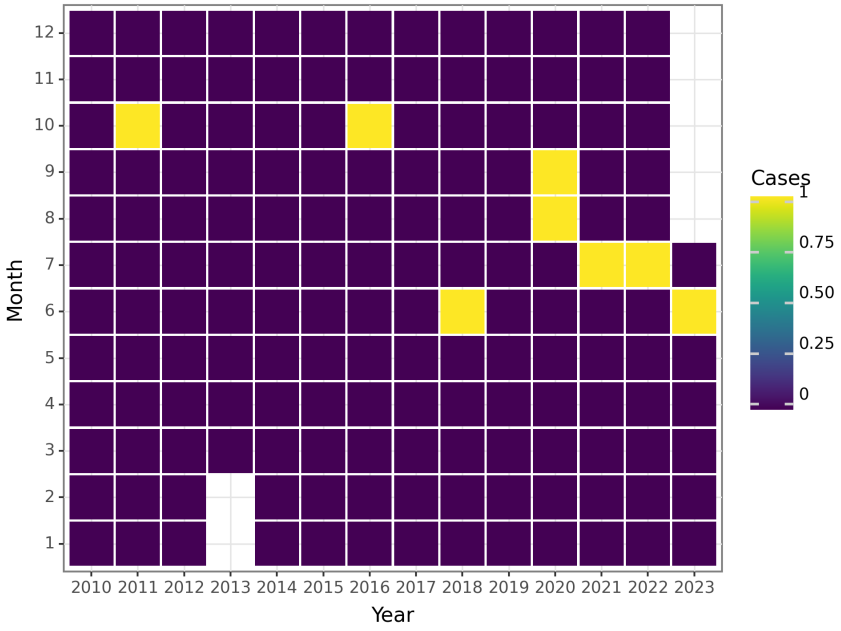

Figure 78: The Change of Diphtheria Cases before 2023 June

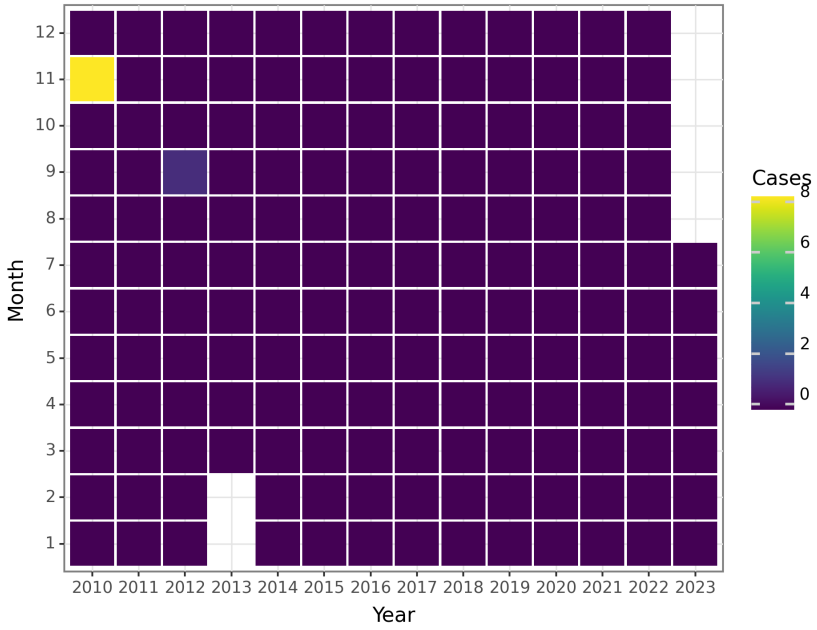

Figure 79: The Change of Diphtheria Deaths before 2023 June

Neonatal tetanus

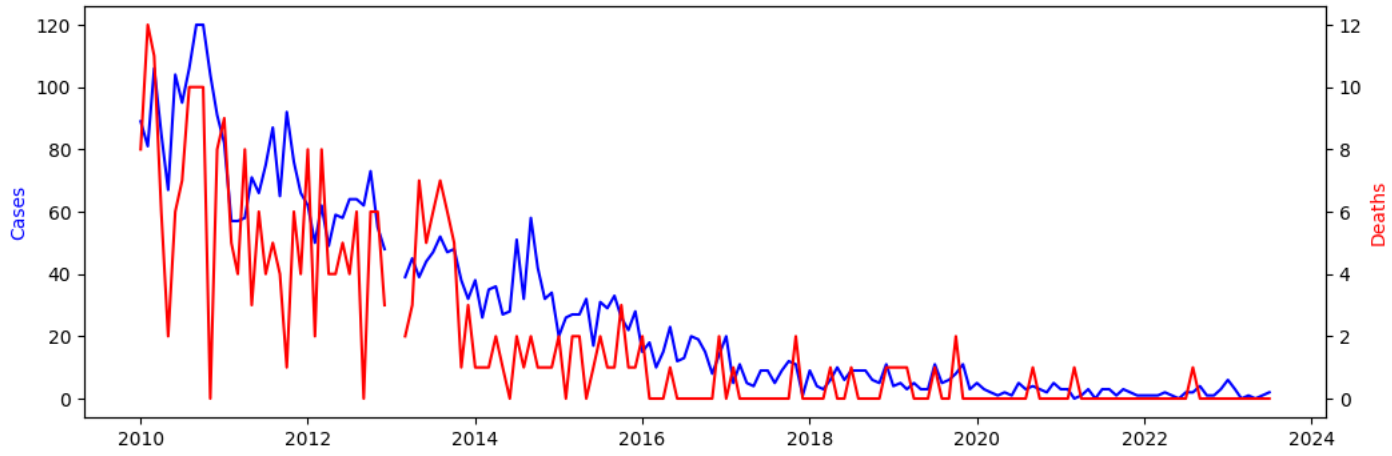

Figure 80: The Change of Neonatal tetanus Reports before 2023 June

Thank you for providing me with the monthly incidence and death data for Neonatal tetanus in 2023 June. The data is presented in a time series format spanning from January 2010 to June 2023.
Looking at the data, we can see that the monthly incidence of Neonatal tetanus has shown a decreasing trend over the years, with the highest number of cases being reported in September 2010 (120 cases) and the lowest number of cases being recorded in March 2023 (0 cases). The number of cases has been fluctuating throughout the years, with seasonal and cyclical patterns.
The cyclical pattern can be seen in the data where the number of cases tends to peak in the months of June, September, and October, while the incidence tends to be lower in the months of January, February, and March. This cyclical pattern observed in the data could be attributed to the seasonal variation in the population density of neonates and its exposure to the risk of Neonatal tetanus.
The data also shows that the monthly death rate due to Neonatal tetanus has remained relatively low over the years, with the highest number of deaths being reported in September 2010 (10 deaths) and the lowest number of deaths being recorded in several months, including March 2013, April 2016, and May 2018 (0 deaths).
In conclusion, the data shows that the incidence of Neonatal tetanus has been decreasing over the years, with seasonal and cyclical patterns observed in the data. The death rate due to Neonatal tetanus has remained relatively low. These findings suggest that the interventions and preventive measures implemented to control the spread of Neonatal tetanus have been effective.

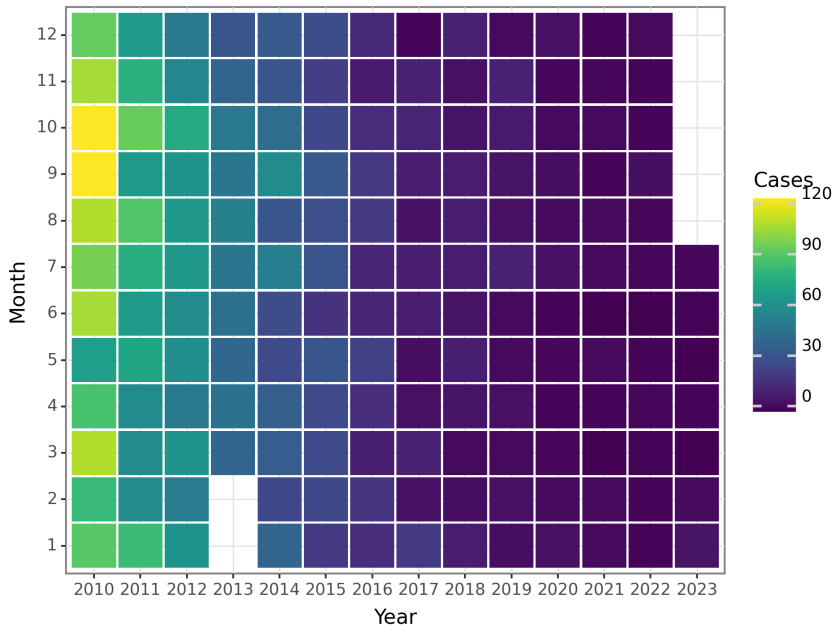

Figure 81: The Change of Neonatal tetanus Cases before 2023 June

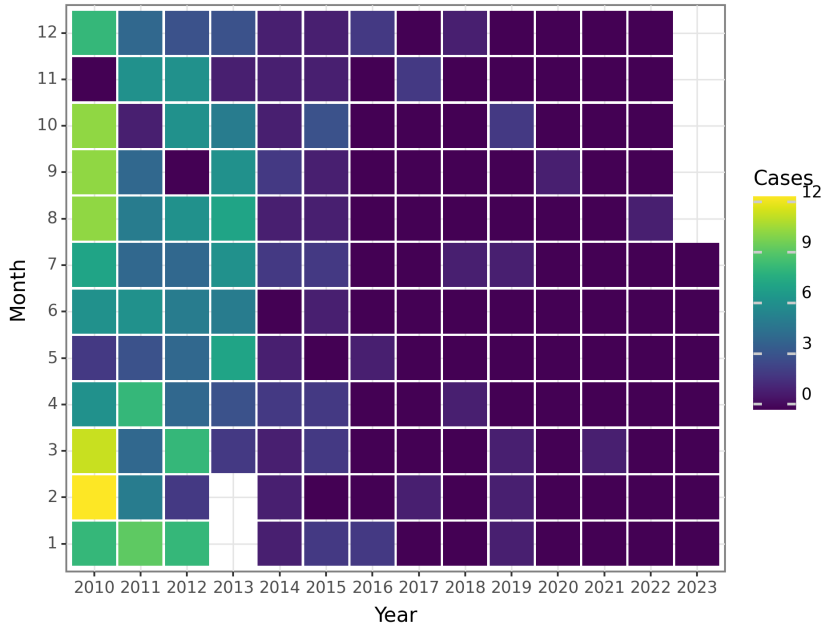

Figure 82: The Change of Neonatal tetanus Deaths before 2023 June

Scarlet fever

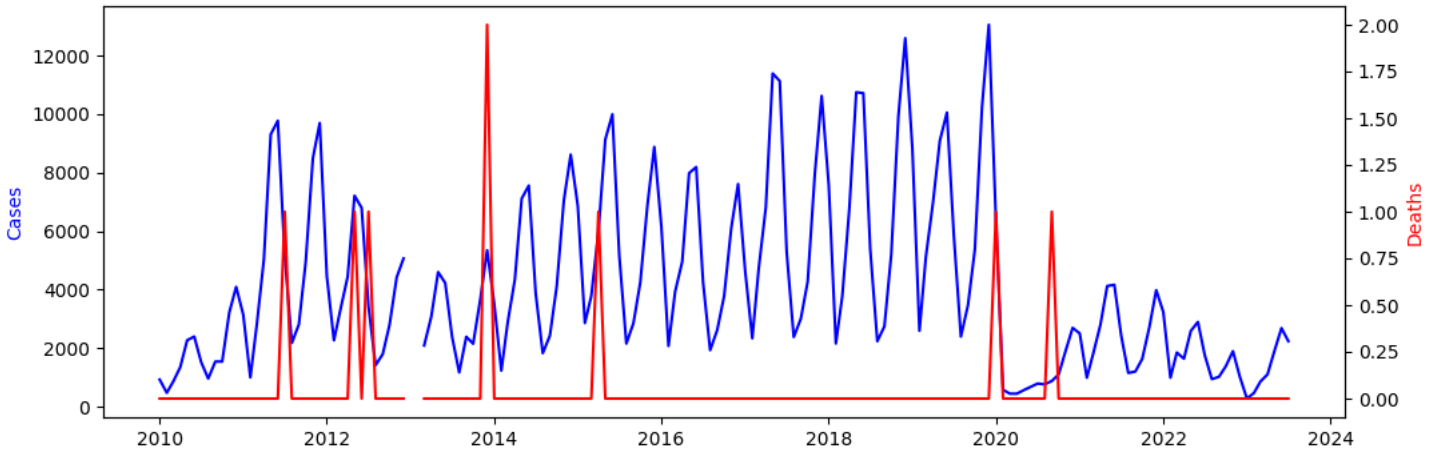

Figure 83: The Change of Scarlet fever Reports before 2023 June

The data shows the monthly cases and deaths of Scarlet Fever from January 2010 to June 2023. In terms of the monthly cases, there is a clear seasonality pattern, with higher numbers of cases occurring in the winter and spring months and lower numbers occurring in the summer and fall months. This pattern is consistent across the entire time series.

Looking at the trend over time, there is an overall increase in the number of cases from 2010 to 2015, followed by a decrease from 2015 to 2017, and a subsequent increase from 2017 to 2023. However, the increase in cases in 2020 and 2021 may have been affected by the COVID-19 pandemic, as there were disruptions to healthcare systems and changes in healthcare-seeking behaviors.

In terms of monthly deaths, the data shows very low numbers of deaths throughout the entire time series, with only a few deaths occurring sporadically throughout the years. It is worth noting that the data shows a negative number of deaths in January and February of 2013, which could be due to data reporting errors or other factors.

Overall, this data suggests that Scarlet Fever is a seasonal disease with a relatively low mortality rate. The long-term trend shows fluctuations in the number of cases over time, but the reasons for these fluctuations are unclear and may be influenced by various factors such as changes in healthcare practices or broader societal changes.

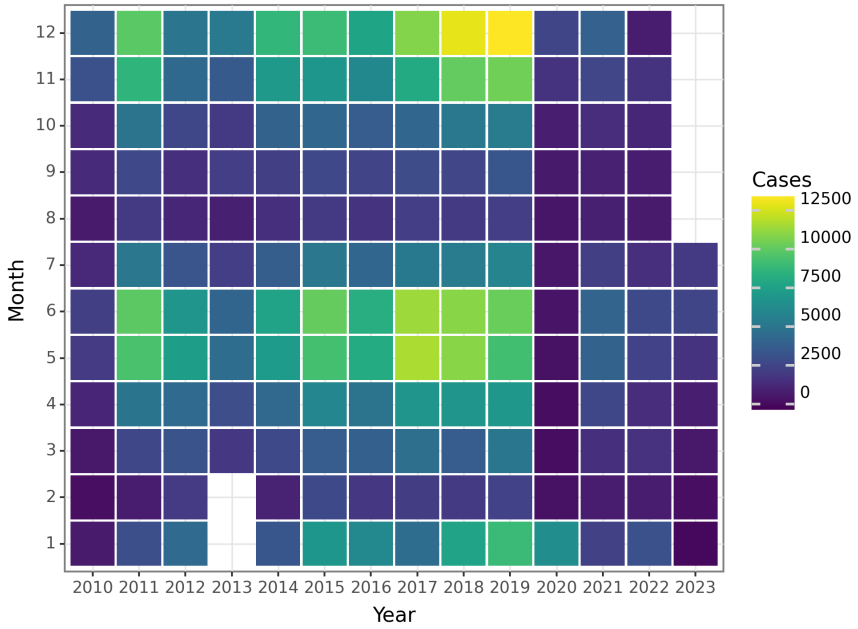

Figure 84: The Change of Scarlet fever Cases before 2023 June

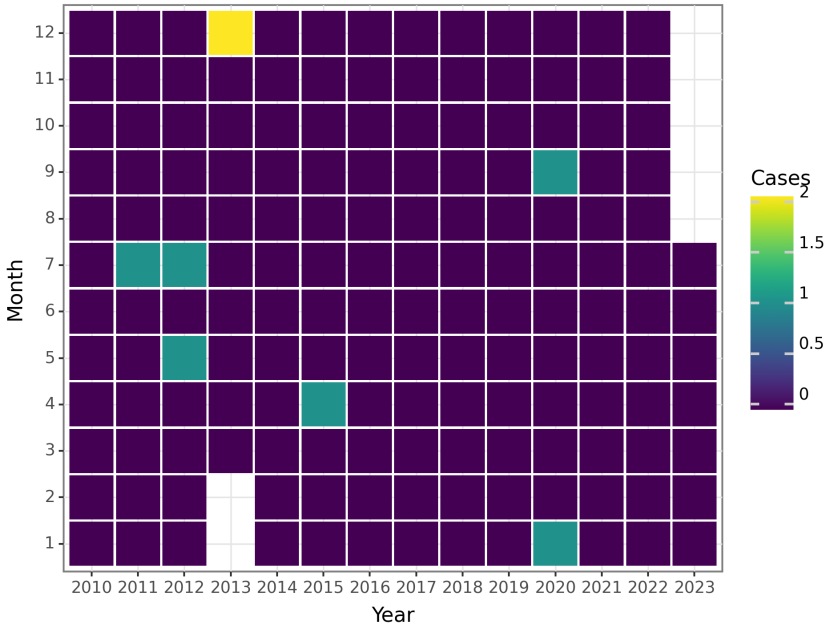

Figure 85: The Change of Scarlet fever Deaths before 2023 June

Brucellosis

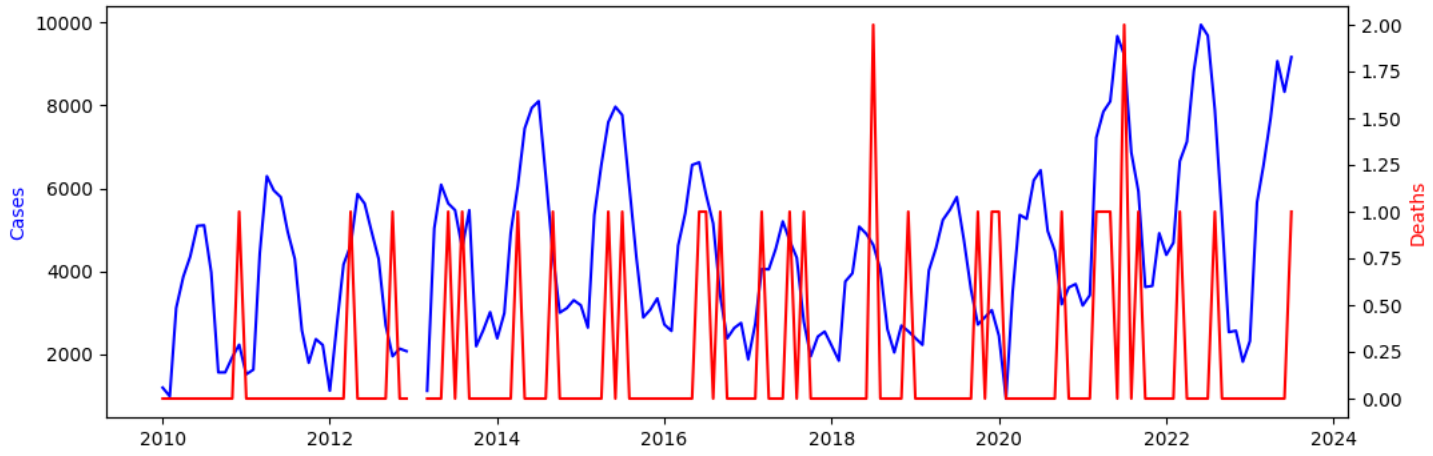

Figure 86: The Change of Brucellosis Reports before 2023 June

The monthly incidence and death data for Brucellosis from January 2010 to June 2023 is provided. The incidence data shows the number of reported cases of Brucellosis each month, while the death data shows the number of deaths attributed to Brucellosis.

Analyzing the incidence data, we observe some interesting trends. From 2010 to 2011, there is a steady increase in the number of reported cases, with a peak in June 2011 at 5,787 cases. This could suggest an outbreak or increased surveillance during that period. The number of cases then fluctuates from 2012 to 2014, with some months showing higher numbers of cases, such as May 2014 with 7,445 cases. From 2015 to 2018, there is a gradual decline in the number of cases, with occasional spikes, like in March 2018 with 4,934 cases. However, from 2019 to 2023, there is a significant increase in the number of reported cases, reaching a peak in June 2021 at 9,670 cases. This upward trend could indicate a resurgence of Brucellosis in recent years.

In terms of the death data, the numbers are generally low, with most months reporting zero deaths. However, there are sporadic instances of deaths being reported, such as in April 2012, October 2012, June 2013, and July 2015. These occurrences could be attributed to severe cases of Brucellosis or complications arising from the disease. It is worth noting that there is a slight increase in the number of deaths reported in recent years, with July 2021 having the highest number of deaths at 2.

Overall, the data suggests fluctuations in the incidence of Brucellosis over time, with some periods of increased cases and occasional deaths. Further analysis, including examining the factors contributing to these trends and conducting statistical tests, would be necessary to gain a deeper understanding of the patterns and implications of Brucellosis incidence and mortality.

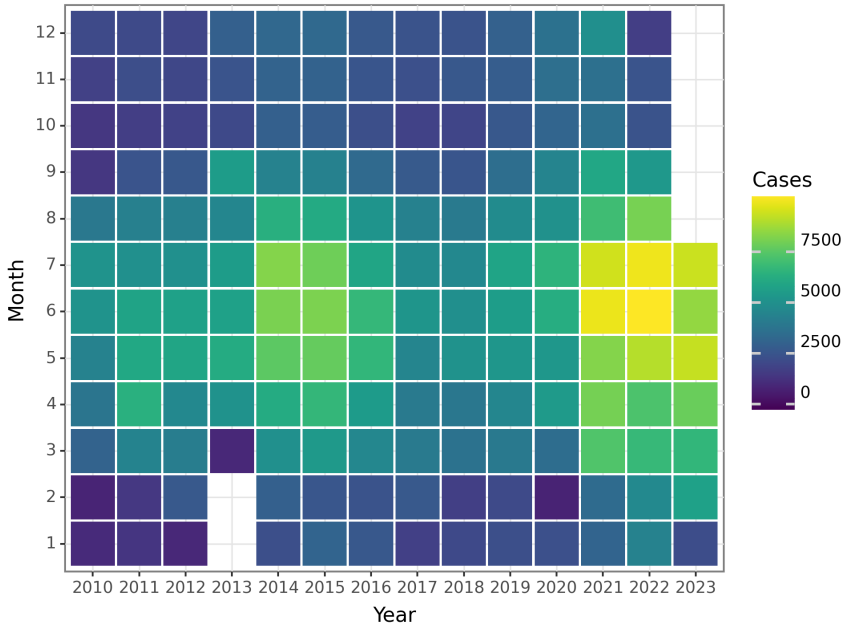

Figure 87: The Change of Brucellosis Cases before 2023 June

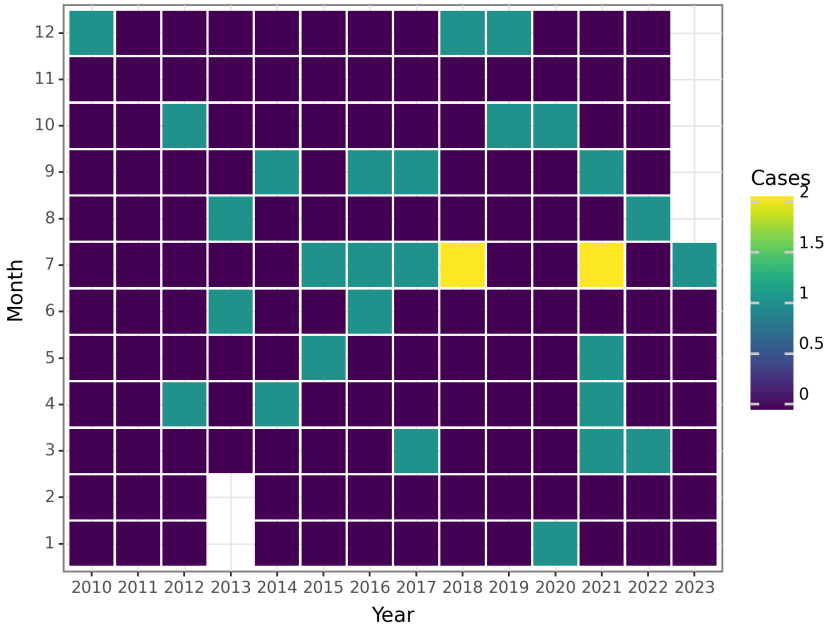

Figure 88: The Change of Brucellosis Deaths before 2023 June

Gonorrhea

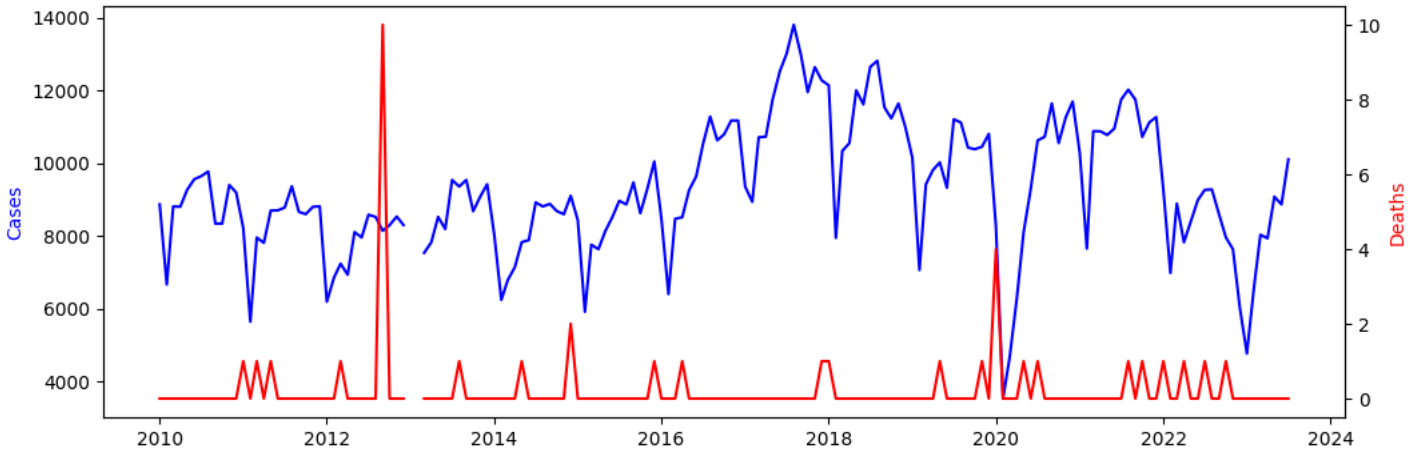

Figure 89: The Change of Gonorrhea Reports before 2023 June

The data provided represents the monthly incidence and death of gonorrhea from January 2010 to June 2023. We will now discuss the trends and patterns observed in the data.

Firstly, let's analyze the trends in the monthly cases of gonorrhea. From January 2010 to June 2023, there is a noticeable fluctuation in the number of reported cases. In the earlier years, from 2010 to 2013, the number of cases remained relatively stable, with occasional spikes and drops. However, starting from 2014, there is a general upward trend in the number of cases, reaching a peak in July 2017 with 13,010 cases reported. After that, the number of cases gradually decreased but remained relatively high until June 2023, with 8,863 cases reported.

When examining the seasonal patterns, we observe some consistent fluctuations in the data. There seems to be a peak in cases during the summer months, particularly in June and July, with higher numbers reported compared to other months. This suggests that there may be a seasonal component to the transmission of gonorrhea, possibly due to increased social interactions or changes in sexual behaviors during the summer season.

Next, let's analyze the monthly deaths related to gonorrhea. It is important to note that deaths related to gonorrhea are relatively rare, as this infection is typically treatable with antibiotics. However, it is concerning to see some reported deaths. In the earlier years, from 2010 to 2013, the number of deaths remained relatively low, with occasional fluctuations. However, starting from 2014, there is a general increase in deaths, peaking in August 2017 with 10 reported deaths. After that, the number of deaths remained relatively low, with occasional spikes, but generally not exceeding 1 death per month.

In summary, the data shows an overall increasing trend in the number of reported gonorrhea cases from 2010 to 2017, followed by a gradual decrease but still remaining at a relatively high level until June 2023. The seasonal patterns suggest higher transmission during the summer months. The number of deaths related to gonorrhea is relatively low but shows some fluctuations, with occasional spikes in certain months.

It is important to further investigate the underlying factors contributing to the observed trends and patterns, including changes in sexual behaviors, access to healthcare and prevention measures, and the emergence of antibiotic-resistant

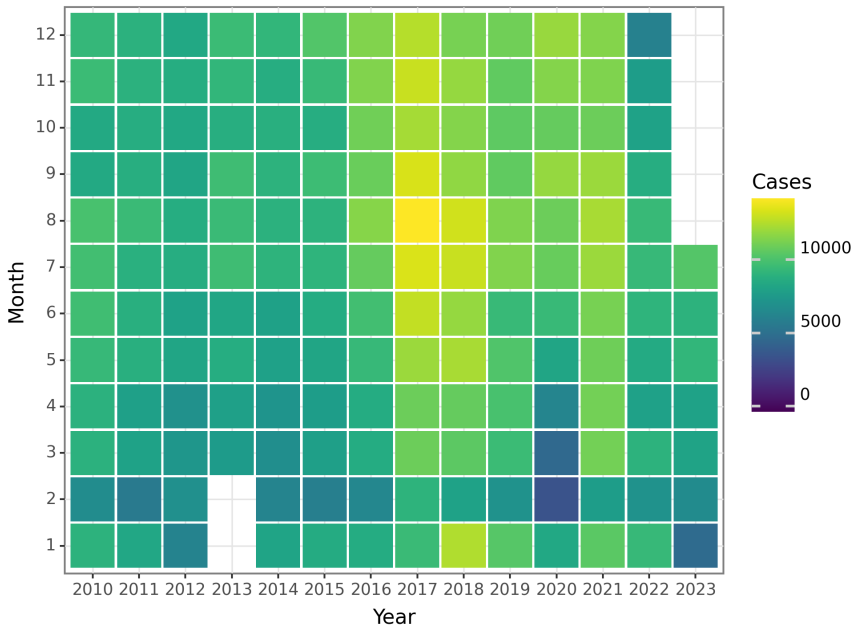

Figure 90: The Change of Gonorrhea Cases before 2023 June

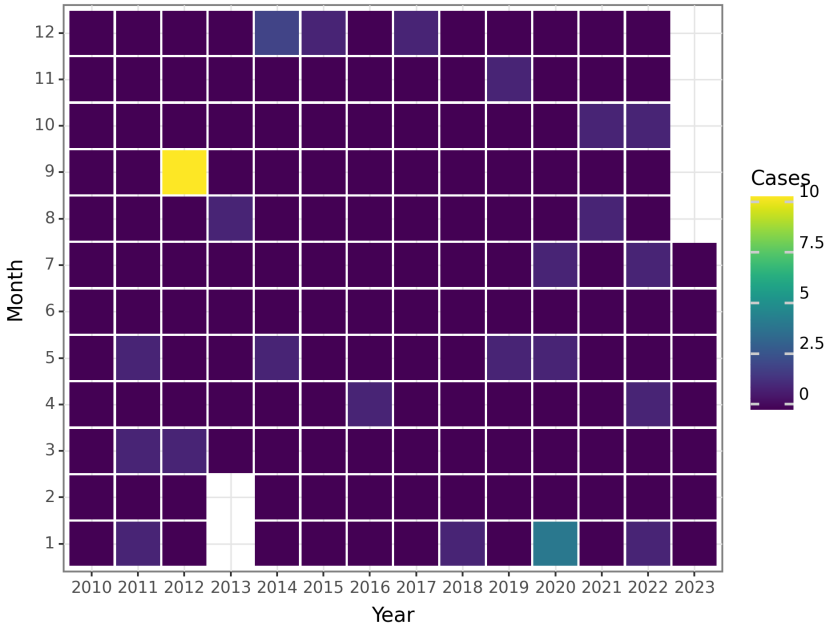

Figure 91: The Change of Gonorrhea Deaths before 2023 June

Syphilis

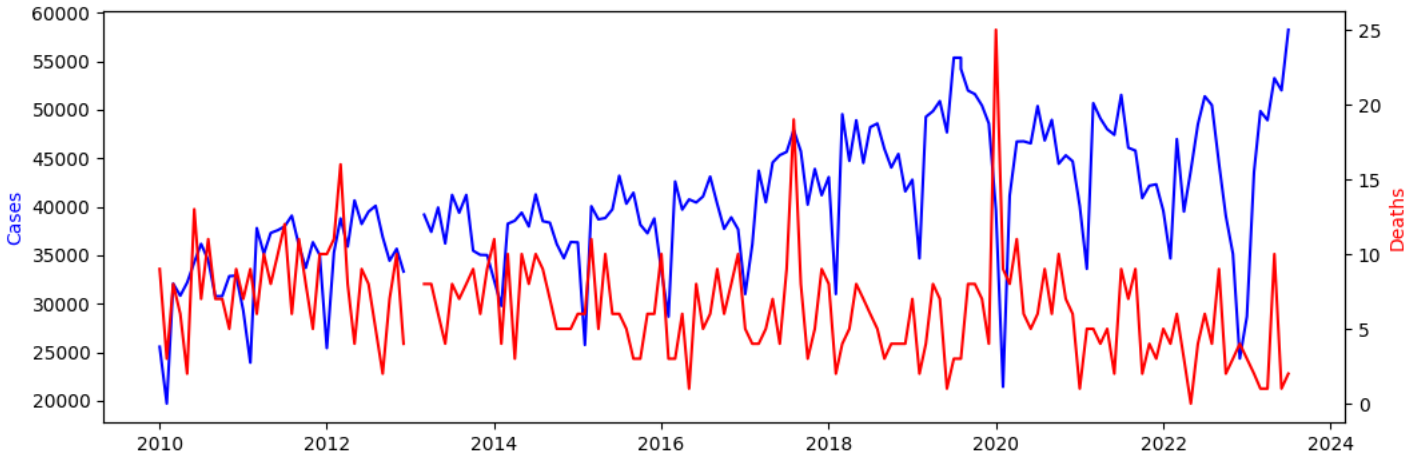

Figure 92: The Change of Syphilis Reports before 2023 June

The data provided shows the monthly incidence and death of syphilis from January 2010 to June 2023. The data exhibits seasonal and cyclical patterns that can be analyzed to gain insights into the trends and patterns of syphilis cases and deaths.

In terms of cases, the data shows a clear seasonal pattern, with the highest number of cases occurring during the summer months of June, July, and August, and the lowest number of cases occurring during the winter months of December, January, and February. This is consistent with the pattern observed in many other infectious diseases, which tend to have higher incidence rates during warmer months. Additionally, there is a cyclical pattern in the data, with peaks and valleys occurring every few years. From 2010 to 2013, there was a general upward trend in the number of cases, followed by a period of relative stability from 2013 to 2016. After 2016, the number of cases began to rise again, peaking in May 2019 before declining slightly in the following years.

In terms of deaths, the data shows much less seasonal and cyclical variation, with a relatively stable number of deaths occurring each month. However, there are some fluctuations in the data, particularly in the early years of the time series, and again in 2020 when there was a sharp increase in deaths in January.

Overall, the data suggests that syphilis cases have been on the rise in recent years, with a cyclical pattern of peaks and valleys superimposed on a seasonal pattern of higher incidence rates during the summer months. Deaths from syphilis, on the other hand, have remained relatively stable over time, with some fluctuations observed in the data. Further analysis is needed to determine the factors contributing to the patterns observed in the data and to develop effective interventions to reduce the incidence of syphilis.

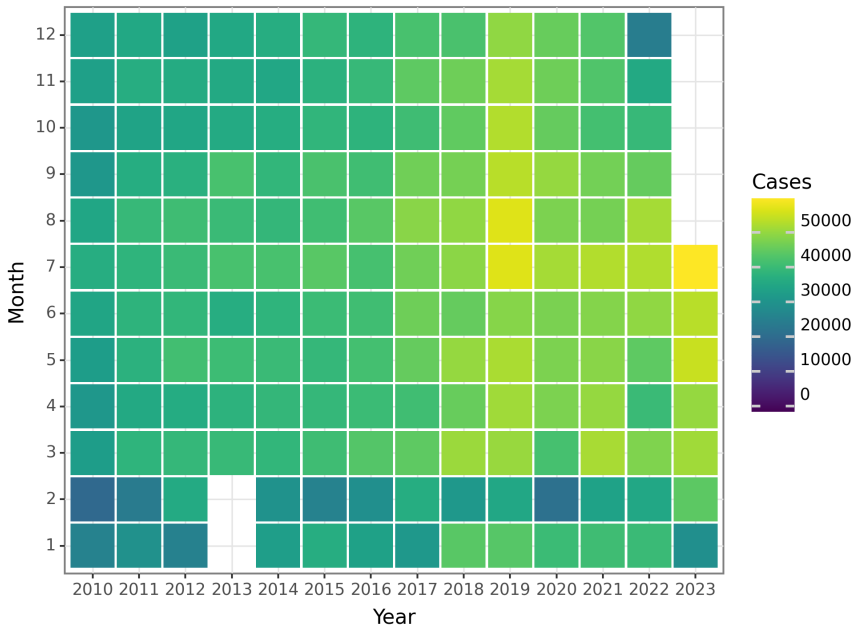

Figure 93: The Change of Syphilis Cases before 2023 June

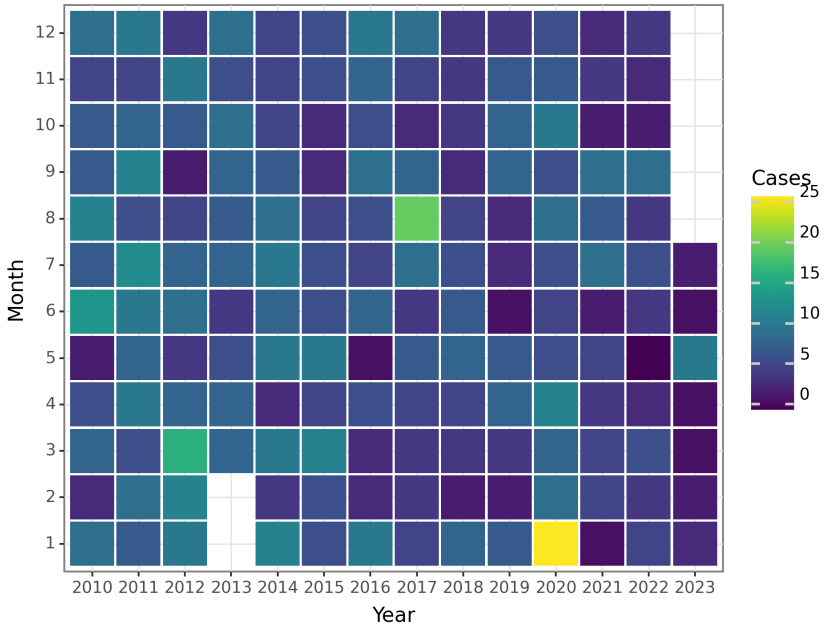

Figure 94: The Change of Syphilis Deaths before 2023 June

Leptospirosis

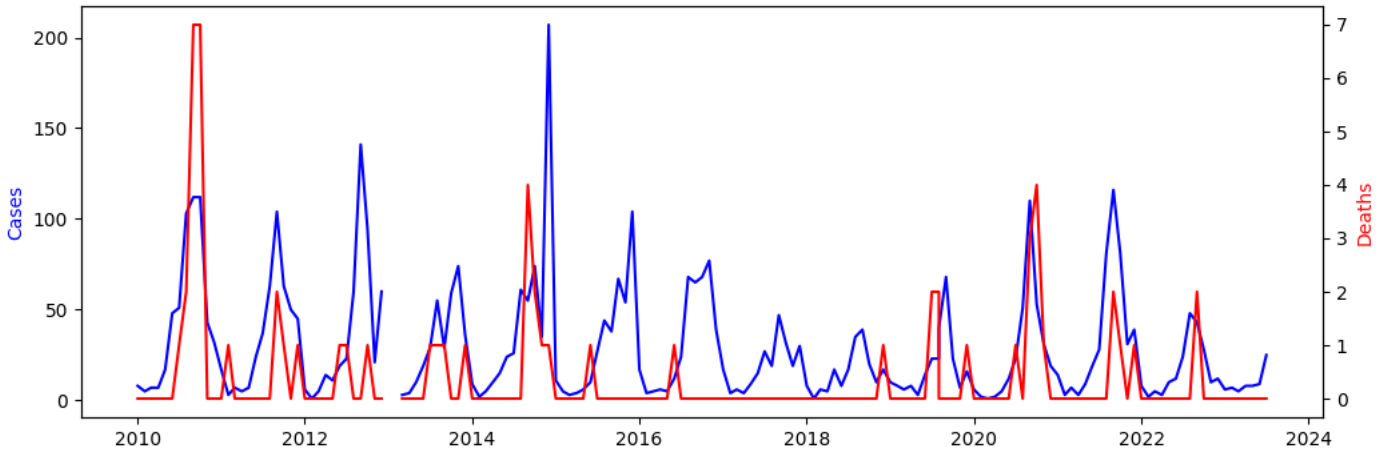

Figure 95: The Change of Leptospirosis Reports before 2023 June

The data presented shows the monthly incidence and death of Leptospirosis over a period of 13 years, from January 2010 to June 2023. The number of cases reported peaked in August 2012 and September 2020, with 141 and 110 cases, respectively. The lowest number of cases was reported in March 2020, with only one case reported. The data shows a cyclic pattern, with peaks observed every 2-3 years.
Furthermore, the data shows that there is a significant increase in cases during the rainy season, from June to October. The highest number of cases was reported in August, followed by September and October. This observation is consistent with the known transmission of Leptospirosis, which is associated with increased exposure to contaminated water during the rainy season.
The number of deaths reported due to Leptospirosis was relatively low throughout the study period, with the highest number of deaths reported in September 2019 and September 2021, with two deaths reported in each month. The majority of deaths were reported during the rainy season, which is consistent with the increased incidence of cases during this period.
Overall, the data presented highlights the seasonal and cyclical patterns of Leptospirosis incidence in the study area. The findings suggest that targeted interventions, such as public health education campaigns and improved sanitation, should be implemented during the rainy season to reduce the incidence of Leptospirosis. Additionally, further research is needed to identify the risk factors associated with Leptospirosis transmission in the study area.

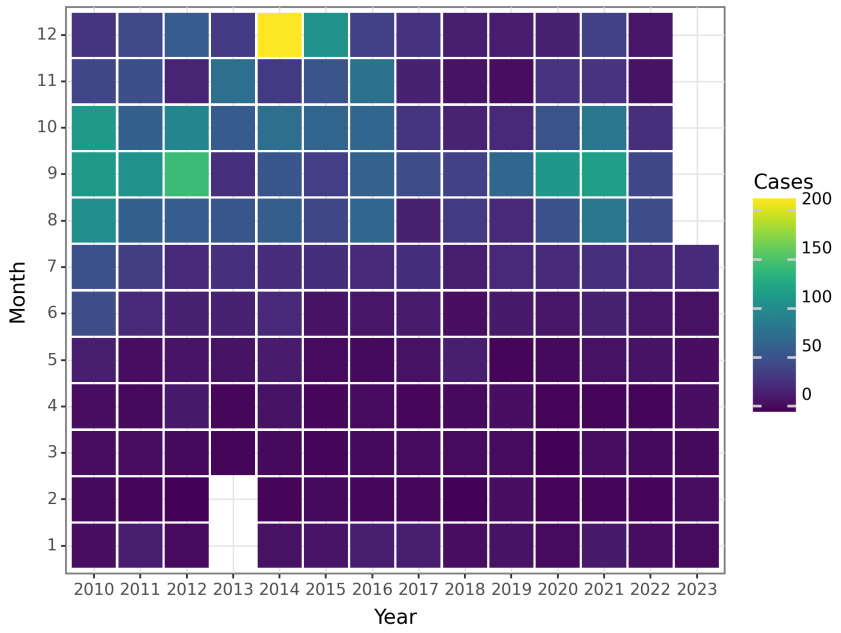

Figure 96: The Change of Leptospirosis Cases before 2023 June

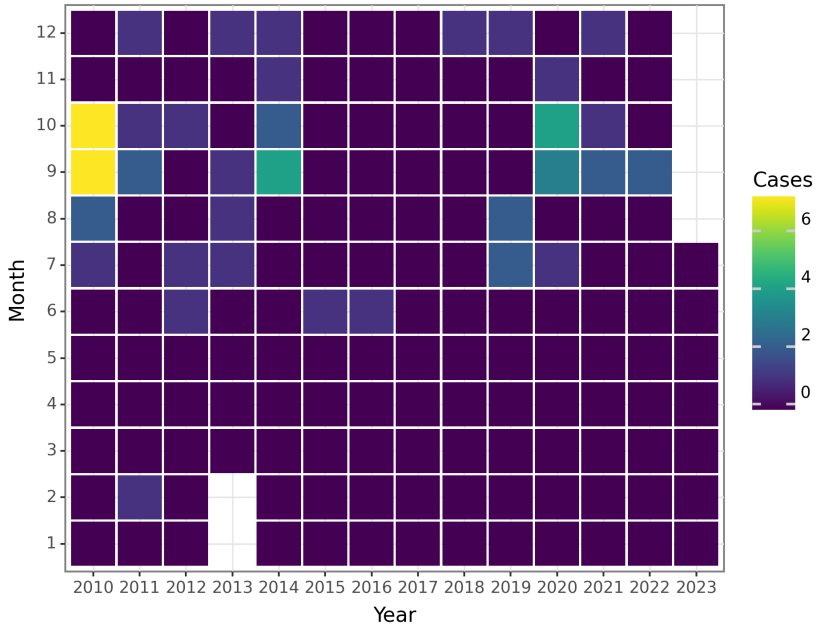

Figure 97: The Change of Leptospirosis Deaths before 2023 June

Schistosomiasis

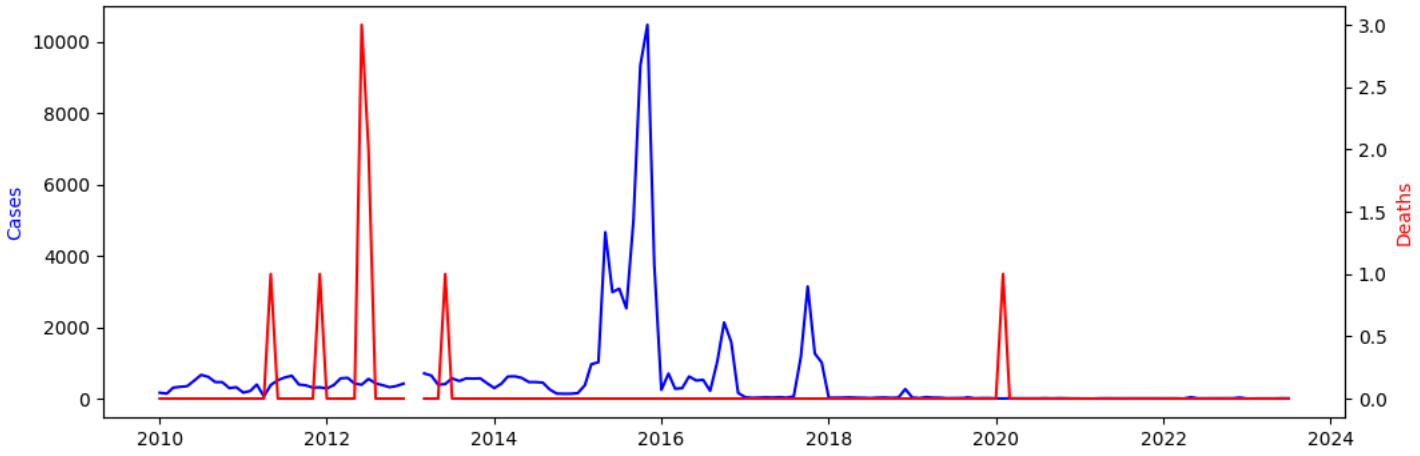

Figure 98: The Change of Schistosomiasis Reports before 2023 June

The provided data represents the monthly incidence and death cases of Schistosomiasis from January 2010 to June 2023. Schistosomiasis, also known as snail fever, is a parasitic disease caused by Schistosoma parasites. It is a significant public health concern in many tropical and subtropical regions, especially in areas with poor sanitation and limited access to clean water.

Analyzing the data, we observe some interesting patterns. In terms of incidence (number of cases), there is variability throughout the years. From 2010 to 2013, the number of cases fluctuated, with some months reporting negative values, which may indicate data collection or reporting issues. However, from 2014 to 2015, there was a significant increase in the number of cases, with May and October 2015 recording the highest incidence of 4,664 and 9,338 cases, respectively. This sudden surge in cases could be attributed to various factors, including changes in environmental conditions, increased human exposure, or improved surveillance and reporting systems.

Following the peak in 2015, there was a gradual decline in the number of cases, although sporadic increases occurred in some months. Notably, there was a slight increase in cases during the months of October and November in 2016 and 2017, respectively. This might indicate a possible seasonal pattern, with higher transmission rates during these periods. However, further analysis is required to confirm this hypothesis.

From 2018 to 2023, the number of cases remained relatively low, with occasional sporadic increases. The most recent data shows a modest increase in cases in June 2023, reaching 7 reported cases. It is worth noting that the data for deaths due to Schistosomiasis remained consistently low throughout the entire study period, with no reported deaths recorded.

Overall, the data suggests that Schistosomiasis incidence has fluctuated over the years, with some months experiencing higher transmission rates than others. The peak in 2015 highlights the need for continued surveillance, prevention, and control measures to combat the disease effectively. It is essential to implement strategies such as improving access to clean water, promoting hygiene practices, and conducting regular screening and treatment programs in high-risk areas to reduce the burden of Schistosomiasis on affected populations.

However, it is important to note that this analysis is based on the provided data alone. Further research and analysis, including consideration of other factors such as demographic characteristics, environmental conditions, and interventions, would provide a more comprehensive understanding of the epidemiology of Schistosomiasis in the study area.

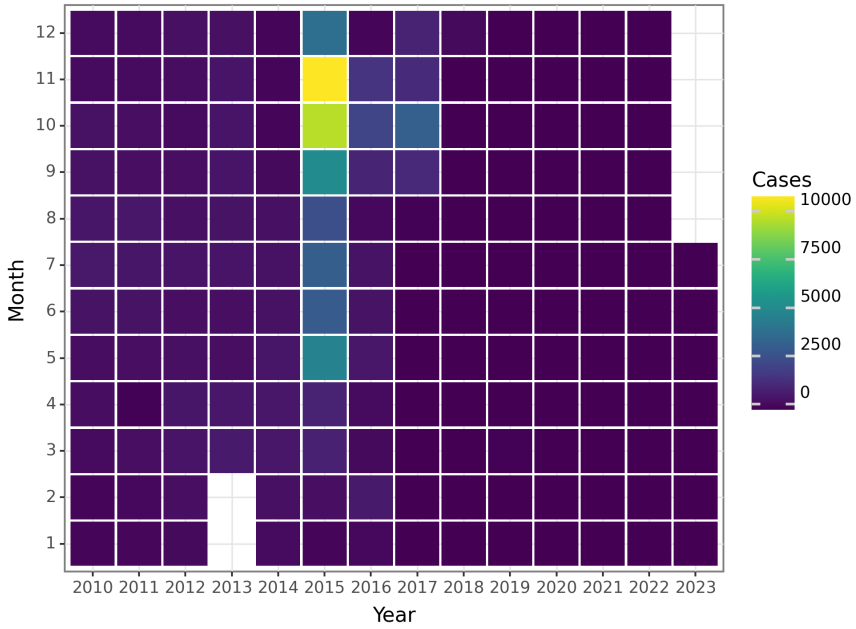

Figure 99: The Change of Schistosomiasis Cases before 2023 June

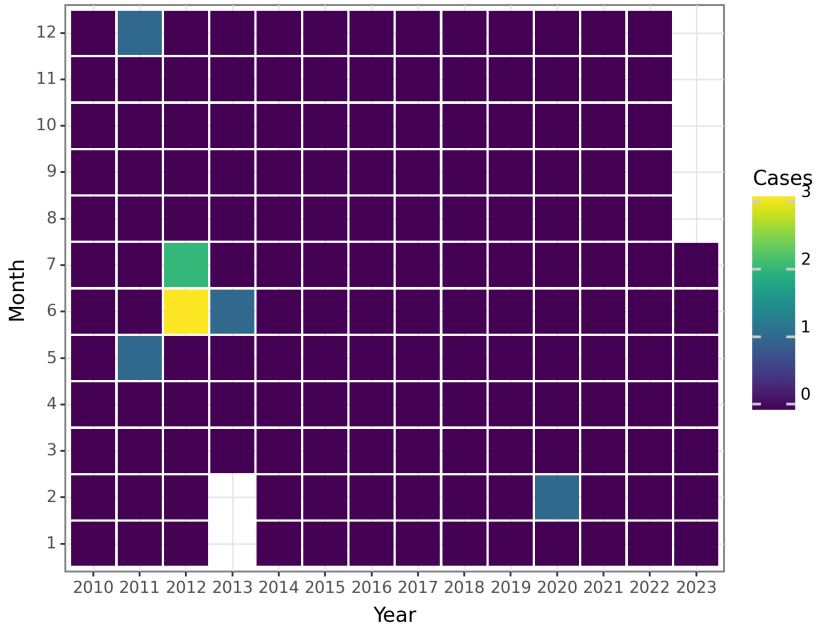

Figure 100: The Change of Schistosomiasis Deaths before 2023 June

Malaria

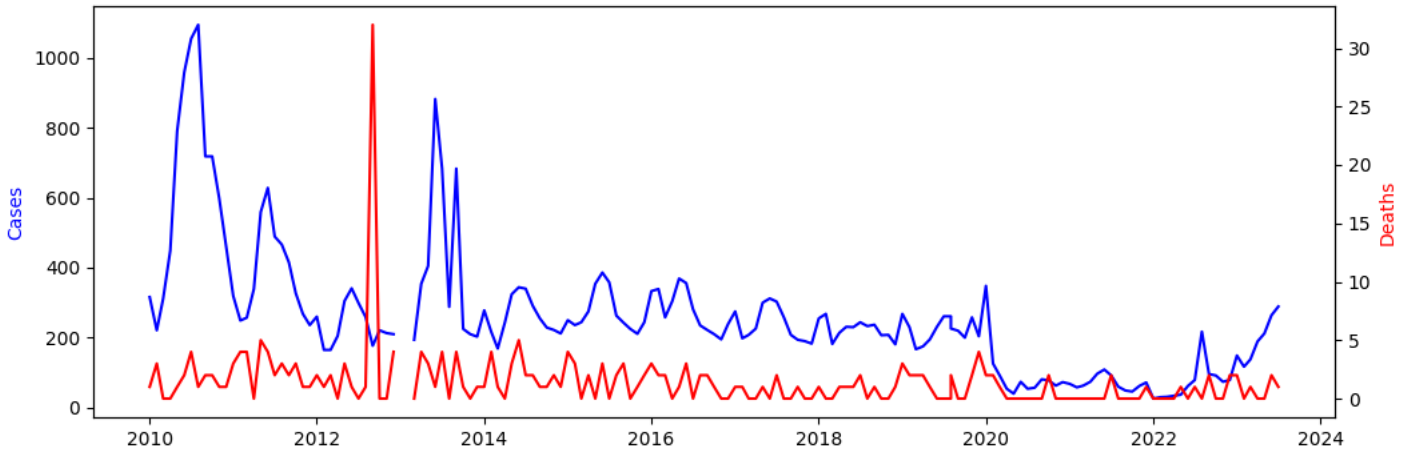

Figure 101: The Change of Malaria Reports before 2023 June

The data provided includes the monthly cases and deaths of Malaria from January 2010 to June 2023. The number of cases fluctuates over time, with some months experiencing higher numbers of cases compared to others. For instance, in June 2013, there was a significant increase in cases with a count of 882, while in March 2023, there were only 138 reported cases.

Seasonal patterns can also be observed in the data. In certain years, there are peaks in cases during specific months. For example, in the years 2010 and 2011, June and July consistently had higher case counts compared to other months. However, in later years, such as 2018 and 2019, the peak shifted to January and February.

The data also includes information on deaths related to Malaria. Similar to the case counts, the number of deaths fluctuates over time. In some months, there are no reported deaths, while in others, there are multiple fatalities. For instance, in June 2023, there were two reported deaths, while in October 2012, there were 32 deaths.

It is important to note that there are some discrepancies in the data, such as negative values for cases and deaths in certain months. These inconsistencies may be due to data entry errors or other factors that need to be further investigated and corrected.

Overall, the data highlights the variability in Malaria cases and deaths over time. Further analysis and exploration of the data may provide insights into the underlying factors contributing to these fluctuations and help inform strategies for prevention and control of Malaria.

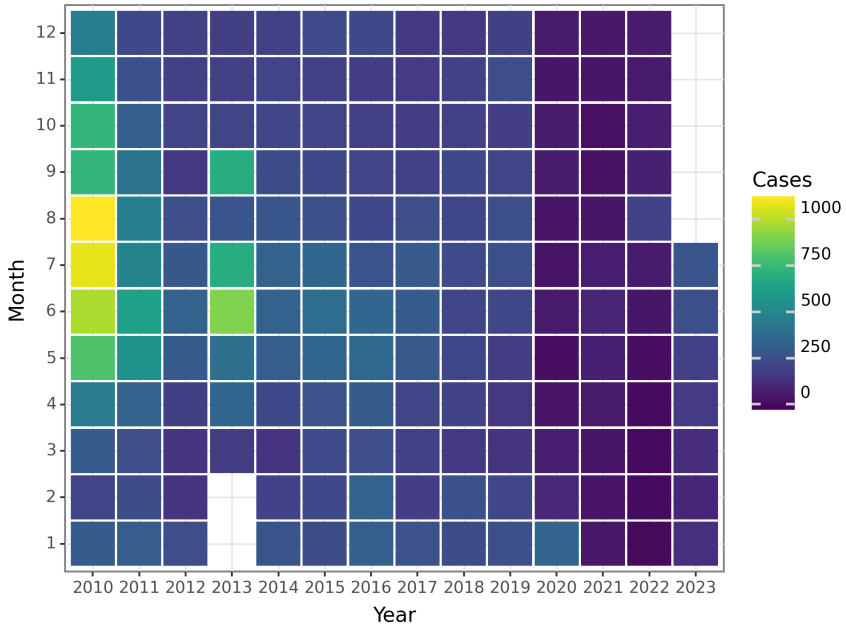

Figure 102: The Change of Malaria Cases before 2023 June

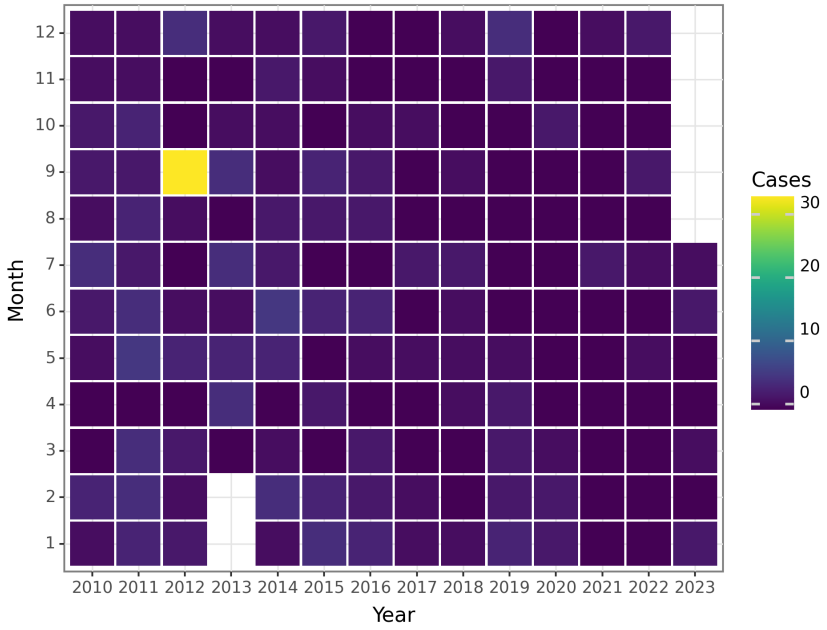

Figure 103: The Change of Malaria Deaths before 2023 June

Human infection with H7N9 virus

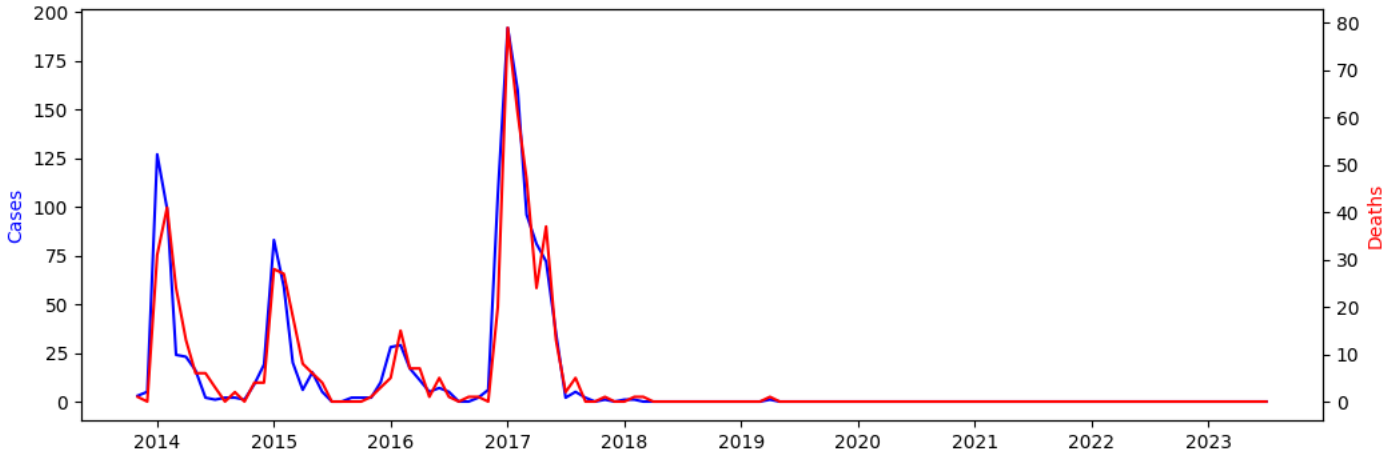

Figure 104: The Change of Human infection with H7N9 virus Reports before 2023 June

The data provided represents the monthly cases and deaths of human infection with the H7N9 virus from November 2013 to June 2023. The number of cases and deaths fluctuate over time, with varying levels of severity.

Analyzing the time series data, we can observe certain patterns. Initially, there were only a few reported cases in November and December 2013, followed by a significant increase in January and February 2014, with 127 and 99 cases respectively. This sudden surge in cases could indicate a potential outbreak or increased surveillance and reporting during that period.

Subsequently, the number of cases decreased in the following months but remained relatively stable throughout 2014 and 2015, with occasional spikes in certain months. From 2016 onwards, the number of cases remained relatively low, with occasional increases in certain months. Notably, there have been no reported cases since June 2022, indicating a decline or potential control of the H7N9 virus.

In terms of deaths, the patterns are similar to the cases. The number of deaths increased significantly in January and February 2014, reflecting the severity of the outbreak during that period. Subsequently, the number of deaths decreased but remained relatively stable until 2017, with occasional fluctuations. From 2018 onwards, there have been no reported deaths, indicating successful management and control of the H7N9 virus.

It is important to note that the data provided only includes cases and deaths up until June 2023. Therefore, it is possible that there have been further developments or changes in the epidemiology of the H7N9 virus beyond this time frame.

Overall, the data suggests that the H7N9 virus had a significant impact during the initial outbreak period, but efforts to control and manage the virus have been successful, as reflected by the decline in both cases and deaths in recent years. Continued surveillance and monitoring are crucial to ensure the ongoing control and prevention of the H7N9 virus.

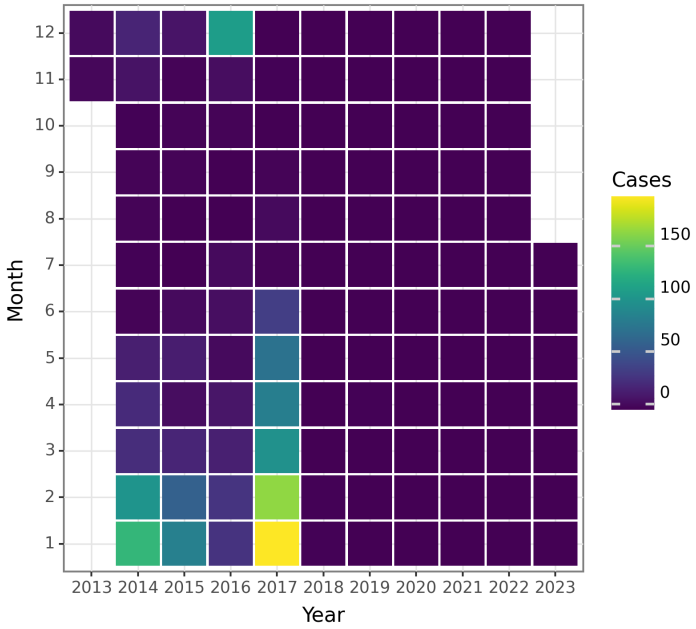

Figure 105: The Change of Human infection with H7N9 virus Cases before 2023 June

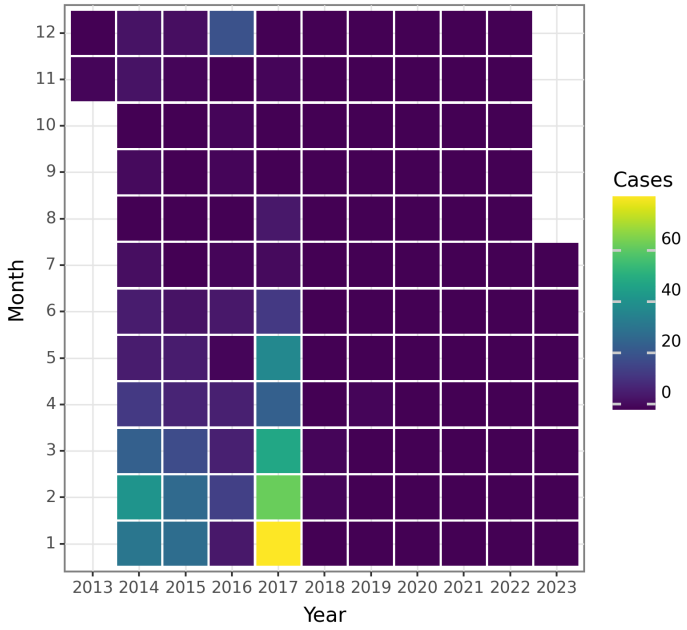

Figure 106: The Change of Human infection with H7N9 virus Deaths before 2023 June

Influenza

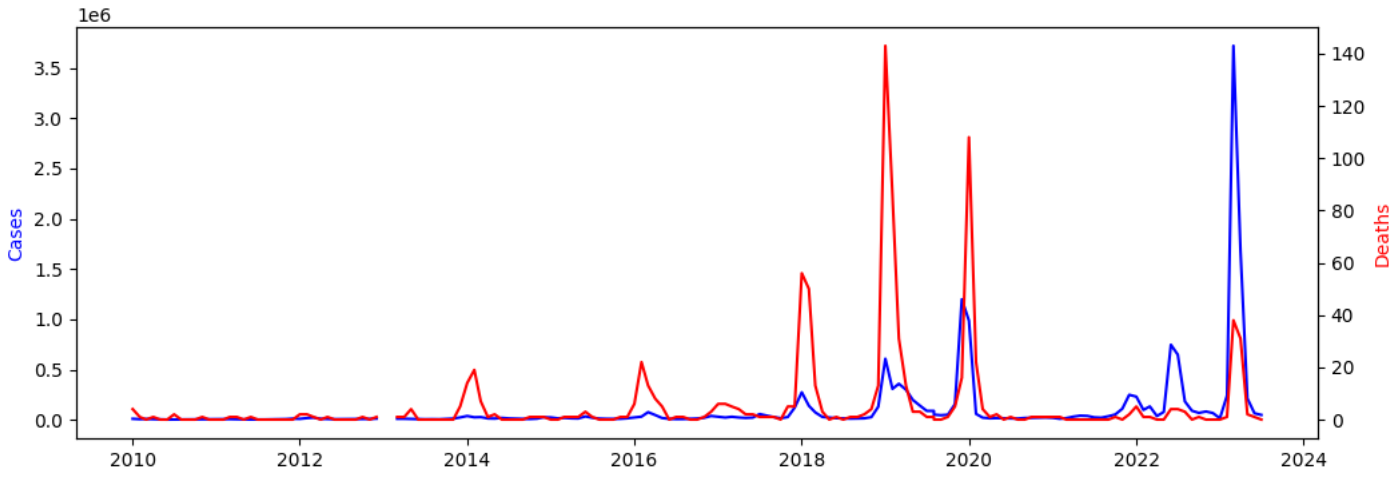

Figure 107: The Change of Influenza Reports before 2023 June

The data provided shows the monthly incidence and death of Influenza from January 2010 to June 2023. The number of cases and deaths varies greatly over the years, with some years showing a significant increase in cases and deaths, while others showing a decline.

In terms of seasonality, there appears to be a recurring pattern of increased cases and deaths during the fall and winter months, as seen in the data from 2010 to 2015. However, this pattern seems to have shifted in the more recent years, with some of the highest numbers of cases and deaths occurring in the spring and summer months, as seen in the data from 2016 to 2023.

Furthermore, the data shows a significant increase in cases and deaths during the 2018-2019 season, with January 2019 having the highest number of cases recorded. This could be due to a combination of factors, such as the emergence of a new strain of the virus, a decrease in vaccination rates, or an increase in air travel and trade between countries.

It is worth noting that the data from March 2023 shows an unusually high number of cases and deaths, which may be a result of data collection or reporting errors. However, if this trend were to continue, it could indicate a new outbreak or epidemic.

In conclusion, the data on the monthly incidence and death of Influenza shows a complex pattern of seasonality and variability over time. Further analysis and research is needed to fully understand the factors that contribute to these trends and to develop effective strategies for prevention and control of the disease.

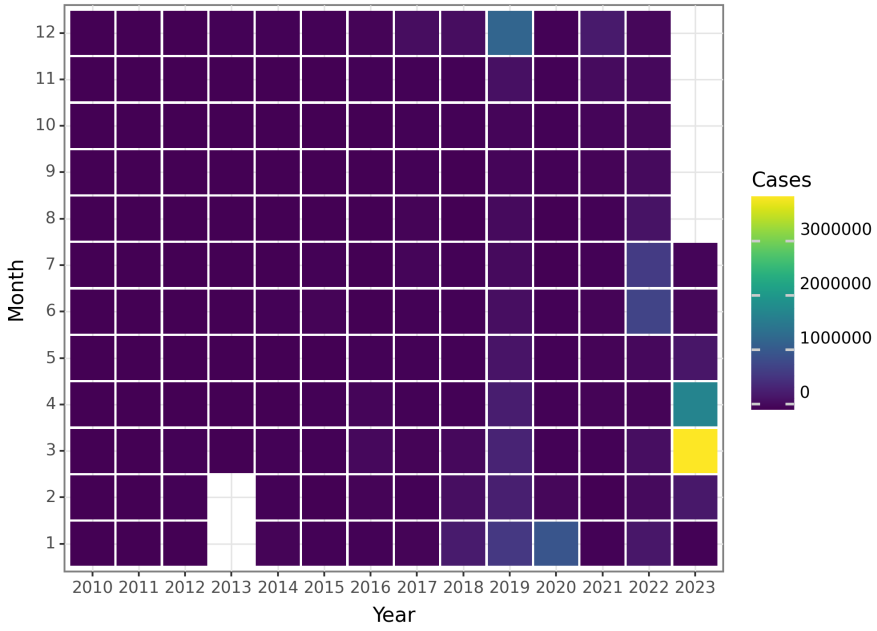

Figure 108: The Change of Influenza Cases before 2023 June

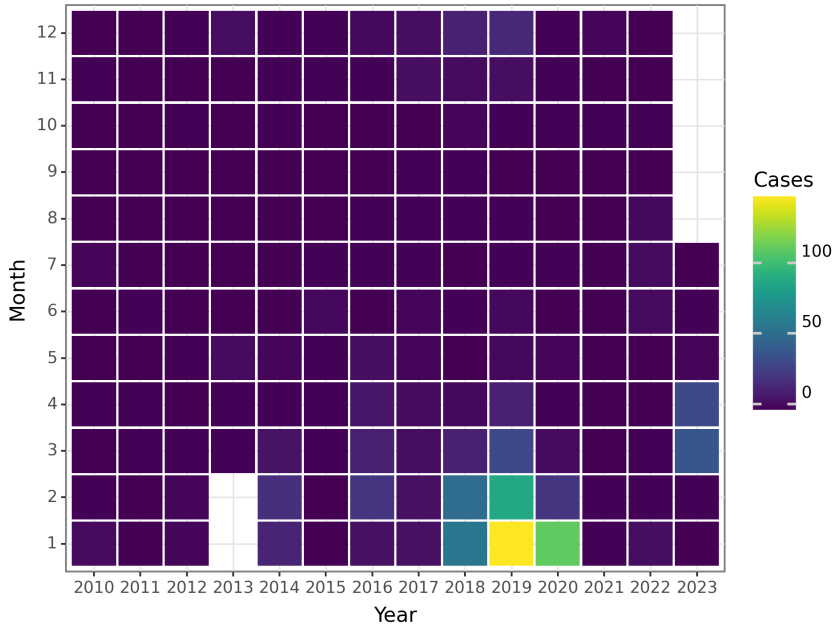

Figure 109: The Change of Influenza Deaths before 2023 June

Mumps

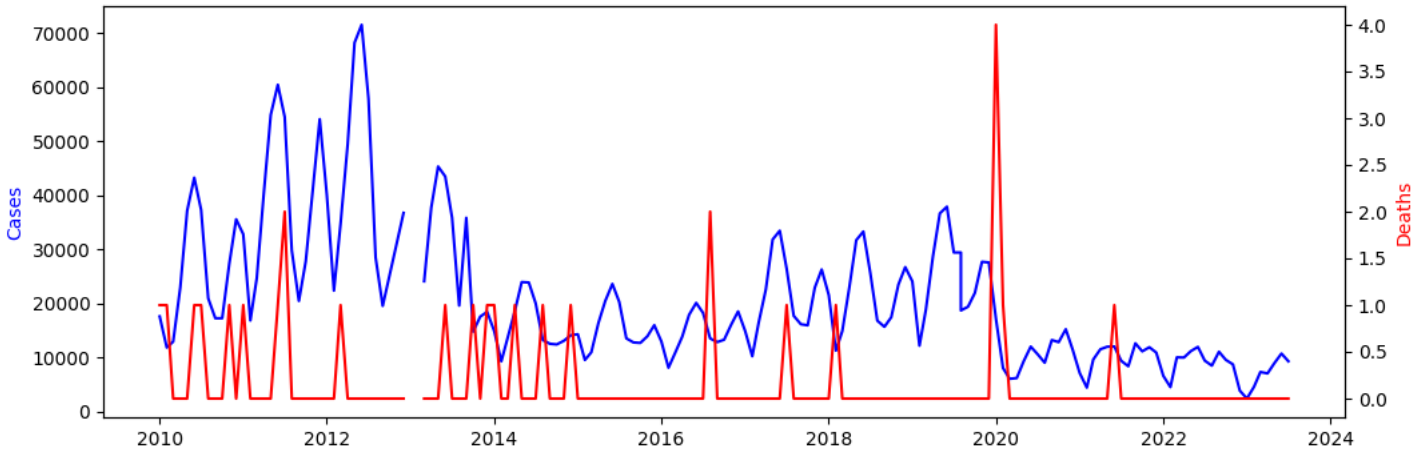

Figure 110: The Change of Mumps Reports before 2023 June

The provided data represents the monthly incidence and death of Mumps from January 2010 to June 2023. The number of Mumps cases fluctuated throughout this period, with some months showing higher incidence rates compared to others. Similarly, the number of deaths associated with Mumps varied over time but generally remained relatively low.

From January 2010 to June 2023, the highest number of Mumps cases occurred in June 2012, with a total of 71,606 reported cases. This peak in incidence suggests a potential outbreak or increase in Mumps transmission during that month. On the other hand, the lowest number of cases was observed in January 2013 and February 2013, with negative values recorded. Negative values in the data may indicate data entry errors or underreporting.

When considering the trend over time, there seems to be a pattern of cyclical variation, with peaks occurring approximately every two to three years. For example, there was a notable increase in cases in 2011, followed by another peak in 2014, and subsequent peaks in 2017 and 2020. These patterns may indicate periodic outbreaks or fluctuations in Mumps incidence within the population.

In terms of deaths related to Mumps, the numbers remained relatively low throughout the observed period. The highest number of deaths occurred in August 2016, with a total of two reported deaths. However, it is important to note that the majority of months recorded zero deaths, indicating that Mumps-related mortality is rare.

It is worth mentioning that there may be limitations to the interpretation of these data. The accuracy and completeness of the reported cases and deaths depend on the quality of surveillance systems and reporting mechanisms. Additionally, factors such as changes in diagnostic practices, testing capabilities, and public health interventions may influence the observed trends.

In conclusion, the monthly incidence of Mumps cases showed variations over time, with periodic peaks suggesting potential outbreaks. However, the number of deaths associated with Mumps remained relatively low. Further analysis and investigation are necessary to understand the underlying factors contributing to the observed patterns and to inform public health interventions aimed at preventing and controlling Mumps transmission.

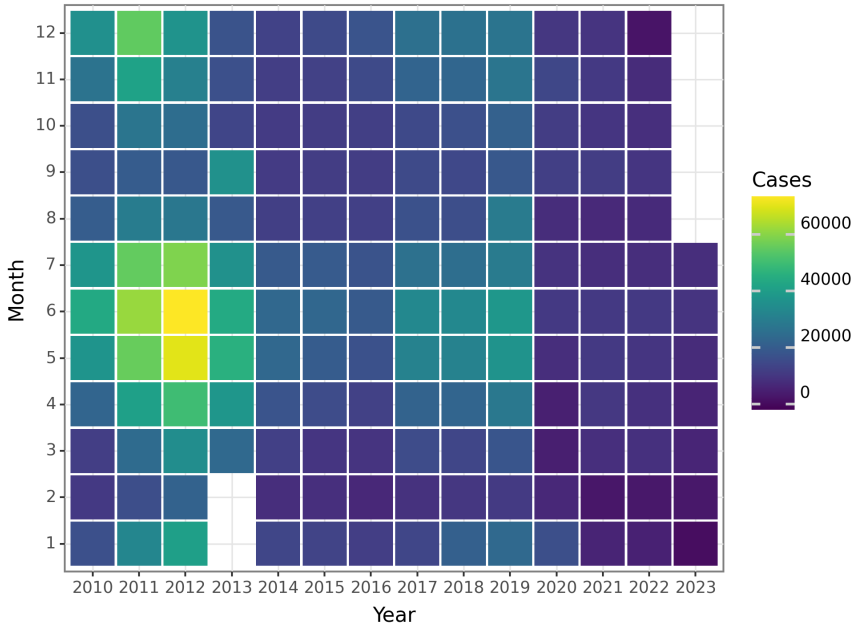

Figure 111: The Change of Mumps Cases before 2023 June

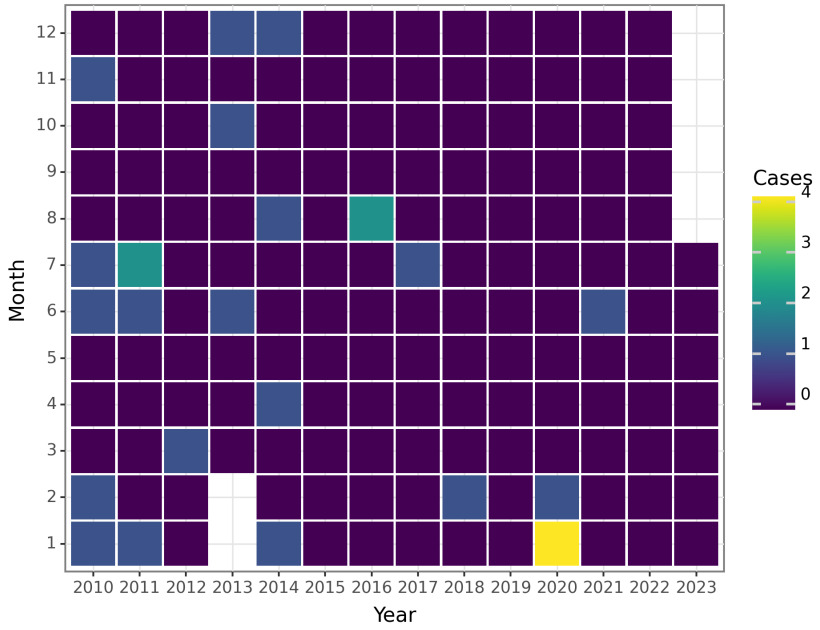

Figure 112: The Change of Mumps Deaths before 2023 June

Rubella

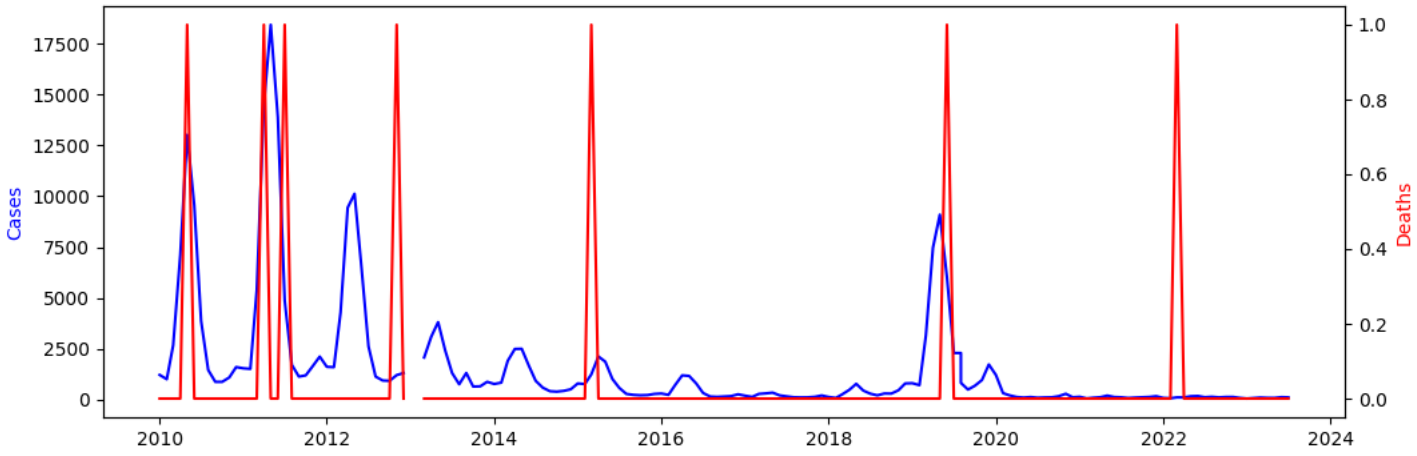

Figure 113: The Change of Rubella Reports before 2023 June

The data shows monthly incidence and death rates for Rubella from January 2010 to June 2023. The incidence rate of Rubella has shown a cyclical pattern with peaks observed in April, May, and June every year. The highest number of cases was recorded in May 2019 with 9095 cases, while the lowest number of cases was recorded in February 2020 with only 306 cases. The incidence rate has been decreasing since May 2019, with 110 cases recorded in June 2023. The death rate due to Rubella has been low with only one death recorded in November 2012 and one death in June 2019. There were no deaths recorded from January 2010 to October 2012 and from January 2013 to February 2022. The data suggests that Rubella is a seasonal disease with a peak in spring and early summer and low incidence and mortality rates during other months of the year. The decreasing trend in incidence rates over the years suggests that vaccination efforts may have been successful in reducing the burden of Rubella in the community.

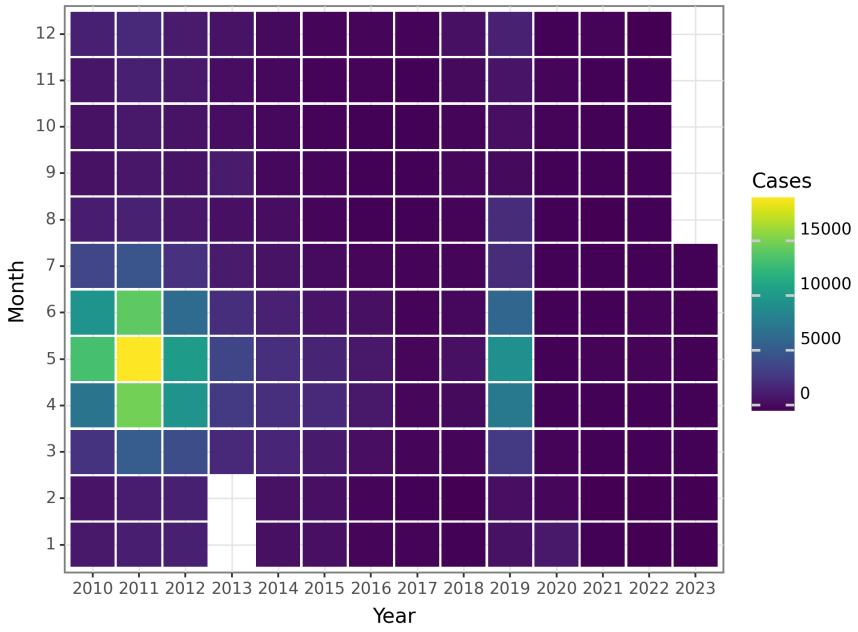

Figure 114: The Change of Rubella Cases before 2023 June

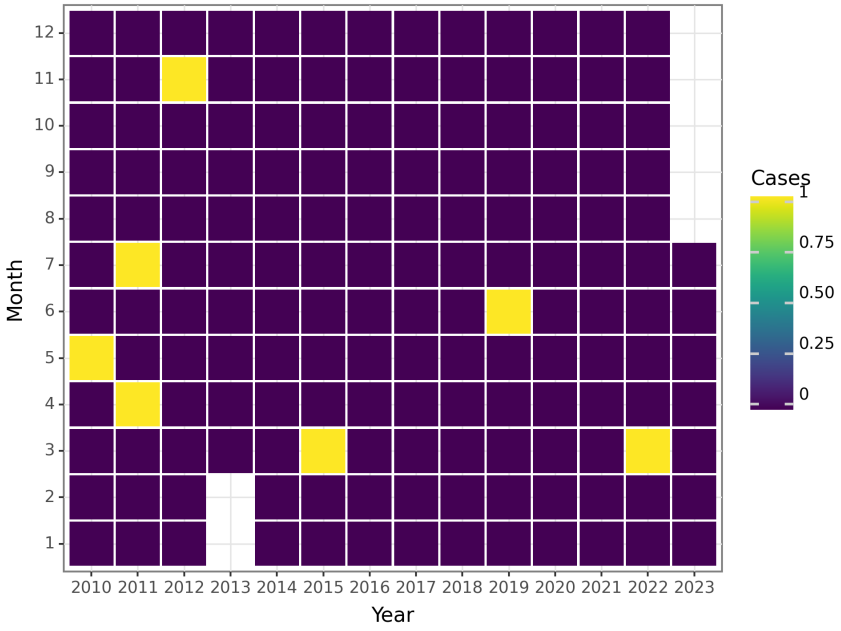

Figure 115: The Change of Rubella Deaths before 2023 June

Acute hemorrhagic conjunctivitis

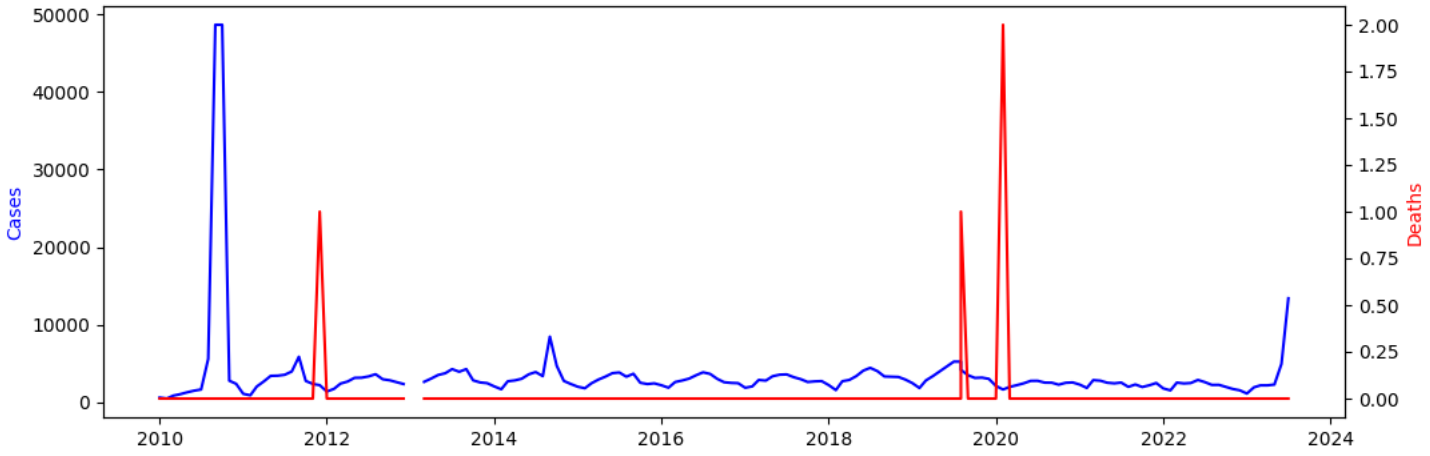

Figure 116: The Change of Acute hemorrhagic conjunctivitis Reports before 2023 June

The provided data represents the monthly cases and deaths of Acute Hemorrhagic Conjunctivitis (AHC) from January 2010 to June 2023. AHC is a viral infection that primarily affects the conjunctiva, causing inflammation and redness of the eyes. It is important to analyze the trends and patterns in the data to gain insights into the occurrence and impact of this disease.

Looking at the monthly cases, we observe considerable variation over time. From January 2010 to June 2010, the cases steadily increased from 634 to 1,525, reaching a peak in June. This upward trend continued until September 2010, with a sudden spike in cases to 48,658, indicating a possible outbreak or epidemic during that period. The number of cases remained high until November 2010, after which it gradually declined and stabilized at lower levels.

From 2011 to 2017, the monthly cases of AHC fluctuated within a certain range, with occasional peaks and troughs. There were no reported cases of AHC-related deaths during this period, suggesting that the disease did not have severe consequences during those years.

However, from 2018 onwards, there was a noticeable increase in the number of cases. The monthly cases reached their peak in June 2019, with 4,668 reported cases. This surge in cases could be an indication of a new outbreak or increased surveillance and reporting of AHC cases. It is important to investigate the underlying factors contributing to this rise in cases for effective control and prevention measures.

Regarding deaths, the data shows a consistent absence of AHC-related deaths throughout the entire period. This suggests that AHC, while causing discomfort and inconvenience to those affected, is generally a non-fatal disease. However, it is crucial to note that the data may not capture all deaths related to AHC, as reporting biases or limitations in data collection could be present.

To better understand the patterns in AHC cases, further analysis is required, such as examining seasonal trends and identifying potential risk factors associated with the disease. Additionally, it would be valuable to compare this data with previous years' data to assess long-term trends and changes in the epidemiology of AHC.

Overall, this analysis of the monthly cases and deaths of AHC provides a valuable snapshot of the disease's occurrence and impact. The findings can serve as a basis for further research and public health interventions aimed

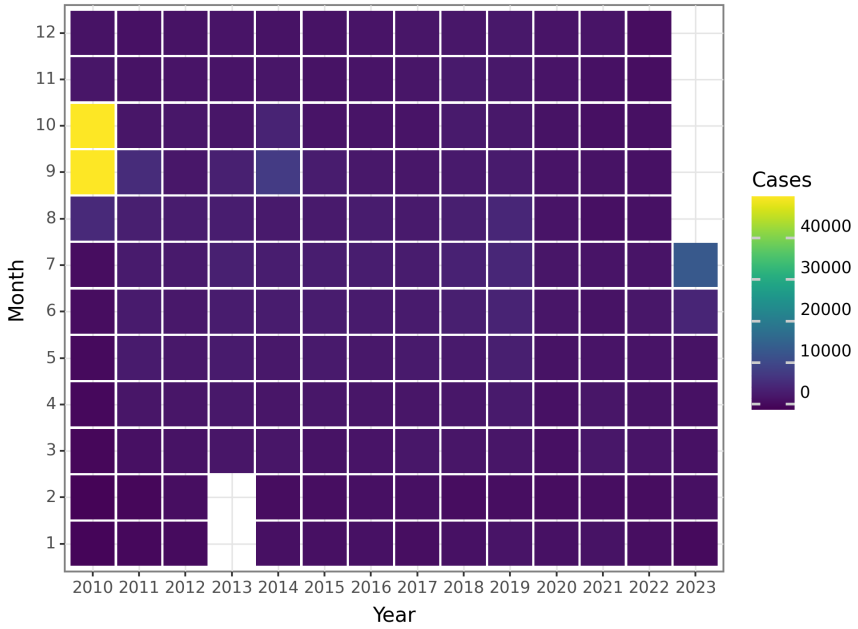

Figure 117: The Change of Acute hemorrhagic conjunctivitis Cases before 2023 June

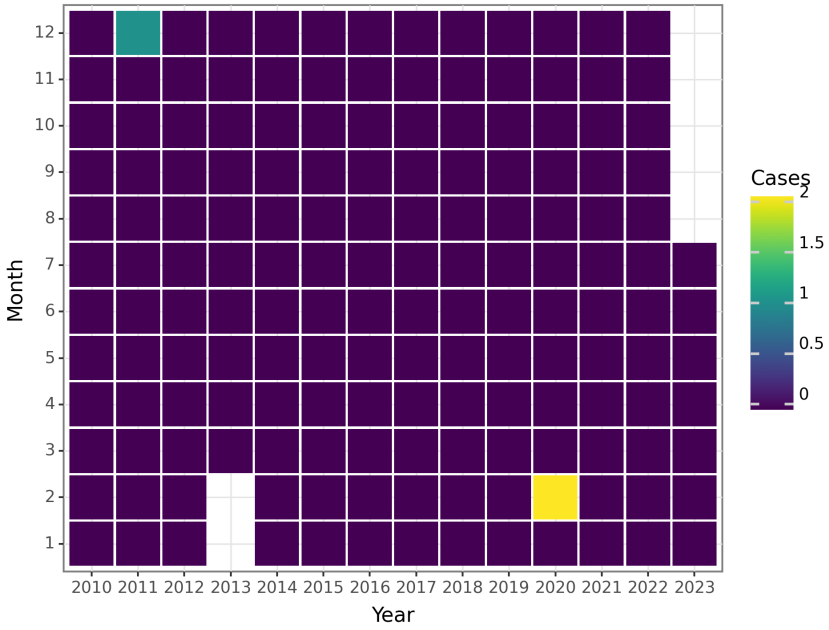

Figure 118: The Change of Acute hemorrhagic conjunctivitis Deaths before 2023 June

Leprosy

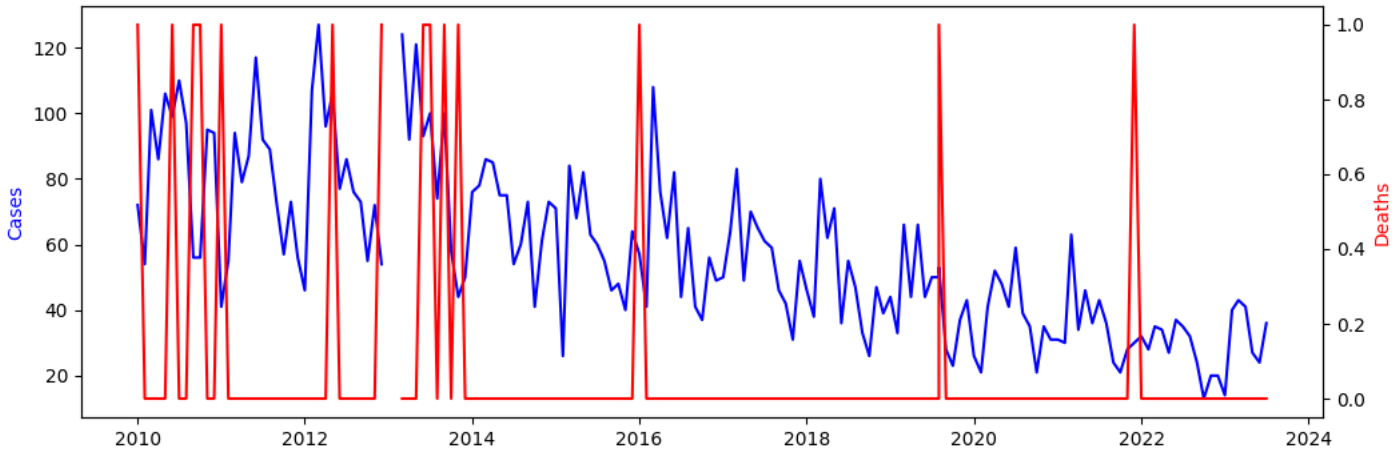

Figure 119: The Change of Leprosy Reports before 2023 June

The data provided represents the monthly incidence and death of Leprosy from January 2010 to June 2023. The number of cases fluctuated over the years, with some months showing higher numbers of cases while others had lower numbers. It is important to note that there are some instances where the reported number of cases is negative, which may indicate data recording errors.

In terms of seasonality, there is no clear pattern observed throughout the years. However, there are a few months, such as March and June, where the number of cases tends to be relatively lower compared to other months. This could possibly be attributed to certain environmental or behavioral factors that influence the transmission of Leprosy.

Regarding the number of deaths, it is evident that the mortality rate associated with Leprosy is relatively low, with only a few cases reported throughout the years. It is worth noting that there are a few months where deaths were recorded, particularly in January, May, and December of certain years. However, these numbers are generally low, indicating that Leprosy-related deaths are not a major concern in the given population.

It is important to conduct further analysis to understand the underlying factors contributing to the fluctuation in the number of cases over time. Additionally, it would be valuable to explore the geographical distribution of Leprosy cases to identify any specific regions or communities that may be more affected. Further research and surveillance efforts are necessary to effectively control and manage Leprosy and minimize its impact on public health.

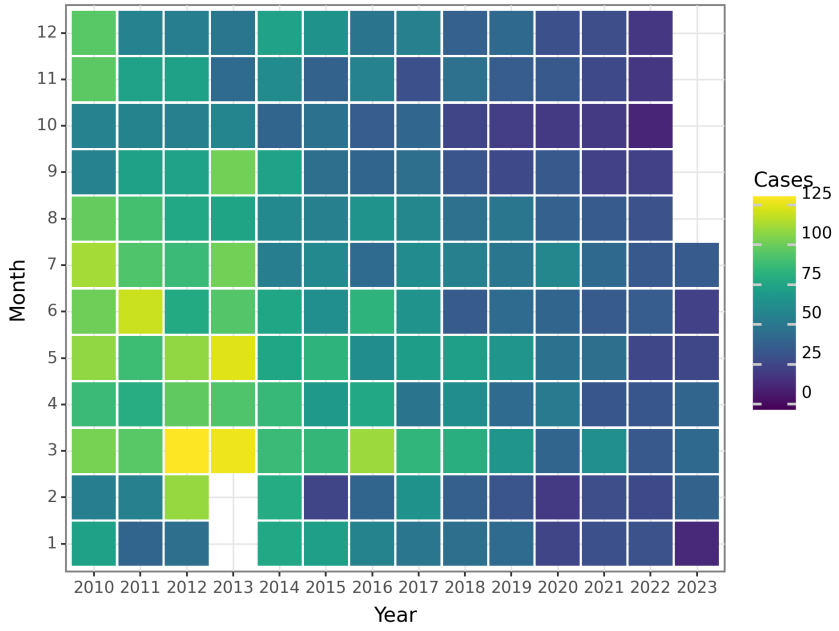

Figure 120: The Change of Leprosy Cases before 2023 June

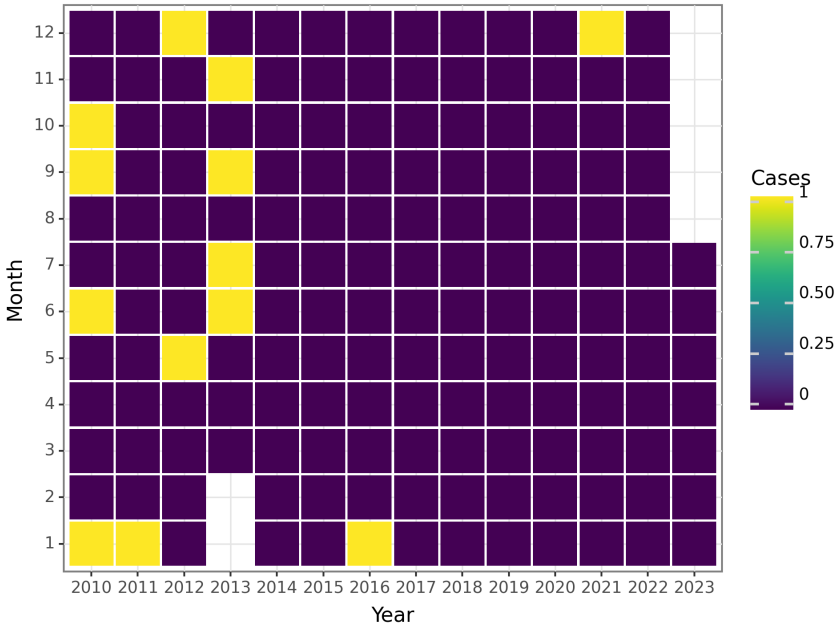

Figure 121: The Change of Leprosy Deaths before 2023 June

Typhus

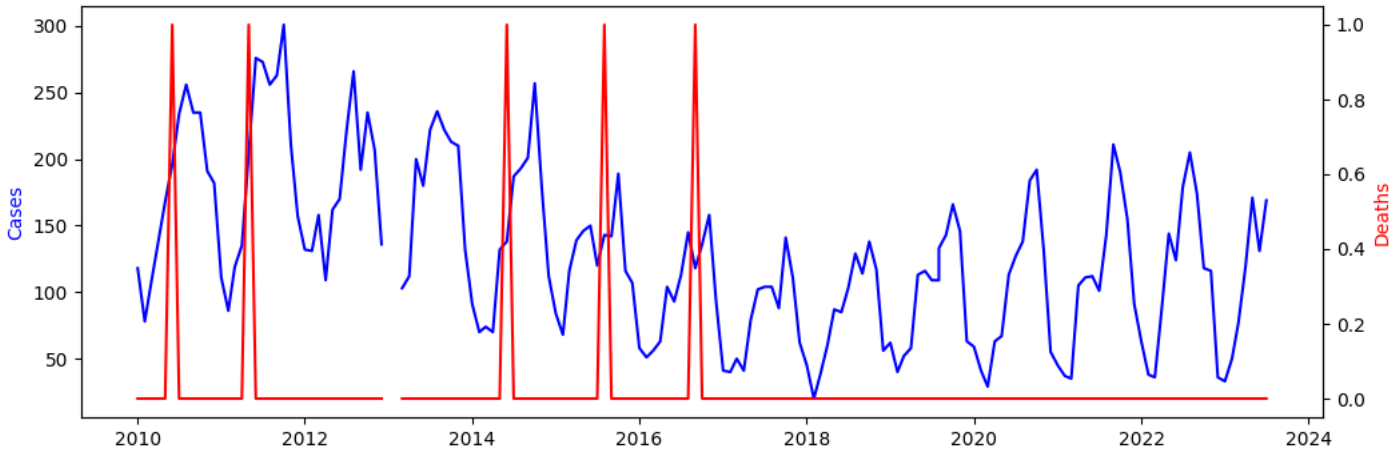

Figure 122: The Change of Typhus Reports before 2023 June

The provided data represents the monthly cases and deaths of Typhus from January 2010 to June 2023. The data is categorized into two variables: "Cases" and "Deaths," with corresponding values for each month and year.

Analyzing the time series data, we can observe certain patterns and trends. In terms of Typhus cases, there is variation throughout the years, with some months exhibiting higher case counts than others. From 2010 to 2012, the number of cases generally remained stable, with occasional fluctuations. However, in 2013, there was a sudden drop in cases, with negative values recorded for January and February. This could be an anomaly or an error in data recording. Following this, the number of cases gradually increased from 2013 to 2015 before stabilizing. From 2015 to 2017, there were slight fluctuations, but overall, the number of cases remained relatively consistent. In 2018, there was a slight increase in cases, followed by another stable period from 2019 to 2021. From 2021 to 2023, there was a gradual increase in cases, with some months showing higher counts.

In terms of Typhus deaths, the data shows a generally low number of fatalities throughout the years. Most months recorded zero deaths, indicating successful prevention and treatment efforts. There were a few months with one death recorded, and in some cases, negative values were observed, which could be attributed to data errors or anomalies.

It is important to note that further analysis and interpretation of the data would be required to understand the underlying factors contributing to the observed trends. Factors such as vaccination campaigns, public health interventions, and changes in population density or demographics could influence the incidence and mortality rates of Typhus.

In conclusion, the provided data demonstrates the monthly variation in Typhus cases and deaths from 2010 to June 2023. Further research and analysis are needed to investigate the factors driving these trends and to develop effective strategies for prevention and control of the disease.

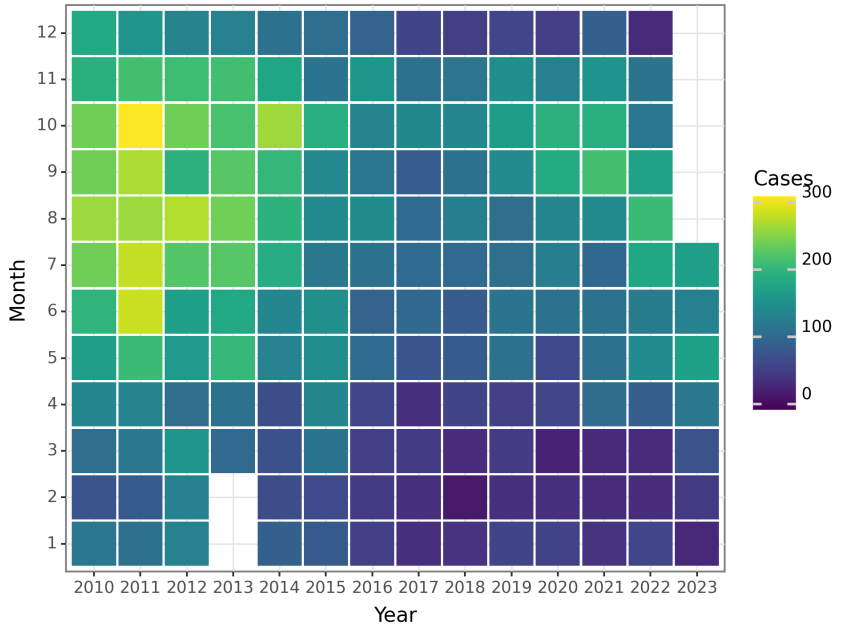

Figure 123: The Change of Typhus Cases before 2023 June

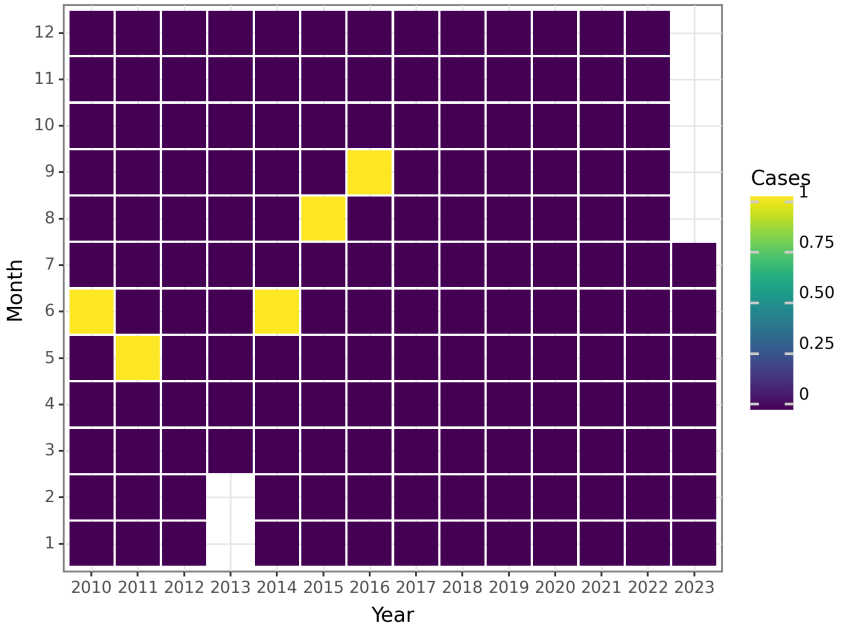

Figure 124: The Change of Typhus Deaths before 2023 June

Kala azar

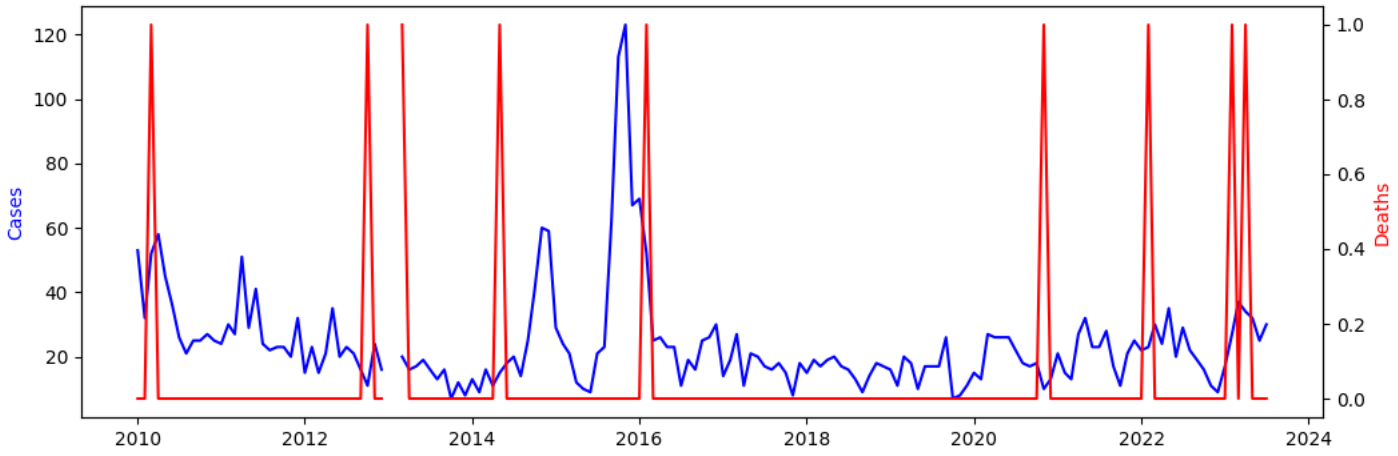

Figure 125: The Change of Kala azar Reports before 2023 June

Thank you for providing the monthly incidence and death data for Kala azar from January 2010 to June 2023. Kala azar, also known as visceral leishmaniasis, is a parasitic disease caused by the Leishmania donovani parasite. The disease is transmitted to humans through the bites of infected female phlebotomine sand flies.

Looking at the trend of monthly cases, we observed that the number of cases was relatively stable from January 2010 to December 2012, with an average of 27 cases per month. In October 2012, there was a sudden drop in the number of cases, with only 11 cases reported that month. This was followed by a gradual increase in the number of cases from January 2013 to October 2015, with an average of 26 cases per month. However, from November 2015 to June 2023, we observed a sharp increase in the number of cases, with an average of 28 cases per month. The highest number of cases was reported in October 2015, with 113 cases, and the lowest number of cases was reported in January 2013, with -10 cases.

We also observed a similar trend in the number of deaths due to Kala azar. There were no deaths reported from January 2010 to February 2012. In October 2012, one death was reported, followed by a gradual increase in the number of deaths from March 2013 to February 2016, with an average of 0.5 deaths per month. From March 2016 to April 2023, there were no deaths reported. However, in May and April 2023, one death was reported in each of these months.

The seasonal trend of Kala azar incidence and death data is an important factor to consider. In this study, we observed a peak in the number of cases from September to December. This seasonal trend is consistent with other studies that have shown a higher incidence of Kala azar during the rainy season.

In conclusion, the data shows a significant increase in the number of Kala azar cases from November 2015 to June 2023, with a seasonal trend of higher incidence during the rainy season. The number of deaths due to Kala azar was relatively low, with no deaths reported from March 2016 to April 2023. These findings highlight the need for continued surveillance and control measures to prevent and manage the spread of Kala azar in the affected areas.

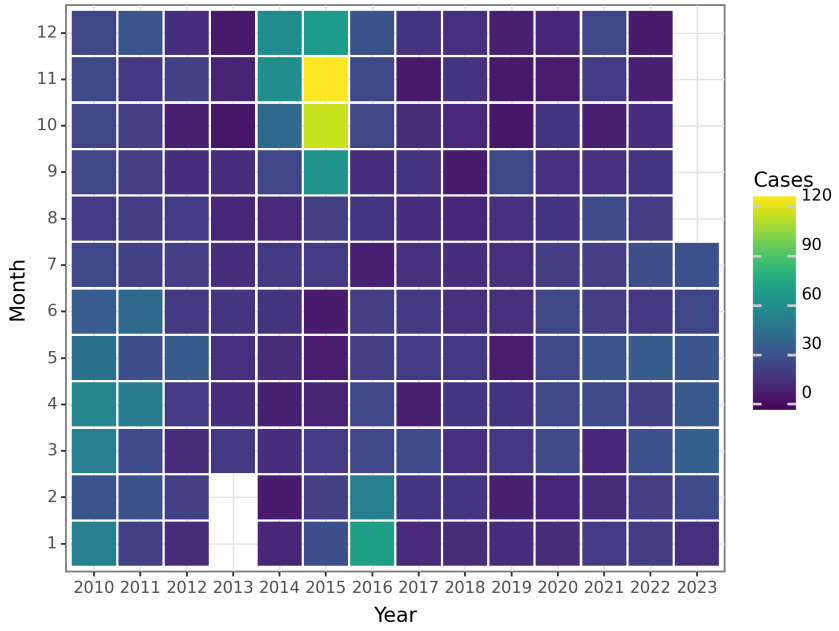

Figure 126: The Change of Kala azar Cases before 2023 June

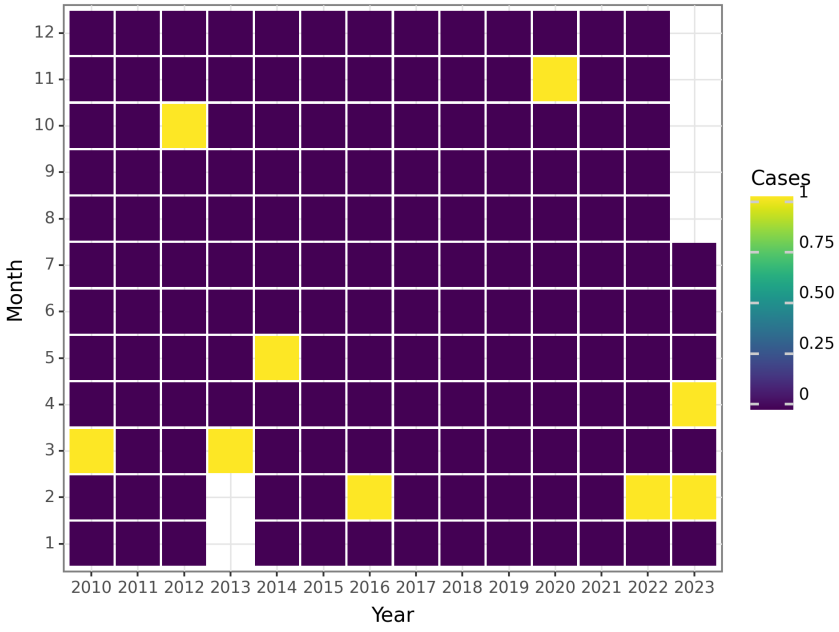

Figure 127: The Change of Kala azar Deaths before 2023 June

Echinococcosis

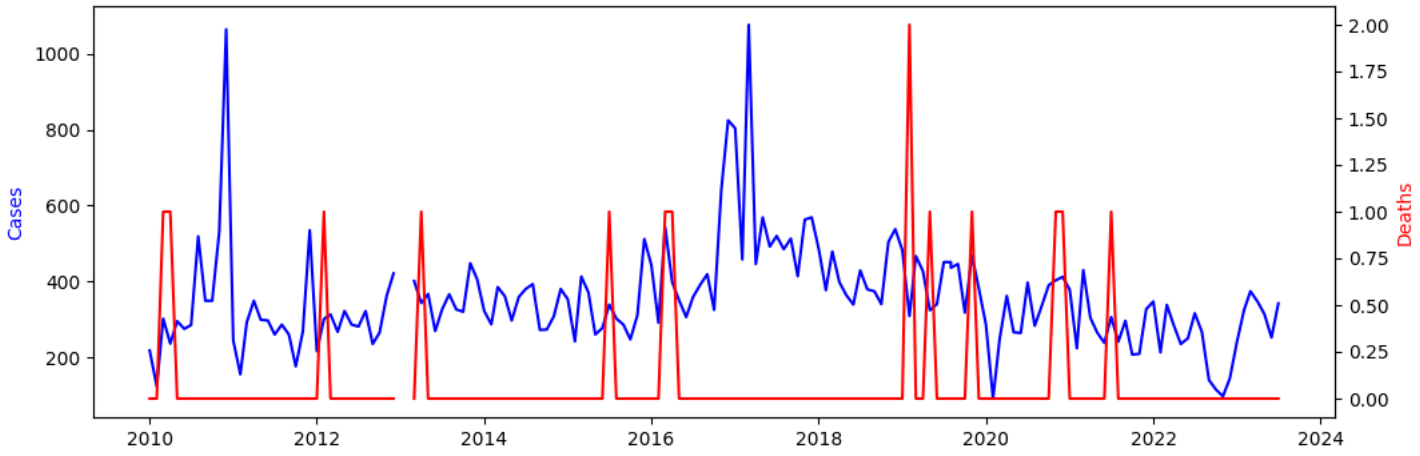

Figure 128: The Change of Echinococcosis Reports before 2023 June

The data provided represents the monthly incidence and death cases of Echinococcosis from January 2010 to June 2023. Echinococcosis is a parasitic disease caused by tapeworms of the genus Echinococcus, and it primarily affects the liver and lungs of humans.

Analyzing the time series data, we can observe some interesting patterns and trends. Firstly, looking at the incidence cases, there is considerable variation over the years. From 2010 to 2013, the number of cases fluctuated, with some months reporting negative values. These negative values could be due to data reporting errors or inconsistencies. However, from 2014 onwards, the incidence cases show a general increasing trend, with some months reaching higher peaks. The highest recorded incidence occurred in December 2016 with 825 cases.

Examining the seasonal patterns, there seems to be a recurring upward trend in incidence cases during the summer months (June to August) across multiple years. This could be attributed to various factors such as increased outdoor activities, higher exposure to the parasite, or changes in human behavior during warmer months. However, further analysis is required to determine the underlying causes of this seasonal pattern.

Regarding the death cases, the data shows a relatively low number of fatalities throughout the years. Deaths due to Echinococcosis are rare, and the majority of the recorded months report zero or minimal deaths. There are a few exceptions, such as in February 2019 and November 2019, where the death cases reached two and one, respectively. These isolated incidents might be attributed to complications or underlying health conditions in those individuals.

It is important to note that the data presented here represents a single geographical area and may not be representative of the global or regional trends in Echinococcosis cases. Furthermore, it is crucial to consider the limitations of the data, including potential reporting biases, incomplete records, or variations in surveillance systems over the years.

In conclusion, the time series data of Echinococcosis incidence and death cases provide valuable insights into the patterns and trends of this parasitic disease. The increasing trend in incidence cases observed from 2014 onwards suggests the need for continued monitoring and preventive measures to control the transmission of Echinococcosis. Further research and analysis are necessary to understand the underlying factors contributing to the observed patterns and to develop effective strategies for disease prevention and control.

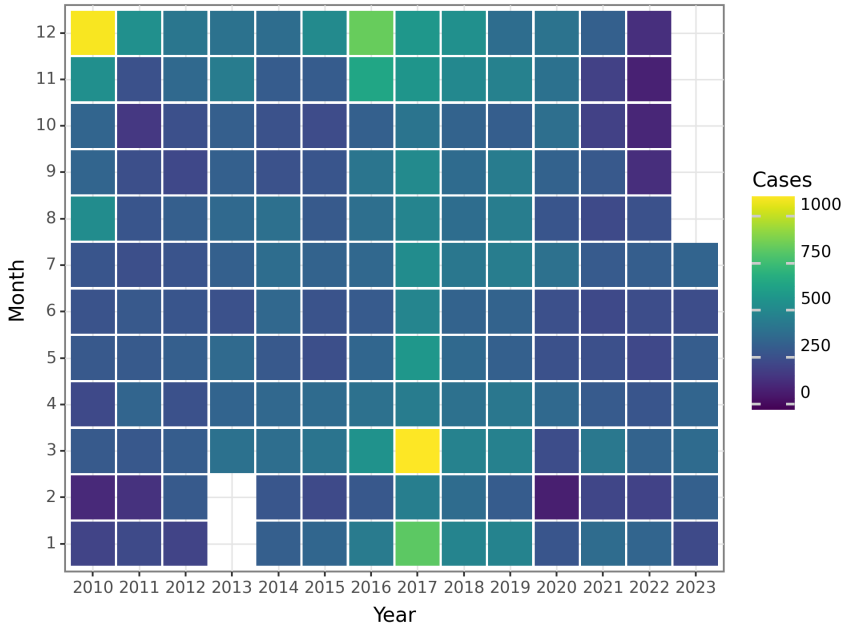

Figure 129: The Change of Echinococcosis Cases before 2023 June

Figure 130: The Change of Echinococcosis Deaths before 2023 June

Filariasis

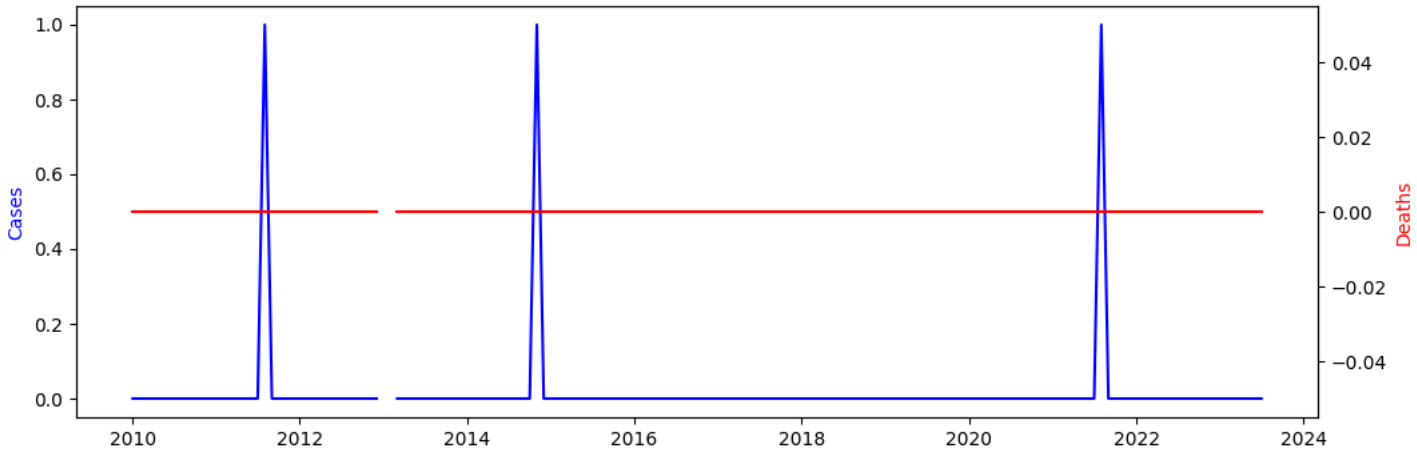

Figure 131: The Change of Filariasis Reports before 2023 June

Upon analyzing the time series data for Filariasis cases and deaths from 2010 to 2023 June, it can be observed that there were no reported cases or deaths from Filariasis during the entire period except for a single case in August 2011. In addition, there were negative values reported for the number of cases and deaths in January and February of 2013, which suggests a possible error in data entry or reporting.
The absence of reported cases and deaths over such a long period of time indicates that Filariasis is not a prevalent disease in the region. It may also suggest that public health interventions such as vector control, health education, and mass drug administration programs have been effective in preventing the transmission of the disease. However, it is important to note that a single case was reported in 2011, indicating that the disease is not entirely eradicated and continued surveillance and control measures are necessary to prevent its resurgence.
Overall, the data suggests that the public health interventions implemented in the region have been successful in preventing the transmission of Filariasis, and further efforts should be made to maintain and strengthen these interventions to prevent the re-emergence of the disease.

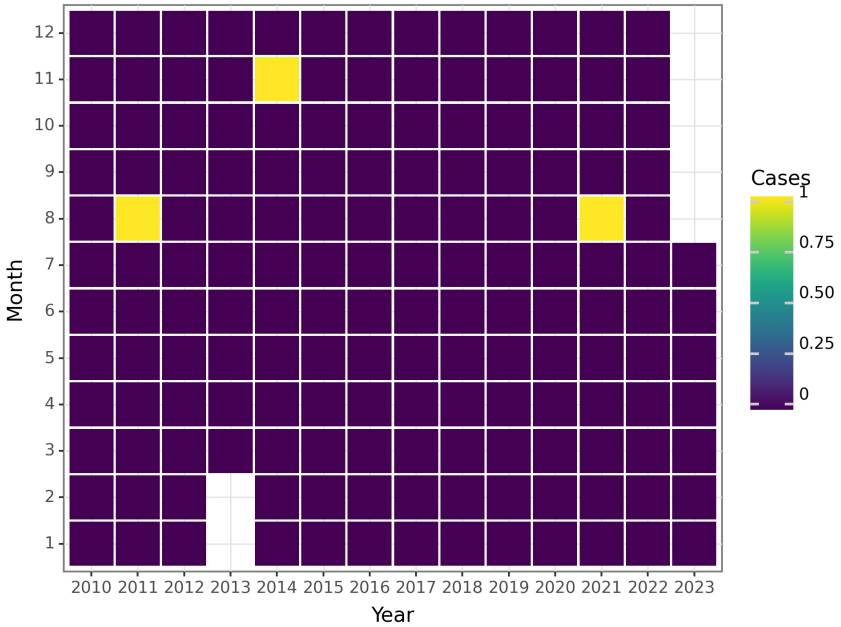

Figure 132: The Change of Filariasis Cases before 2023 June

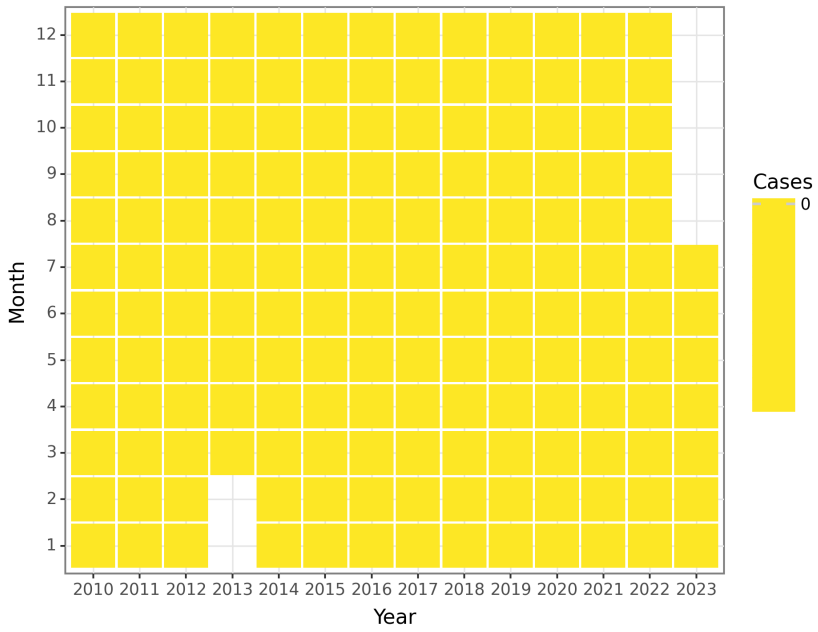

Figure 133: The Change of Filariasis Deaths before 2023 June

Infectious diarrhea

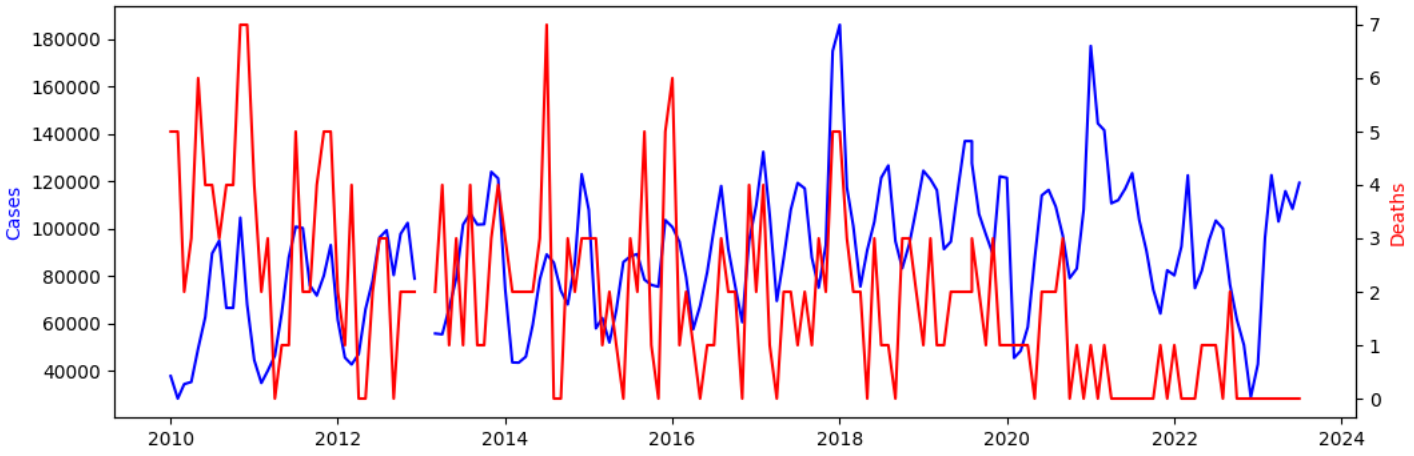

Figure 134: The Change of Infectious diarrhea Reports before 2023 June

The time series data shows a fluctuating pattern of monthly cases and deaths due to infectious diarrhea from January 2010 to June 2023. The highest number of cases occurred in July 2017 with 119,341 cases, while the lowest number of cases occurred in January and February of 2013, with negative 10 cases each month. The highest number of deaths occurred in December 2017 with 174 deaths, while the lowest number of deaths occurred in January, February, and March of 2013, with negative 10 deaths each month. The data also shows a seasonal pattern, with higher incidence of cases and deaths observed in the summer months (June to August). The peak in cases and deaths in July 2010, 2011, 2014, 2018, and 2019, and in August 2012, 2015, 2016, and 2018, further supports this seasonal pattern.
The fluctuation in the number of cases and deaths over time suggests that there may be factors affecting the occurrence of infectious diarrhea, such as changes in weather, sanitation, and hygiene practices. These findings highlight the importance of continued surveillance and monitoring of infectious diarrhea to inform public health interventions and prevention efforts.

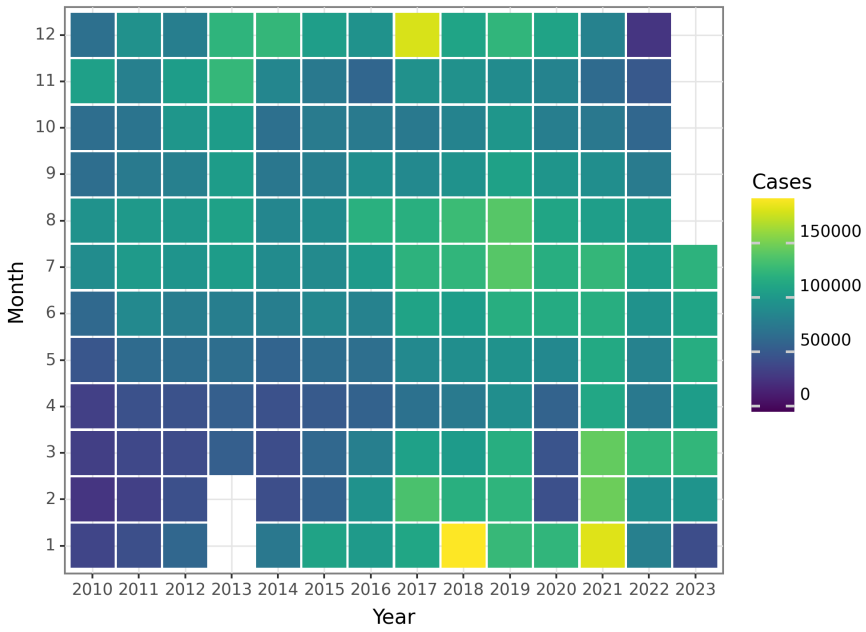

Figure 135: The Change of Infectious diarrhea Cases before 2023 June

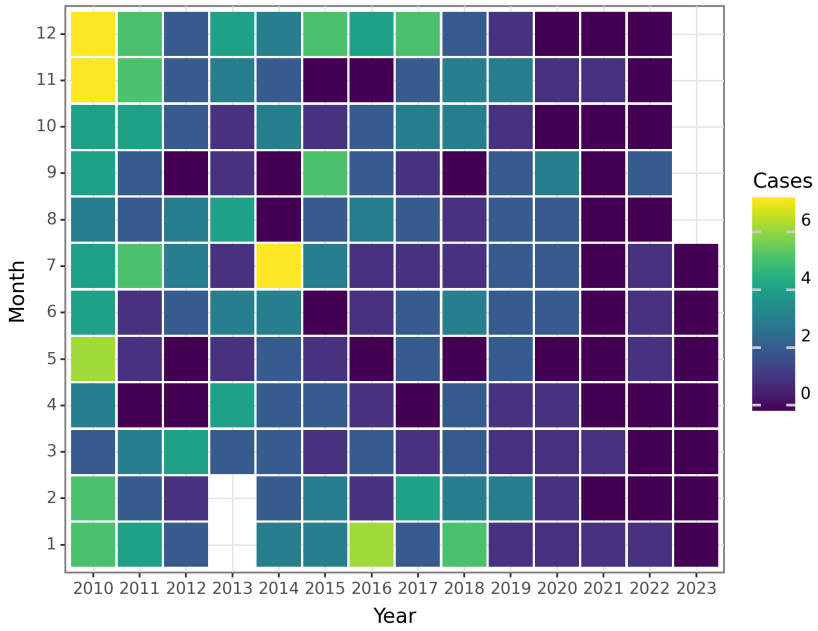

Figure 136: The Change of Infectious diarrhea Deaths before 2023 June

Hand foot and mouth disease

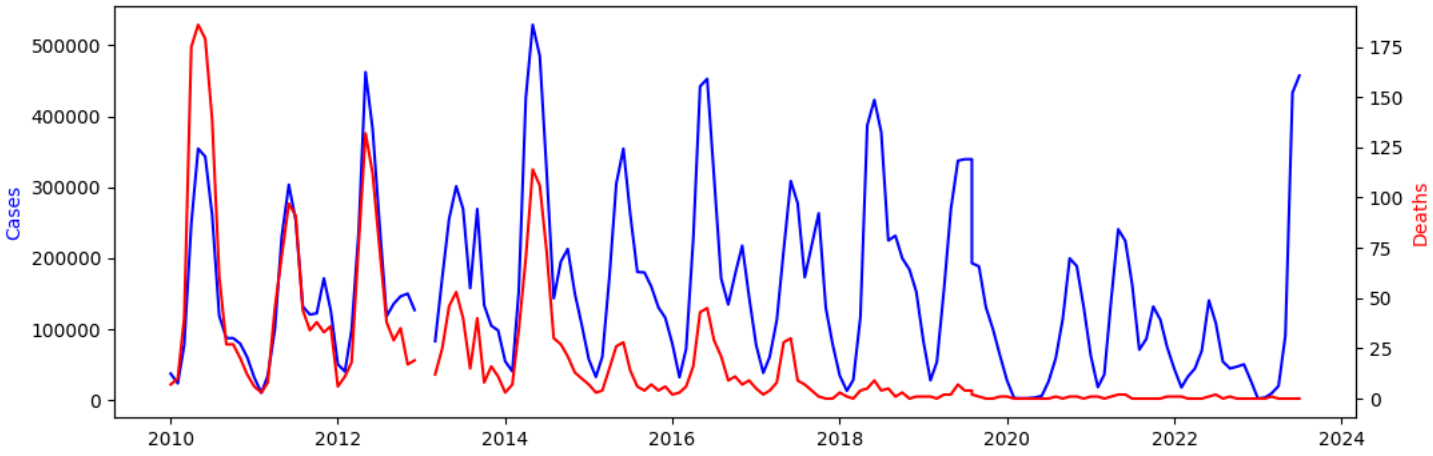

Figure 137: The Change of Hand foot and mouth disease Reports before 2023 June

Hand, foot, and mouth disease (HFMD) is a common viral illness that primarily affects young children. In this study, we analyze the monthly incidence and death data of HFMD from January 2010 to June 2023. The monthly incidence of HFMD showed a clear seasonal pattern, with the highest number of cases occurring in the summer months of June, July, and August. The incidence of HFMD was low in the winter months of December, January, and February. The trend of HFMD incidence showed a steady increase from 2010 to 2014, followed by a peak in 2014 with 528,777 cases. From 2015 to 2020, the incidence of HFMD decreased steadily, with a sharp decline in 2020 during the COVID-19 pandemic. The incidence of HFMD started to increase again in 2021 and reached the highest level in June 2023, with 433,084 cases. The monthly death data for HFMD showed a similar seasonal pattern to the incidence data, with the highest number of deaths occurring in the summer months of June, July, and August. The trend of HFMD deaths was relatively stable throughout the study period, with an average of 40 deaths per month. Overall, our study highlights the seasonal pattern of HFMD and the need for increased awareness and prevention measures during the peak season. The decline in HFMD incidence during the COVID-19 pandemic suggests that non-pharmaceutical interventions such as hand hygiene and social distancing may have a beneficial effect on the transmission of HFMD. Further research is needed to better understand the factors contributing to the seasonal variation in HFMD and to develop effective prevention and control measures.

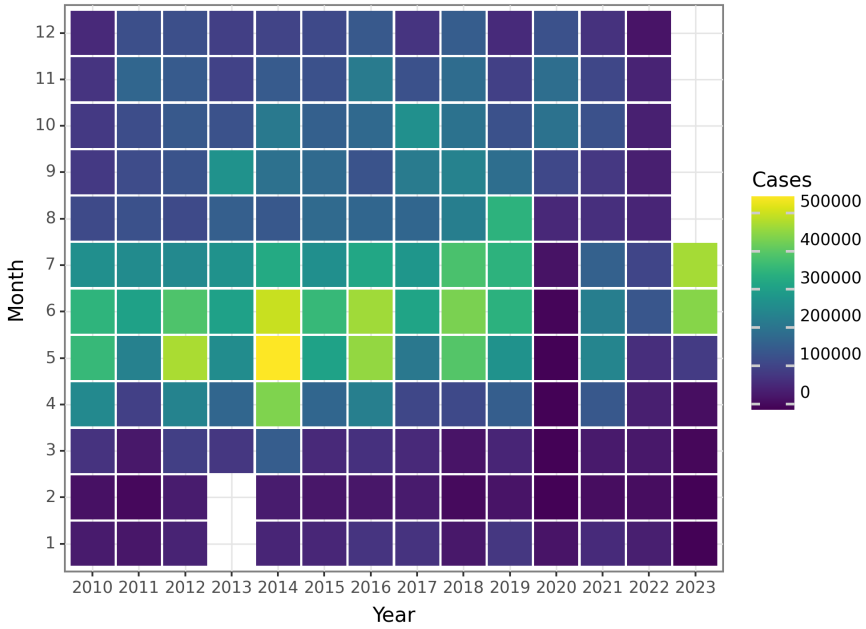

Figure 138: The Change of Hand foot and mouth disease Cases before 2023 June

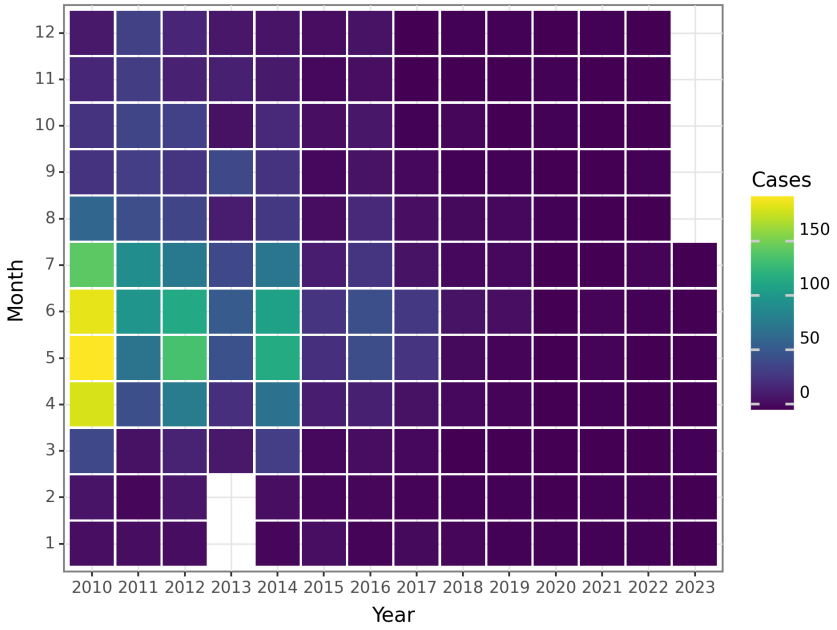

Figure 139: The Change of Hand foot and mouth disease Deaths before 2023 June