



SHORT COMMUNICATION

Global Infectious Diseases in November 2022: Monthly Analysis

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Abstract

Infectious diseases, such as COVID-19 and monkeypox, pose a severe threat to economic development in all countries, as well as to the health of people everywhere. The World Health Organization and National Health Council epidemiological websites were used herein as data sources. Shusi Tech's Global Epidemic Information Monitoring System was used to analyze the data for infectious diseases, determine changes in global epidemics, determine the distribution and quantity of infectious disease cases from October 24, 2022 to November 23, 2022, and analyze their changing trends. Furthermore, the analysis of these data can be used to predict prevalence rates, and assess epidemic prevention and control measures.

Key words: infectious disease, COVID-19, transmission

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INTRODUCTION

Globally, infectious diseases are increasing. Approximately 8% of the world's population has died, and 640 million cases of Coronavirus Disease 2019 (COVID-19) attributed to severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2) have been confirmed [1]. Several SARS-CoV-2 variants have been identified, including Alpha, Beta, Gamma, and Delta. The new variant Omicron has received increasing attention [2,3]. Omicron subvariants, such as BA.5.2, have gradually spread worldwide [4]. The World Health Organization declared monkeypox an International Public Health Emergency in July 2022, because monkeypox was observed to spread worldwide beyond Africa [5]. Many other infectious diseases, such as dengue, measles, and cholera, are also of concern.

By regularly compiling and analyzing global infectious diseases, we can map the changing trends of disease development and visualize the distribution of diseases. By using Shusi Tech's Global Epidemic Information

Monitoring System (Fig 1), we analyzed the prevalence of infectious diseases around the world and described as fully as possible other types of infectious diseases with relatively low incidence from October 24, 2022 to November 23, 2022 (Fig 1).

COVID-19

According to the WHO, more than 10 million new COVID-19 cases have been reported globally, including more than 40,000 deaths. Over the past month, new confirmed cases and deaths have been reported on all continents, with varying trends. The Western Pacific region and Europe have reported the most new cases, followed by the Americas, which accounted for 98.08% of all new cases worldwide. Whether the epidemic has been effectively controlled remains unclear. In the Eastern Mediterranean, COVID-19 cases have been declining yet remain at approximately 200 cases per day, and the region must be cautious in the event of rebounding (Fig 2A, B).

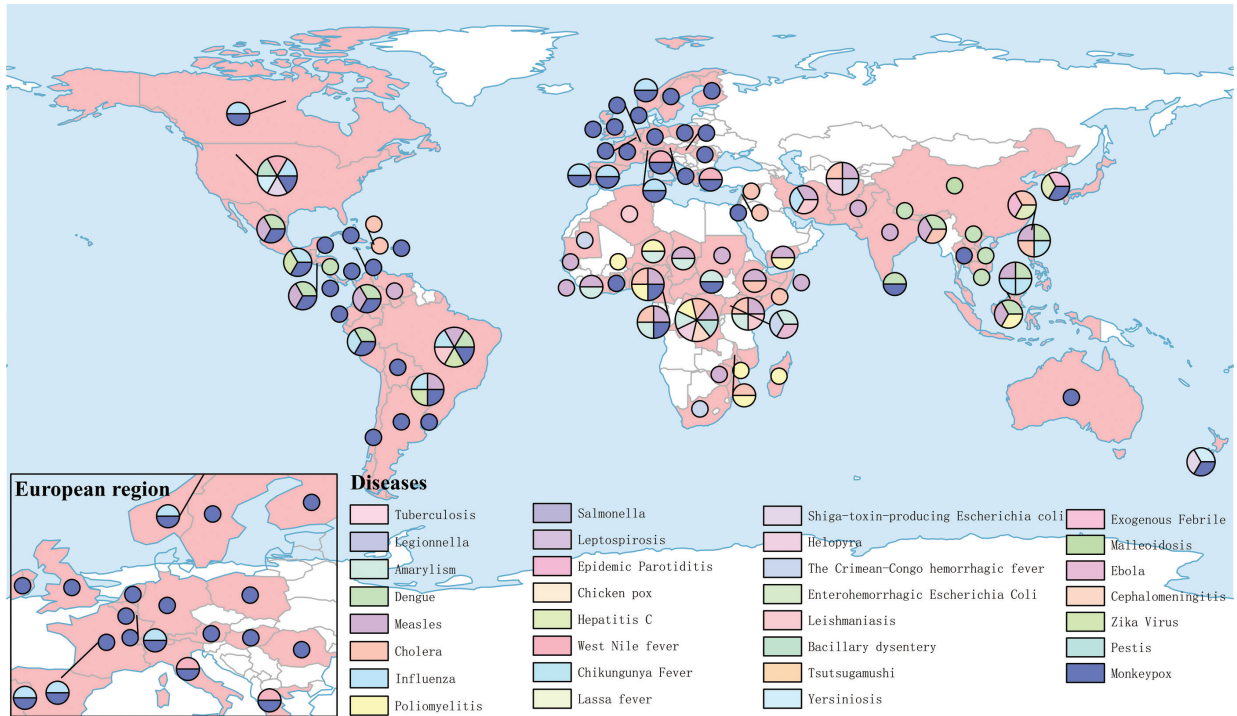


FIGURE 1 | Worldwide distribution of infectious diseases from October 24, 2022 to November 23, 2022.

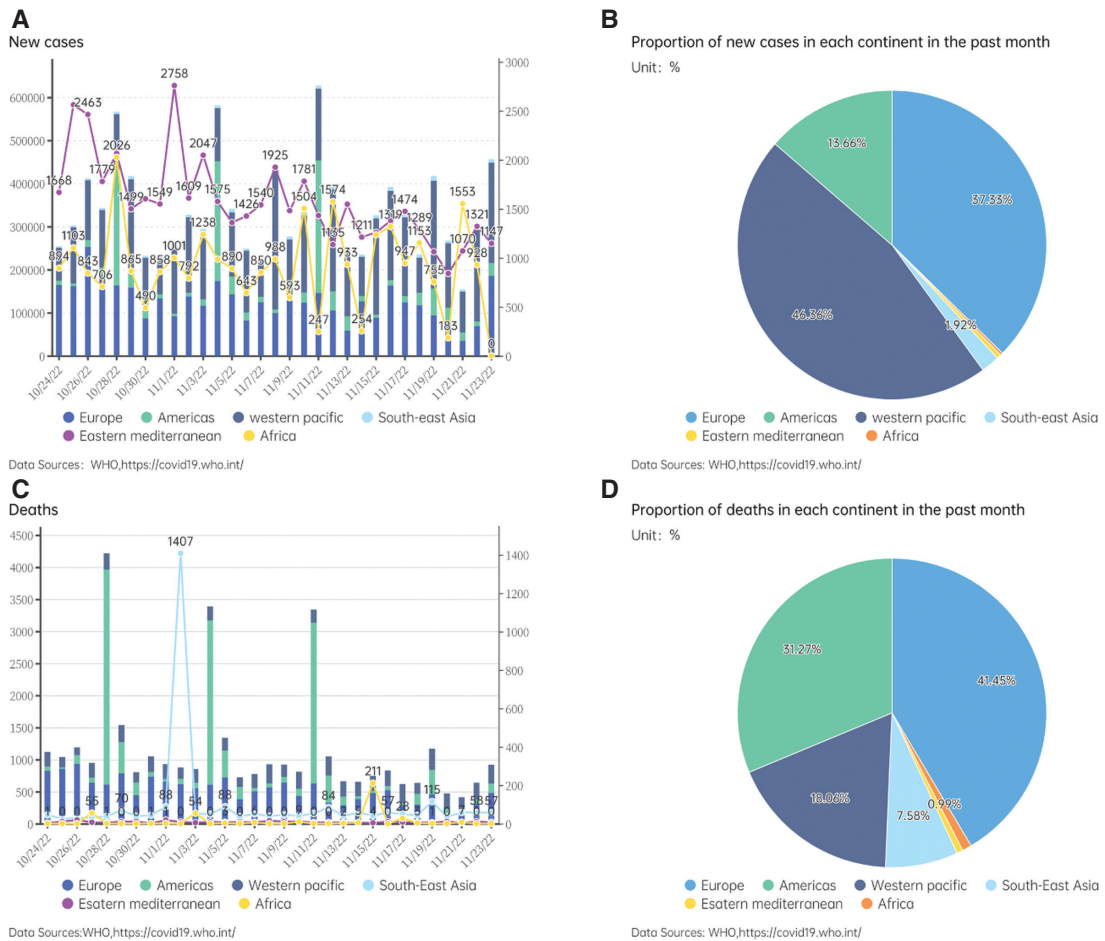


FIGURE 2 | Statistics of new confirmed cases and deaths worldwide daily. A, C: New cases have been reported daily on every continent. B, D: Continent-specific proportions of new confirmed cases and deaths (October 24, 2022 to November 23, 2022; data were obtained from the World Health Organization website: <https://covid19.who.int/>).

Although the Western Pacific region has reported more new confirmed cases, its number of deaths is lower than those in the Americas and Europe, where the numbers of cases have been relatively stable in the past week. Over the past few weeks, however, the number of deaths in the Americas has increased. After the onset of winter, a small outbreak occurred in Southeast Asia on November 2, 2022, possibly because of a decrease in temperature, diminished immunity, and limited medical resources. The outbreak was effectively controlled, and the mortality rate has decreased (Fig 2C, D). Because the data underlying this statistic are mainly from the WHO, data from Asia, Africa, and other regions needed to be included. Therefore, we supplemented the COVID-19 reports from China with data from the National Health Commission of the People’s Republic of China, NHC. Although COVID-19 has been under control for some time in China, prevalence has risen again in recent weeks in some areas. Guangdong Province has seen an explosive increase in cases, followed by Beijing and Chongqing (Fig 3). Because of a potential spike in population flow across the country as well as school winter vacations, epidemic prevention and control remain a high priority.

Monkeypox

Herein, analytical monkeypox data were collected via direct reporting of case-based data by WHO Member States. Owing to the variable completeness of records,

the data were collected until November 27, 2022. The World Health Organization reported more than 5,000 new monkeypox cases between October 24 and November 23.

America had the highest number of new cases confirmed, followed by Europe. As shown in Fig 4, most deaths occurred in the Americas. To optimize the data presentation, the date is on the horizontal axis, and the numbers of new cases from each continent are indicated by the bubble size, and the number is provided. As shown in the figure, in the Americas, new cases have been reported sporadically in Brazil and the USA, whereas Colombia and Mexico have reported cases every few weeks. In Europe, Spain had the newest monkeypox cases, and Italy had a small outbreak on November 8 before the epidemic was effectively contained. As shown in Fig 5, although the epidemic trend has slowed in the past 2 months, vigilance remains essential (Fig 5).

Dengue

Because November is a summer month in the southern hemisphere, dengue transmission has increased significantly in South America and Africa. A significant increase in dengue infections with respect to the previous month has occurred in Nicaragua, Peru, Colombia, Mexico, Salvador, Brazil, and the People’s Republic of Bangladesh (Table 1). Due to their geographical locations and climatic conditions, tropical nations such as Laos, the

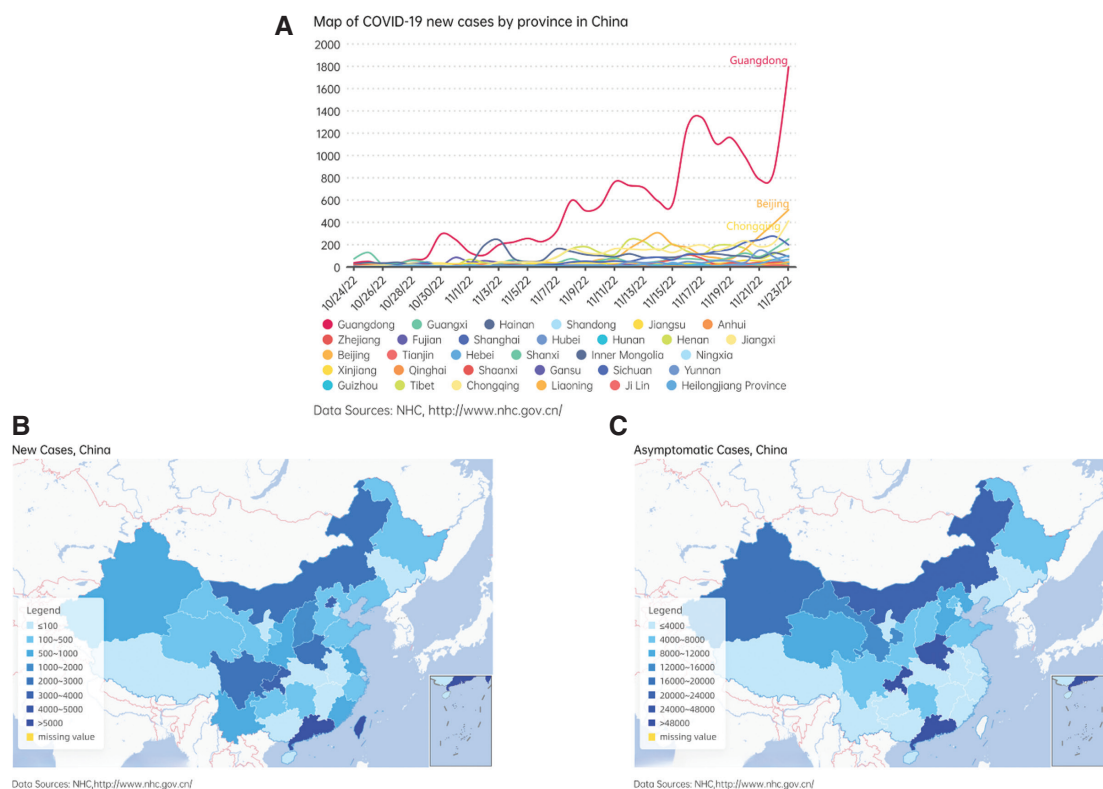


FIGURE 3 | New confirmed and asymptomatic cases have been reported daily in China. A: Map of new COVID-19 cases in China by province. B, C: Maps showing the numbers of confirmed COVID-19 cases in each province in China; asymptomatic cases are not shown in Hong Kong, Macau, or Taiwan (October 24, 2022 to November 23, 2022; data were obtained from the NHC website: <http://www.nhc.gov.cn/>).

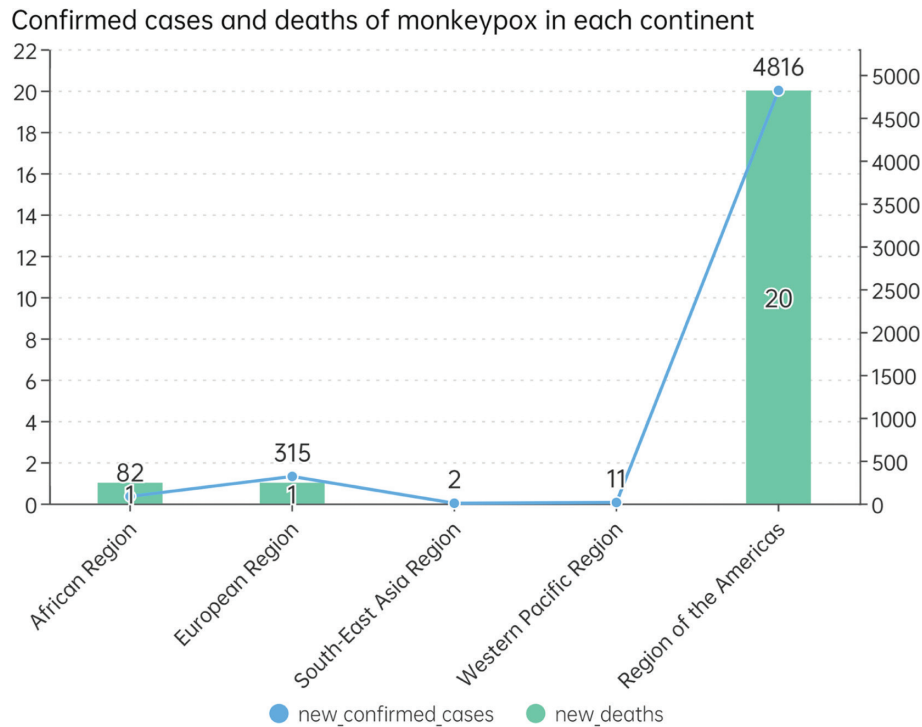


FIGURE 4 | Confirmed monkeypox cases and deaths by continent. Data were obtained from the World Health Organization website (https://worldhealthorg.shinyapps.io/mpx_global/#3_Detailed_case_data).

Philippines, and Malaysia experience high dengue infection rates.

Measles

Humans are the only natural hosts of the measles virus, which is spread mainly through droplet transmission and close contact. Spring and winter are high transmission seasons for measles virus. As of this month, several countries and regions still have measles viral infections (Table 2). The measles virus can be prevented by vaccination, and countries should increase vaccination coverage in response to the increasing numbers of infections and deaths associated with the virus.

Cholera

Early in its history, cholera was a highly deadly and highly infectious disease. In November, large numbers of cholera infections were reported in Afghanistan, Somalia, Lebanon, Haiti, Cameroon, Syria, and Malawi (Table 3). Water sanitation in developing or war-torn countries remains a major concern, and targeted solutions may mitigate the spread of cholera.

Influenza

The risk of influenza is high during the autumn and winter. The following table shows influenza infection records in several developed countries (Table 4). Developed countries tend to have established health surveillance systems,

which are essential for predicting and preventing infectious diseases.

Poliomyelitis

Over the past few years, poliomyelitis has spread in some regions. Poliomyelitis infection cases have been reported in some African, South American, and Asian countries in the past month, according to The Global Polio Website (Table 5). Despite the low numbers of infections, some countries, such as the Democratic Republic of the Congo, continue to see cases that warrant continued attention.

Tuberculosis

Recently, the number of tuberculosis infections has increased. Some countries have consistently tracked tuberculosis, similarly to influenza (Table 6). Last month, Korea and Japan recorded several hundred new TB infections per week, and the infected cases number is similar between two countries in 2022. Because the two countries have different total populations, they show significantly different actual infection rates.

Legionella

Detailed records of Legionella in November have been reported in Hong Kong, Taiwan (China), and Japan (Table 7). Table 7 indicates that Legionella cases are recorded every week in Japan. To prevent the disease from progressing, continued action by Asian countries remains necessary.

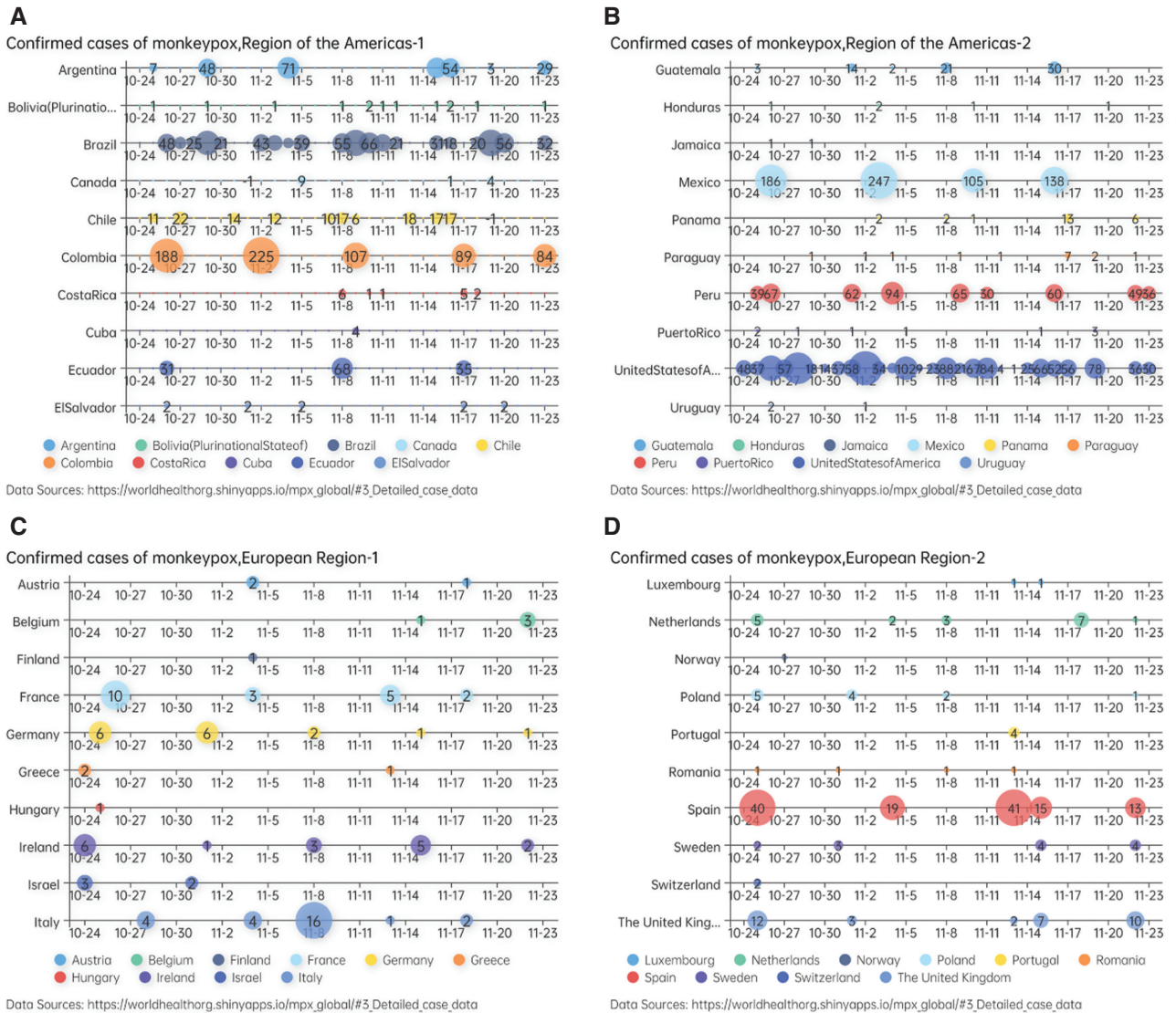


FIGURE 5 | Daily statistics of new confirmed monkeypox cases. A, B: Monkeypox cases confirmed in the Americas. (Owing to the large amount of data, the data have been split into Americas-1 and Americas-2.) C, D: Monkeypox cases confirmed in the European region. (Owing to the large amount of data, the data have been split into European region-1 and European region-2.)

Amarylism

As shown in Table 8, amarylism has been reported in Africa, the Americas, and Southeast Asia. In comparison with the data from last month, many countries have reported Amarylism infection, thus indicating a trend of regional expansion of Amarylism infection. The disease has attracted the attention of relevant countries, and this attention will be crucial for controlling further epidemics.

Sporadic infectious diseases

Regional epidemiological trends in some infectious diseases have occurred over the past month. Several epidemic diseases are listed in Table 9, including parotiditis, chicken pox, leptospirosis, salmonella, helopyra, Crimean-Congo hemorrhagic fever, hepatitis C, West Nile fever, Chikungunya fever, Lassa fever, enterohemorrhagic

Escherichia coli, leishmaniasis, bacillary dysentery, tsutsugamushi, yersiniosis, Shiga-toxin-producing Escherichia coli, Typhoid fever, malleoidosis, Ebola malleoidosis, Ebola, cephalomeningitis, Zika virus, pestis, human infections with highly pathogenic avian influenza, rotavirus, Ross river virus, enzootic hepatitis, listeriosis, and Middle East respiratory syndrome. In some cases, these diseases have been affecting the indicated regions for an entire year but only now are receiving official attention.

CONCLUSION

As the autumn and winter seasons in the northern hemisphere approach, most countries are entering the traditional influenza season. Against the backdrop of continued global infection by novel coronaviruses, seasonal respiratory infectious diseases such as influenza appear to

TABLE 1 | Worldwide Dengue Cases Reported Between 24/10/2022 and 23/11/2022.

Report Date (In 2022)	Location	Cumulative Death Cases Reported During Record Period	Cumulative Death Cases Reported Since 1/1/2022	Data Source
09/10–15/10	Nicaragua	3189	66162	WHO Regional Office for the Americas
16/10–29/10		7282	73444	
30/10–12/11		6271	79715	
13/11–19/11		3146	82861	
16/10–22/10	Peru	608	62295	
23/10–29/10		755	63050 (76)	
30/10–05/11		944	63994 (77)	
06/11–12/11		852	64846 (78)	
09/10–22/10	Columbia	2402	53090 (36)	
23/10–29/10		1590	54680 (36)	
30/10–05/11		1672	56352 (36)	
09/10–15/10	Mexico	3027	39953 (14)	
16/10–29/10		3176	45939 (14)	
02/10–15/10	Salvador	417	15419	
16/10–29/10		377	15796	
18/09–08/10	Brazil	2001	29117 (4)	
01/01–22/10	The Philippines		187560	Outbreak News Today
23/10–29/10		413 (3)		Philippine Ministry of Health
08/10–14/10	Sri Lanka	692	50300	Sri Lankan Ministry of Health
15/10–21/10		606	51207	
22/10–28/10		521	52524	
05/11–11/11		565	54694	
17/10–23/10	Vietnam	9677	270278 (118)	Vietnam Ministry of Health
24/10–30/10		10911	281189 (118)	
31/10–06/11		11250 (2)		
07/11–13/11		11198	303637	
01/01–14/11	People's Republic of Bangladesh		49300 (205)	ProMED-mail
01/01–06/11	Malaysia		50749	Malaysian Ministry of Health
06/11–12/11		1715 (2)	52977 (35)	
10/10–16/10		Kampuchea	438	
16/10–22/10	Singapore	375	29305	Singapore Environment Agency
23/10–29/10		317	29577	
06/11–12/11		294	30183	
01/01–14/11	Laos		30085 (22)	ProMED-mail
01/01–17/10	Indonesia		94355	
01/01–09/11	Nepal		51177 (57)	Outbreak News Today

TABLE 2 | Worldwide Measles Cases Reported Between 24/10/2022 and 23/11/2022.

Report Date (In 2022)	Location	Cumulative Death Cases Reported During Record Period	Cumulative Death Cases Reported Since 1/1/2022	Data Source
01/01–09/10	Democratic Republic of the Congo		115905 (1411)	WHO Regional Office for Africa
10/10–16/10		2014 (24)	120486 (1464)	United Nations Office for the Coordination of Humanitarian Affairs
17/10–23/10		2665 (36)	123720 (1512)	
24/10–30/10		1936 (36)	125473 (1550)	
2021/12/13–2022/11/02	Liberia		7942 (81)	WHO Regional Office for Africa
10/04–02/10	Zimbabwe		7504 (744)	
01/01–11/10	Sudan		2866	WHO
01/01–19/10	Chad		2781 (9)	WHO Regional Office for Africa
26/06–18/10	Kenya		212 (2)	United Nations Office for the Coordination of Humanitarian Affairs
01/01–23/10	Senegal		373 (1)	WHO Regional Office for Africa
01/01–06/11	Ethiopia		6788 (57)	
01/01–08/11	Cameroon		3046	WHO
09/10–15/10	Afghanistan	548	3660	WHO Regional Office for the Eastern Mediterranean Sea
16/10–22/10		469	70109 (378)	
30/10–05/11		631	72245 (378)	
17/10–23/10		507	15143 (501)	
01/01–05/11	Brazil		3217	WHO Regional Office for the Americas
01/01–05/11	Mexico		2258	
01/01–05/11	Columbia		984	
01/01–22/10	Venezuela		1595	
01/01–22/10	Salvador		525	
01/01–22/10	Paraguay		431	
01/01–08/11	Yemen		10541	WHO
01/01–08/11	India		55379	
01/01–08/11	Pakistan		14547	
01/01–08/11	Indonesia		8252	
01/01–08/11	People's Republic of Bangladesh		5053	
01/01–08/11	Iran		7928	
01/01–08/11	Malaysia		2855	
01/01–08/11	The Philippines		1735	
01/01–08/11	Nigeria		26495	
01/01–08/11	Cote d'Ivoire		5039	

be more problematic. In some developed countries, health departments can perform timely surveillance of influenza and other diseases—a process essential for epidemic prevention. Additionally, the outbreak of monkeypox virus has significantly declined this month under the continuing attention of health departments in several countries, including Europe and other regions where monkeypox

was previously prevalent. In contrast, countries in the Americas may need to take more aggressive epidemic prevention measures. The monkeypox virus remains untreatable, and patients with the disease rely primarily on supportive care to recover. To interrupt the spread of the disease, vaccines and aggressive preventive measures remain essential [6].

TABLE 3 | Worldwide Cholera Cases Reported Between 24/10/2022 and 23/11/2022.

Report Date (In 2022)	Location	Cumulative Death Cases Reported During Record Period	Cumulative Death Cases Reported Since 1/1/2022	Data Source
09/10–15/10	Afghanistan	6519	197951 (68)	WHO Regional Office for the Eastern Mediterranean Sea
16/10–22/10		6165 (8)	204116 (76)	
23/10–29/10		4873 (4)	209055 (74)	
30/10–05/11		5100 (3)	214155 (77)	
25/10/2021–13/10/2022	Cameroon		12779 (263)	WHO Regional Office for Africa
14/10–20/10		94 (2)	13096 (276)	
28/10–03/11		80 (5)	13447 (290)	
01/01–22/10	Democratic Republic of the Congo		10455 (195)	
24/10–30/10		441	12355 (222)	United Nations Office for the Coordination of Humanitarian Affairs
10/10–16/10	Somalia	311	11345 (69)	
24/10–30/10		366 (1)	11996 (71)	
21/11	Dominican Republic	2		WHO Regional Office for the Americas
20/10		1		
05/10–21/11	Lebanon	4061 (20)		Ministry of Public Health
30/09–20/11	Haiti	11039 (202)		Haitian Ministry of Public Health and Population
01/01–02/10	Nigeria		2198 (256)	WHO Regional Office for the Eastern Mediterranean Sea
25/08–05/11	Syria	35569 (92)		United Nations Office for the Coordination of Humanitarian Affairs
03/03–13/11	Malawi	8111 (241)		WHO Regional Office for Africa
17/09–29/10	Ethiopia	331 (17)		
16/10	Kenya	94 (2)		
03/19–30/10	South Sudan	424		United Nations Office for the Coordination of Humanitarian Affairs
01/01–2/11	The Philippines		4102 (37)	ProMED-mail
01/01–12/11	Bangladesh		162	WHO
03/11	Taiwan, China	1		China Taiwan Disease Control Agency

Meanwhile, the prevalence of various infectious diseases is highest in Africa, South America, and Southeast Asia. Health authorities in the Democratic Republic of the Congo, an African country, reported last month that nearly a dozen infectious diseases, including measles, cholera, poliomyelitis, amarylism, helopyra, Typhoid fever, cephalomeningitis, and pestis, are of concern. The country's public health problems must be given the attention by the relevant authorities, while international organizations should also provide targeted assistance.

Mosquito-borne diseases such as dengue, West Nile fever, and Zika continue to be prevalent in the equatorial

region. Because these diseases lack specific treatment options, a large-scale outbreak would be likely to have substantial economic repercussions. Consequently, prompt infection monitoring is imperative [7].

Although Cholera infections have become less common in some developed nations, Afghanistan continues to record large numbers of infections. Despite falling temperatures, the infections have not decreased, thus greatly affecting already vulnerable societies. In addition, some regional infectious diseases, although they spread only sporadically within several countries, must be closely monitored to study their spatial and temporal characteristics.

TABLE 4 | Worldwide Influenza Cases Reported Between 24/10/2022 and 23/11/2022.

Report Date (In 2022)	Location	Cumulative Death Cases Reported During Record Period	Cumulative Death Cases Reported Since 1/1/2022	Data Source
02/10–15/10	Canada	394	652	Public Health Service of Canada
16/10–29/10		1508	652	
06/11–12/11		3909	8273	
02/10–15/10	U.S.A.		4782	America CDC
16/10–22/10		4129		
23/10–29/10		7504		
31/10–05/11		13178	32046	
06/11–12/11		15308	49726	
03/01–30/10	Spain		10073	WHO
03/01–30/10	Portuguesa		9402	
03/01–16/10	Norway		13592	
03/01–16/11	Switzerland		11851	
01/01–23/10	Iran		4112	
03/01–23/10	Malaysia		3660	

TABLE 5 | Worldwide Poliomyelitis Cases Reported Between 24/10/2022 and 23/11/2022.

Report Date (In 2022)	Location	Cumulative Death Cases Reported During Record Period	Cumulative Death Cases Reported Since 1/1/2022	Data Source
12/10–18/10	Democratic Republic of the Congo	18 (cVDPV1)/17 (cVDPV2)		Global Polio Website
19/10–25/10		1 (cVDPV1)/6 (cVDPV2)		
26/10–01/11		7 (cVDPV1)/3 (cVDPV2)		
02/11–08/11		5 (cVDPV1)/8 (cVDPV2)		
09/11–15/11		6 (cVDPV1)/17 (cVDPV2)		
12/10–18/10	Yemen	5 (cVDPV2)		
09/11–15/11		4 (cVDPV2)		
26/10–01/11	Mozambique	1 (WPV1)/5 (cVDPV1)		
02/11–08/11		3 (cVDPV1)		
19/10–25/10	Nigeria	1 (cVDPV2)		
26/10–01/11		1 (cVDPV2)		
12/10–18–10	Benin	1 (cVDPV2)		
12/10–18/11	Malawi	1 (cVDPV1)		
19/10–25/10	Niger	1 (cVDPV2)		
26/10–01/11	Madagascar	2 (cVDPV2)		
19/11	Indonesia	1 (cVDPV2)		

TABLE 6 | Worldwide Tuberculosis Cases Reported Between 24/10/2022 and 23/11/2022.

Report Date (In 2022)	Location	Cumulative Death Cases Reported During Record Period	Cumulative Death Cases Reported Since 1/1/2022	Data Source
09/10–15/10	Korea	353	13510	Korean Center for Disease Control and Prevention
16/10–22/10		320	13775	
23/10–29/10		413	14114	
30/10–05/11		395	14431	
06/11–12/11		349	14724	
10/10–16/10	Japan	187	11469	National Institute of Infectious Diseases, Japan
17/10–23/10		226	11753	
24/10–30/10		201	12005	
31/10–06/11		166	12213	
01/10–31/10	Thailand	581	7213	Thailand Ministry of Health
30/10–05/11	U.S.A.	65	4268	America CDC

TABLE 7 | Worldwide Legionella Cases Reported Between 24/10/2022 and 23/11/2022.

Report Date (In 2022)	Location	Cumulative Death Cases Reported During Record Period	Cumulative Death Cases Reported Since 1/1/2022	Data Source
16/10–22/10	Hong Kong, China	3	72	Hong Kong Health Protection Center of China
23/10–29/10		2	74	
01/01–19/11			76	
09/10–15/11	Taiwan, China	8	260	China Taiwan Disease Control Agency
23/10–29/10		9	272	
31/10–05/11		17	410	
06/11–12/11		6	291	
10/10–16/10	Japan	42	1751	National Institute of Infectious Diseases, Japan
17/10–23/10		61	1819	
24/10–30/10		45	1874	
31/10–06/11		25	1908	

TABLE 8 | Worldwide Amarylism Cases Reported Between 24/10/2022 and 23/11/2022.

Report Date (In 2022)	Location	Cumulative Death Cases Reported During Record Period	Cumulative Death Cases Reported Since 1/1/2022	Data Source
02/01–04/10	Uganda		398	WHO Regional Office for Africa
01/09–19/10	Niger	6		
13/08–19/10	Ivory Coast	41		
04/01–02/11	Cameroon	2885		
2021/11/01–2022/11/08	Chad		2195	
03/08–08/11	Central African Republic	755 (4)		
01/01–28/10	Kenya		141 (11)	United Nations Office for the Coordination of Humanitarian Affairs
17/10–23/10	Democratic Republic of the Congo	12 (1)	838 (24)	

TABLE 9 | Worldwide Sporadic Infectious Disease Cases Reported Between 24/10/2022 and 23/11/2022.

Report Date (In 2022)	Location	Cumulative Death Cases Reported During Record Period	Cumulative Death Cases Reported Since 1/1/2022	Data Source
Epidemic Parotiditis				
09/10–15/10	Taiwan, China	17	188	China Taiwan Disease Control Agency
16/10–22/10		7	195	
23/10–29/10		17	212	
31/10–05/11		17	229	
06/11–12/11		16	245	
16/10–22/10	Korean	111	5228	Korean Center for Disease Control and Prevention
30/10–05/11		128	5468	
Chicken Pox				
09/10–15/10	Korea	264	14113	Korean Center for Disease Control and Prevention
16/10–22/10		244	14376	
23/10–29/10		359	14782	
30/10–05/11		329	15160	
06/11–12/11		405	15592	
01/10–31/10	Thailand	1062		Thailand Ministry of Health
09/10–15/10	Korea	264	14113	Korean Center for Disease Control and Prevention
16/10–22/10		244	14376	
23/10–29/10		359	14782	
Hepatitis C				
09/10–15/10	Korea	80	6718	Korean Center for Disease Control and Prevention
23/10–29/10		118	7034	
09/10–15/10	Taiwan, China	11	373	China Taiwan Disease Control Agency
16/10–22/10		13	386	
23/10–29/10		8	393	
31/10–05/11		17	410	
West Nile Fever				
13/10–19/10	Italy	9	573 (37)	European Center for Disease Control and Prevention
27/10–02/11		12	585 (37)	
13/10–19/10	Serbia	16 (3)	218 (11)	
20/10–26/10		8 (1)	226 (12)	
13/10–19/10	Greece	4	274 (26)	
20/10–26/10		2	283 (30)	
01/01–15/11	U.S.A.		913 (66)	America CDC
Chikungunya Fever				
18/09–08/10	Brazil	7193	247537	WHO Regional Office for the Americas
01/01–12/11	Peru		304	
02/10–22/10	Guatemala	180	1615	
06/11–12/11	Paraguay	247	740	Paraguay Ministry of Health
01/01–29/10	The Philippines		547	Philippine Ministry of Health
01/01–05/11	Malaysia		682	Malaysian Ministry of Health

TABLE 9 | Continued

Report Date (In 2022)	Location	Cumulative Death Cases Reported During Record Period	Cumulative Death Cases Reported Since 1/1/2022	Data Source
Lassa Fever				
01/01–09/10	Liberia		138 (16)	WHO Regional Office for Africa
01/01–23/10			156 (17)	
17/10–23/10	Nigeria	97	6980 (173)	Nigeria CDC
24/10–30/10		108 (1)	7183 (176)	
31/10–05/11		110	7293 (177)	
Leptospirosis				
08/10–14/10	Sri Lanka	107	4510	Sri Lankan Ministry of Health
15/10–21/10		126	4667	
22/10–28/10		113	4802	
29/10–04/11		134	4928	
Salmonella				
01/09–30/09	New Zealand	58	529	New Zealand
03/10–16/10	Australia	296	8201	Australian Department of Health
30/10–05/11	U.S.A.	265	40324	U.S. CDC
06/11–12/11		280	41525	
Helopyra				
10/10–26/10	Democratic Republic of the Congo	627848 (341)	26765830 (17515)	WHO Regional Office for Africa
17/10–23/10		609754 (364)	27539504 (18031)	United Nations Office for the Coordination of Humanitarian Affairs
24/10–30/10		654817 (354)	28053085 (18072)	
01/06–05/11	Afghanistan	2591		WHO Regional Office for the Eastern Mediterranean Sea
Crimean-Congo Hemorrhagic Fever				
01/01–29/10	Afghanistan		372 (15)	WHO Regional Office for the Eastern Mediterranean Sea
29/08–31/10	Mauritania	3 (2)		WHO Regional Office for Africa
12/07–15/10	Uganda	5 (1)		
01/01–02/11	South Africa		3	Outbreak News Today
Enterohemorrhagic Escherichia coli				
10/10–16/10	Japan	50	2759	National Institute of Infectious Diseases, Japan
17/10–23/10		79	2879	
24/10–30/10		62	2960	
31/10–06/11		37	2994	
Leishmaniasis				
01/01–01/11	Algeria		192	ProMED-mail
01/01–31/10	Brazil		324	ProMED-mail
03/01–06/11	Kenya		2048 (10)	WHO Regional Office for Africa
21/03–15/11	Iran		78 (9)	ProMED-mail

TABLE 9 | Continued

Report Date (In 2022)	Location	Cumulative Death Cases Reported During Record Period	Cumulative Death Cases Reported Since 1/1/2022	Data Source
Bacillary Dysentery				
01/01–29/10	Spain		203	European Center for Disease Control and Prevention
17/08–18/11	Canada	173		Outbreak News Today
17/08–18/11	U.S.A.	79	11166	Outbreak News Today
Tsutsugamushi				
16/10–22/10	Taiwan, China	7	233	China Taiwan Disease Control Agency
01/10–31/10	Thailand	742	4964	Thailand Ministry of Health
06/11–12/11	Korea	797	4090	Korean Center for Disease Control and Prevention
Yersiniosis				
01/09–30/09	New Zealand	149	907	New Zealand Ministry of Health
16/10–22/10	U.S.A.	364		U.S. CDC
23/10–29/10		98	10609	
Shiga-toxin-producing Escherichia coli				
01/09–30/09	New Zealand	94	778	New Zealand Ministry of Health
23/10–29/10	U.S.A.	84	11012	U.S. CDC
06/11–12/11		64	11571	
16/10–22/10		93		
Typhoid fever				
10/10–16/10	Democratic Republic of the Congo	35655 (17)	1511170 (661)	United Nations Office for the Coordination of Humanitarian Affairs
17/10–23/10		33502 (12)	1553234 (674)	
01/01–02/11	The Philippines		12902 (58)	ProMED-mail
Malleoidosis				
16/10–22/10	Hong Kong, China	31 (7)		Hong Kong Health Protection Center of China
25/10		3	34	
Ebola				
20/09–14/11	Uganda	141 (55)		United Nations Office for the Coordination of Humanitarian Affairs
Cephalomeningitis				
02/06–22/10	Democratic Republic of the Congo		131 (20)	WHO Regional Office for Africa
02/06–02/11			137 (22)	
Zika Virus				
06/11–12/11	Paraguay	156	446	Paraguay Ministry of Health
21/08–24/09	Brazil	2001	29117 (4)	WHO Regional Office for the Americas
02/10–22/10	Guatemala	54	1617	
Pestis				
01/01–30/10	Democratic Republic of the Congo		626 (12)	United Nations Office for the Coordination of Humanitarian Affairs

TABLE 9 | Continued

Report Date (In 2022)	Location	Cumulative Death Cases Reported During Record Period	Cumulative Death Cases Reported Since 1/1/2022	Data Source
Human Infection with Highly Pathogenic Avian Influenza				
27/09–13/10	Spain	2		WHO
			Diphtheritis	
01/01–29/10	People's Republic of Bangladesh		324 (1)	WHO
			Rotavirus	
03/10–16/10	Australia	570	3585	Australian Department of Health
			Ross River Virus	
03/10–16/10	Australia	31	256	Australian Department of Health
			Enzootic Hepatitis	
29/08–31/10	Mauritania	51 (23)		WHO Regional Office for Africa
			Listeriosis	
11/09	U.S.A.	16 (1)		U.S. CDC
			Middle East Respiratory Syndrome	
29/12/2021–31/10/2022	Saudi Arabia		4	WHO

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