



SHORT COMMUNICATION

Global Infectious Diseases between July and September 2024: Periodic Analysis

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Abstract

Infectious diseases are caused by a variety of pathogens that can be transmitted between individuals, between animals, or between humans and animals. In the summer, hot weather accelerates the growth and reproduction of various bacteria and viruses. Water, food, and the environment are more susceptible to contamination, so summer is the season for infectious diseases such as monkeypox (Mpox), dengue, cholera, measles. We obtained surveillance data from Shusi Tech's Global Epidemic Information Monitoring System and conducted a comprehensive analysis of the timing and location of outbreaks in infected populations from July to September of 2024.

Key words: Infectious disease, Mpox, Dengue, Cholera, Measles

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INTRODUCTION

Infectious diseases remain a major threat to global public health. The effects of economic globalization, climate change, and the emergence of new infectious diseases [1,2] are spreading worldwide, thus substantially burdening health systems. Mosquito-borne and intestinal infectious diseases are particularly prevalent during the summer months, because of elevated temperature and humidity. Furthermore, climate change has contributed to an increase in extreme weather events, which may intensify outbreaks of specific infectious diseases [3].

To comprehensively understand the global distribution of infectious diseases from July to September of 2024, we used Shusi Tech's Global Epidemic Information Monitoring System to collect data on infectious diseases worldwide

and subsequently conducted a thorough systematic analysis (Fig 1).

DENGUE

The global incidence of dengue fever has sharply increased in recent years, in close association with the distribution of its mosquito vectors. Dengue fever is prevalent in tropical, subtropical, and temperate climatic regions exhibiting seasonal fluctuations, and its incidence is highest during the summer months [4]. The Americas and Southeast Asia have a high incidence of dengue outbreaks. As shown in Fig 2, approximately the region with 856,362 suspected cases occurred in the past 3 months. Mexico had 97,344 suspected cases, 19,696 confirmed cases, and 79 deaths. Argentina reported 24,826 suspected cases. Many people with dengue are asymptomatic or exhibit mild

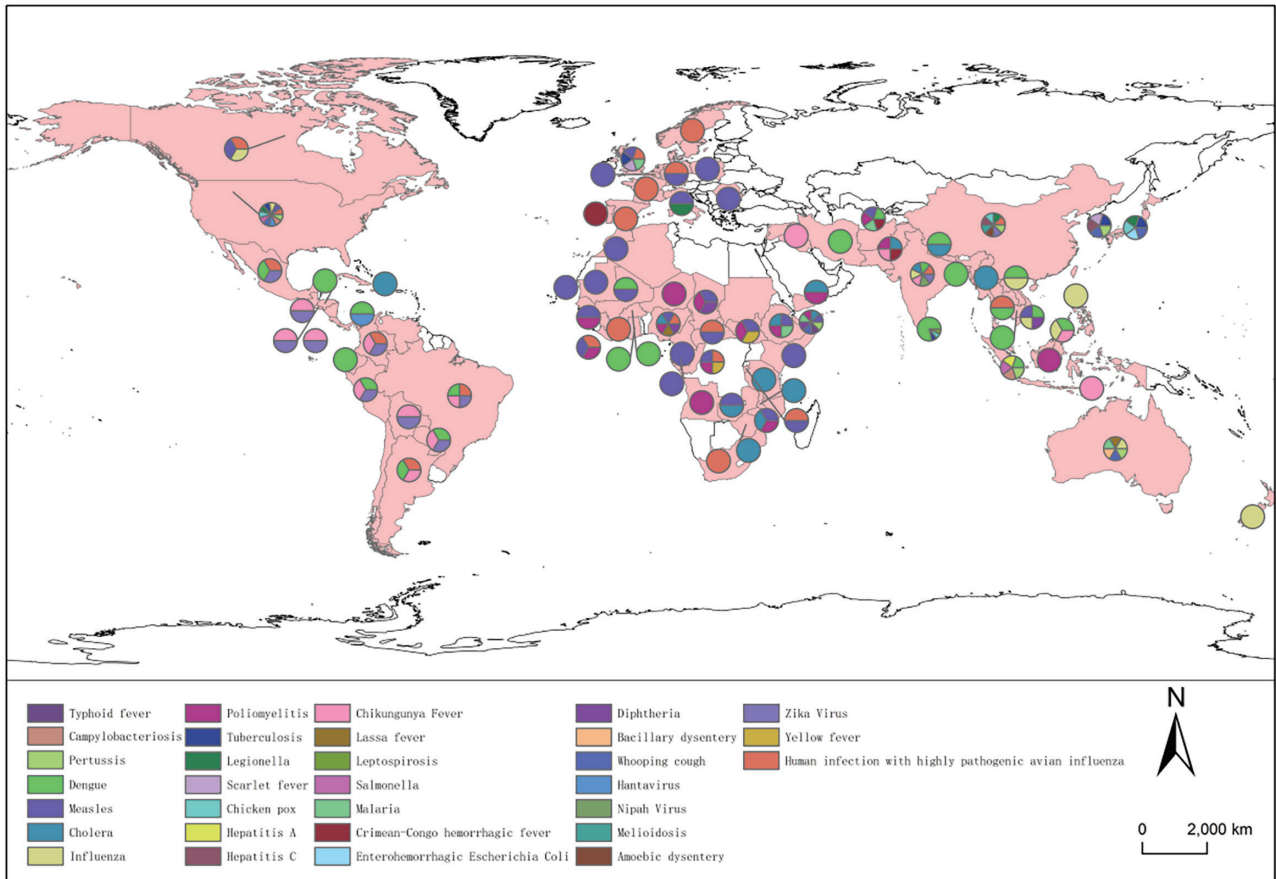


FIGURE 1 | Worldwide distribution of infectious diseases from July to September of 2024.

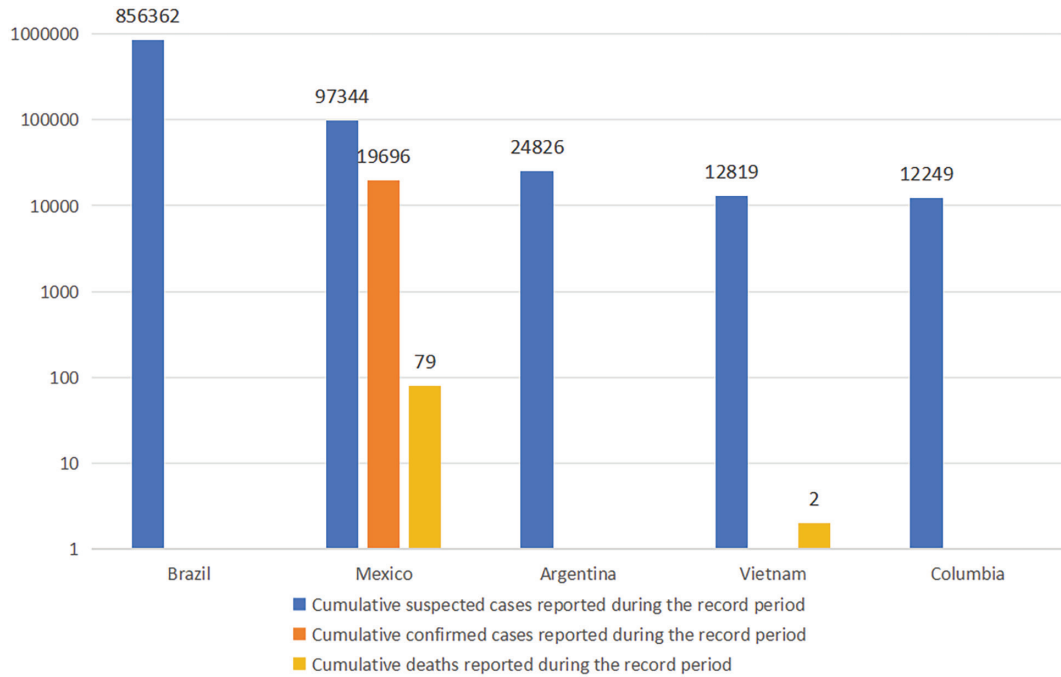


FIGURE 2 | Statistics data on the five countries or regions with cumulative number of dengue cases (July to September of 2024).

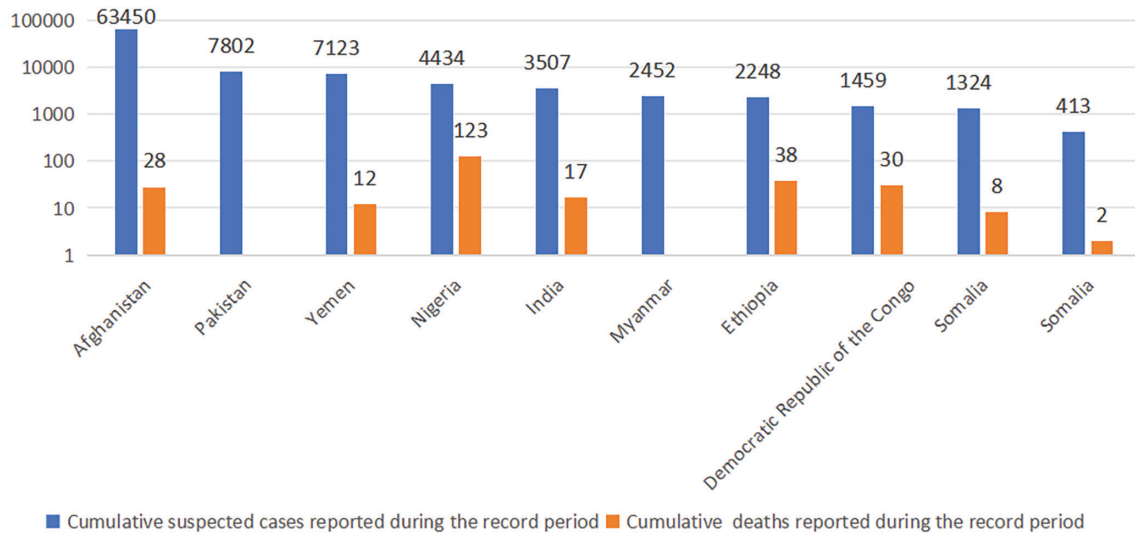


FIGURE 3 | Statistical data on the top ten countries or regions in terms of cumulative number of suspected cholera cases and deaths (July to September of 2024).

symptoms, thus potentially leading to underreporting; therefore, implementation of effective prevention and control measures is essential.

CHOLERA

Cholera is an acute diarrheal disease caused by the bacterium *Vibrio cholerae*, which is typically transmitted through contaminated water or food, particularly in areas with inadequate sanitation. Cholera can lead to severe dehydration and can be fatal if not treated promptly. In resource-rich countries, cholera is relatively rare; however, in regions lacking access to clean drinking water and sanitation, particularly those affected by conflict, poverty, and natural disasters, cholera remains a serious public health concern. According to data on suspected cholera cases from the past 3 months, countries such as Afghanistan, Pakistan, Yemen, and Nigeria have been major hotspots for cholera outbreaks (Fig 3). The data indicated relatively severe spread of cholera in developing countries, particularly those experiencing war or poverty [5]. Although some countries have reported few suspected cases, ongoing monitoring and prevention efforts are necessary to prevent outbreaks from expanding.

MPOX

Mpox is a zoonotic disease caused by the monkeypox virus (MPXV), which was first identified in 1970 [6]. In 2022, a global outbreak emerged, characterized by widespread human-to-human transmission in non-endemic regions, thus prompting the WHO to declare a Public Health Emergency of International Concern. From July to September, similarly to the period from April to June, most infections were concentrated in the Democratic

Republic of the Congo. Whereas cases decreased in Brazil, infections increased in Spain and the United States, both of which were behind the Democratic Republic of the Congo in terms of total reported cases (Table 1).

MEASLES

Measles, a highly contagious viral disease caused by the measles virus, continues to pose a substantial global health threat in 2024. Outbreaks occurred in various regions because of vaccination gaps exacerbated by the COVID-19 pandemic [7]. Between July and September 2024, measles outbreaks were concentrated in low-income countries such as the Democratic Republic of the Congo, Afghanistan, and Nigeria, where vaccination rates remain critically low (Table 2). The WHO and the Centers for Disease Control and Prevention (CDC) emphasize the urgent need for enhanced global vaccination efforts to mitigate further outbreaks and protect vulnerable populations.

SPORADIC INFECTIOUS DISEASES

The incidence of various infectious diseases from July to September 2024 is presented in Table 3. Notably, the patterns of infectious diseases during this period varied among countries. In Australia, a substantial number of individuals were affected by respiratory syncytial virus (RSV) and pertussis. In the United States, campylobacteriosis, chickenpox, and coccidioidomycosis were prevalent. Additionally, tuberculosis continued to be a concern in economically developed regions, such as Japan and South Korea, and also remained prevalent in several developing countries, including Sri Lanka.

TABLE 1 | Worldwide Mpox cases reported between 01/07/2024 and 30/09/2024.

Record period	Location	Cumulative suspected cases (confirmed cases) reported during the record period	Cumulative deaths reported during the record period	Data source
01/08/2024–31/08/2024	Argentina	26		WHO
01/08/2024–31/08/2024	Brazil	33 (33)		WHO
03/08/2024–16/08/2024	Burundi	272 (78)		African CDC
24/08/2024–31/08/2024		327 (91)		
05/08/2024–01/09/2024		288		WHO
19/08/2024–15/09/2024		411		
01/01/2024–24/08/2024	Canada	178		U.N. Office for the Coordination of Humanitarian Affairs
05/08/2024–01/09/2024	Central African Republic	5		WHO
19/08/2024–15/09/2024	Central African Republic	5 (5)		WHO
01/01/2024–31/08/2024	Colombia	118		U.N. Office for the Coordination of Humanitarian Affairs
05/08/2024–01/09/2024	Cote d'Ivoire	22		WHO
19/08/2024–15/09/2024		12 (12)		
03/08/2024–23/08/2024	Democratic Republic of the Congo	4064 (312)	102	African CDC
05/08/2024–01/09/2024		148		WHO
19/08/2024–15/09/2024		794		WHO
01/08/2024–31/08/2024	France	24		WHO
01/08/2024–31/08/2024	Germany	23		WHO
01/01/2024–14/08/2024	Hong Kong, China	67		China Hong Kong Centre for Health Protection
24/09/2024	India	1		CIDRAP Center for Infectious Disease Policy Research
24/08/2024–08/09/2024	Liberia	87 (2)		African CDC
01/08/2024–31/08/2024	Mexico	23		WHO
14/07/2024–10/08/2024	Nigeria	53 (2)		Nigeria Department
05/08/2024–01/09/2024		17		WHO
19/08/2024–15/09/2024		17		
08/05/2024–02/07/2024	South Africa	20	3	WHO
01/08/2024–31/08/2024	Spain	136 (136)		WHO
15/08/2024	Sweden	1		WHO
03/09/2024–09/09/2024	Taiwan, China	5 (5)		China Taiwan Disease Control Agency
06/08/2024–19/08/2024		9		
27/08/2024–02/09/2024		5 (5)		
09/07/2024–22/07/2024		(9)		
24/6/2024–21/07/2024	Thailand	(13)		WHO Regional Office for South-East Asia
22/07/2024–04/08/2024		5		
22/08/2024		1		European Union CDC
01/08/2024–31/08/2024	United Kingdom	40 (40)		WHO
01/08/2024–31/08/2024	United States	113 (113)		WHO

TABLE 2 | Worldwide Measles cases reported between 01/07/2024 and 30/09/2024.

Record period	Location	Cumulative suspected cases (confirmed cases) reported during the record period	Cumulative deaths reported during the record period	Data source
30/06/2024–06/07/2024	Afghanistan	1597	13	WHO Regional Office for the Eastern Mediterranean
28/07/2024–17/08/2024		4280	18	
01/09/2024–14/09/2024		1752	6	
28/06/2024–20/07/2024	United States	21		U.S. CDC
11/06/2024–09/07/2024	Austria	(57)		EU Centers for Disease Control and Prevention
10/07/2024–12/08/2024	Belgium	10		EU Centers for Disease Control and Prevention
20/07/2024–28/07/2024	Burundi	173		African CDC
27/07/2024–02/08/2024		123		
10/08/2024–16/08/2024		63		
24/08/2024–31/08/2024		42		
14/09/2024–23/09/2024		76		
20/07/2024–28/07/2024	Cameroon	18 (2)		African CDC
27/07/2024–08/09/2024		209 (65)		
27/07/2024–16/09/2024		87 (38)		
07/07/2024–13/07/2024	Canada	2		Public Health Agency of Canada
07/09/2024–16/09/2024	Central African Republic	7 (3)		African CDC
22/06/2024–30/06/2024	Chad	850 (736)	1	African CDC
20/07/2024–28/07/2024		135 (57)		
27/07/2024–09/08/2024		135 (35)		
24/08/2024–31/08/2024		17		
07/09/2024–13/09/2024		17		
14/09/2024–23/09/2024		16		
27/07/2024–02/08/2024	Democratic Republic of the Congo	3310	131	African CDC
10/08/2024–23/08/2024		2023	115	
10/08/2024–31/08/2024	Ethiopia	651	1	African CDC
31/08/2024–08/09/2024		87		
14/09/2024–23/09/2024		39		
29/06/2024–08/09/2024	Gabon	71		African CDC
07/09/2024–16/09/2024		10		
10/06/2024–10/07/2024	Germany	(18)		EU Centers for Disease Control and Prevention
10/07/2024–08/08/2024		9		
01/01/2024–05/08/2024	Guinea	769 (306)	7	WHO Regional Office for Africa
11/06/2024–08/08/2024	Italy	251		EU Centers for Disease Control and Prevention
13/06/2024–12/07/2024	Kenya	282	1	African CDC
27/07/2024–16/08/2024		97 (11)	1	EU Centers for Disease Control and Prevention

TABLE 2 | (continued)

Record period	Location	Cumulative suspected cases (confirmed cases) reported during the record period	Cumulative deaths reported during the record period	Data source
29/06/2024–12/07/2024	Liberia	99 (25)		African CDC
27/07/2024–31/08/2024		846		
31/08/2024–13/09/2024		337 (36)		
03/08/2024–09/08/2024	Mali	8 (7)		African CDC
06/07/2024–19/07/2024	Mauritania	30 (15)		African CDC
06/07/2024–12/07/2024	Morocco	323 (98)	3	African CDC
27/07/2024–02/08/2024		289 (93)	3	
31/08/2024–08/09/2024		287 (141)	4	
07/09/2024–13/09/2024		297 (104)	3	
10/08/2024–16/08/2024	Morocco	506 (194)	5	EU Centers for Disease Control and Prevention
09/07/2024–21/08/2024	Mozambique	283 (283)	18	WHO Regional Office for Africa
29/05/2024–26/06/2024	The Netherlands	25		EU Centers for Disease Control and Prevention
11/05/2024–23/08/2024	Nigeria	3028 (1602)	6	African CDC
30/06/2024–08/08/2024	Poland	24		EU Centers for Disease Control and Prevention
06/07/2024–19/07/2024	Democratic Republic of the Congo	27 (5)		African CDC
10/08/2024–31/08/2024		25		
31/08/2024–23/09/2024		9187	174	
09/06/2024–04/08/2024	Romania	4444	3	EU Centers for Disease Control and Prevention
10/08/2024–31/08/2024	Senegal	3		African CDC
06/07/2024–12/07/2024	Somalia	217		African CDC
27/07/2024–02/08/2024		213 (10)		
10/08/2024–23/08/2024		344 (14)	1	
07/09/2024–13/09/2024		139 (8)		
15/06/2024–09/08/2024	South Sudan	737 (3)		African CDC
03/06/2024–07/07/2024	Spain	90		EU Centers for Disease Control and Prevention
26/08/2024–16/09/2024	United Kingdom	59		United Kingdom Health Security Agency
26/07/2024–08/08/2024	United States	23		U.S. CDC
18/08/2024–31/08/2024		7		
08/09/2024–21/09/2024		4		
01/01/2024–04/08/2024	Vietnam	505 (262)		ProMED-mail
01/01/2024–04/08/2024	Zambia	4259 (179)		WHO Regional Office for Africa

TABLE 3 | Worldwide cases of other infectious diseases reported between 01/07/2024 and 30/09/2024.

Record period	Location	Cumulative suspected cases (confirmed cases) reported during the record period	Cumulative deaths reported during the record period	Data source
Influenza				
30/06/2024–20/07/2024	United States	(618)		U.S. CDC
24/06/2024–07/07/2024	Australia	(82)		Australian Department of Health
22/07/2024–04/08/2024		41414		
19/08/2024–01/09/2024		23168		
14/07/2024–20/07/2024	Canada	(54568)		Public Health Agency of Canada
18/08/2024–24/08/2024		57		
01/01/2024–07/07/2024	Laos	(76)		WHO Regional Office for the Western Pacific
01/01/2024–07/07/2024	Malaysia	(3179)		WHO Regional Office for the Western Pacific
22/07/2024–04/08/2024		436		
01/01/2024–19/08/2024		4433		
22/07/2024–04/08/2024	New Zealand	83		WHO Regional Office for the Western Pacific
01/01/2024–07/07/2024	The Philippines	(491)		WHO Regional Office for the Western Pacific
28/07/2024–31/08/2024	United States	781		U.S. CDC
27/08/2024–02/09/2024		179		
08/09/2024–21/09/2024		512		
01/01/2024–07/07/2024	Vietnam	(249)		WHO Regional Office for the Western Pacific
19/08/2024		1		
01/01/2024–19/08/2024		730		
11/07/2024	Canada	1 (H3N2)		ProMED-mail
11/07/2024–06/08/2024	India	11 (H1N1)		ProMED-mail
09/08/2024	United States	2 (H3N2)		CIDRAP Center for Infectious Disease Policy Research
24/08/2024		1 (H1N1)		
21/09/2024		2 (H3N2)		
Malaria				
04/08/2024–17/08/2024	Afghanistan	5375	1	WHO Regional Office for the Eastern Mediterranean
25/08/2024–31/08/2024		3489		
27/08/2024–02/09/2024		2850		
01/09/2024–14/09/2024		7816		
19/08/2024–01/09/2024	Australia	17		Australian Department of Health
24/06/2024–30/06/2024	Britain	7		British Health and Safety Authority
01/01/2024–18/08/2024	Ethiopia	4773900	918	WHO Regional Office for Africa

TABLE 3 | (continued)

Record period	Location	Cumulative suspected cases (confirmed cases) reported during the record period	Cumulative deaths reported during the record period	Data source
01/07/2024–07/07/2024	Somalia	(88)		United Nations Office for the Coordination of Humanitarian Affairs
19/08/2024–01/09/2024		355		
Human infection with highly pathogenic avian influenza				
04/07/2024,22/07/2024	United States	7		CIDRAP Center for Infectious Disease Policy Research
06/07/2024–08/07/2024	Cambodia	2		CIDRAP Center for Infectious Disease Policy Research
03/08/2024		1		
20/08/2024		1		
Polio				
03/07/2024–10/07/2024	Afghanistan	3		Global Polio website
31/07/2024–06/08/2024		2		
14/08/2024–20/08/2024		2		
03/07/2024–09/07/2024	Angola	2		Global Polio website
07/08/2024–13/08/2024		1		
03/07/2024–10/07/2024	Chad	1		Global Polio website
21/08/2024–27/08/2024		2		
03/07/2024–23/07/2024	Democratic Republic of the Congo	3		Global Polio website
31/07/2024–06/08/2024		2		
21/08/2024–27/08/2024		1		
17/07/2024–23/07/2024	Ethiopia	5		Global Polio website
31/07/2024–06/08/2024		1		
26/06/2024–03/07/2024	Guinea	2		Global Polio website
26/06/2024–02/07/2024	Indonesia	4		Global Polio website
07/08/2024–13/08/2024	Liberia	1		Global Polio website
03/07/2024–09/07/2024	Mozambique	1		Global Polio website
10/07/2024–16/07/2024	Nigeria	1		Global Polio website
31/07/2024–06/08/2024		1		
14/08/2024–27/08/2024		3		
26/06/2024–02/07/2024	Pakistan	3		Global Polio website
17/07/2024–23/07/2024		1		
31/07/2024–13/08/2024		5		
17/07/2024–24/07/2024	Somalia	1		Global Polio website
31/07/2024–06/08/2024	South Sudan	1		Global Polio website
21/08/2024–27/08/2024		1		
26/06/2024–03/07/2024	Niger	1		Global Polio website
14/08/2024–20/08/2024		4		
03/07/2024–09/07/2024	Yemen	6		Global Polio website

TABLE 3 | (continued)

Record period	Location	Cumulative suspected cases (confirmed cases) reported during the record period	Cumulative deaths reported during the record period	Data source
Legionella				
23/06/2024–29/06/2024	United States	78		U.S. CDC
19/08/2024–01/09/2024	Australia	33		Australian Department of Health
30/06/2024–21/09/2024	Hong Kong, China	31		Hong Kong Centre for Health Protection, China
11/04/2024–08/08/2024	Italy	49	3	European Union CDC
08/07/2024–14/07/2024	Japan	80		Japan National Institute of Infectious Diseases
29/07/2024–18/08/2024		120		
26/08/2024–01/09/2024		43		
28/07/2024–03/08/2024	Taiwan, China	153		China Taiwan Disease Control Agency
30/06/2024–20/07/2024		37		
Yellow fever				
22/06/2024–30/06/2024	Democratic Republic of the Congo	32 (1)		African CDC
20/04/2024–19/07/2024	South Sudan	15		African CDC
20/07/2024–09/08/2024		9		
Zika virus disease				
01/01/2024–31/08/2024	Bolivia	213		WHO Regional Office for the Americas
01/01/2024–24/08/2024	Brazil	35751 (1865)		WHO Regional Office for the Americas
01/01/2024–14/09/2024	Colombia	96		WHO Regional Office for the Americas
28/07/2024–03/08/2024		3		
15/09/2024–21/09/2024		10		
01/01/2024–07/09/2024	Costa Rica	28		WHO Regional Office for the Americas
28/07/2024–03/08/2024	El Salvador	2		WHO Regional Office for the Americas
01/01/2024–07/09/2024		64		
01/01/2024–13/07/2024	Guatemala	41 (2)		WHO Regional Office for the Americas
01/01/2024–07/09/2024		63	2	
20/06/2024–09/07/2024	India	(12)		ProMED-mail
01/01/2024–24/08/2024	Mexico	27		WHO Regional Office for the Americas
01/09/2024–21/09/2024		28		
01/01/2024–06/07/2024	Paraguay	4		WHO Regional Office for the Americas
01/01/2024–20/07/2024	Peru	38		WHO Regional Office for the Americas

TABLE 3 | (continued)

Record period	Location	Cumulative suspected cases (confirmed cases) reported during the record period	Cumulative deaths reported during the record period	Data source
12-07-2024	Taiwan, China	(1)		China Taiwan Disease Control Agency
01/01/2024-24/08/2024		86		WHO Regional Office for the Americas
Scarlet fever				
24/06/2024-30/06/2024	Britain	88		British Health and Safety Authority
25/08/2024-31/08/2024	South Korea	72		Korea CDC
01/09/2024-14/09/2024		142		
Paratyphoid fever				
10/06/2024-23/06/2024	Australia	3		Australian Department of Health
Typhoid fever				
01/07/2024-07/07/2024	Somalia	13429		United Nations Office for the Coordination of Humanitarian Affairs
01/01/2024-25/08/2024		17486		
01/01/2024-01/09/2024		17486		
Leptospirosis				
01/06/2024-07/06/2024	Sri Lanka	211		Sri Lanka Ministry of Health
15/06/2024-28/06/2024		557		
27/07/2024-16/08/2024		553		
Tuberculosis				
07/07/2024-13/07/2024	United States	157		U.S. CDC
11/08/2024-17/08/2024		56		
24/06/2024-30/06/2024	Britain	84		British Health and Safety Authority
24/06/2024-14/07/2024	Japan	744		Japan National Institute of Infectious Diseases
29/07/2024-15/09/2024		1645		
07/07/2024-13/07/2024	Korea	344		Korea CDC
28/07/2024-14/09/2024		1405		
08/06/2024-28/06/2024	Sri Lanka	640		Sri Lanka Ministry of Health
20/07/2024-02/08/2024		508		
10/08/2024-16/08/2024		210		
Enterohemorrhagic <i>Escherichia coli</i> infection				
24/06/2024-14/07/2024	Japan	325		Japan National Institute of Infectious Diseases
29/07/2024-15/08/2024		933		
Hepatitis A				
30/06/2024-06/07/2024	Singapore	2		Singapore Ministry of Health
01/01/2024-23/07/2024	Kenya	19 (19)	3	WHO Regional Office for Africa

TABLE 3 | (continued)

Record period	Location	Cumulative suspected cases (confirmed cases) reported during the record period	Cumulative deaths reported during the record period	Data source
01/09/2024	India	150		ProMED-mail
Hepatitis C				
30/06/2024–06/07/2024	Korea	106		Korea CDC
28/07/2024–03/08/2024		91		
30/06/2024–20/07/2024	Taiwan, China	28		China Taiwan Disease Control Agency
04/08/2024–31/08/2024		34		
08/09/2024–21/09/2024		15		
Hepatitis E				
13/07/2024–19/07/2024	Burkina Faso	7		African CDC
17/08/2024–23/09/2024		26		
31/08/2024–23/09/2024		66	1	
06/07/2024–19/07/2024	Chad	805 (78)	1	African CDC
20/07/2024–09/08/2024		55		
10/08/2024–13/09/2024		104	11	
01/07/2024–07/07/2024	Japan	8		Japan National Institute of Infectious Diseases
02/09/2024–08/09/2024		13		
Salmonella				
30/06/2024–13/07/2024	United States	2717		U.S. CDC
30/06/2024–21/09/2024	Singapore	359		Singapore Ministry of Health
Campylobacteriosis				
28/07/2024–17/08/2024	United States	2630		U.S. CDC
30/06/2024–20/07/2024	Singapore	34		Singapore Ministry of Health
28/07/2024–21/09/2024		73		
25/08/2024–31/08/2024	United States	802		U.S. CDC
Crimean-Congo hemorrhagic fever				
30/06/2024–20/07/2024	Afghanistan	186	21	WHO Regional Office for the Eastern Mediterranean
25/08/2024–31/08/2024		33	2	
08/09/2024–14/09/2024		22	1	
10–07–2024	Pakistan	(1)		ProMED-mail
01/01/2024–10/07/2024		15.00	3	
13/09/2024		2		
Chikungunya fever				
23/06/2024–29/06/2024	Argentina	(36)		WHO Regional Office for the Americas
28/07/2024–03/08/2024		70		
11/08/2024–17/08/2024		8		
01/01/2024–24/08/2024		768 (768)		

TABLE 3 | (continued)

Record period	Location	Cumulative suspected cases (confirmed cases) reported during the record period	Cumulative deaths reported during the record period	Data source
01/01/2024–31/08/2024	Bolivia	409		WHO Regional Office for the Americas
30/06/2024–20/07/2024	Brazil	22831		WHO Regional Office for the Americas
04/08/2024–24/08/2024		12584		
01/01/2024–07/09/2024		386295 (242506)		
01/01/2024–31/08/2024	Colombia	64		WHO Regional Office for the Americas
01/01/2024–07/09/2024	Costa Rica	30		WHO Regional Office for the Americas
01/01/2024–31/07/2024	East Timor	195		European Union CDC
01/01/2024–07/09/2024	El Salvador	41		WHO Regional Office for the Americas
01/01/2024–06/07/2024	Guatemala	48		WHO Regional Office for the Americas
01/01/2024–07/09/2024		81 (3)		
01/01/2024–31/07/2024	India	69395		European Union CDC
01/09/2024–06/09/2024		90		ProMED-mail
10/09/2024	Iraq	3 (3)		ProMED-mail
01/01/2024–31/07/2024	Malaysia	58		European Union CDC
01/01/2024–31/07/2024	Pakistan	1302		European Union CDC
01/01/2024–14/09/2024	Paraguay	2749 (43)		WHO Regional Office for the Americas
01/01/2024–31/08/2024	Peru	83 (11)		WHO Regional Office for the Americas
Lassa fever				
24/06/2024–07/07/2024	Nigeria	219 (13)		Nigeria CDC
29/07/2024–25/08/2024		455 (26)	3	
09/09/2024–15/09/2024		115 (5)	1	
Hantavirus				
01/01/2024–01/07/2024	United States	(7)	3	ProMED-mail
24–07–2024	Panama	1		ProMED-mail
Amebic dysentery				
30/06/2024–20/07/2024	Taiwan, China	206		China Taiwan Disease Control Agency
Pertussis				
30/06/2024–13/07/2024	United States	864		U.S. CDC
28/07/2024–10/08/2024		442		U.S. CDC
24/06/2024–07/07/2024	Australia	2199		Australian Department of Health
22/07/2024–04/08/2024		2586		
30/06/2024–06/07/2024	Korea	1387		Korea CDC
28/07/2024–24/08/2024		2591		

TABLE 3 | (continued)

Record period	Location	Cumulative suspected cases (confirmed cases) reported during the record period	Cumulative deaths reported during the record period	Data source
27/08/2024	Macau, China	2		Ministry of Health, Macau, China
07/07/2024–13/07/2024	Singapore	4		Singapore Ministry of Health
01/01/2024–07/07/2024	Somalia	2343		United Nations Office for the Coordination of Humanitarian Affairs
16/07/2024–30/07/2024	Taiwan, China	(7)		China Taiwan Disease Control Agency
Diphtheria				
06/07/2024–19/07/2024	Chad	830	34	African CDC
13/07/2024–16/08/2024	Nigeria	1305 (868)	141	African CDC
17/08/2024–31/08/2024		774 (332)	14	
01/07/2024–07/07/2024	Somalia	9		United Nations Office for the Coordination of Humanitarian Affairs
01/01/2024–01/09/2024		613		
11/08/2024	Vietnam	3		ProMED-mail
Chickenpox				
15/06/2024–28/06/2024	Sri Lanka	313		Sri Lanka Ministry of Health
20/07/2024–02/08/2024		336		
10/08/2024–16/08/2024		173		
19/08/2024–25/08/2024	Japan	4		Japan National Institute of Infectious Diseases
01/09/2024–07/09/2024	Taiwan, China	10		China Taiwan Disease Control Agency
18/08/2024–24/08/2024	United States	885		U.S. CDC
08/09/2024–14/09/2024		832		
Coccidioidomycosis				
30/06/2024–06/07/2024	United States	266		U.S. CDC
28/07/2024–10/08/2024		666		
18/08/2024–31/08/2024		297		
08/09/2024–14/09/2024		51		
Melioidosis				
12/07/2024–18/07/2024	Hong Kong, China	(1)		Hong Kong Centre for Health Protection, China
25/07/2024–29/08/2024		8		
30/08/2024–05/09/2024		1 (1)		
13/09/2024–19/09/2024		2 (2)		
06/08/2024–12/08/2024	Taiwan, China	19	3	China Taiwan Disease Control Agency

TABLE 3 | (continued)

Record period	Location	Cumulative suspected cases (confirmed cases) reported during the record period	Cumulative deaths reported during the record period	Data source
Leishmaniasis				
15/06/2024–28/06/2024	Sri Lanka	145		Sri Lanka Ministry of Health
27/07/2024–02/08/2024		57		
10/08/2024–16/08/2024		89		
Nipah virus disease				
22–07–2024	India	1		ProMED-mail
17/09/2024		1	1	CIDRAP Center for Infectious Disease Policy Research
Mumps				
07/07/2024–20/07/2024	Korea	218		Korea CDC
18/08/2024–24/08/2024		111		
14/07/2024–20/07/2024	Singapore	8		Singapore Ministry of Health
28/07/2024–17/08/2024		13		
28/07/2024–17/08/2024	Taiwan, China	10		China Taiwan Disease Control Agency
Western equine encephalitis				
12/11/2023–13/07/2024	Argentina	577 (108)	12	Argentine Ministry of Health
Bacillary dysentery				
24/06/2024–07/07/2024	Australia	106		Australian Department of Health
11/08/2024–17/08/2024	United States	202		U.S. CDC
Anthrax				
04/06/2024–23/06/2024	Uganda	11		WHO Regional Office for Africa
01/01/2024–04/08/2024	South Sudan	133	3	WHO Regional Office for Africa
Crimean-Congo hemorrhagic fever				
28/07/2024–24/08/2024	Afghanistan	193	14	WHO Regional Office for the Eastern Mediterranean
14/08/2024	Portugal	1		ProMED-mail
Streptococcus pneumoniae				
28/07/2024–03/08/2024	Taiwan, China	11		China Taiwan Disease Control Agency
Amoebic dysentery				
04/08/2024–24/08/2024	Taiwan, China	17		China Taiwan Disease Control Agency
Scarlet fever				
04/08/2024–17/08/2024	Korea	154		Korea CDC
Respiratory syncytial virus				
22/07/2024–04/08/2024	Australian	8372		Australian Department of Health
Varicella				
22/07/2024–04/08/2024	Australian	91		Australian Department of Health

TABLE 3 | (continued)

Record period	Location	Cumulative suspected cases (confirmed cases) reported during the record period	Cumulative deaths reported during the record period	Data source
Eastern equine encephalitis				
27/08/2024	United States	1		ProMED-mail
27/08/2024	United States	1	1	ProMED-mail
05/09/2024		1		
09/09/2024		1		
18/09/2024		1		
23/09/2024		1	1	
Whooping cough				
19/08/2024–01/09/2024	Australia	3179		Australian Department of Health
09/09/2024–15/09/2024	Japan	103		Japan National Institute of Infectious Diseases
01/01/2024–01/09/2024	Somalia	2838		U.N. Office for the Coordination of Humanitarian Affairs
25/08/2024–07/08/2024	South Korea	980		Korea CDC
18/08/2024–31/08/2024	United States	501		U.S. CDC
08/09/2024–14/09/2024		292		
Amoebic dysentery				
18/08/2024–31/08/2024	Taiwan, China	13		China Taiwan Disease Control Agency
08/09/2024–14/09/2024		4		
Parotitis				
18/08/2024–24/08/2024	Singapore	8		Health Ministry of Singapore
01/09/2024–21/09/2024		11		
01/09/2024–07/09/2024	Taiwan, China	5		China Taiwan Disease Control Agency
15/09/2024–21/09/2024		4		
Oropouche virus disease				
01/01/2024–31/08/2024	Bolivia	356		U.N. Office for the Coordination of Humanitarian Affairs
01/01/2024–31/08/2024	Brazil	7931	2	U.N. Office for the Coordination of Humanitarian Affairs
01/01/2024–31/08/2024	Colombia	74 (74)		U.N. Office for the Coordination of Humanitarian Affairs
01/01/2024–31/08/2024	Cuba	506		U.N. Office for the Coordination of Humanitarian Affairs
01/01/2024–31/08/2024	Peru	930		U.N. Office for the Coordination of Humanitarian Affairs
19/08/2024–25/08/2024	Somalia	20		U.N. Office for the Coordination of Humanitarian Affairs
01/01/2024–31/08/2024	United States	21 (21)		U.N. Office for the Coordination of Humanitarian Affairs
Rift Valley fever				
01/03/2024–29/07/2024	Uganda	16 (5)	5	WHO Regional Office for Africa

TABLE 3 | (continued)

Record period	Location	Cumulative suspected cases (confirmed cases) reported during the record period	Cumulative deaths reported during the record period	Data source
Avian influenza				
26/08/2024	Ghana	1 (H9N2)		WHO
20/09/2024	United States	1 (H5N1)		CIDRAP Center for Infectious Disease Policy Research
Marburg virus disease				
27/09/2024	Rwanda	1		ProMED-mail
28/09/2024		26	6	WHO

CONCLUSION

With climate change, population growth, urbanization, socioeconomic factors, changes in human behavior, and the emergence of new infectious diseases, the numbers of infectious disease events have markedly increased in recent years. These factors have fostered environments in which pathogens can thrive and spread easily. Enhancing sanitation conditions, strengthening public health systems, and raising public health awareness are essential components of comprehensive strategies to prevent the rise in infectious diseases.

Moreover, timely monitoring, and effective prevention and control measures have become essential in decreasing disease transmission risk and protecting public health. These measures should include implementation of vaccination programs, public health campaigns to educate communities in hygiene practices, and establishment of robust surveillance systems to detect and respond to outbreaks swiftly. Collaborative efforts among governments, health organizations, and communities are crucial for enhancing resilience to infectious diseases, and ensuring that health systems can effectively respond to current and emerging threats. Additionally, addressing the root causes of these diseases, such as by improving living conditions and promoting sustainable practices, will play major roles in safeguarding public health in the future.

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