



SHORT COMMUNICATION

# Global Infectious Diseases in April 2023: Monthly Analysis

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## ABSTRACT

Thousands of years have passed since infectious diseases first endangered human health as the most potentially lethal and debilitating diseases worldwide. The global incidence of infectious diseases has increased significantly over the past decades, such as COVID-19, cholera, dengue, and influenza. Key elements in combating and controlling diseases include monitoring and reporting infectious disease timelines and geographic distribution. We obtained surveillance data from Shusi Tech's Global Epidemic Information Monitoring System and comprehensively analyzed the timing and location of outbreaks in infected populations from 24 March 2023 to 23 April 2023. Recent worldwide outbreaks of infectious diseases highlight the need to implement effective monitoring strategies and warning systems.

**Key words:** Infectious disease, COVID-19, MPOX, Dengue, Cholera

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## INTRODUCTION

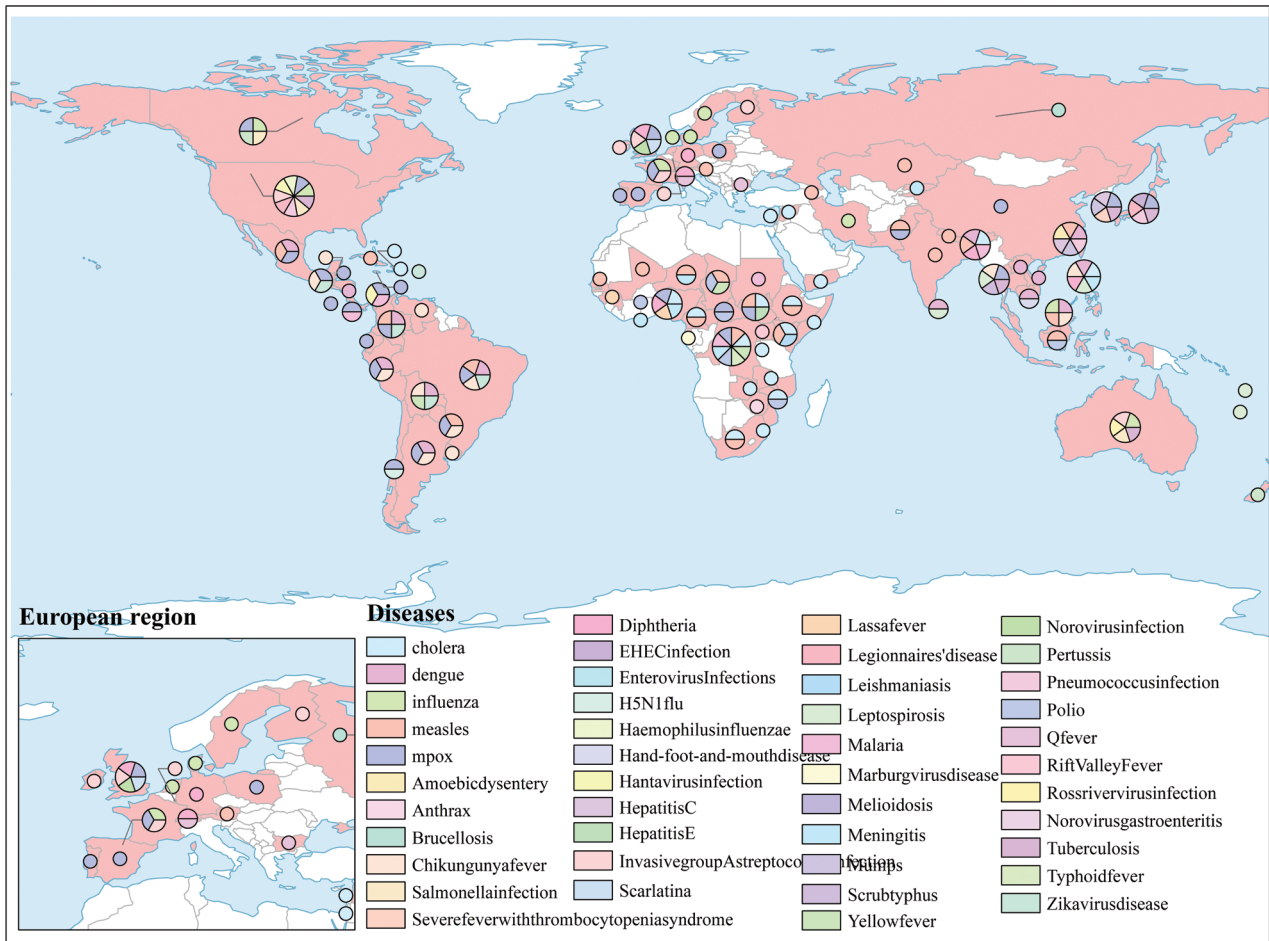
As the world becomes more and more globalized, health and illnesses have no borders. Economic integration, industrialization, urbanization, and mass migration are intricately intertwined, making the current world fraught with a variety of public health risks. It is clear that humans face increasing, substantial health threats due to the emergence of infectious diseases, which cause significant morbidity and mortality worldwide. Several infectious diseases in humans (e.g., COVID-19) have emerged in recent years, causing serious public health issues, environmental degradation, and diminished quality of life. The outbreak of new infectious diseases, the persistence of reported infectious diseases, and the increase in antibiotic resistance of pathogenic microorganisms have all seriously threatened human

health. Indeed, comprehending the spatial and temporal distribution of infectious diseases is a challenging task.

To maximize visualization of the regional and pattern of developing infectious diseases, we utilized Shusi Tech's Global Epidemic Information Monitoring System to conduct a perform a systematic and comprehensive analysis of global infectious diseases from 24 March 2023 to 23 April 2023 (Fig 1).

## COVID-19

COVID-19 is a contagious disease that is caused by coronavirus 2 and associated with severe acute respiratory syndrome (SARS-CoV-2) [1]. There were approximately 2.4 million new cases and 13,000 deaths globally attributed to COVID-19 in the last month (24 March – 23 April 2023), which were decreased by 33% and 50%, respectively, compared to the



**FIGURE 1** | Worldwide distribution of infectious diseases from 24 March 2023 to 23 April 2023.

previous 30 days, indicating that the infectious disease pandemic caused by COVID-19 had an overall positive trend (Fig 2). The World Health Organization (WHO) officially announced on 5 May (Beijing time) that the COVID-19 outbreak no longer constitutes a “public health emergency of international concern (PHEIC).” This declaration is evidence that the global pandemic has reached an end, and it is an essential milestone in the ongoing fight against the virus; however, it is imperative to bear in mind that COVID-19 continues to pose a threat and should not be underestimated. Keeping a vigilant watch over the COVID cases in the US and Europe is crucial, and taking additional precautions is imperative.

## CHOLERA

Cholera is an illness that causes severe watery diarrhea and dehydration. Cholera is spread by consuming contaminated food or water containing *Vibrio cholerae* [2]. Our evaluation of the published data revealed an ongoing outbreak of cholera in Syria, Malawi, and Haiti from 24 March 2023 to 23 April 2023. The number of confirmed

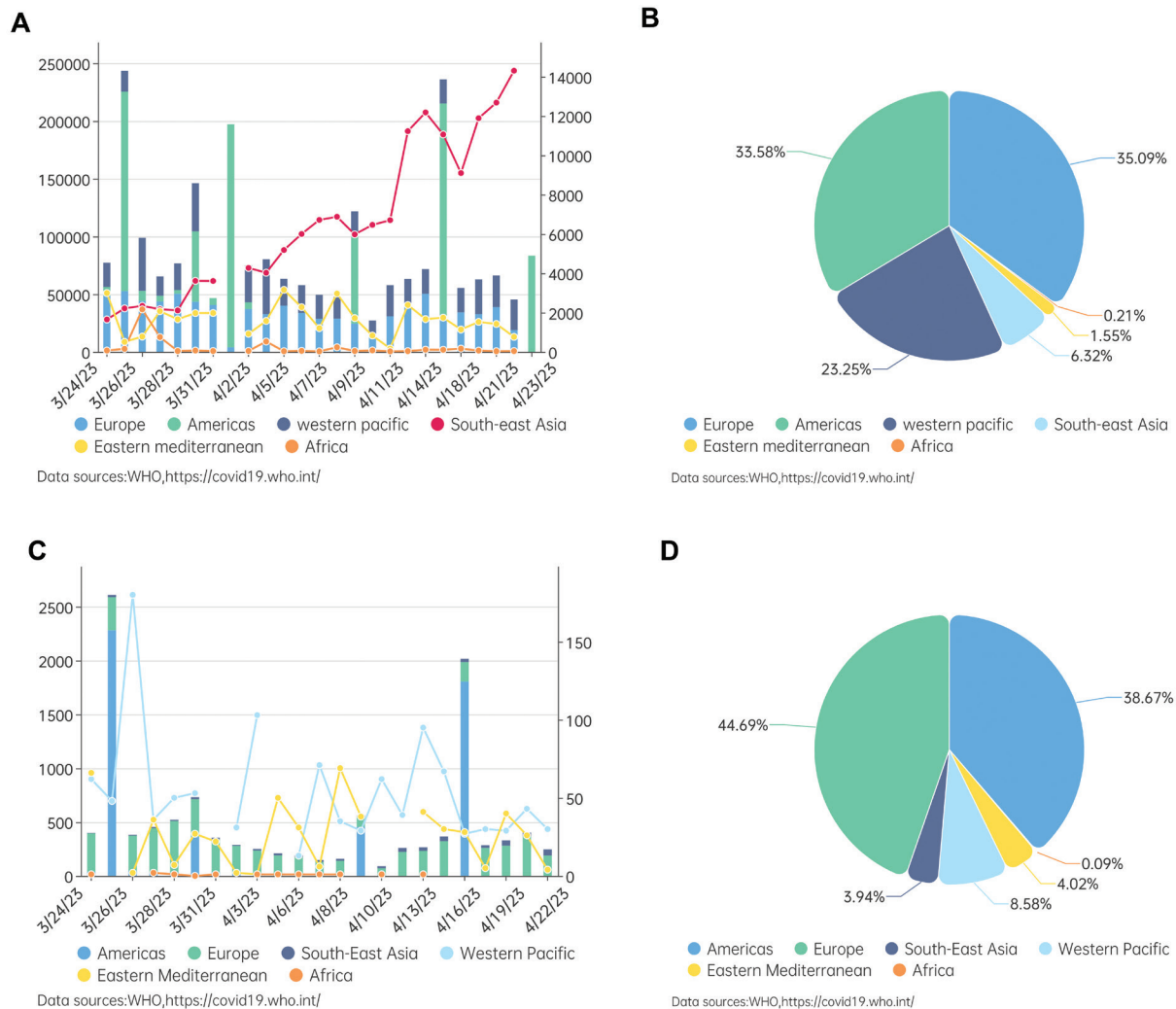
cases and deaths globally is high, as shown in Table 1. This issue requires further attention.

## MPOX

MPOX is a disease caused by the monkeypox virus (MPV) that results in fevers and an erythematous rash [3]. Between 24 March 2023 and 23 April 2023 there have been new cases of MPOX, mainly in the Americas and the western Pacific region. Of 255 new cases, 65% were in the Americas and 23% were in the western Pacific region, as indicated in Table 2, Fig 3.

## DENGUE

Dengue is a disease spread by mosquitoes that can cause a severe illness [4]. Dengue is found in several regions worldwide, including Africa, the eastern Mediterranean, the Americas, southeast Asia, and the western Pacific. Despite efforts to prevent and treat dengue, it remains a challenging task. In the past month (24 March - 23 April 2023), Nicaragua and Colombia have reported the highest proportion of dengue cases. While Brazil has the highest



**FIGURE 2** | Statistics on new confirmed cases and deaths of COVID-19 worldwide daily. A, C New cases and deaths of COVID-19 reported daily in the above continents. B, D Continent-specific proportions of new cases and deaths about COVID-19 (24 March 2023 – 23 April 2023; data were obtained from the World Health Organization website [https://COVID19.who.int/]).

number of suspected cases, confirmed cases are uncertain (Table 3).

**MEASLES**

Measles is a febrile illness that is incredibly contagious and caused by a virus. Measles can spread when someone coughs, sneezes, or comes into contact with the nasal secretions of an infected individual. From 24 March 2023 to 23 April 2023, Congo and India reported tens of thousands of suspected measles cases, with other countries having an even higher incidence. These countries should be considered critical areas for preventing an epidemic, as shown in Table 4.

**INFLUENZA**

Humans are at risk of acute respiratory diseases caused by influenza viruses. Similar to the common cold, influenza

is caused by a virus that changes its antigenic determinants to avoid detection by the human immune system. Compared to other infectious diseases, the incidence of influenza in the last month (24 March 2023 – 23 April 2023) was highest in the US, Australia, and France, with no deaths reported (Table 5). Influenza transmission rates are seasonal and typically decrease when the weather gets warmer. As a result, these infections become less common during those times.

**CHIKUNGUNYA VIRUS**

Chikungunya virus (CHIKV) is an enveloped virus belonging to the genus *Alphavirus* in the *Togaviridae* family and consists of > 30 recognized viruses [5]. Based on the data presented in the Table 6, it was observed that the Chikungunya virus had a significant outbreak in Paraguay and Brazil between 24 March 2023 and 23 April 2023. The table shows that suspected and cumulative cases and

**TABLE 1** | Worldwide cholera cases reported between 24/03/2023 and 23/04/2023.

Record period	Location	Cumulative suspected cases (confirmed cases) reported during the record period	Cumulative deaths reported during the record period	Data source
01/01/2023–12/03/2023	Somalia	2573 (20)	7	WHO Regional Office for the Eastern Mediterranean
25/08/2022–04/03/2023	Syria	100598 (2869)	104	
05/03/2023–19/03/2023		5361 (7)	0	
03/03/2022–18/03/2023	Malawi	54491	1677	WHO Regional Office for Africa
19/03/2022–26/03/2023		1295	28	
27/03/2023–04/04/2023		977	17	
05/04/2023–15/04/2023		1023	14	Outbreak News Today
14/09/2022–20/03/2023	Mozambique	10854	75	WHO
21/03/2023–28/03/2023		6956	10	WHO Regional Office for Africa
29/03/2023–04/04/2023		4672	12	
05/10/2022–27/03/2023	Lebanon	7125 (671)	23	Lebanese Ministry of Public Health
01/01/2023–12/03/2023	Yemen	1724	3	WHO
01/01/2023–05/03/2023	Democratic Republic of the Congo	5901	38	United Nations Office for the Coordination of Humanitarian Affairs
01/01/2023–05/03/2023	Nigeria	922	32	Nigerian CDC
06/03/2023–02/04/2023		98	3	
02/10/2022–24/03/2023	Haiti	37251 (2553)	640	Ministry of Public Health and Population, Haiti
25/03/2023–03/04/2023		736 (39)	10	
04/04/2023–11/04/2023		827 (25)	15	
25/10/2021–12/03/2023	Cameroon	15309	311	WHO
22/02/2023–23/03/2023	South Sudan	461 (4)	2	United Nations Office for the Coordination of Humanitarian Affairs
24/03/2023–27/03/2023		38	0	WHO Regional Office for Africa
20/01/2023–09/04/2023	Zambia	331 (103)	8	WHO
13/03/2023–30/03/2023	Cameroon	13	0	WHO Regional Office for Africa
05/10/2022–09/04/2023	Kenya	8584 (282)	137	
13/03/2023–26/03/2023	Somalia	855 (13)	14	United Nations Office for the Coordination of Humanitarian Affairs
27/03/2023–02/04/2023		587	3	
06/03/2023–19/03/2023	Democratic Republic of the Congo	1342	9	
27/08/2022–27/03/2023	Ethiopia	2370	51	WHO Regional Office for Africa
28/03/2023–03/04/2023		387	6	
05/10/2022–17/04/2023	Lebanon	7384 (671)	23	Lebanese Ministry of Public Health
01/01/2023–18/03/2023	Philippines	1006	7	Philippines Department of Health
26/03/2023–01/04/2023		46		
27/03/2023	Eswatini	0 (1)		WHO Regional Office for Africa
03/02/2023–27/03/2023	South Africa	0 (11)	1	
01/01/2023–08/04/2023	Burundi	247 (66)	1	
02/04/2023–08/04/2023	Bangladesh	26		WHO
20/03/2023–07/04/2023	Dominican Republic	(3)		WHO Regional Office for the Americas

**TABLE 2** | Worldwide MPOX cases reported between 24/03/2023 and 23/04/2023.

Region	Date	Cumulative confirmed cases reported during the record period	Cumulative deaths reported during the record period	New probable cases during the record period
<b>African Region</b>				
	2023/3/24	1	0	0
	2023/3/24	3	0	0
	2023/3/24	7	0	0
	2023/3/31	4	0	0
<b>European Region</b>				
	2023/4/4	16	0	0
	2023/3/28	1	0	0
	2023/4/11	2	0	0
	2023/4/4	2	0	0
	2023/4/4	3	0	0
	2023/4/11	3	0	0
<b>Region of the Americas</b>				
	2023/3/24	1	0	0
	2023/3/28	1	0	0
	2023/3/29	2	0	0
	2023/4/4	1	0	0
	2023/4/11	2	0	0
	2023/4/18	1	0	0
	2023/3/26	12	0	1
	2023/4/3	3	0	1
	2023/4/8	4	0	1
	2023/4/18	3	0	0
	2023/4/21	4	1	11
	2023/4/4	2	0	0
	2023/4/1	2	0	0
	2023/4/19	1	0	0
	2023/4/18	1	0	0
	2023/3/26	7	0	0
	2023/3/31	4	0	0
	2023/4/15	3	0	0
	2023/4/16	0	1	0
	2023/3/29	2	0	0
	2023/4/15	3	0	0
	2023/4/5	6	0	0
	2023/3/26	1	0	0
	2023/4/5	0	1	0
	2023/3/25	1	0	0
	2023/3/31	8	0	0
	2023/4/5	0	1	0

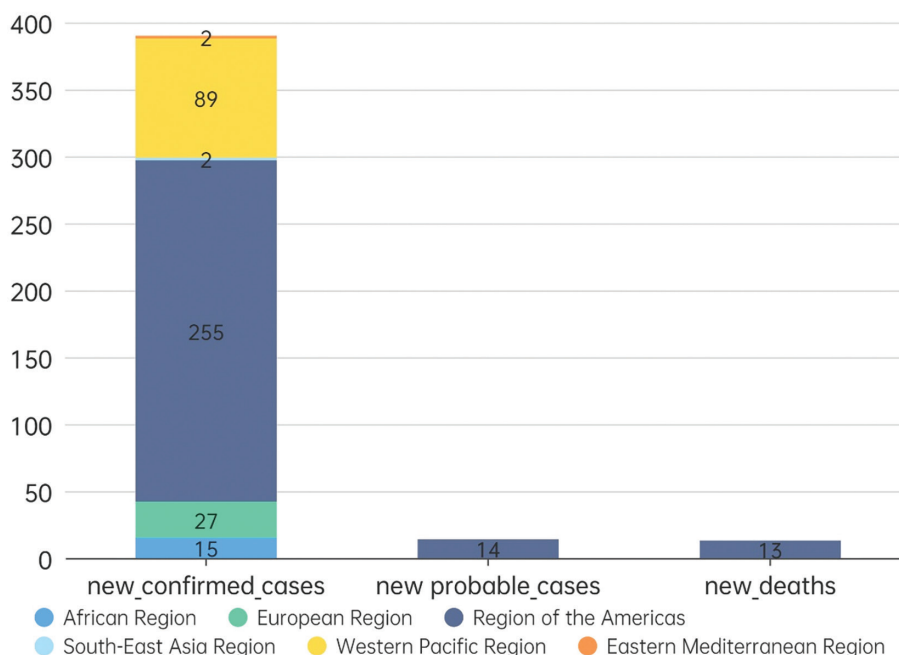
**TABLE 2** | (continued)

Region	Date	Cumulative confirmed cases reported during the record period	Cumulative deaths reported during the record period	New probable cases during the record period
	2023/4/13	2	1	0
	2023/4/14	4	0	0
	2023/3/29	2	0	0
	2023/4/6	19	1	0
	2023/4/1	27	0	0
	2023/4/7	5	0	0
	2023/4/14	2	1	0
	2023/4/1	3	0	0
	2023/4/15	3	0	0
	2023/3/24	9	0	0
	2023/4/11	15	0	0
	2023/3/29	12	0	0
	2023/3/31	4	0	0
	2023/4/1	7	0	0
	2023/4/5	1	1	0
	2023/4/7	4	0	0
	2023/4/12	45	3	0
	2023/4/14	1	0	0
	2023/4/15	3	2	0
	2023/4/19	2	0	0
	2023/4/22	10	0	0
<b>Southeast Asia Region</b>				
	2023/3/25	1	0	0
	2023/4/5	1	0	0
<b>Western Pacific Region</b>				
	2023/3/28	5	0	0
	2023/4/10	1	0	0
	2023/4/20	15	0	0
	2023/3/24	4	0	0
	2023/3/29	17	0	0
	2023/3/30	2	0	0
	2023/4/4	13	0	0
	2023/4/7	1	0	0
	2023/4/12	12	0	0
	2023/4/7	1	0	0
	2023/4/14	4	0	0
	2023/4/16	1	0	0
	2023/4/17	2	0	0
	2023/4/21	7	0	0
	2023/4/23	2	0	0

**TABLE 2 |** (continued)

Region	Date	Cumulative confirmed cases reported during the record period	Cumulative deaths reported during the record period	New probable cases during the record period
	2023/3/30	1	0	0
	2023/4/14	1	0	0
<b>Eastern Mediterranean Region</b>				
	2023/4/21	1	0	0
	2023/4/5	1	0	0

Statistics of cases by continent



[https://worldhealthorg.shinyapps.io/mpx\\_global/#3\\_Detailed\\_case\\_data](https://worldhealthorg.shinyapps.io/mpx_global/#3_Detailed_case_data)

**FIGURE 3 |** Statistics of the continent with new confirmed, probable, and deaths cases involving MPOX (24 March 2023 – 23 April 2023; data were obtained from the World Health Organization website [<https://Mpx.who.int/>]).

**TABLE 3 |** Worldwide dengue cases reported between 24/03/2023 and 23/04/2023.

Record period	Location	Cumulative suspected cases (confirmed cases) reported during the record period	Cumulative confirmed cases (deaths) reported since 1/1/2023	Data source
01/01/2023–18/03/2023	Nicaragua	21334 (408)		WHO Regional Office for the Americas
19/03/2023–25/03/2023		2021		
02/04/2023–08/04/2023		1178		
01/01/2023–11/03/2023	Columbia	19018 (9370)	2	
12/03/2023–18/03/2023		1752		
19/03/2023–25/03/2023		2015		
26/03/2023–01/04/2023		2217		
02/04/2023–08/04/2023		1627		

**TABLE 3** | (continued)

Record period	Location	Cumulative suspected cases (confirmed cases) reported during the record period	Cumulative confirmed cases (deaths) reported since 1/1/2023	Data source
01/01/2023–18/03/2023	Malaysia	23753	16	Ministry of Health, Malaysia
19/03/2023–25/03/2023		2469	1	
02/04/2023–08/04/2023		2239	2	
09/04/2023–15/04/2023		2399	1	
11/03/2023–17/03/2023	Sri Lanka	959		Ministry of Health, Sri Lanka
18/03/2023–24/03/2023		1214		
25/03/2023–31/03/2023		1211		
01/04/2023–07/04/2023		290		
21/03/2023–27/03/2023	Bangladesh	0 (20)		Ministry of Health and Family Welfare, Bangladesh
28/03/2023–10/04/2023		0 (59)		
11/04/2023–18/04/2023		0 (32)		
19/03/2023–25/03/2023	Singapore	127		Singapore Environment Agency
26/03/2023–01/04/2023		110		
02/04/2023–08/04/2023		114		
12/03/2023–18/03/2023	Argentina	0 (4512)		WHO Regional Office for the Americas
19/03/2023–25/03/2023		0 (5720)		
26/03/2023–01/04/2023		11193		
02/04/2023–08/04/2023		12497		
12/03/2023–18/03/2023	Mexico	1075		
13/03/2023–19/03/2023	Vietnam	1345		WHO Regional Office for the Western Pacific
27/03/2023–02/04/2023		822		ProMED-mail
01/01/2023–25/03/2023	Philippines	29885	96	WHO Regional Office for the Western Pacific
26/03/2023–01/04/2023		575	1	
01/01/2023–23/03/2023	Laos	670		China Xinhua News Network Corporation
26/03/2023–01/04/2023		0 (98)		
12/03/2023–18/03/2023	Cambodia	104		WHO Regional Office for the Western Pacific
26/03/2023–01/04/2023		104		
19/03/2023–25/03/2023	Bolivia	8147		WHO Regional Office for the Americas
19/03/2023–25/03/2023	Peru	3767		
26/03/2023–01/04/2023		5483		
02/04/2023–08/04/2023		4990		
26/02/2023–01/04/2023	Brazil	515961		
01/01/2023–15/04/2023	Taiwan, China	30		Taiwan Centers for Disease Control, China
01/01/2023–20/04/2023	Hong Kong, China	8		Centre for Health Protection, Hong Kong, China



**TABLE 4** | Worldwide measles cases reported between 24/03/2023 and 23/04/2023.

Record period	Location	Cumulative suspected cases (confirmed cases) reported during the record period	Cumulative deaths reported during the record period	Data source
01/01/2022–16/03/2023	South Sudan	5433 (4856)	53	WHO Regional Office for Africa
16/03/2023–26/03/2023		377 (351)	5	United Nations Office for the Coordination of Humanitarian Affairs
01/01/2023–05/03/2023	Democratic Republic of the Congo	40960	467	
05/03/2023–19/03/2023		5790	55	
01/01/2023–26/03/2023		57167 (909)	649	WHO Regional Office for Africa
01/01/2023–28/03/2023	Kazakhstan	(82)		Outbreak News Today
01/01/2023–21/03/2023	Austria	(89)		EU CDC
01/01/2023–11/04/2023		(108)		ProMED-mail
26/02/2023–11/03/2023	Paraguay	278		WHO Regional Office for the Americas
26/03/2023–08/04/2023		64		
26/02/2023–11/03/2023	Mexico	107		
12/03/2023–25/03/2023		67		
26/03/2023–08/04/2023		78		
26/02/2023–11/03/2023	Brazil	116		
12/03/2023–25/03/2023		27		
26/03/2023–08/04/2023		125		
26/02/2023–11/03/2023	Columbia	101		
12/03/2023–25/03/2023		42		
26/03/2023–08/04/2023		79		
01/01/2023–18/03/2023	Niger	423 (50)		WHO Regional Office for Africa
01/01/2023–12/03/2023	Chad	1973 (210)	2	
01/01/2023–02/04/2023	Cameroon	1440		
08/10/2022–24/03/2023	South Africa	(838)		
26/03/2023–01/04/2023		(53)		
02/04/2023–08/04/2023		32		ProMED-mail
01/01/2023–19/03/2023	Kenya	99 (64)	3	WHO Regional Office for Africa
14/03/2023–29/03/2023	Armenia	(35)		Outbreak News Today
01/01/2023–25/03/2023	Bangladesh	194 (11)		WHO
12/03/2023–25/03/2023	Cuba	236		WHO Regional Office for the Americas
11/04/2023	Hong Kong, China	(1)		Centre for Health Protection, Hong Kong, China
01/01/2023–26/03/2023	Mali	263 (94)		WHO Regional Office for Africa
01/01/2023–26/03/2023	Senegal	(180)		
11/04/2023	Taiwan, China	(1)		Taiwan Centers for Disease Control, China
01/01/2023–31/03/2023	Ethiopia	3529 (2168)		WHO Regional Office for Africa
01/01/2023–11/04/2023	India	39429 (29357)		WHO
01/01/2023–11/04/2023	Indonesia	5052 (1282)		
01/01/2023–11/04/2023	Pakistan	4304 (2054)		
01/01/2023–11/04/2023	Nepal	980 (721)		
01/01/2023–11/04/2023	Malaysia	780 (45)		

**TABLE 5** | Worldwide influenza cases reported between 24/03/2023 and 23/04/2023.

Record period	Location	Cumulative confirmed cases (deaths) reported during the record period	Data source
02/01/2023–19/03/2023	The Netherlands	8281	WHO
02/01/2023–12/03/2023	Sweden	10205	
12/03/2023–18/03/2023	USA	535	US CDC
19/03/2023–25/03/2023		626	
26/03/2023–01/04/2023		482	
02/04/2023–08/04/2023		515	
09/04/2023–15/04/2023		453	
12/03/2023–18/03/2023	Canada	392	Public Health Agency of Canada
26/03/2023–01/04/2023		510	
01/01/2023–19/03/2023	Australia	13292	Australian Department of Health
06/03/2023–19/03/2023		3730	
02/01/2023–02/04/2023	Qatar	2617	WHO
02/01/2023–02/04/2023	Iran	1725	
02/01/2023–02/04/2023	Malaysia	2745	WHO Regional Office for the Western Pacific
02/01/2023–09/04/2023	France	17497	WHO
02/01/2023–09/04/2023	Denmark	17311	

deaths make up a significant percentage in certain geographic areas. Thus, these geographic areas should be given priority for preventive efforts (Table 6).

## MALARIA

Malaria is a potentially fatal disease that is transmitted by vectors. Malaria is caused by parasites belonging to the *Plasmodium* genus. [6]. Although significant progress has been made in the fight against malaria in recent decades, the global burden of malaria is still unacceptably high. Even though malaria prevalence rates are lower compared to other malaria-endemic African countries, malaria and malaria-related deaths continue to pose significant public health challenges. Not surprisingly, the incidence of malaria remained elevated in the last month (24 March 2023 – 23 April 2023), especially in the Congo and Sudan, where malaria-related deaths remain significant (Table 7).

## SPORADIC INFECTIOUS DISEASES

It is essential to acknowledge that sporadic infectious diseases hold equal significance to the more common counterparts, including but not limited to diphtheria, *Haemophilus influenzae*, Legionnaires' disease, and Zika virus disease. Understanding and vigilantly monitoring the spread and impact of all infectious diseases is crucial in mitigating the effects on public health. It is essential to gain insight into the incidence areas and quantity of relevant sporadic infectious diseases for monitoring, prevention, and control. From 24 March 2023 to 23 April 2023,

Zimbabwe reported 481 suspected cases and 88 deaths of anthrax. Invasive group A streptococcal infections were reported in Ireland with 16 deaths among 219 cases. It is important to pay attention to Marburg virus disease in Equatorial Guinea, leishmaniasis in Kenya, Lassa fever and meningitis in Nigeria, typhoid fever in the Congo, and Zika virus in Brazil due to the low occurrence, but high mortality rates (Table 8).

## CONCLUSION

Over the past few decades, the unstoppable wave of globalization has spawned and accelerated various social and economic upheavals. Some epidemics have spread rapidly through international routes and viruses easily spread rapidly from one country to another, thus potentially bringing the risk of disease and death to every corner of each continent worldwide. The spread of communicable diseases was rapid under these conditions, especially COVID-19, malaria, and cholera.

According to the World Health Organization (WHO), a public health emergency of international concern (PHEIC) is a severe, sudden, and uncommon public health event that can spread across countries and may require a coordinated global response. It has been over 3 years since 30 January 2020, when COVID-19 was declared a PHEIC, after which our lives were significantly impacted. Although the WHO announcement that the pandemic had ended is significant, the COVID-19 virus has not vanished from the planet. COVID-19 will remain an ongoing

**TABLE 6** | Worldwide chikungunya cases reported between 24/03/2023 and 23/04/2023.

Record period	Location	Suspected cases*/New cases (death cases) during the record period	Suspected cases*/Cumulative cases (deaths) reported since 1/1/2023	Data source
12/03/2023–18/03/2023	Malaysia	7	117	Ministry of Health, Malaysia
12/03/2023–18/03/2023	Paraguay	13632*	126857*/56951 (91)	WHO Regional Office for the Americas
19/03/2023–25/03/2023		10126*		
02/04/2023–08/04/2023		2784*		
12/03/2023–18/03/2023	Argentina	93	647	WHO Regional Office for the Americas
19/03/2023–25/03/2023		78		
26/03/2023–01/04/2023		104		
02/04/2023–08/04/2023		299		
01/01/2023–25/03/2023	Belize		90*	WHO Regional Office for the Americas
01/01/2023–18/03/2023	Venezuela		111*/5	
12/03/2023–25/03/2023	Bolivia	342*	935*/2	
01/01/2023–25/03/2023	Guatemala		199*	
01/01/2023–08/04/2023	Peru		131*/41	
26/02/2023–01/04/2023	Brazil	48257*	78643*/21787 (10)	
01/03/2023–31/03/2023	Thailand	85*	381	Ministry of Health, Thailand
23/04/2023	Uruguay	7		Outbreak News Today
01/01/2023–01/04/2023	Philippines	30*		Philippines Department of Health

\*: Cumulative suspected cases.

**TABLE 7** | Worldwide malaria cases reported between 24/03/2023 and 23/04/2023.

Record period	Location	Suspected cases*/New cases (death cases) during the record period	Suspected cases*/Cumulative cases (deaths) reported since 1/1/2023	Data source
27/02/2023–05/03/2023	Congo	782989 (361)	6887609*/2820069 (3234)	United Nations Office for the Coordination of Humanitarian Affairs
13/03/2023–19/03/2023		873290 (392)	8339878*/3408090 (3864)	
19/03/2023–25/03/2023	Bangladesh	58	583*/20	WHO
02/04/2023–08/04/2023		70	713	
01/01/2023–18/03/2023	Sudan		438238*/(19)	WHO Regional Office for the Eastern Mediterranean
01/01/2023–17/04/2023	Costa Rica		115	Outbreak News Today
01/01/2023–14/04/2023	Panama		3124	Outbreak News Today

\*: Cumulative suspected cases.

health problem requiring long-term management. The incidence of COVID-19 cases and fatalities has decreased recently; however, there is a growing concern regarding the emergence of new strains, particularly the XBB.1.16 variant, which is spreading rapidly across the globe and poses a significant threat to public health. Recently, malaria has begun to spread widely as the climate warms. The world has made significant progress in reducing the

number of malaria cases and deaths since 2000, but the number of malaria-related deaths is high. Africa continues to bear > 90% of the global malaria burden.

It is an inescapable reality that every nation and individual must confront public health crises of a substantial nature. Achieving an acceptable public health status requires collaboration among the international community, countries, local communities, and the public.

**TABLE 8** | Worldwide sporadic infectious diseases cases reported between 24/03/2023 and 23/04/2023.

Record period	Location	Suspected cases*/ New cases (death cases) during the record period	Suspected cases*/ Cumulative cases (deaths) reported since 1/1/2023	Data source
<b>Amoebic dysentery</b>				
19/03/2023–25/03/2023	Taiwan, China	8	72	Taiwan Centers for Disease Control, China
26/03/2023–01/04/2023		10		
<b>Anthrax</b>				
01/01/2022–05/03/2023	Zimbabwe	481*/88		WHO Regional Office for Africa
<b>Brucellosis</b>				
01/01/2023–21/03/2023	Russia		30	ProMED-mail
<b>Diphtheria</b>				
26/02/2023–04/03/2023	Bangladesh	7	93	WHO
05/03/2023–11/03/2023		4		
19/03/2023–25/03/2023		7		
02/04/2023–08/04/2023		5		
01/01/2022–26/03/2023	UK	74		United Kingdom Health Security Agency
01/01/2023–19/03/2023	Nigeria		733*/ (89)	United Nations Office for the Coordination of Humanitarian Affairs
01/01/2023–25/03/2023	Philippines		32 (9)	Philippines Department of Health
01/01/2023–04/04/2023	Germany		17	EU CDC
01/01/2023–03/04/2023	Switzerland		5	
<b>Enterohemorrhagic <i>Escherichia coli</i> (EHEC) infections</b>				
13/03/2023–19/03/2023	Japan	10	188	National Institute of Infectious Diseases, Japan
27/03/2023–02/04/2023		28	259	
03/04/2023–09/04/2023		16		
<b>Enterovirus infections</b>				
02/2023	Macau, China	32	46	Health Bureau of Macao, China
<b>H5N1 flu</b>				
29/03/2023	Chile	1		Outbreak News Today
<b><i>Haemophilus influenzae</i> infections</b>				
19/03/2023–25/03/2023	U.S.	62	1305	U.S. CDC
<b>Hand-foot-and-mouth disease</b>				
01/01/2023–29/03/2023	Vietnam		248	Outbreak News Today
<b>Hantavirus infections</b>				
01/01/2023–31/03/2023	Panama		5	ProMED-mail
01/01/2023–15/04/2023	U.S.		5 (1)	Outbreak News Today
<b>Hepatitis C infections</b>				
12/03/2023–18/03/2023	Korea	84	2307	Korea CDC
19/03/2023–25/03/2023		106		
26/03/2023–01/04/2023		95		
02/04/2023–08/04/2023		136		
09/04/2023–15/04/2023		157		

**TABLE 8** | (continued)

Record period	Location	Suspected cases*/ New cases (death cases) during the record period	Suspected cases*/ Cumulative cases (deaths) reported since 1/1/2023	Data source
12/03/2023–18/03/2023	Taiwan, China	11	153	Taiwan Centers for Disease Control, China
19/03/2023–25/03/2023		10		
26/03/2023–01/04/2023		7		
02/04/2023–08/04/2023		5		
<b>Hepatitis E infections</b>				
01/01/2019–16/03/2023	South Sudan	104 (27)		
<b>Invasive group A streptococcal infections</b>				
01/01/2023–25/03/2023	Finland	80 (1)		EU CDC
01/02/2023–28/02/2023	Luxembourg	4 (1)		
13/03/2023–26/03/2023	UK	236		United Kingdom Health Security Agency
27/03/2023–16/04/2023		314		
06/03/2023–19/03/2023	Australia	75	481	Australian Department of Health
02/10/2022–01/04/2023	Ireland	219 (16) @		Irish Health Protection Surveillance Centre
01/01/2023–31/03/2023	U.S.		450	Outbreak News Today
01/09/2022–26/03/2023	France	170 (19)		French Public Health Agency
<b>Lassa fever</b>				
13/03/2023–19/03/2023	Nigeria	268*/38 (14)	4555*/869 (151)	Nigeria CDC
20/03/2023–26/03/2023		283*/39 (2)		
27/03/2023–02/04/2023		231*/23 (4)		
03/04/2023–09/04/2023		221*/23 (3)		
21/03/2023	The Republic of Guinea	1 (1)		WHO Regional Office for Africa
<b>Legionnaires' disease</b>				
19/03/2023–25/03/2023	U.S.	24	871	U.S. CDC
02/04/2023–08/04/2023		21		
20/03/2023–26/03/2023	Japan	13	341	National Institute of Infectious Diseases, Japan
03/04/2023–09/04/2023		21		
01/01/2023–08/04/2023	Hong Kong, China		13	Centre for Health Protection, Hong Kong, China
<b>Leishmaniasis</b>				
03/01/2020–19/03/2023	Kenya	2233*/2051 (10)		WHO Regional Office for Africa
<b>Leptospirosis</b>				
01/01/2023–22/03/2023	Vanuatu		51 (6)	United Nations Office for the Coordination of Humanitarian Affairs
23/03/2023–30/03/2023		8 (1)		
18/03/2023–24/03/2023	Sri Lanka	109	1951	Ministry of Health, Sri Lanka
25/03/2023–31/03/2023		226		
01/04/2023–07/04/2023		22		
01/01/2023–18/03/2023	Philippines		1127 (104)	Philippines Department of Health
26/03/2023–01/04/2023		10 (1)		

**TABLE 8** | (continued)

Record period	Location	Suspected cases*/ New cases (death cases) during the record period	Suspected cases*/ Cumulative cases (deaths) reported since 1/1/2023	Data source
03/2023	Thailand	168 (2)	587 (3)	Ministry of Health, Thailand
01/01/2023–19/04/2023	New Caledonia		102 (2)	ProMED-mail
<b>Marburg virus disease</b>				
07/02/2023–30/03/2023	Equatorial Guinea	33 (29)		CIDRAP Center for Infectious Disease Policy Research
31/03/2023		1 (1)		
11/04/2023		1 (1)		Outbreak News Today
07/02/2023–18/04/2023		39 (34)		WHO
23/04/2023		1 (1)		Outbreak News Today
<b>Melioidosis</b>				
25/02/2023–24/03/2023	Hong Kong, China	2	6	Centre for Health Protection, Hong Kong, China
08/04/2023–14/04/2023		2		
<b>Meningitis</b>				
15/02/2023–19/03/2023	Togo	123*/17 (12)		WHO Regional Office for Africa
19/12/2022–02/04/2023		141*/22 (12)		WHO
03/10/2022–05/03/2023	Nigeria	628*/160 (52)		Nigeria CDC
01/01/2023–17/03/2023	Kyrgyzstan		10 (1)	ProMED-mail
02/06/2022–03/04/2023	Congo	515*/10 (86)		WHO Regional Office for Africa
26/03/2023–01/04/2023	Niger	67*/(7)	831*/(41)	
01/01/2023–01/04/2023	Philippines		36 (15)	Philippines Department of Health
<b>Mumps</b>				
12/03/2023–18/03/2023	Korea	103	2050	Korea CDC
19/03/2023–25/03/2023		138		
26/03/2023–01/04/2023		139		
02/04/2023–08/04/2023		207		
09/04/2023–15/04/2023		373		
12/03/2023–18/03/2023	Taiwan, China	7	68	Taiwan Centers for Disease Control, China
02/04/2023–08/04/2023		6		
<b>Norovirus gastroenteritis</b>				
02/2023	Macau, China	50	52	Health Bureau of Macao, China
<b>Norovirus infection</b>				
06/03/2023–12/03/2023	UK	760	6340#	United Kingdom Health Security Agency
13/03/2023–19/03/2023		797		
20/03/2023–26/03/2023		305		
<b>Pertussis</b>				
01/01/2023–22/03/2023	Canada		21	ProMED-mail
01/01/2023–22/03/2023	New Zealand		8 (2)	United Nations Office for the Coordination of Humanitarian Affairs

**TABLE 8** | (continued)

Record period	Location	Suspected cases*/ New cases (death cases) during the record period	Suspected cases*/ Cumulative cases (deaths) reported since 1/1/2023	Data source
<b><i>Pneumococcus</i> infections</b>				
12/03/2023–18/03/2023	Taiwan, China	5	90	Taiwan Centers for Disease Control, China
19/03/2023–25/03/2023		6		
02/04/2023–08/04/2023		4		
12/03/2023–18/03/2023	U.S.	208	5926	U.S. CDC
26/03/2023–01/04/2023		222		
09/04/2023–15/04/2023		208		
13/03/2023–19/03/2023	Japan	35	398	National Institute of Infectious Diseases, Japan
20/03/2023–26/03/2023		27		
27/03/2023–02/04/2023		25	434	
09/04/2023–15/04/2023	Singapore	6	42	Ministry of Health, Singapore
<b>Polio</b>				
15/03/2023–21/03/2023	Congo	5		The Global Polio Website
22/03/2023–28/03/2023		33		
29/03/2023–04/04/2023		21		
05/04/2023–11/04/2023		7		
15/03/2023–21/03/2023	Indonesia	1		
22/03/2023–28/03/2023	Central African Republic	5		
22/03/2023–28/03/2023	Chad	2		
29/03/2023–04-04-2023		1		
29/03/2023–04-04-2023	Mozambique	1		
12/04/2023–18/04/2023		3		
05/04/2023–11/04/2023	Benin	1		
<b>Q fever</b>				
02/04/2023	Bulgaria	1	8	ProMED-mail
30/03/2023	Switzerland	6		
<b>Rift Valley Fever</b>				
23/02/2023–23/03/2023	Uganda	30 (5)		ProMED-mail
<b>Ross river virus infections</b>				
06/03/2023–19/03/2023	Australia	96	670	Australian Department of Health
<b>Salmonella</b> infections				
12/03/2023–18/03/2023	U.S.	200	7629	U.S. CDC
19/03/2023–25/03/2023		217		
26/03/2023–01/04/2023		274		
02/04/2023–08/04/2023		209		
09/04/2023–15/04/2023		227		
06/03/2023–19/03/2023	Australian	528	3078	Australian Department of Health
13/04/2023	Canada	45		Public Health Agency of Canada
09/04/2023–15/04/2023	Singapore	23	316	Ministry of Health, Singapore

**TABLE 8** | (continued)

Record period	Location	Suspected cases*/ New cases (death cases) during the record period	Suspected cases*/ Cumulative cases (deaths) reported since 1/1/2023	Data source
<b>Scarlatina</b>				
13/03/2023–26/03/2023	UK	2811		United Kingdom Health Security Agency
27/03/2023–16/04/2023		2211		
<b>Scrub typhus</b>				
03/2023	Thailand	235	903 (2)	Ministry of Health, Thailand
<b>Severe fever with thrombocytopenia syndrome</b>				
07/04/2023	Korea	1 (1)		Korea CDC
<b>Tuberculosis</b>				
12/03/2023–18/03/2023	Korea	359	4507	Korea CDC
19/03/2023–25/03/2023		393		
26/03/2023–01/04/2023		382		
02/04/2023–08/04/2023		357		
12/03/2023–18/03/2023	U.S.	22	971	U.S.CDC
26/02/2023–01/04/2023		41		
09/04/2023–15/04/2023		41		
02/2023	Macau, China	16	29 (1)	Health Bureau of Macao, China
13/03/2023–19/03/2023	Japan	186	3274	National Institute of Infectious Diseases, Japan
20/03/2023–26/03/2023		196		
27/03/2023–02/04/2023		203		
03/04/2023–09/04/2023		175		
06/03/2023–19/03/2023	Australia	43	282	Australian Department of Health
03/2023	Thailand	555 (1)	2693 (8)	Ministry of Health, Thailand
<b>Typhoid fever</b>				
01/01/2023–05/03/2023	Congo		386384*/(110)	United Nations Office for the Coordination of Humanitarian Affairs
<b>Yellow fever</b>				
27/02/2023–05/03/2023	Congo	17*	192 (8)	United Nations Office for the Coordination of Humanitarian Affairs
13/03/2023–19/03/2023		18*		
03/04/2023	Bolivia	2		ProMED-mail
01/11/2021–02/04/2023	Chad	2753*/31 (7)		WHO Regional Office for Africa
<b>Zika virus disease</b>				
01/01/2023–18/03/2023	Columbia		68*	WHO Regional Office for the Americas
01/01/2023–11/03/2023	Puerto Rico		15*	
12/03/2023–25/03/2023	Bolivia	205*	561*/6	
26/02/2023–08/04/2023	Brazil	4466*	6440 (675)	
01/01/2023–08/04/2023	Guatemala	112*		

#: Cumulative cases reported since 04/07/2022.

\*: Cumulative suspected cases.

@: Children &lt; 18 years of age accounted for 38% of the cases.



Achieving a harmonious equilibrium between maintaining a routine existence and safeguarding oneself against communicable illnesses necessitates continual adaptation and growth. Maintaining a consistent and thorough collection of data regarding worldwide infectious diseases is imperative to effectively and appropriately address global public health emergencies.

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#### CONFLICT OF INTEREST STATEMENT

The authors declared no potential conflicts of interest with respect to the research, authorship, and publication of this article.

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