Doi: https://doi.org/10.3329/ewmcj.v14i2.87353

PREVALENCE OF DENGUE AND CHIKUNGUNYA AND THEIR SEASONAL VARIATIONS AMONG FEBRILE PATIENTS IN DHAKA, BANGLADESH, IN 2025

Khatun S[1], Johora FT[2], Munny NN[3], Zafrin CA[2], Chowdhury MZU[3]

Article History:
Received: 25th January 2026
Accepted: 15th February 2026

Abstract:

Introduction: *Many people in Bangladesh are getting dengue and chikungunya, which are significant health problems. Aedes mosquitoes spread both viruses. Dengue has been a constant problem in Bangladesh since 2000. In 2017, there was a big outbreak of chikungunya, and the virus has been spreading ever since. It might be hard to tell the difference between dengue virus (DENV) and chikungunya virus (CHIKV) infections since their symptoms are so similar. Nonetheless, information about the co-circulation of DENV and CHIKV is scarce.* Objective: *To determine the prevalence and seasonal trends of dengue and chikungunya virus infections among patients presenting with fever in 2025.*

Methods: *This retrospective cross-sectional study used a consecutive sampling method. Data were collected from laboratory records at the Ibn Sina Diagnostic & Consultation Center in Uttara. Both immunochromatographic tests (ICT) and polymerase chain reaction (PCR) assays were used to diagnose DENV and CHIKV.*

Results: *A total of 31,839 samples were analyzed. Of these, 25,939 were tested for dengue and 5,900 for chikungunya. In the dengue group, 15% tested positive for DENV and 85% tested negative. In the chikungunya group, 18% were positive for CHIKV and 82% were negative. The dengue group included 15, 071 (58. 1%) males and 10, 868 (41. 9%) females, with a male-to-female ratio of 1. 39: 1 and a mean age of 25. 25.12 ± 0. 55 years (range: 1–82 years). The chikungunya group comprised 3, 174 (53. 8%) males and 2, 726 (46. 2%) females, with a male-to-female ratio of 1. 16: 1 and a mean age of 34. 34.40 ± 1. 30 years (range: 3–77 years). The highest number of dengue- positive cases occurred from September to November, accounting for approximately 79. 85% of cases. The peak frequency of sCHIKV was observed from September to October, at approximately 76. 46%. Seasonal variation in positive and negative cases for both viruses was statistically significant (p < 0. 0001). Comparisons between peak and off- peak months also revealed statistically significant differences for both viruses (DENV: p < 0. 0001, OR 11. 11.89, 95% CI 3. 21–44.03. 03; CHIKV: p < 0. 0001, OR 16. 24, 95% CI 3. 3.541–74. 74.64). These findings indicate that dengue and chikungunya infections are no longer restricted to the monsoon season but occur year-round, with the highest incidence in the post-monsoon period.*

Keywords:
Dengue, chikungunya, seroprevalence, seasonal variation, rRT-PCR, Aedes aegypti.

EWMCJ Vol. 14, No. 2, July 2026: 234-244

1. Dr. Sumaiya Khatun, Associate Professor, Department of Microbiology, East-West Medical College, Dhour, Nishat Nagar, Uttara, Dhaka, Bangladesh.
2. Dr. Fatima Tuj Johora, Associate Professor, Department of Microbiology, East-West Medical College, Dhour, Nishat Nagar, Uttara, Dhaka, Bangladesh.
3. Dr. Nazmun Nahar Munny, Associate Professor, Department of Microbiology, East-West Medical College, Dhour, Nishat Nagar, Uttara, Dhaka, Bangladesh.
4. Dr. Chowdhury Aruba Zafrin, Lecturer, Department of Microbiology, East-West Medical College, Dhour, Nishat Nagar, Uttara, Dhaka, Bangladesh.
5. Dr. Md. Zaforullah Chowdhury Professor and Head, Department of Microbiology, East-West Medical College, Dhour, Nishat Nagar, Uttara, Dhaka, Bangladesh.

Address of Correspondence: Dr. Sumaiya Khatun, Associate Professor, Department of Microbiology, East-West Medical College, Dhour, Nishat Nagar, Uttara, Dhaka, Bangladesh. E-mail: khatun.sumaiya@yahoo.com. Cell No.: +8801717082778. ORCID ID: orcid.org/000-0001-5193-4493.

Introduction

Dengue and Chikungunya are among the fastest-spreading viral diseases mosquitoes can transmit. Tropical countries like Bangladesh have to deal with a lot of them. Bangladesh faced a public health disaster in 2025, when dengue fever was widespread, and chikungunya made a major comeback. Dengue and chikungunya are both arthropod-borne acute febrile illnesses caused by the dengue virus (DENV) and chikungunya virus (CHIKV), respectively. Both viruses are RNA viruses, but they belong to two different families. DENV belongs to the Flaviviridae family & CHIKV belongs to the Togaviridae family. Both are transmitted primarily by Aedes aegypti and Aedes albopictus mosquitoes.[1] Transmission of these arboviruses has been shifted from seasonal outbreaks to year-round threats in South Asia. Both the vectors originate in Africa & South Asia, and are currently found in all tropical and subtropical climates.[2] Several factors have a significant impact on the spread of these vectors and, consequently, the arboviruses DENV and CHIKV. Population growth, travel, globalization, global warming, and international trade are among these factors. Inadequate vector control measures, favorable climatic conditions, and competent vectors all contribute to a significant risk of outbreaks and eventual endemicity.[3]

DENV has 4 serotypes: DENV1, DENV2, DENV3 & DENV4. Infection with one serotype confers lifelong immunity. It also provides short-term immunity against other serotypes. All 4 strains are found in Bangladesh. DENV-4 is the most prevalent (41%), followed by DENV-2 (25%), DENV-1 (22%), and DENV-3 (13%).[4,5] All the strains cause a wide range of diseases. The diseases may vary from mild undifferentiated fever to severe hemorrhage & dengue shock syndrome. Second-time infection by a different serotype may cause life-threatening complications, even death, if not appropriately managed.

The WHO says dengue is one of the 10 biggest threats to global health.[6] Dengue is a global issue, notably in Europe, the Americas, and the Eastern Mediterranean. However, 70% of worldwide incidence is concentrated in Asia, especially Southeast Asia (ASEAN) and South Asia.[2,5] In Asia, dengue fever has been a serious public health issue since the 1950s. Dengue cases increased by 46% in the ASEAN region between 2015 and 2019. Indonesia, Myanmar, and Thailand are some of the world's most endemic nations.[7]. Rapid urbanization in South and Southeast Asian nations, such as Bangladesh, India, Pakistan, and Sri Lanka, increases the risk of dengue-related death and morbidity. Dense slums and poor infrastructure serve as breeding grounds for Aedes mosquitoes.[8,9] Currently, 390 million individuals are exposed to DENV annually, leading to 96 million cases of virus-associated disease worldwide. Additionally, approximately 3 billion people residing in tropical and subtropical areas are susceptible to infection.[10-15] The World Health Organization (WHO) estimates that roughly 500,000 individuals develop dengue-related serious disease each year. About 1,250 (2.5%) of these cases result in fatalities.[16]

The initial dengue outbreak in Bangladesh was documented in 1964 in East Pakistan, and the term Dacca fever was introduced.[17,18] In 2000, Bangladesh had its first recognized dengue outbreak, with 5,551 cases and 93 fatalities.[19] Since then, dengue has become endemic in Bangladesh. As global dengue cases rose, so did numbers in Bangladesh. From 2000 to 2024, Bangladesh faced yearly dengue outbreaks and fatalities. Among these, 2023 saw the deadliest outbreak, with 321,179 confirmed cases and 1,705 fatalities.[20] The case fatality rate (CFR) rose from 0.16% in 2019 to 0.57% in 2024, indicating it remains a yearly threat.

Like dengue, chikungunya is also a tropical infection. The disease usually starts with a sudden fever and severe joint pain that can make it hard to move. This joint pain usually goes away after a few days, but in some cases, it can last for weeks, months, or even years. About 39% of the world's people live in places where the chikungunya virus (CHIKV) is common.[21] The Chikungunya virus was first isolated from the serum of a person with fever during an epidemic in the Newala district of Tanzania by Ross in 1952.[22] In Asia, CHIKV has circulated since the 1950s, with outbreaks occurring nearly every decade in Southeast Asia since the 1960s.[23] Prior to 2000, chikungunya cases were infrequent and mainly clustered in small groups. Following nearly 30 years without major outbreaks, chikungunya re-emerged in 2005, spreading across the Indian Ocean.[24]

The first documented outbreak of CHIKV in Bangladesh occurred in 2008 in two villages in the northwest region, Rajshahi and Chapai Nawabganj.[25] In 2011, an outbreak in Dohar, Dhaka, affected several hundred people.[22] The 2017 outbreak was the largest, with

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13,176 clinically confirmed cases reported across 17 of 64 districts. National surveillance from 2015 to 2016 found a 2.4% seroprevalence, estimating that 4.99 million people had been infected with CHIKV before the 2017 epidemic.[26] After 2017, CHIKV nearly disappeared from Bangladesh, with only a few isolated cases documented. Chikungunya re-emerged as a significant urban outbreak in 2025 after a seven-year hiatus.

The current understanding of the epidemiological interactions between dengue and chikungunya remains limited, despite their co-occurrence. Dengue is hyperendemic across all 64 districts. The actual prevalence of chikungunya is probably underestimated because of poor monitoring, few diagnostic tools, and the fact that it can look like dengue. This study seeks to evaluate the present prevalence and spatiotemporal dynamics of both viruses in Dhaka during the 2025 transmission cycles.

Materials and Methods

This is a retrospective cross-sectional study. The consecutive sampling method was employed. The data were collected from the laboratory records of the Ibn Sina Diagnostic & Consultation Center, Uttara, Dhaka, covering the period from January 1, 2025, to December 31, 2025. Data were collected from all suspected cases of dengue and chikungunya who came for dengue (NS1, anti-dengue IgM, anti-dengue IgG & dengue PCR) and chikungunya (anti-chikungunya IgM, anti-chikungunya IgG & chikungunya PCR) tests by themselves or with a doctor's advice. The total sample was 31,839. Among them, 25,939 came for a dengue test, and 5,900 came for a chikungunya test. As this study did not include any personal information from the cases and data were collected from previous laboratory records, consent from the cases was not required.

Detection of antigen & antibody against dengue & chikungunya

NS1 antigen, anti-dengue IgM, anti-dengue IgG, anti-chikungunya IgM, and anti-chikungunya IgG were detected by the method of ICT using a commercial ICT kit (OnSite Dengue Ag Rapid Test, Bioline™ Dengue IgG/IgM WB, ULTRA Chikungunya IgM/IgG).

Detection of viral RNA

RNA from both viruses was detected by real-time reverse transcription PCR (rRT-PCR) using a commercial PCR kit (Truenat® RT-PCR Dengue/Chikungunya).

Laboratory criteria for the diagnosis of dengue

The cases were considered positive if they tested positive for the NS1 antigen, anti-dengue IgM, or had a positive PCR test. Those who tested negative for the NS1 antigen, anti-Dengue IgM, or had a negative RNA test by PCR, but were positive for anti-Dengue IgG, were considered negative. Because positive anti-Dengue IgG indicates past infection.

Laboratory criteria for the diagnosis of chikungunya

The cases were considered positive if they tested positive for anti-chikungunya IgM or had a positive PCR test for chikungunya RNA. Those who tested negative for the anti-chikungunya IgM, or had a negative RNA test by PCR, but were positive for anti-chikungunya IgG, were considered negative. Because positive anti-chikungunya IgG indicates past infection.

Statistical analysis

Data was analyzed using SPSS 26, manufactured by IBM. Descriptive analysis of all relevant variables was performed using proportions, central tendency, and dispersion. The statistical significance of age with DENV & CHIKV was analyzed using Welch's Independent T-test. Statistical significance of sex with DENV & CHIKV was analyzed using the Chi-Square Test. A p-value <0.05 is considered significant. Seasonal variation of DENV & CHIKV and their statistical significance were analyzed using the Chi-Square Test of Independence. Positive cases were compared, and the statistical significance between peak and off-peak months was assessed using p-values, OR, and 95% CIs.

Results:

A total of 31,839 patients were included in the study, comprising a dengue group (25,939) and a chikungunya group (5,900). Among the dengue group (n=25,939), 15,071 (58.1%) males and 10,868 (41.9%) females, with a male-to-female ratio of 1.39:1. Their mean age at study entry was 25.12 ± 0.55, ranging from 1 – 82 years. (Table I).

Among the chikungunya group (n=5,900), 3174 (53.8%) males and 2726 (46.2%) females, with a male-to-female ratio of 1.16:1. Their mean age at study entry was 34.40 ± 1.30, ranging from 3 – 77 years. (Table I).

The *p*- value of sexes between 2 groups was *p* <0.0001. Since this value is much lower than the standard significance level of 0.05, the difference in proportions between the dengue and chikungunya groups is statistically significant. Age distribution also differed significantly between the two groups (*p* <0.0001). Patients in the chikungunya group were significantly older than those in the dengue group.

Among the suspected dengue cases (n=25,939), 3981 (15%) were positive for dengue, and 21958 (85%) were negative [Fig. 1].

Among the suspected chikungunya cases (n=5,900), 1058 (18%) were positive for chikungunya, and 4842 (82%) were negative [Fig. 2].

Figure 3 shows the seasonal trends of both dengue & chikungunya. It had been observed that, in dengue, cases remain at or near zero for the first five (January – June) months, with a very slight uptick starting in June. There is a significant and steady increase starting in July (125 cases), jumping sharply through August (280 cases) and September (665 cases). Dengue cases reach their highest point and plateau during these two months (October – November), peaking at approximately 1260 cases. As the year ends (December), cases drop drastically to below 400.

In the chikungunya group, they follow a similar flatline to dengue but remain low for longer, showing almost no activity until August. Unlike dengue, which plateaus, chikungunya has a distinct, rapid peak in September, reaching nearly 480 cases. Immediately after its September peak, the number of cases drops consistently each month, ending the year with very few cases in December [Fig 3].

The temporal distribution of positive (n= 3981) and negative (n= 21958) cases of dengue group across the 12-month study period showed highly significant seasonal variation (*p* <0.0001). Negative cases peaked in July (28.65%), while positive cases remained low (3.19%). The positive cases peaked between September, October & November. For the seasonal distribution of positive and negative cases, the calculated *p*-value was <0.0001 & it is statistically significant (Table II).

Table-I

Distribution of study population according to their sex and age.

Studypopulation	Sex				Age (year)		
	Male	Female	Male: Female	*p* value	Range	Mean ± SD	*p* value
Dengue (n = 25,939)	15,071 (58.1)	10,868 (41.9)	1.39:1	<0.0001	1 – 82	25.12 ± 0.55	<0.0001
Chikungunya (n = 5,900)	3174 (53.8)	2726 (46.2)	1.16:1		3 – 77	34.40 ± 1.30	

Note: Figure within the parentheses indicates percentage.
A *p*-value <0.05 is considered significant.

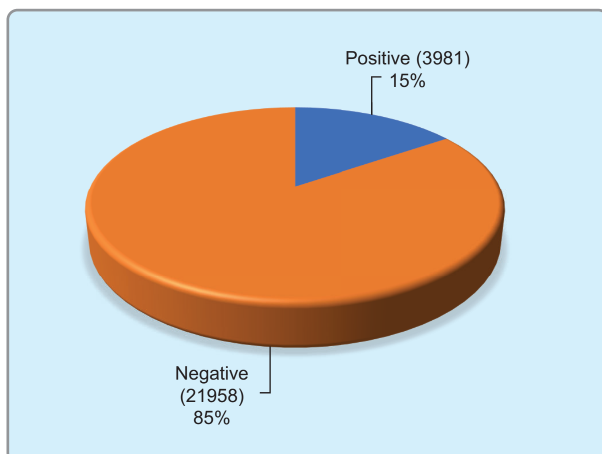

Figure 1: *Distribution of suspected dengue cases according to their serological and rRT-PCR results (n = 25,939).*

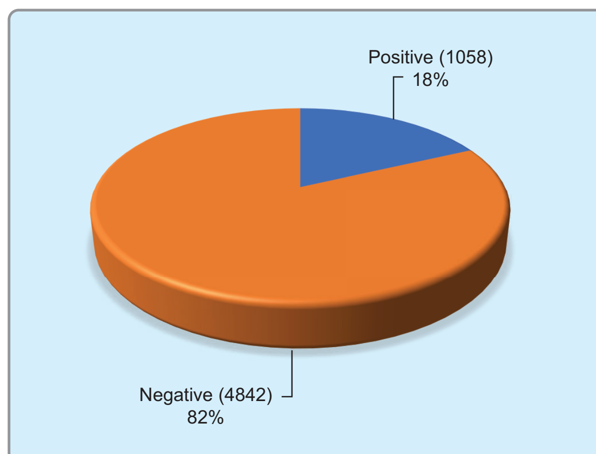

Figure 2: *Distribution of suspected chikungunya fever cases according to their serological and rRT-PCR results (n = 5900).*

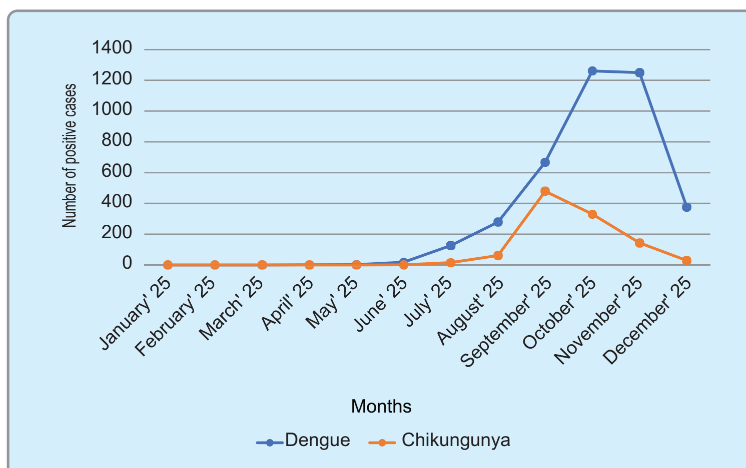

Figure 3: *Seasonal trend of dengue & chikungunya positive cases in 2025.*

Table-II

Distribution of suspected dengue fever cases according to months.

Months	Positive (n= 3981)	Negative (n= 21,958)	*p* value
January	0 (0)	0 (0)	<0.0001
February	0 (0)	12 (0.05)	
March	0 (0)	26 (0.12)	
April	1 (0.03)	95 (0.43)	
May	2 (0.05)	491 (2.24)	
June	18 (0.45)	994 (4.53)	
July	127 (3.19)	6292 (28.65)	
August	279 (7.01)	4229 (19.26)	
September	668 (16.78)	2862 (13.03)	
October	1261 (31.68)	2900 (13.21)	
November	1250 (31.40)	2892 (13.17)	
December	375 (9.42)	1235 (5.62)	

Note: Figure within the parentheses indicates percentage.
A *p*-value <0.05 is considered significant.

In contrast, positive cases surged sharply in the final quarter of the year. An odds ratio (OR) analysis confirmed that the odds of a positive test result during this peak period (September –November) were 11.89 times higher than during the off-peak months (January –August, December) (95% CI: 3.21 –44.03), with a *p*-value <0.0001 and the difference was statistically significant (Table III).

Of the 5900 suspected chikungunya cases, September to October accounted for over 76.46% of all cases. There is a 5-month period (January–May) with zero recorded cases, followed by a steady ramp-up starting in June/July. For the seasonal distribution of positive and negative cases, the calculated *p*-value was <0.0001 (Table IV). When comparing peak months (September – October) & off-peak months (January – August, November & December), the *p* value was <0.0001, OR was 16.24 and 3.54 – 74.64 was 95% CI. So, this seasonal association is statistically significant (Table V).

Table III

Comparison of dengue positive cases between peak & off-peak months (n= 3981).

Months	Positive cases	*p* value	OR	95% CI
Peak months(September - November)	3179 (79.85)	<0.0001	11.89	3.21 –44.03
Off-peak months(January –August, December)	802 (20.15)			

Note: Figure within the parentheses indicates percentage.
A *p*-value <0.05 is considered significant.
OR = Odds ratio.
CI = Confidence Interval.

Table-IV

Distribution of suspected chikungunya fever cases according to months.

Months	Positive (n= 1058)	Negative(n= 4842)	*p* value
January	0 (0)	10 (0.21)	<0.0001
February	0 (0)	13 (0.27)	
March	0 (0)	10 (0.21)	
April	0 (0)	05 (0.10)	
May	0 (0)	15 (0.31)	
June	1 (0.09)	55 (1.14)	
July	15 (1.42)	47 (0.97)	
August	61 (5.77)	1181(24.39)	
September	479 (45.27)	1218 (25.15)	
October	330 (31.19)	1223 (25.26)	
November	143 (13.52)	784 (16.19)	
December	29 (2.74)	281 (5.80)	

Note: Figure within the parentheses indicates percentage.
A *p*-value <0.05 is considered significant.

Table-V

Comparison of chikungunya positive cases between peak & off-peak months (n= 1058).

Months	Positive cases	*p* value	OR	95% CI
Peak (September-October)	809 (76.46%)	<0.0001	16.24	3.54 – 74.64
Off-peak (January-August, November & December)	249 (23.54%)			

Note: Figure within the parentheses indicates percentage.
A *p*-value <0.05 is considered significant.
OR = Odds ratio.
CI = Confidence Interval.

Discussion

Arthropod-borne viruses pose an expanding public health threat in endemic areas, such as Bangladesh. Outbreaks of these viruses occur worldwide, raising public concern and challenging healthcare systems and political leaders in affected countries. The climate conditions in Bangladesh are becoming increasingly favorable for the transmission of vector-borne diseases, such as dengue & chikungunya.

In 2025, Bangladesh faced a significant public health challenge as dengue reached widespread geographic saturation and chikungunya experienced a major urban resurgence after a 7-year hiatus. As dengue &

chikungunya share almost identical clinical presentations, a new degree of complication develops in the presence of cocirculation & coinfection. Medical professionals often mistake CHIKV for DENV. A definite & early confirmed diagnosis is essential for the proper management of the cases.

In this study, from 1st January to 31st December 2025, a total of 31,839 cases were tested for dengue & chikungunya at Ibn Sina Diagnostic Center, Uttara. Among them, 25,939 cases came for dengue testing and 5,900 for chikungunya testing. The comparative analysis of demographic data between dengue (n=25,939) and chikungunya (n=5900) reveals highly significant differences in both sex distributions and age profiles ($p < 0.0001$). While both infections demonstrated a male predominance, the trend was significantly more pronounced in the dengue cohort, with a male-to-female ratio of 1.39:1 (58.1% male) compared to 1.16:1 (53.8% male) in the chikungunya group.

Furthermore, the age distribution showed a distinct shift: patients diagnosed with chikungunya were, on average, significantly older (34.40 ± 1.30 years) than those diagnosed with dengue (25.12 ± 0.55 years). These findings suggest that while both arboviral infections affect a broad demographic range (1–82 years), chikungunya tends to affect an older population segment, whereas dengue burden remains more concentrated in younger adults and shows a stronger gender skew. These findings were similar to those of other studies in Bangladesh, Sri Lanka, the Indian Ocean Islands, Singapore & Colombia.[29,30,32-38] However, a study in Colombia found female predominance.[31] These demographic variations are statistically robust and may reflect differences in environmental exposure, host susceptibility, or healthcare-seeking behaviors between the two patient groups.

The male preponderance may result from women remaining at home and experiencing reduced exposure to the virus. It is well accepted that, in numerous Asian nations, the low infection positive rate among females is attributable to less hospital reporting. Females are statistically less inclined to seek hospital care when ill or are admitted only as a last resort.[39] Scientific evidence also indicates that viral infections exhibit greater severity and prevalence in men, but women tend to experience more favorable illness outcomes. Women exhibit a more vigorous immunological response than men, resulting in expedited virus clearance. In vitro research revealed that female immune cells have a 10-fold greater expression rate compared to the male immune system.[39]

Out of 25,939 suspected dengue cases, 3,981 (15%) were confirmed positive for dengue fever. This indicates that while dengue remained a notable issue, a considerable majority (85%) of fever episodes may be due to other illnesses, potentially including the concurrently rising chikungunya and seasonal influenza. This data contributes a small portion of the national data, where total dengue cases throughout the year 2025 were 102,861.[40] In 2024, the total dengue cases were 101,211, which indicates a 1.3% increase in cases in 2025.[40]

Out of 5,900 suspected chikungunya cases, 1,058 (18%) were found to be positive for CHIKV infection throughout the year in 2025. Although the suspected cases were fewer, positivity was high. This result corroborates national observations in 2025 that chikungunya was re-emerging with elevated transmission efficacy in metropolitan areas such as Dhaka and Chattogram.[41,42] Diagnosis of chikungunya depends on the time of sample collection after the onset of symptoms. Currently, there are only 2 methods available for diagnosing an acute case of chikungunya: antibody detection and PCR for viral RNA. Testing for antibodies during the acute phase (the first few days) often yields false negatives because the immune system has not yet mounted a measurable response. Additionally, the PCR test is expensive and not widely accessible. These factors may explain the low positivity rate for chikungunya compared to suspected cases. In this study, no co-infection with CHIKV and DENV was found, despite the prevalence of such co-infections being described in several studies.[43]

The seasonal distribution of positive (n=3,981) and negative (n=21,958) cases among dengue suspected over a calendar year found a highly significant p-value (<0.0001), indicating a strong statistical difference in how these two groups are distributed across the months. This study revealed that positive cases are heavily concentrated in the last quarter of the year, with September, October, and November accounting for 79.85% of all positive results. The negative cases peak earlier in July (28.65%), followed by a steady presence through the autumn months. When positive

cases were compared between peak (highest concentration of new cases) (September - November) & off-peak months (lowest concentration of new cases) (January – August, December), the highest concentration of cases, 3179 (79.85%) were found in September – November. The Odds Ratio (OR) was 11.89. It indicated that the likelihood of a case being positive was nearly 12 times higher during the peak months compared to the off-peak months. The p-value (<0.0001) confirmed this was not a random fluke, and the 95% CI (3.21–44.03) showed that even at the lowest estimated range, the risk was more than triple during the peak period. It suggests an extended transmission season, possibly affected by monsoon and post-monsoon circumstances conducive to Aedes mosquito proliferation. The lack of occurrences in February, March, and January indicates negligible transmission during the dry season. This finding was similar to the national data of Bangladesh, which reported the highest number of affected cases in November 2025.[40] When compared with the previous dengue outbreaks in Bangladesh, it has been found that in 2022, the highest number of dengue cases were found in October, in 2023 in September, and in 2024 in October.[40,44] The most significant rainy period in Bangladesh lasts from late May to early October, with the most intense rainfall occurring between June and September. The period from April to July is identified as a seasonally established peak, whereas July to September is considered the dengue outbreak phase. But the findings of this study indicate a shift in the peak of dengue cases toward November. This study observed year-round transmission, despite the low number of positive dengue cases in other months. Some investigators revealed a significant relationship between increased average rainfall and prolonged dengue seasons in Bangladesh. It may account for the unparalleled trend of annual dengue cases in Bangladesh.[44] A new study has forecasted that dengue transmission may persist year-round by the end of the 21st century due to ongoing climatic changes in Bangladesh.[45] This may explain why the highest number of dengue cases has shifted towards November and why transmission occurs year-round.

Chikungunya positivity followed a similar but stronger seasonal pattern, peaking in September at 45.27%, then dropping to 31.19% in October and 13.52% in November. This means the 2025 outbreak worsened very quickly after the monsoon season. Negative cases are more evenly distributed across the peak months of August, September, and October, each accounting for roughly 24–25% of the total. The differences between the two groups are statistically significant (p < 0.0001), indicating that case timing is not random. But national data showed that the highest peaks of chikungunya happened in May and August.[46] This difference might be due to a lack of a regular national surveillance system for chikungunya, insufficient tests to confirm early diagnosis, and overlapping symptoms with dengue. When positive cases were compared between peak (September – October) & off-peak months (January – August, November & December), over 76% of all positive cases (809 out of 1,058) occurred in peak months. The *p*-value was <0.0001, which indicates the difference between peak and off-peak periods was highly significant and not due to chance. Odds Ratio (OR) was 16.24 & this indicates that the odds of a case being “positive” were over 16 times higher during the peak months (September–October) than during the off-peak months. 95% CI was 3.54 – 74.64, supporting the OR. Since the entire range was well above 1.0, it confirms a massive increase in risk of infection during those two months. The burden was much lower in other months, with no cases found from January to May. In July 2017, a significant chikungunya outbreak occurred, and six years later, in October 2024, another outbreak was reported.[47,48] Seasonal variation in chikungunya has been documented in other studies as well. Some studies indicate that chikungunya peaks in September, while others suggest it peaks in October.[48,49] This timing corresponds with the ecology of the Aedes mosquito, which additionally transmits chikungunya and flourishes in humid, tropical environments. Positive cases of both dengue and chikungunya in December in this study also suggest that Aedes mosquitoes can adapt to cooler temperatures.

The concurrent seasonal maxima (September to November) led to a “syndemic” in which both viruses co-circulated. Due to the nearly indistinguishable symptoms of high fever and joint pain, clinicians in 2025 were recommended to employ RT-PCR testing for differential diagnosis, especially since some patients may present with co-infections. It is also necessary to make molecular diagnosis widely available and accessible to all people for early diagnosis and proper management of dengue and chikungunya.

Conclusion

The 2025 data indicated that the overall prevalence of dengue and chikungunya among suspected cases, along with year-round transmission, signifies that these diseases continue to pose substantial public health challenges in Bangladesh, characterized by marked seasonal increases. Consistent targeted preventative actions, prompt diagnosis, and efficient vector management are essential year-round, not solely during the monsoon and post-monsoon periods, to alleviate the burden of these diseases.

Limitations of the study

This study was limited to a single center. A multicenter analysis could provide a more comprehensive understanding of the prevalence of dengue and chikungunya, as well as their seasonal variations.

Funding Source

The authors of this study did not receive funding from any agency.

Conflict of interest:

Authors declare no conflict of interest.

Ethical approval:

Permission for the study was obtained from the involved department. As the data were collected from previous records and no personal information of patients was used, consent was needed from the patients.

Acknowledgement

We sincerely appreciate the contributions and assistance of Ibn Sina Diagnostic & Consultation Center, Uttara, in identifying suspected cases of dengue and chikungunya. We also express our gratitude to the laboratory staff of Ibn Sina Diagnostic & Consultation Center, Uttara, for their support in data collection.

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