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DENGUE IN WEST BENGAL

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ABSTRACT

Dengue is a communicable disease that spreads by the bite of mosquito. After Second World War, dengue started spreading actively across the world. India is also facing this problem. Mortality rate of Dengue is also high in India. During the year of 2014 - 2018, the cases of dengue skyrocketed to be the highest in West Bengal compared to all the other states of India. In this paper, we will discuss about the spread of Dengue in West Bengal through 'district – wise statistical data'. The paper will also point out the data about district-wise number of cases of Dengue during the year 2012 – 2016, as well as mortality rate of Dengue during the same year, in India. We will compare the change in the number of total cases of Dengue during this time period. Also this paper will provide us the data regarding the rapid spread of Dengue in various regions. This study indirectly highlights the major efforts of the district to control the spread of disease.

Keywords: *Dengue, Disease, State Wise, Death*.

Introduction

Dengue is a serious disease. In India the spread of this disease is very fast. In my paper "Dengue in India" I discussed about the rapid spread of this disease in India and also discussed about the majorly affected states. I found that in West Bengal, the spread of the disease is very high. In this paper I have discussed about the condition of West Bengal. The number of cases of this disease and number of death in various districts of the state have been taken for this study.

Objectives

- To examine the district wise spread of dengue in West Bengal.
- To examine the district wise Mortality rate due to Dengue in West Bengal.
- To make comparison between districts of West Bengal.

Review of Literature

The paper published in Pub Med.gov written by A.K. Hati explains that Dengue occurred all over West Bengal, starting in 2005.The data was collected from various sources including Calcutta School of Tropical Medicine and Government of West Bengal. The study includes three years for investigation, 2005, 2006, and 2007.The cases were high in 2005 in the state. Highest cases were found in Kolkata. The cases were drastically reduced during 2006 and 2007.

The article written by Debjani Taraphdar, ArindamSarkar, BansiB. Mukhopadhyay and Shyamlendu chatterjee, published in The American Journal of Tropical Medicine and hygiene, Volume-86, Issue – 4 discusses that people in West Bangal getting affected by dengue with chicungunya. Total 550 blood samples were taken to and investigated for the same. The paper shows that, in West Bengal not only Dengue but Chicken gunya is also an emerging problem. It discusses about the common symptoms which are appear in the patients affected by both Dengue and chickengunya.

A research paper written by Minubharti and dhirajSaha published in PlosOne writing center discusses about the seriousness of the disease. The paper suggests the government to take strong action to prevent the rapid spread of the disease. Proper integrated vector management action is very needful in West Bengal.

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A paper published by Falguni Debnath, Manickam Ponniah, and Pralay Acharya, discusses about the situation of Baranagar municipality of North -24 parganas district of West Bengal. Six hundred and Seventy One cases were observed out of Thirty Four wards. They observed that all age groups were affected. In this paper, various symptoms of the disease were noticed. The paper recommended control measures. The study covers the time period of 2012 to 2015. They confirm outbreak and find out potential breeding sources.

Table 1: Reported cases of Dengue / DHF in West Bengal (2012 – 2016)

Sr. No.	District	2012		2013		2014		2015		2016		Total	
		Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths
1.	Alipurdua									16	0	16	0
2.	Bankura	246	0	76	0	37	0	64	0	373	1	796	1
3.	Birbhum	13	0	5	0	13	0	89	0	442	1	562	1
4.	Bardhhman	169	0	89	1	64	0	129	1	480	0	931	2
5.	Koch Bihar	4	0	0	0	4	0	26	0	37	0	71	0
6.	Dakshindinajpur	23	0	93	0	55	0	72	0	1321	1	1564	1
												0	0
7.	Darjeeling	28	0	3560	1	190	0	65	0	165	0	4008	1
8.		243	0	27	0	145	1	138	1	2160	1	2713	3
9.	Haora	326	0	64	0	226	0	850	2	2237	6	3703	8
10.	Jalpaiguri	31	0	760	0	35	0	82	0	168	0	1076	0
11.	Kolkata	3361	11	703	0	1741	2	3610	1	1063	4	10478	18
12.	Malda	129	0	20	0	42	0	109	0	412	0	712	0
13.	Murshidabad	177	0	48	0	100	0	140	0	1070	0	1535	0
14.	North 24 – parganas	750	0	216	2	815	0	2254	7	8250	26	12285	35
												0	0
15.	Nadia	405	0	23	0	78	1	118	1	1564	0	2188	2
16.	PaschimMedinipur	155	0	64	0	59	0	137	0	629	0	1044	0
17.	PurabMedinipur	111	0	17	0	124	0	167	0	424	1	843	1
18.	Puruliya	4	0	5	0	5	0	4	0	39	0	57	0
19.	South 24 – parganas	238	0	79	0	162	0	310	1	1722	2	2511	3
												0	0
20.	Uttar dinajpur	8	0	9	0	11	0	48	0	87	0	163	0
21.	Other States	35	0	62	0	38	0	104	0	206	0	445	0

Source: https://www.wbhealth.gov.in/

Table 2: Major districts of West Bengal affected by Dengue

Sr. No.	District	2012		2013		2014		2015		2016		Total	
		Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths
1.	Dakshin	23	0	93	0	55	0	72	0	1321	1	1564	1
2.	Darjeeling	28	0	3560	1	190	0	65	0	165	0	4008	1
3.	Hugli	243	0	27	0	145	1	138	1	2160	1	2713	3
4.	Haora	326	0	64	0	226	0	850	2	2237	6	3703	8
5.	Jalpaiguri	31	0	760	0	35	0	82	0	168	0	1076	0
6.	Kolkata	3361	11	703	0	1741	2	3610	1	1063	4	10478	18
7.	Murshidabad	177	0	48	0	100	0	140	0	1070	0	1535	0
8.	North 24 –parganas	750	0	216	2	815	0	2254	7	8250	26	12285	35
9.	Nadia	405	0	23	0	78	1	118	1	1564	0	2188	2
10.	Paschim Medinapur	155	0	64	0	59	0	137	0	629	0	1044	0
11.	South 24 – parganas	238	0	79	0	162	0	310	1	1722	2	2511	3

District	2012	2013	2014	2015	2016
Dakshin	23	93	59	72	1321
Darjeeling	28	3560	190	65	165
Hugli	243	27	145	138	2160
Haora	326	64	226	850	2237
Jalpaiguri	31	760	35	82	168
Kolkata	3361	703	1741	3610	1063
Murshidabad	177	48	100	140	1070
North 24 – parganas	750	216	815	2254	8250
Nadia	405	23	78	118	1564
PaschimMedinapur	155	64	59	137	629

South 24 – parganas	238	79	162	310	1722

Table-3

Dengue cases in Dakshin	
2012	23
2013	93
2014	55
2015	72
2016	1321

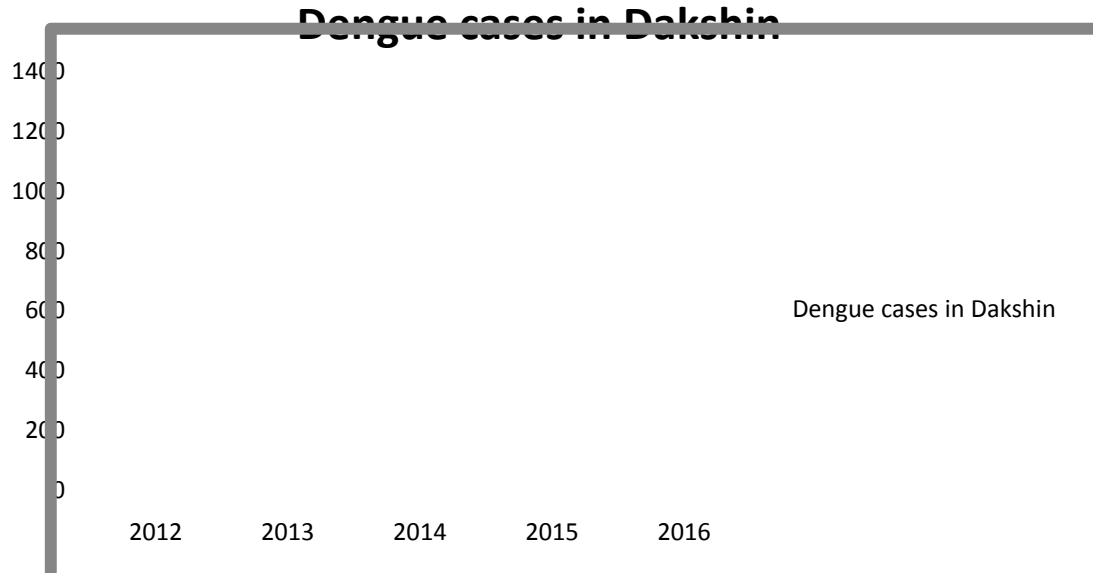


Table 4

Dengue cases in Darjeeling	
2012	28
2013	3560
2014	190
2015	65
2016	165

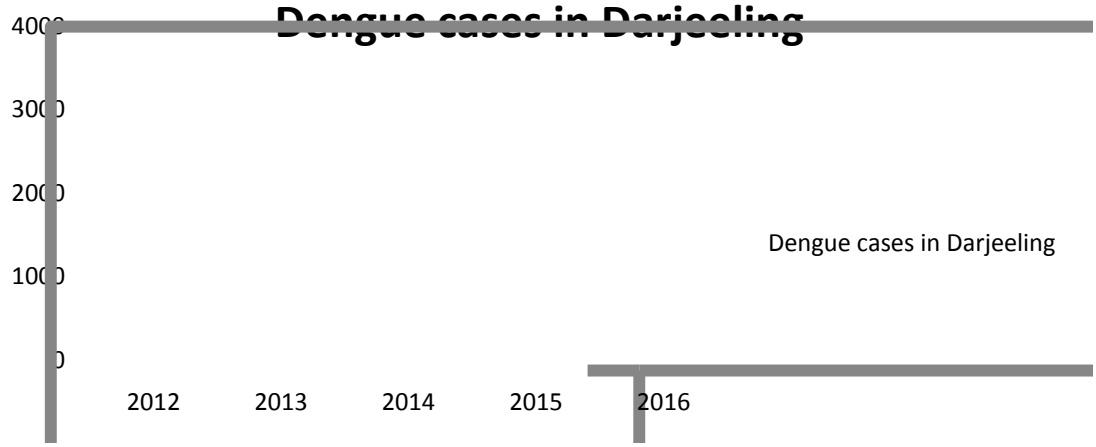


Table 5

Dengue cases in Hugli	
2012	243
2013	27
2014	145
2015	138
2016	2160

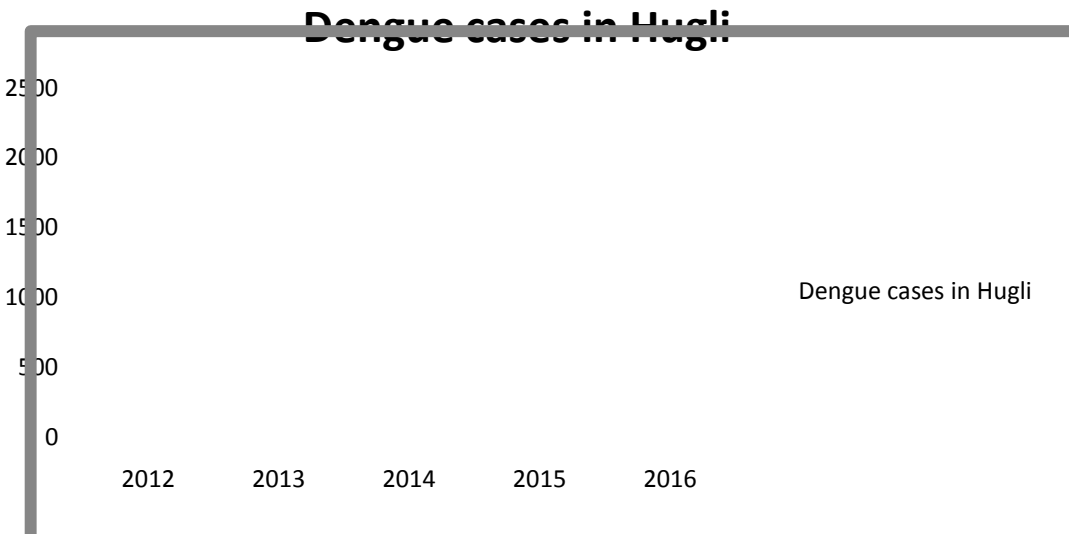


Table 6

Dengue Cases in Haora	
2012	326
2013	64
2014	226
2015	850
2016	2237

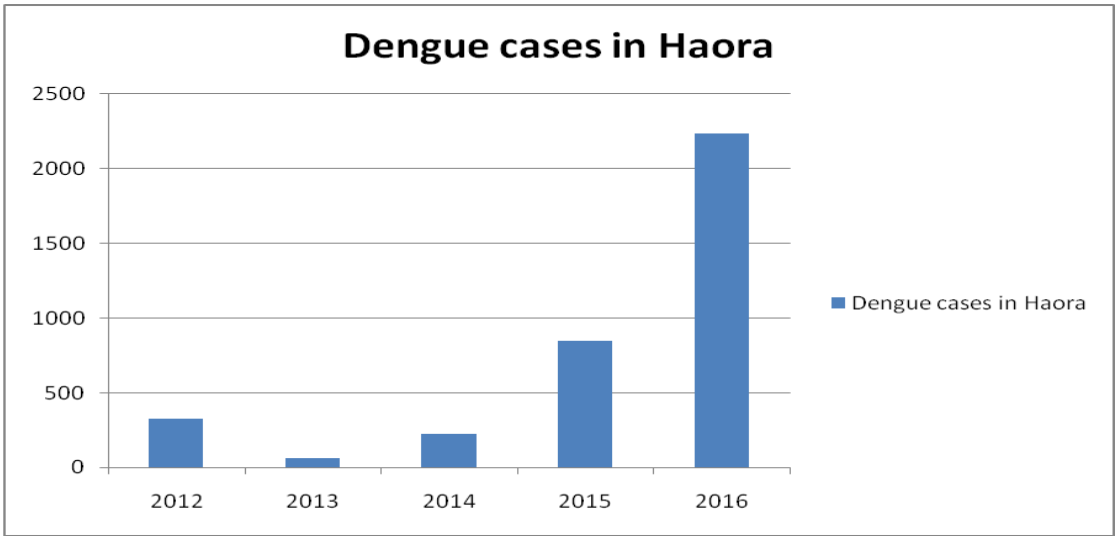


Table 7

Dengue cases in Jalpaiguri	
2012	31
2013	760
2014	35
2015	82
2016	168

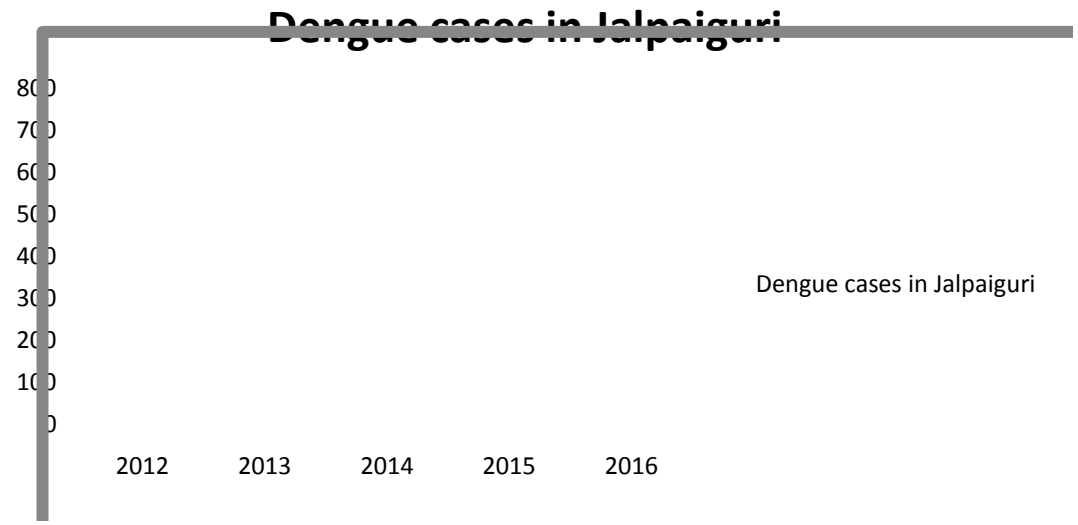


Table 8

Dengue cases in Kolkata	
2012	3361
2013	703
2014	1741
2015	3610
2016	1063

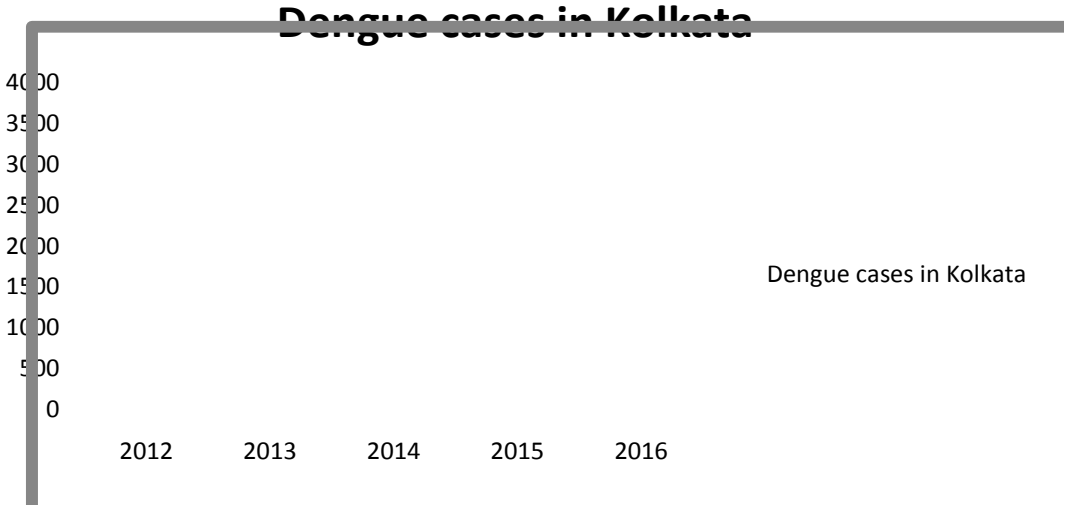


Table 9

Dengue cases in North 24 - parganas	
2012	750
2013	216
2014	815
2015	2254
2016	8250

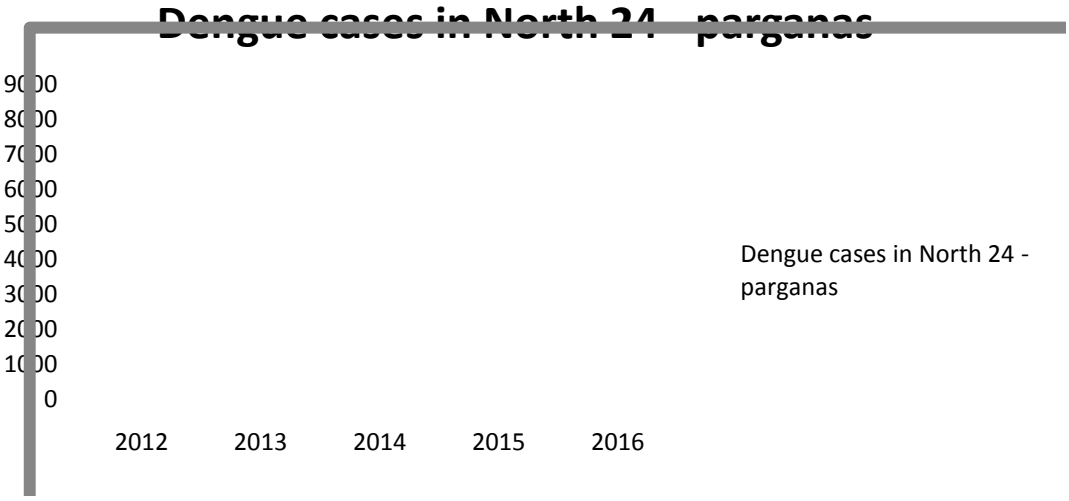
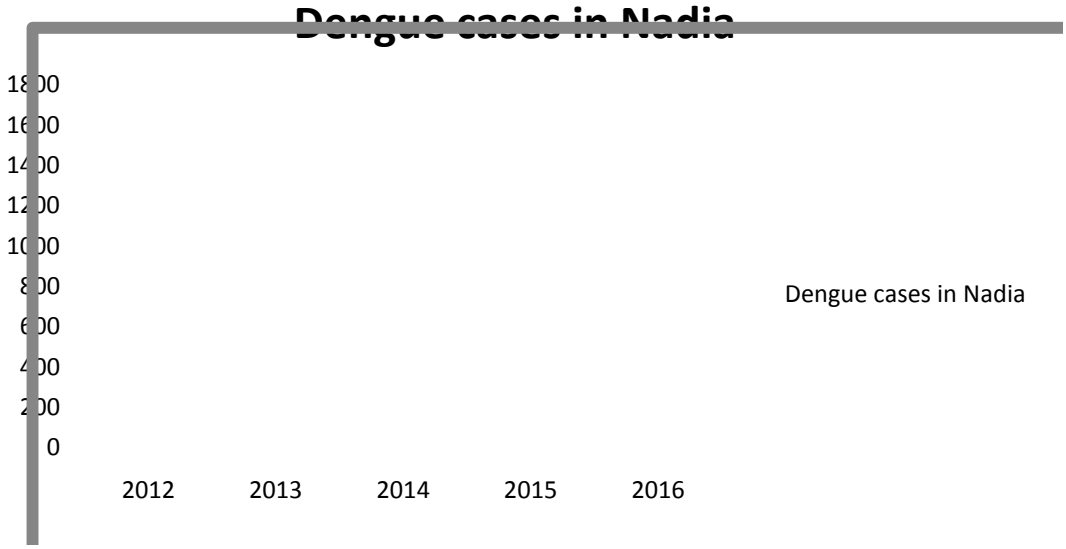


Table 10

Dengue cases in Nadia	
2012	405
2013	23
2014	78
2015	118
2016	1564



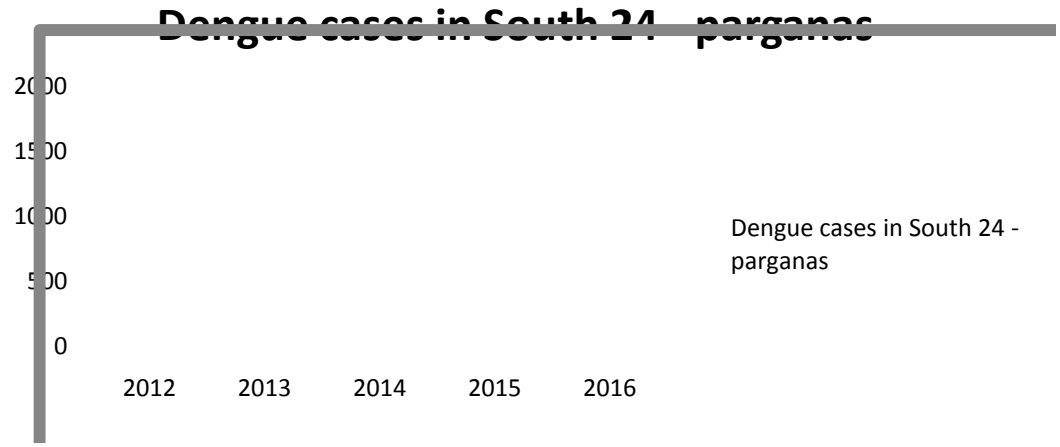


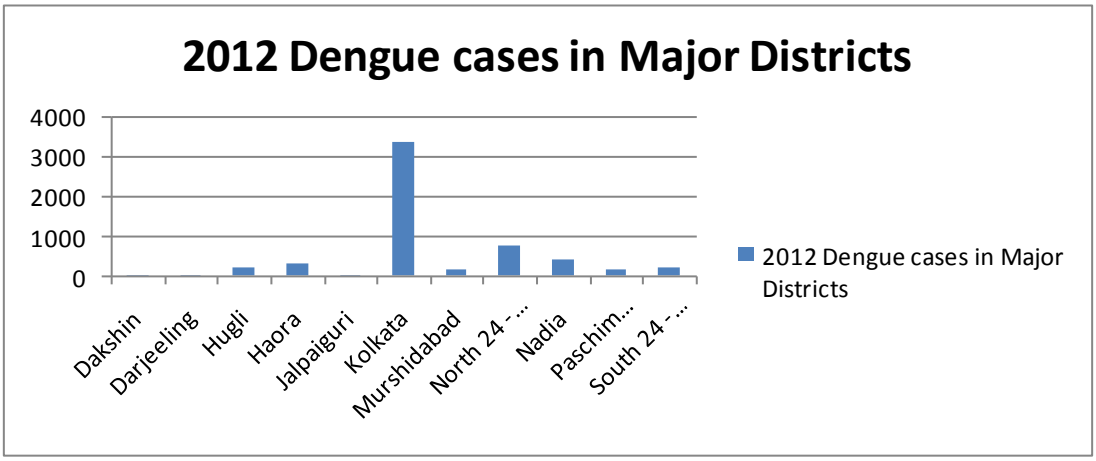
Table 11: Dengue cases in South 24 - parganas

2012	238
2013	79
2014	162
2015	310
2016	1722

Table 12 : 2012 Dengue cases in Major Districts

Districts	2012 Dengue cases in Major Districts
Dakshin	23
Darjeeling	28
Hugli	243
Haora	326
Jalpaiguri	31
Kolkata	3361
Murshidabad	177
North 24 – parganas	750
Nadia	405

PaschimMedinapur	155
South 24 – parganas	238



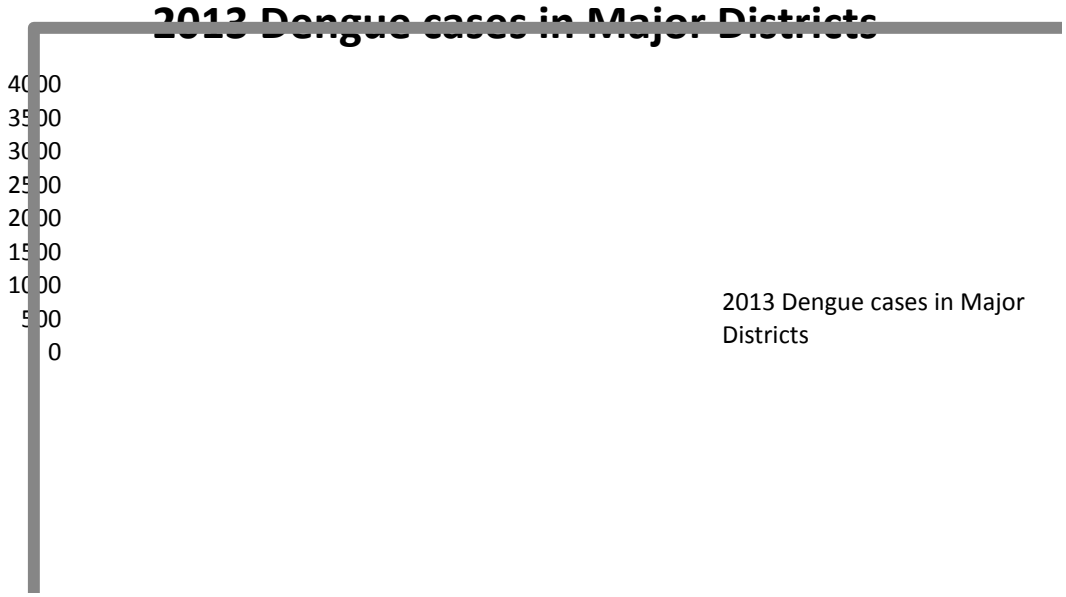


Table 13 : 2013 Dengue cases in Major Districts

Districts	2013 Dengue cases in Major Districts
Dakshin	93
Darjeeling	3560
Hugli	27
Haora	64
Jalpaiguri	760
Kolkata	703
Murshidabad	48
North 24 – parganas	216
Nadia	23
PaschimMedinapur	64
South 24 - parganas	79

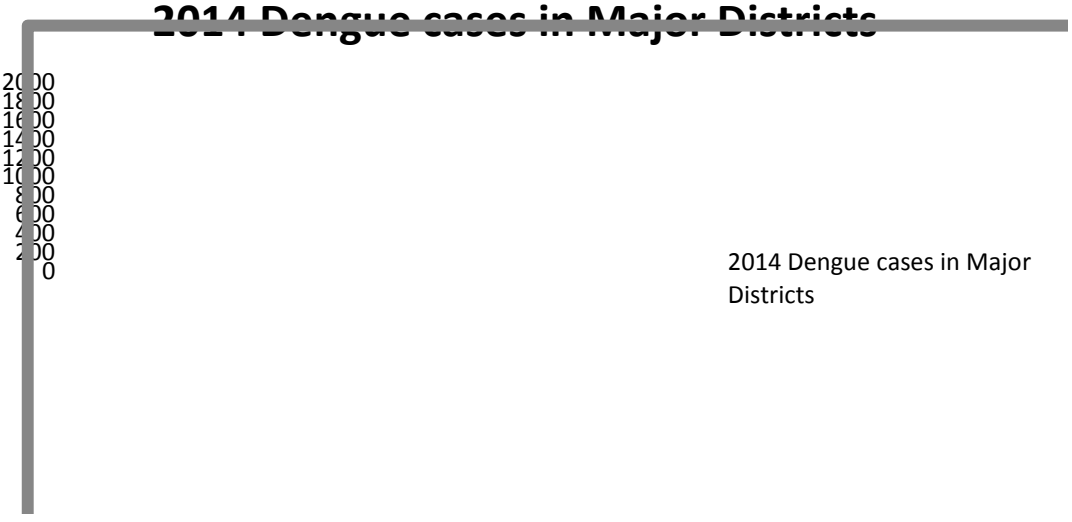


Table 14 : 2014 Dengue cases in Major Districts

Districts	2014 Dengue cases in Major Districts
Dakshin	55
Darjeeling	190
Hugli	145
Haora	226
Jalpaiguri	35
Kolkata	1741
Murshidabad	100
North 24 – parganas	815
Nadia	78
PaschimMedinapur	59
South 24 - parganas	162

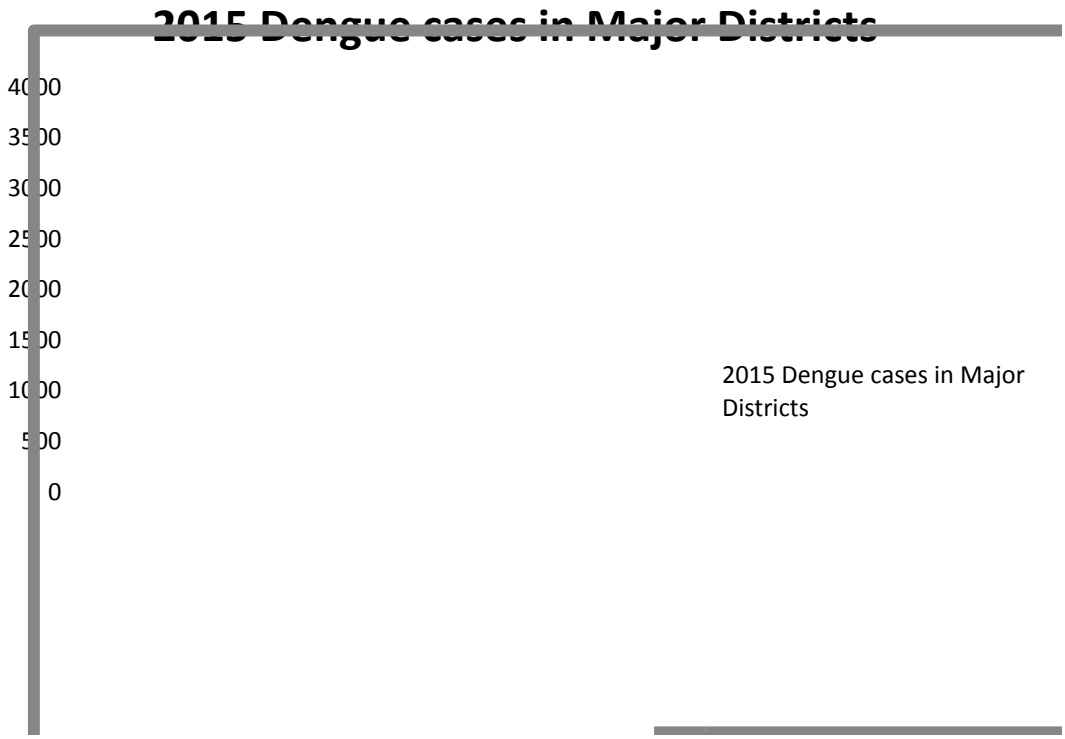


Table 15: 2015 Dengue cases in Major Districts

Districts	2015 Dengue cases in Major Districts
Dakshin	72
Darjeeling	66
Hugli	138
Haora	850
Jalpaiguri	82
Kolkata	3610
Murshidabad	140
North 24 – parganas	254
Nadia	118
PaschimMedinapur	137
South 24 - parganas	310

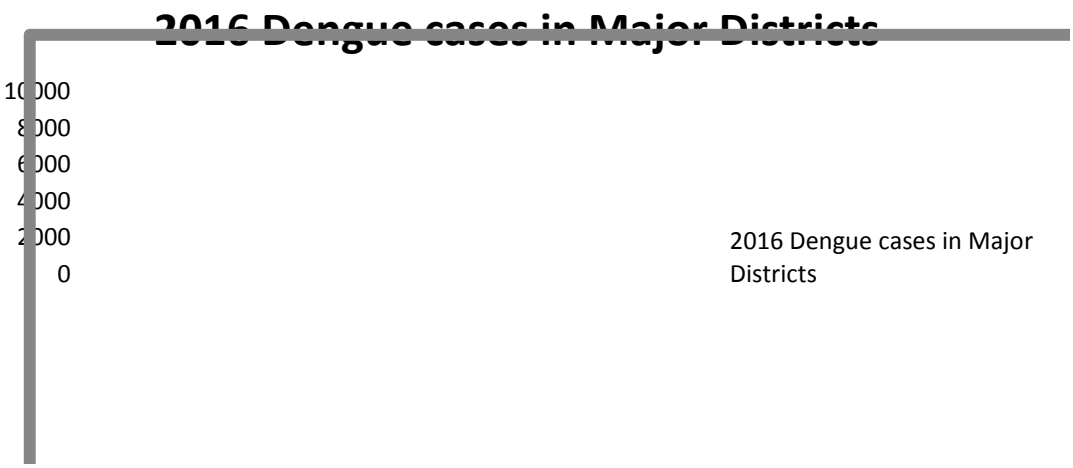


Table 16 : 2016 Dengue cases in Major Districts

Districts	2016 Dengue cases in Major Districts
Dakshin	1321
Darjeeling	165
Hugli	2160
Haora	2237
Jalpaiguri	168
Kolkata	1063
Murshidabad	1070
North 24 – parganas	8250
Nadia	1564
PaschimMedinapur	629
South 24 - parganas	1722

Table-1 shows the total cases and death due to Dengue, district wise during 2012 to 2016. Among the district of West Bengal, some districts were more affected by the disease. Dakshin, Darjeeling, Hugli, Haora, Jalpaiguri, Kolkota, Murshidabad, North-24 parganas, Nadia, Paschim medinipur and South-24 parganas had maximum cases of Dengue during the time period. This is showed in table-2.

Table-3 discusses the situation of Dakshin district. In this district the effect of the disease was highest in the year of 2016. Table-4 shows the situation of Darjeeling district it was affected badly in the year of 2013. Table-5 shows that Hugli district had maximum cases of Dengue in 2016. In table-6 the situation of haora district is given. The district had maximum cases in the year 2015, which were increased in 2016. Table-7 shows the picture of jalpaiguri district . The most cases were in the year of 2013. Table-8 shows the situation of Kolkata district. The situation of this district is very bad during the study years. Maximum cases were registered in the year of 2015. The situation in 2012 was also not good but during 2013 and 2014 the cases were decreased but again in 2015 the cases were increased rapidly which can get controlled in 2016.

Table-9 shows the picture of North-24 parganas. The cases were highest in the year of 2016. Table-10 shows the situation of Nadia district. The cases were highest in the year of 2016 in this year. Table-11 shows the situation of South-24 parganas. In this district the cases were highest in the year of 2016.

Conclusion

Among the 21 district, 11 districts are found to be most affected district by Dengue. In 2013, maximum cases of the disease were found in Darjeeling district. In 2014 Kolkata had maximum numbers of cases. In 2015 again Kolkata district found being most affected district of the state. In 2016, North- 24 parganas were affected maximum by Dengue.

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