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Preparedness and Communication for Dengue Fever Prevention and Control based on a Knowledge and Awareness study done among MBBS Interns in a Tertiary Care Teaching Hospital.

Hospital Administration

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ABSTRACT

Introduction: The outbreaks of Dengue fever in India has been a major concern ,many states have been affected, it is very essential to know more about this disease and the knowledge and awareness about severity of the disease pattern, early detection of the virus and early management of the disease among Doctors to aid better results in patient recovery.

Aim and Objective: The objective of this study is to create preparedness and strengthen the communication for Dengue Fever prevention and control in a Tertiary Care Teaching Hospital based on a knowledge and awareness study among MBBS Interns.

Material and Methods: A cross sectional study was carried out among MBBS Interns of tertiary care teaching hospital during August to October 2016. A pre-structured & self-administered questionnaire was used to collect data regarding dengue fever preparedness, clinical knowledge, awareness & communication from MBBS Interns. The Questionnaire was distributed to **120** Interns respectively out of which **90** Interns responded.

Results & Conclusion: The study concluded that majority of Interns had good knowledge about Signs and symptoms (75.5%), modes of Transmission of Dengue (74.28%), Diagnosis (63.4%) and Treatment (71.4%) aspect of Dengue Fever . Approximately 78% Interns were aware of the serious Life threatening complications of Dengue Fever and 96.6% knew the preventive measures to avoid spread of Dengue Fever.

KEYWORDS:

Dengue fever, Interns, Clinical knowledge, Preparedness, Communication, Awareness.

Introduction:

Dengue fever (DF) is increasingly recognized as one of the world's major vector borne diseases and causes significant morbidity & mortality in most tropical and subtropical countries of the world. It has also become the most common arbo viral disease of human[1] Dengue fever is endemic in most parts of India and continues to be a public health concern. WHO currently estimates that there may be 50– 100 million dengue infections worldwide.[2,3] Out of the 2.5 billion people at risk globally; about 1.8 billion or more than 70 percent of them live in the Asia-Pacific region.[4] Emergence of dengue could be the result of growing levels of urbanization, international trade and travel which disseminate both vector and viruses.[5]The term Break Bone Fever was applied by Benjamin Rush in 1789 report from the Philadelphia epidemic. He used the name *"bilious remitting fever"*. The term dengue fever came into use after 1828. The mortality of Dengue Fever is 1-5% without treatment and less than 1% with treatment. Severe disease (dengue haemorrhagic fever, D. S. S) carry a mortality of 26%.

In India, First outbreak was reported during 1963 in Kolkata.[6]

Objective:

To create preparedness and strengthen the communication for Dengue Fever prevention and control based on a knowledge and awareness study done among MBBS Interns in a Tertiary Care Teaching Hospital.

Methodology:

Study setting:

Study was conducted among MBBS Interns at a Tertiary Care Teaching Hospital. Out of 120 Interns 90 responded.

Table No. 1: ***Signs and Symptoms of Dengue Fever***

SIGNS AND SYMPTOMS					
		RIGHT ANSWER		WRONG ANSWER	
SL. NO.	QUESTION	NUMBER	%	NUMBER	%
1	Which of the following is a symptom of Dengue Fever	86	95.55556	4	4.444444
2	Saddle back fever is seen in.	86	95.55556	4	4.444444
3	True for Dengue fever includes	54	60	36	40
4	Which of the following presentations of Dengue Fever is NOT true.	80	88.88889	10	11.11111
5	Ominous sign in Dengue Fever is.	12	13.33333	78	86.66667
6	Which of the following is NOT a symptom of Dengue Fever.	55	61.11111	35	38.88889
7	Which symptom is not characteristic of Dengue Fever.	87	96.66667	3	3.333333
8	Symptoms of Dengue appear next day after bite of an infected mosquito.	84	93.33333	6	6.666667

Table No. 2: ***Modes of Transmission of Dengue Fever***

MODES OF TRANSMISSION OF DENGUE					
		RIGHT ANSWER		WRONG ANSWER	
SL. NO.	QUESTION	NUMBER	%	NUMBER	%
1	Dengue fever is transmitted by.	90	100	0	0
2	Which mosquito can carry Dengue Fever	86	95.55556	4	4.444444
3	Dengue Virus belongs to which family.	41	45.55556	49	54.44444
4	Dengue is transmitted by.	81	90	9	10
5	Dengue Fever.	67	74.44444	23	25.55556
6	Which of the following is correct in relation to Dengue Fever.	76	84.44444	14	15.55556
7	Dengue Fever is caused by which family of viruses.	27	30	63	70

Table No. 3: ***Diagnosis of Dengue Fever***

DIAGNOSIS					
		RIGHT ANSWER		WRONG ANSWER	
SL. NO.	QUESTION	NUMBER	%	NUMBER	%
1	Most sensitive test for Dengue is	84	93.33333	6	6.666667
2	Maximum incubation period of Dengue Fever is.	81	90	9	10
3	In order to confirm diagnosis of Dengue Fever which of the following serological findings will be found.	28	31.11111	62	68.88889
4	Mechanism by which Dengue virus survives inter-epidemic period.	35	38.88889	55	61.11111
5	Features of Classical Dengue Fever include all except.	48	53.33333	42	46.66667
6	Dengue is characterized by.	87	96.66667	3	3.333333
7	Which is the most important clinical finding of Dengue Fever.	37	41.11111	53	58.88889

Table no 4: ***Treatment of Dengue Fever***

TREATMENT					
		RIGHT ANSWER		WRONG ANSWER	
SL. NO.	QUESTION	NUMBER	%	NUMBER	%
1	Which one of the following concerning management of Dengue fever is not true.	71	78.88889	19	21.11111
2	Which of the following is a cure for Dengue Fever.	35	38.88889	55	61.11111
3	Antibiotics are useful in treating Dengue infections.	87	96.66667	3	3.333333

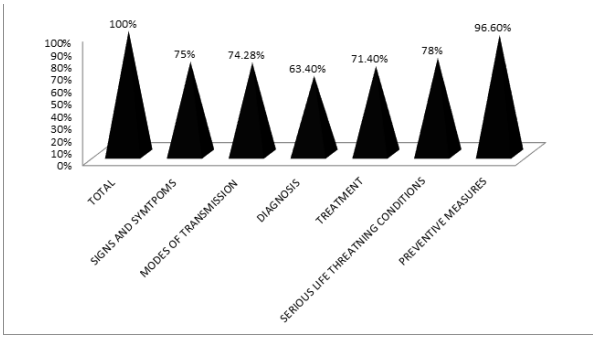
Table no 5: ***Serious Life Threatening Conditions***

SERIOUS LIFE THREATENING CONDITIONS					
		RIGHT ANSWER		WRONG ANSWER	
SL. NO.	QUESTION	N	%	N	%
1	Dengue shock syndrome is characterised by all except	67	74.44444	23	25.55556
2	Dengue shock syndrome occurs due to.	86	95.55556	4	4.444444
3	Bleeding in Dengue occurs due to.	86	95.55556	4	4.444444
4	Severity of Dengue depends on.	42	46.66667	48	53.33333

Table No. 6: ***Preventive Measures for Dengue Fever***

PREVENTIVE MEASURES					
		RIGHT ANSWER		WRONG ANSWER	
Q. NO.	QUESTION	NUMBER	%	NUMBER	%
1	How to prevent spread of Dengue Fever.	87	96.66667	3	3.333333

Figure 1:



Results and Conclusion:

Majority of Interns had good knowledge about Signs and symptoms (75.5%), modes of Transmission of Dengue (74.28%), Diagnosis (63.4%) and Treatment (71.4%) aspect of Dengue Fever. Approximately 78% Interns were aware of the serious Life threatening complications of Dengue Fever and 96.6% knew the preventive measures to avoid spread of Dengue Fever. The study concluded that even though the target population belongs to the junior most level of Medical Practitioners that are the MBBS Interns, the clinical knowledge and awareness about Dengue Fever was satisfactory, but since Dengue fever (DF) and its more severe form, dengue haemorrhagic fever (DHF), are causing ever-increasing levels of illness and death. There is no specific medicine available for the treatment of dengue and vaccines that can be effective against all four virus serotypes are under development and it will be a while before they are ready for public health use. A social mobilization and communication approach is called for that makes a seamless connection between knowledge and behaviour, addresses the costs and values of engaging in healthy behaviours, appreciates the gradual stages of behaviour change, and creates a supportive environment. The above study suggests that we need to strengthen our knowledge on preparedness and communication regarding Dengue Fever among Hospital Personnel in a Tertiary Care Teaching Hospital.

Recommendations:

AEDES CONTROL MEASURES IN AND OUTSIDE HOSPITAL.

Environmental sanitation measures to reduce mosquito breeding sites, such as the physical management of water containers (e.g. mosquito-proof covers for water storage containers, polystyrene beads in water tanks), better designed and reliable water supplies, and recycling of solid waste. Biological methods (e.g. fish, copepods – small crustaceans that feed on mosquito larvae) to kill or reduce larval mosquito populations in water containers.

Chemical methods against the mosquito's aquatic stages for use in water containers (e.g. temephos sand granules) Chemical methods directed against adult mosquitoes, such as insecticide space sprays or residual applications. Personal protection through use of repellents, vaporizers, mosquito coils, and insecticide-treated screens, curtains, and bed nets (for daytime use against Aedes).

- **THE GLOBAL STRATEGY FOR PREVENTION AND CONTROL OF DF/DHF BY WHO**
- Selective, integrated mosquito control with community and intersectoral participation, in which control is directed towards geographical areas at highest risk of transmission, integrating all appropriate methods in the most cost-effective and economical manner.
- Active disease surveillance based on strong health information systems, involving clinical and laboratory-based dengue surveillance for early detection of epidemics and vector surveillance for monitoring and evaluation of control programmes.
- Emergency preparedness, necessitating development of emergency and contingency plans, including education of the medical community, hospitalization plans, case management, and emergency vector control.
- Capacity building and training, in surveillance, laboratory diagnosis, case management, and vector control at professional, supervisory, technical, and field levels.
- Vector control research, including studies on vector biology and control, disease relationships, design and management of control programmes, including social and economic approaches, and cost–benefit analyses.

- **MANAGERIAL INSIGHT- HICDARM AND BEHAVIOUR ADOPTION**

First, we **H**ear about the new behaviour then, we become **I**nformed about it and later **C**onvinced that it is worthwhile.

In time, we make the **D**ecision to do something about our conviction and later we take **A**ction on the new behaviour.

We next await **R**e-confirmation that our action was a good one and if all is well, we **M**aintain the behaviour!

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Ethical approval;- The study was approved by the institutional ethical committee.

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