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Research Article

**PRIORITIES, CHALLENGES AND SAFETY MEASURES  
ADOPTED TO DECREASE THE BURDEN OF DENGUE  
FEVER IN PAKISTAN**<sup>1</sup>Dr Muhammad Usman Haider, <sup>2</sup>Dr Hafiza Asfa Falak, <sup>3</sup>Dr Aisha Saleem<sup>1</sup>Sharif Medical and Dental College Lahore<sup>2</sup>Sir Gangaram Hospital Lahore<sup>3</sup>DHQ Teaching Hospital Sahiwal**Article Received:** April 2020**Accepted:** May 2020**Published:** June 2020**Abstract:**

*There is currently no Brobdingnagian research on the dangers and morbidity problems in Pakistan and should therefore be used for priority deliveries. It is the government's duty. identification of people in the region primarily through high-quality research laboratories and devices for the treatment of dengue, awareness and dissemination. Complaints may be dealt with correctly and at a higher level. Dealing of dengue fever is tremendously problematic due to the deficiency of vaccines accessible. An emerging country, such as an Asian country, is unable to solve problems because of the country's lake of awareness, human behavior, terrorism and other socio-economic factors, as well as the government's attention to dealing with other problems. present tense. Therefore, additional measures should be taken to prevent disease. In the community medicine and medicine unit I department of Jinnah Hospital Lahore for one-year duration from May 2018 to April 2019.*

**Keywords:** *Priorities, Challenge, Safety Measures, Decrease, Burden, Dengue Fever.*

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## INTRODUCTION:

Pakistan may be an emerging country with restricted resources and high populace mass, so high risk, popularity, treatment and various dengue problems are problematic. Currently, the main great way is to determine the exact generality of dengue in the state, as well as the main aspects of danger and failure, so it should be especially appreciated. In recent years, Pakistan has struggled with various natural disasters and problems, as well as lack of water, floods, earthquakes and terrorist acts, thus destroying national resources that threaten health. generally. Dengue fever has become a major drawback due to the lack of vaccines, inadequate cleaning services, insecure drinks, crowded cities and a wide range of refugees. According to the World Health Organization (WHO), there are about 60 million diseases caused by dengue contagious diseases each year, and three-fifth of the world's populace is at risk of developing dengue<sup>1</sup>. Dengue disease, shock, dengue infection and dengue virus have begun good and increased illness and death in different parts of the world<sup>2</sup>. Dengue is one of the top ten reasons of expiry and hospitalization among children in at least eight tropical Asian countries<sup>3</sup>.

### 1.1 History of dengue fever

In 1906, dengue fever looked like an infectious agent. Dengue fever, the first documented symptoms known in the Chinese chin cyclopedia on chin (AD 265-420), was known. This disease has been associated with mobile arthropods at a binary union and is known as "water poison." The word "dengue" is dizzying

Voice communication in Swahili, which means "skull attack", comes from Ka-dinga pepo. The first medically documented epidemics of dengue took place over 10 years at the same time in Asia, the continent and North America. Primary clinical analysis of 1889 clinical cases of the epidemic in 1890. In the city of Gupta et al.

The word "breaking bone fever" due to muscle pain and pain<sup>4</sup>. Common symptoms of dengue fever consist of vomiting, diarrhea, rash, muscle and joint pain, bleeding from the mouth and nose, headache and an unexpected onset of fever<sup>5</sup>.

### 1.2 Dengue virus

Dang may be a rapid increase in the disease caused by infectious agents with pandemic tendencies in various countries of the planet. Dengue fever virus (DENV) belongs to the polymeric virus of the family Flaviviridae<sup>6</sup>. DENV genetic material is preserved based on 12,000 ester bases<sup>7</sup>. DENV consists of a cube-shaped nucleocapsid surrounded by a conjugated protein shell. The length of DENV consists of two macromolecule ((structural) genes

encoding the nucleus (C) or nucleocapsid protein, membrane-associated macromolecule (M), associated class (E) capsular macromolecule, and 7 non-structural macromolecule (NS) genes. these have neutralizing and caking functions<sup>8</sup>. There are five types of DENV called serotypes, and there are currently 4 different gene-associated virus serotypes (DENV-1). 2, 3 and 4). dengue world community. There is health information Dang is completely different from protozoal infection because protozoal infection is common in remote components, dengue fever occurs in rural areas and specific areas that provide special care to control an epidemic, but unfortunately DENV has a problem editing today. Accurate treatment for DENV cannot be obtained clinically. Low-safety DENV barrier and long-term vaccination have not been performed. In addition to the function and replication of the infectious agent macromolecules, efforts are underway to provide many types of antiviral drugs and inhibitors.

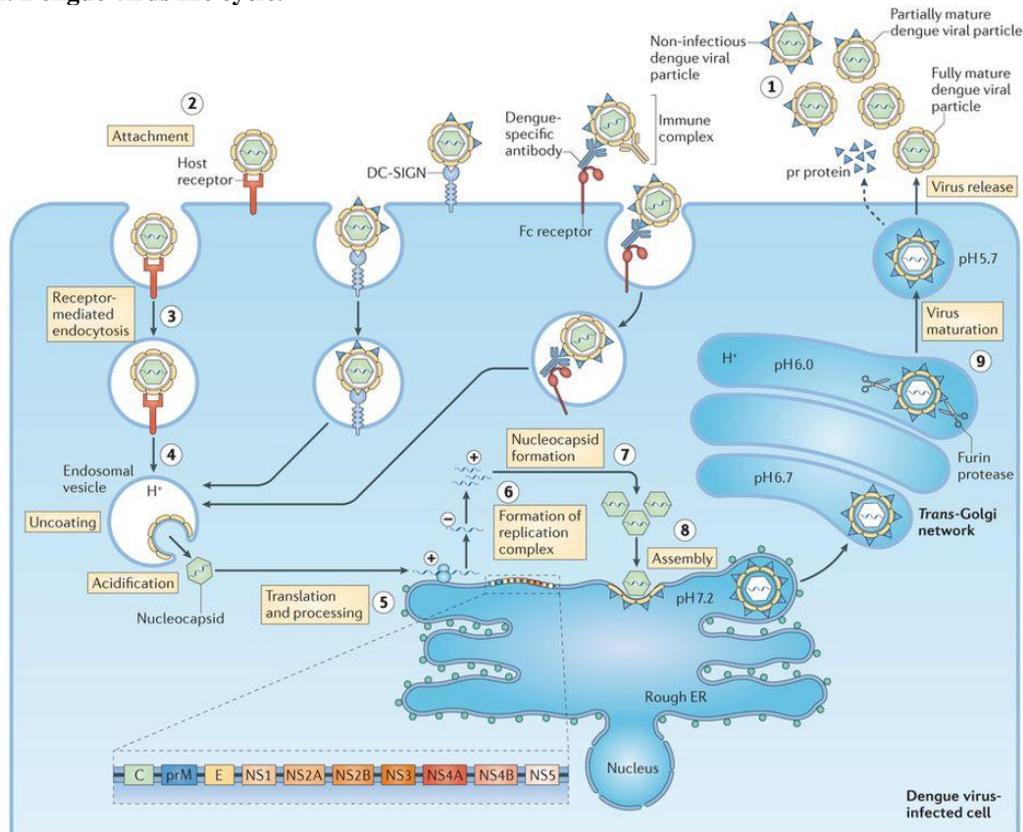
### 1.3 Dengue virus life cycle

The DENV propagation method relies on endocytosis via the cell surface receptor (Fig. 1). After choosing the method, the virus removes the intracellular layer. For DENV, the super particle of this layer is perfectly placed on the DENV surface, creating a polyhedral layer. After transferring DENV to the host cell and lysosomes, the super molecule divides into another type due to the acidic atmosphere and becomes a trimmer needle. A large number of (hydrophobic) amino acids are accumulated in the liposomal membrane at the end of the same head, causing the membrane to melt with the organelle. Meanwhile, ribonucleic acid is poured into the host cell and a state of discomfort begins. The regulation of DENV ribonucleic acid in a dangerous cell is translated by host ribosomes. The resulting polychromolecule is cut off by proteases from cells and infectious agents in highly recognizable regions. Non-structural infectious agent proteins use a negative sense medium to positively copy the ribonucleic acid sequence, which then binds to the capsid macromolecule and is encapsulated in different virions. Replication of all treated ribonucleic acid positive viruses happens in a closed relationship with the induced virus.

Intracellular membrane structures. DENV also causes such intense rearrangement of mobile membranes, called complex replication. These complex replications appear to contain an infectious agent polymer, infectious agent proteins and host cell elements. As a result, unripe virions are packaged when freshly grown

They formed nucleocapsid in the light of endoplasmic reticulum, so they used a lipoid bilayer envelope with prM and E structural proteins,

avoiding wet conformational changes throughout transport through the trans-Golgi acid network, where prM proteins stabilize E. Prion is supplemented by the protein before removing virions from the host organism furin cells in soluble amide and protein bound to virion to complete the **Figure 1. Dengue virus life cycle.**



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## 2. Dengue infection in Pakistan

Pakistan struggles with many water and vector diseases (epidemics). Dengue fever is the simplest and most important dengue fever in the world. The main outbreak of the DENV fire in our country was recorded in Lahore in 2001-2008<sup>11</sup>. Over the past five to six years, the DENV outbreak has become terrible in Pakistan, especially when the monsoon season and major cities, such as urban and urban areas, are violently exposed to a dengue outbreak. These floods negatively affect these conditions. As a result, the number of dengue cases increased from 5,600 cases that occurred in the city center in 2015, to twenty-one 305 cases in the country in 2017. In 2016, there were only 15,000 cases in the city center and 400 deaths due to dengue. According to many consultants, these figures are unlikely to constitute a significant disease burden in Pakistan, as individual cases are higher than documented<sup>12</sup>. In 2003, another study found ten cases of dengue confirmed by five deaths in Pakistan, northern Japan. Dengue cases have been found to have increased in the city center since 2008. This year, more than 5,000 cases

maturation method. Outside the cell, the virus units find a neutral concentration of hydrogen ions that allows protective peptides to separate from the virus particles and produce infectious mature virions. This may be the purpose for which the loop repeats<sup>9</sup>.

of dengue fever have occurred in epidemic species, representing a huge increase compared to previous years<sup>13</sup>. WHO and energy efficiency centers. They measured dengue as a major health threat in Pakistan, Brazil and India to control disease and disability<sup>14</sup>.

### 2.1 Complications in dealing with problems.

Laboratory identification, clinical trials and treatment of DENV fever in Pakistan are advanced due to protozoa, dengue and dengue infection, conflict or superinfection. Various deaths in many epidemic diseases can be attributed to many serious diseases, the lack of accurate management indicators and the training of healthcare professionals. To date, there is no registered immunogen for dengi<sup>15</sup>.

### 3. Security strategies.

There are 4 approaches to solving the problem of dengue fever. The most important thing is to use protection to avoid contact with infected mosquitoes. Aedes mosquitoes bite throughout the day and can be avoided by proper waste management and increased water storage, avoiding

all free water sources, avoiding things (pesticides, coils) and nets, avoiding individual mosquitoes), with long sleeves, shirts and nets to prevent Sport mosquito pants. The Pakistani government is working on security, with increased awareness of dengue among the public, especially in Lahore. The second approach is the vaccine, which is below the preparation method, and the third approach is medical care for drugs, but unfortunately it is not recommended to attack the dengue virus. However, comprehensive care and treatment will save a patient with dengue disease. Fever will be treated with antipyretics such as acetaminophen. Joint pain will be treated with painkillers or tablets. Patients should be hospitalized for dengue, hemorrhagic viral fever and dengue shock syndrome. Oral rehydration therapy stops dehydration, and if oral ingestion is not possible, changing the fluid in the blood vessels does not stop the patient being shaken. If the platelet count falls below 30,000 or is bleeding a lot, platelet transfusion is usually recommended. Do not use drugs such as brufen, empirin and non-steroidal drugs, as they increase bleeding. Avoid medications that minimize platelet counts. As with rapid preventive measures in Pakistan, it is important to rank local laboratories and talk with news about the national union council and the recent outbreak. For dengue fever tests, it is recommended that the regional research institute in each region cooperate with hospitals, laboratories, centers and basic health units and each local unit. Patients should be hospitalized for dengue, hemorrhagic viral fever and dengue shock syndrome. Oral rehydration therapy stops dehydration, and if oral intake is not possible, changing the fluid in the blood vessels does not stop the shock in patients. If the platelet count falls below 30,000 or is bleeding a lot, platelet transfusion is usually recommended. Do not use drugs such as brufen, empirin and non-steroidal drugs, as they increase bleeding. Avoid medications that minimize platelet counts. As with rapid preventive measures in Pakistan, it is necessary to adapt local laboratories and inform the national union council about the cause of the explosion and the final census. For dengue fever testing, it is recommended that the leading district-level research institute in each province work with each local unit, hospital, laboratory, facility, and primary care facility. The main goal of dengue institutes is to respond quickly to dengue patients, the community and government to treatment and intervention. To reduce dengue fever in our country, national dengue management programs should comply with all dengue control guidelines recommended by United Nations institutions. Important details of the activities of the United Nations are: geographically documented entomology, public participation, recognition of breeding sites, chemical fog and ecological management, health control systems and public health education. Attempts to control local, national

and international dengue. In addition, parallel research should be inspired by large scales in different cities.

Pakistan In addition, the facility can monitor and conduct medical examinations in the future, thanks to new and increasing treatment that patients can provide.

### 3.1 Preventive and control measures.

Currently, the only reason to control or prevent dengue is to fight vector mosquitoes. Mosquito breeds mainly consist of metal barrels, ceramic containers and man-made containers, such as concrete tanks used to store water in social units, used car tires, and excessive plastic jars and accumulation. alternative items. fresh water.

### 3.2 Vector control

Chemical forms and environmental management are used. It is used to properly remove solid waste and increase the efficiency of water storage tanks and closed containers to stop contact by placing female mosquitoes. Appropriate pesticides are used. The most economical for mosquito management is to reduce wildlife by cleaning or eliminating locations / containers with double compounds.

larvae chamber for yellow fever. Community participation is important for implementing a dipperant management program. This is only possible through law enforcement and public education.

### 3.3 Vaccine research

DENV vaccines are not yet available. The synthesis of dengue vaccines is difficult, although development continues. So far there is very little data on how the disease behaves naturally and how the virus works with the system. Another complexity is that VHF is not a dengue safe animal model for testing immune responses against potential vaccines. In addition, progress in vaccine progress is slow, mainly due to the low growth of dengue viruses in cell culture. Due to the lack of cross-protection between the four dengue fever serotypes and the possibility of a taxonomic group that weakens immunity, it causes viral dengue infection with natural infections. Danger is only possible if an economically strong AN immunogen is developed. Suppression was achieved by continuous transition of wild-type DENV strains to cell culture. It is used to produce immunogens classified as inactivated and fractionated vaccines, deoxyribonucleic acid vaccines and vaccine virus vectors with recombinant vaccine. Currently, a new advanced methodology is to organize a fractional currency, immunogen strength suggests combining DVV-2 NS1 nonstructural protein as immunogens during adjuvant. I have a patent.

**CONCLUSION:**

Pakistan needed a useful strategy to regulate DENV. To this end, Pakistan has drawn conclusions from alternative countries, uses common technologies to edit vectors, responds quickly to reports of fever, and maintains sufficient funds to manage DENV in any monetary budget. Dengue fever can be a serious illness and DENV infection becomes hyperbolic every year. To date, no accredited drugs or vaccines are available on the market, so natural medicine with antiviral mechanism, larvicidal / mosquito action and action against dengue virus due to the properties of repellents can also be effectively used to regulate infectious diseases. It is generally recommended to further analyze the active compounds in the plants studied to develop drugs for the treatment of dengue fever. There is a need for general coordination between the world, a professional and industry on our planet. As a result, the result of the last analysis may be in circulation and eventually reborn into an effective DENV drug.

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