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Letter to the Editor

## Dengue death tolls: A nightmare for Khyber Pakhtunkhwa, Pakistan

*Dear Editor*

Fundamental goal of this letter is to toss light on dengue as vector-based infection, its transmission and elevation in death toll ratio in Pakistan chiefly Sindh and Khyber Pakhtunkhwa (KPK) and dynamic strides were taken by government to vanquish such intense circumstances. Dengue is caused and transmitted through bite of infected *Aedes aegypti* and *Aedes albopictus* belonging to family *Flaviridae.* Symptoms appear within 7 days after bite [1] including flu, pyrexia, pain in eyes, bone pain resulting in Dengue Hemorrhagic Fever, Circulatory Shock Syndrome, thrombocytopenia and low heme-concentration. Having no specific treatment, it infected 50–100 million people with incrementing ratio around the world [1,2].

As arthropod-borne infection, dengue has stroked humans largely in South Asia as reported by World Health organization (WHO). Provincial healthcare department in Pakistan affirmed its deadly hazards due to population of 193.2 million people with unhealthy edibles with inadequate sanitation and vaccination coverage [2]. Considering death tolls, after 1994, dengue was evolved again in late 2005. In Sindh, 422 dengue cases were registered, including 410 in Karachi out of 21.2 million and 5 out of 6.81 million people in Hyderabad [4]. From June 06, 2016 to September 6, 2017, two lives were lost in Karachi. According to a report, from 6th September to onwards, at least 81 cases were reported [3]. Later on, in October 2015, Dawn News published demise of 7/2500 patients in Sindh [4].

In 2015, 3900 dengue patients out of all population of 30.52 million were diagnosed in KPK with primary death in Haripur, KPK on September 5, 2015. On August 26, 2016, Geo news headlined dengue infection in 5000 people largely in KPK and death tolls of 10 people. In 2017, total 2199 cases were reported in Pakistan including KPK with 1297 and 793 cases in Sindh majorly [2]. Afterwards, on August 19, 2017, senior health minister called an emergency meeting in KPK after third dengue death on August 8, 2017 [3] to discuss dengue outbreak. Till August 26, 2017, death toll rose to 8 along with 1500 infected persons in KPK [4]. Recently, on September 21, 2017, in Khyber Teaching Hospital, death of 26 patients was reported with 270 dengue patients [4,5]. On September 26, 2017, news of 195 more patients in hospitals and 36 deaths during last 24 h had announced. A day before it, 307

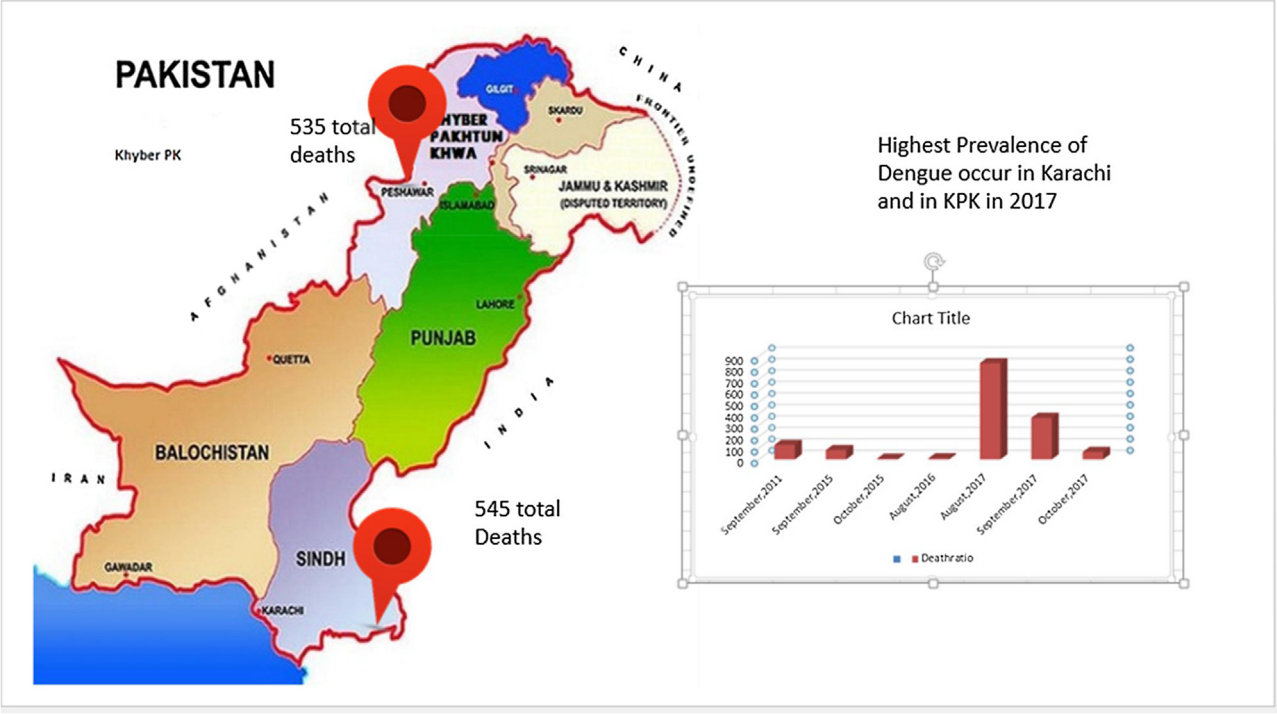


**Fig. 1.** Death tolls in different cities of Pakistan from dengue with highest rate annually.

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patients were hospitalized and 95 got discharged with 276 patients with under treatment issues [3]. While from September 27, 2017 to October 31, 2017 death number reached to 65 and November 3, 2017, announced death of 67 in KPK leaving behind a breath-taking situation for thirty million people of KPK (Fig. 1) [3,4].

To eradicate it, Government authorities have taken several preventive measures across Pakistan. Strict actions were taken for mosquito larva detection to oppose their development. During past few years, anti-dengue day has also been observed to vigilant people about dengue. During past few years, spreading cognizance in the form of literature, workshops and paid media ads are for the most part frill of Government of Punjab and KPK to communicate basic information to individuals for taking prime activities if medical facilities are far away [3]. Moreover, capacity building training has been provided to medicos of KPK from specialists of Dengue Expert advisory group of Punjab, with the purport of treatment and case supervision of infected person [5]. According to a report published in local Tribal news network (TNN) on November 7, 2017, KPK government collaborated with WHO to provide certain guidelines and capacity building in prevention and controlling measurements.

Hospitals were provided with testing and medical facilities with guidelines. KPK administration claimed about working of 200 teams in anti-dengue campaign and 15,000 houses were sprayed in an attempt to kill mosquitoes. The main hallmark in this scenario is exordium of good medical facility at a minor distance in KPK to overcome this lethal virus [5]. Recently, KPK Information Technology Board (KPK-ITB) has introduced a mobile application as a step to eradicate dengue. Now citizens would have capacity to distinguish the side effects and can report the neighborhood case around. It is easy to use and will be available soon on Google play store [3]. All of these efforts offer a ray of hope for many suffered people and elimination of this lethal virus.

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## Competing interests

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## Ethical approval

Not required.

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