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Wastewater Management and Control of Vector Borne Diseases in Lothukunta Area Telangana State

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Abstract
Introduction to Vector borne diseases: In India, the Directorate of National Vector borne Diseases control Programme (NVBDCP) has identified 6 most common VBDs in India namely Malaria, filarial, Dengue, Lymphatic filariasis, kala azar, Japanese Encephalitis and chickungunia. NVBDCP is aiming at eradicating the vector breeding places and creating awareness among the citizens about sanitation and hygiene. Vector borne diseases are illnesses that are transmitted by vectors, which include mosquitoes, ticks and fleas. These Vectors can carry infective pathogens such as viruses, bacteria and protozoa, which can be transferred from one host (carrier)to another. There are about 14 Vector borne diseases that are of public health concern, these diseases account for a significant number of human diseases and death.

Keywords
Dengue, kala azar

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NCDC:[1]

National Centers for disease control was established in India in 2001 to support the life initiative for control of human diseases and interventions for vector-borne diseases focused on housing and hygiene in urban areas. The activities include prevention of breeding places of vectors through Indian Environment control (IEC),Community mobilization, Collection of blood smears from diseased persons, Supply of anti malarial drugs, follow up treatment, Providing the test kits to the labs, Vector control includes the control of larval forms also. The IEC activities include enhanced awareness and preventive measures about the disease. Organizing school health education. Survey of morbidity and mortality rates.

[1] Preventive and social medicine By: K..Park

MATERIALS AND METHODS:

The statistical data was collected from the Urban area in lothukunta a proper questionnaire was prepared and survey was made on 25 houses in the area .Individual houses were screened for rain water pits about 5 houses reported to have proper rain water pits and 5 houses had the facility to collect the rain water from the roof top and recycle it for domestic purpose. Survey reports in the area showed that the residents are recycling the kitchen water waste for land scaping and utilizing for plants to have an ecofriendly environment. About 14 out of 25 were recycling kitchen waste[2]. There were two stagnant water pits which were the breeding places for Vectors. The children in the nearby slum had no proper toilet facility and were defecating on the roadside the parents were counseled about the spread of deadly diseases.

Counseling the residents of lothukunta colony residents:

Proper counseling was given to create awareness about the amount of water being wasted in the urban area, about 5 liters of running tap water is wasted while shaving, about 100 liters is wasted while taking a shower bath, about 5 liters of running tap water is wasted while brushing teeth and 20 liters of water is wasted per day while flushing the toilet .Each and every family can save at least 300 liters of water per day with minor changes in the life style.

RESULTS:

Water conservation methods in the catchment area lothukunta

Urban area	**Rainwater pit facility for houses**	**5 / 20%**
Urban area	**Rainwater recycled for domestic purpose**	**5 /20%**
Urban area	**Kitchen water recycled for land scape**	**14 /56%**
Urban/Rural	**Stagnant water pit (vector breeding place)**	**2 /8%**

Prevalent vector borne diseases in the year 2018-2019 urban slum area:

Invertibrate Vector	Disease	Reported cases/%
Female anopheles mosquito	**Malaria**	**5 /4%**
Aedes Aegypti	**Dengue**	**3 /2.4%**
House fly	**Enteric Fever**	**3 /2.4%**

Employment status of the residents of catchment area:

Total no of residents	Employed /%	Unemployed / %
125	**39 / 31.2%**	**86/ 68.8 %**

CONCLUSION:

Survey made on 125 residents indicated 68.8% were unemployed and 31.2 % were employed. The residents were not aware of the water conservation methods due to less literacy and no motivation to preserve rainwater.

[2] Water conservation and management by:S.N.Chatterjee

Recommendations:

- Conserve the rainwater in the form of pits, draining into bore to improve ground water sources.
- Avoid stagnation of water by proper leveling the ground to avoid Vector borne diseases.
- Spraying of Kerosene and anti larval sprays on the stagnant water.
- Identifying endemic vector borne diseases to the area by proper screening and lab tests.
- Provide toilet facility to the rural area residents.
- Training people for proper hand washing techniques.
- Reassuring and treating the affected people with proper medication.
- Health education by health personnel

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