Conclusion: The state is in line with the elimination target of < 5 cases/100,000 pop. There is still significant number of unvaccinated children and measles surveillance performance is not adequate.

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Evaluation of dengue surveillance system, Telangana state, India, 2017

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Background: World-wide 50-100 million dengue infections occur annually in > 100 countries, putting half the world's population at risk. In 2016, India reported 111,880 confirmed dengue cases and 227 deaths with 3,759 confirmed cases and 4 deaths from Telangana state. We described and evaluated dengue surveillance system in Telangana to identify strengths and weaknesses.

Methods & Materials: We described dengue surveillance by Integrated Disease Surveillance Programme (IDSP) in Telangana from June-December 2016 by reviewing program guidelines and reports and interviewing state and district surveillance unit (SSU and DSU) officials. We evaluated attributes such as representativeness, acceptability, positive predictive value, flexibility and usefulness in the state. For assessing simplicity, timeliness, and data quality, we selected three districts (two high and one low prevalent).

Results: IDSP conducts passive dengue surveillance with health facilities reporting on formats for presumptive and laboratory-confirmed cases on weekly basis to DSUs. DSUs share data online with SSU and health facilities. At state level, representativeness of government facilities was 97% (1545/1598) while only two private hospitals were involved. Consistency of reporting units (indicating acceptability), defined by reporting at least 80% of time, was 94%(1497/1598). Positive predictive value of probable cases being laboratory-confirmed was 17% (range: 2%-26% in low to high prevalent districts). After re-organisation of state from 10 districts to 31 in October 2016, DSUs continued surveillance in new districts and adapted to changing operation conditions including need for additional infrastructure and manpower. Surveillance system in the state detected six dengue outbreaks early and rapid response teams controlled all with no mortality. In three selected districts, all participants (100%) knew mode and frequency of reporting. While 60/69 (87%) stated filling forms was simple, 19/22 physicians (86%) reported difficulties from imprecise probable case definition. At district level, timeliness of weekly reports was 91% (435/480) while data quality (completeness) was 80% (275/343).

Conclusion: Dengue surveillance system in Telangana is acceptable, flexible and producing useful quality data to guide control measures in a timely manner but needs improvement for representativeness by including private hospitals and early infrastructure development and manpower augmentation in new districts. We recommended reviewing probable case definition for improvement of simplicity and predictive value positive.

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UMP. 459

Health seeking behavior of patients in Muzaffarpur-TMRC Health and Demographic Surveillance Site may obstruct Kala-azar elimination in Bihar, India

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Background: Muzaffarpur-TMRC Health and Demographic Surveillance System (HDSS) is a dedicated platform for visceral leishmaniasis (VL) research established in 2008 in Muzaffarpur district of Bihar state in India. In the 50 VL endemic villages of the HDSS, annual household surveys are conducted and all VL patients are registered and interviewed. We use the HDSS dataset to get more insight into the healthcare seeking behavior of VL patients.

Methods & Materials: From the available data we extracted information on number and types of health providers consulted by VL patients, diagnosis and treatment prescribed; and individual and health system delay. We performed the trend analysis to study changes occurred in the health seeking behavior of the villagers over a period of 8 years.

Results: Between March 2007 and July 2015, 332 VL cases were registered (185 men (56%) and 147 women (44%)). We observed declining trend in annual incidence (15 per 10000 in 2007 to 0.82 in 2014). Most patients (73%) first consulted unqualified providers; only 3% opted government hospitals. Mean patient delay was 7.3 days and on average each patient visited more than three health facilities before being diagnosed. These trends did not improve much over the study period. During the course of health seeking, only 17% of the time government hospitals were consulted. Mean total health system delay (constituted as diagnosis delay: 37.7 days + treatment delay 6.3 days) was 44 days. Patients (93.7%) were diagnosis by rK39 rapid test, Amphotericin-B (45.5%) and Miltefosine (23.5%) were the most common treatments while 19.3% received some combination therapy, 11.8% received abandoned antimonial treatment. Of 332 patients, though 35.5% were diagnosed at public hospitals, only 22.3% of them took final treatment there. Remaining patients moved to either NGOs (47%) or private qualified doctors (30.72%).

Conclusion: Incidence of VL in the HDSS area sharply declined over the past 8 years. Patients usually present early but mostly to unqualified providers despite free diagnosis, treatment and wage loss compensation provided by public hospitals. They still incur alarmingly long health system's delays which increases risks for further transmission of infection.

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