

ABSTRACT

Background: Dengue outbreaks can rapidly increase demand for outpatient, inpatient, laboratory, and critical-care services. Effective response therefore depends on both the readiness of frontline healthcare workers and the operational capacity of hospitals. District-level assessments that examine these two components together remain limited in Sri Lanka.

Objective: To assess the preparedness of selected government hospitals, medical officers, and nursing officers for dengue outbreak management in the Kandy District.

Methods: A descriptive cross-sectional study was conducted at National Hospital Kandy, Teaching Hospital Peradeniya, and Base Hospital (Teaching) Gampola. All 362 medical and nursing officers in the eligible sampling frame were invited, and 317 returned usable questionnaires (response rate 87.6%). The structured questionnaire assessed knowledge, reported practices, perceived challenges, recent training and mock-drill exposure, confidence, and perceived hospital readiness. Institutional readiness was assessed by direct observation, record review, and key-informant clarification using a dengue-specific checklist adapted from the WHO Service Availability and Readiness Assessment framework. Healthcare-worker preparedness was described as a multidimensional profile rather than as a single composite score.

Results: Good knowledge was demonstrated by 92.1% of respondents; all medical officers and 89.8% of nursing officers achieved this level ($p = 0.01$). No participant reported formal dengue training or participation in a dengue-related mock drill during the preceding two years. Although all respondents reported following national guidelines, none reported a designated fever or dengue triage area. Overall, 94.0% were confident or very confident in managing warning signs and 77.9% perceived their hospital as prepared. The most prominent high-level challenges were overcrowding (89.0%), limited ICU-bed availability (82.0%), and laboratory delays (54.2%). Institutional preparedness scores were 75.7% at National Hospital Kandy, 65.7% at Teaching Hospital Peradeniya, and 62.9% at Base Hospital (Teaching) Gampola. Logistics scored strongly, whereas outpatient preparedness, training, written procedures, and coordination showed important gaps.

Conclusions: Strong clinical knowledge and confidence coexisted with weak operational preparedness indicators. The findings support regular refresher training and mock drills, pre-identified fever-triage arrangements, and hospital-specific surge plans for beds, critical care, laboratory services, staffing, and coordination.

Keywords: dengue outbreak, healthcare workers, hospital preparedness, knowledge, surge capacity