ABSTRACT

Introduction

Leptospirosis is a major but under-recognised zoonotic disease in Sri Lanka, associated with significant morbidity and mortality, particularly following flooding and extreme weather events. In late 2024, the Jaffna District (historically considered non-endemic) experienced an unexpected leptospirosis outbreak. This highlighted the need to assess the preparedness of healthcare workers and health institutions to manage leptospirosis effectively in such settings.

Objectives

To assess the level of knowledge and self-reported practices related to leptospirosis management among selected healthcare workers at Base Hospital Point Pedro, Jaffna, and to evaluate the hospital's preparedness to manage leptospirosis outbreaks.

Methodology

A descriptive cross-sectional study was conducted from December 2025 to February 2026 at Base Hospital Point Pedro, reported in line with the STROBE guidance for cross-sectional studies. Medical officers and nursing officers were recruited using a total population (census) sampling approach, in which all eligible staff were invited to participate; 76.7% ultimately took part. Knowledge and self-reported practices were assessed using self-administered questionnaires developed separately for each group. Hospital preparedness was evaluated using a 23-item structured observational checklist, benchmarked against the national leptospirosis management guidelines, covering surveillance and reporting, diagnostic capacity, clinical management facilities, treatment readiness, and communication and coordination. Data were analysed using descriptive statistics and appropriate non-parametric inferential tests; because multiple subgroup comparisons were performed without correction for multiplicity, subgroup findings are interpreted as hypothesis-generating rather than confirmatory.

Results

A total of 115 healthcare workers participated in the study (76.7% of the eligible population). Most (64.3%) medical officers and 67% of nursing officers demonstrated intermediate levels of knowledge, with a smaller proportion achieving advanced knowledge against pre-determined, expert-consensus cut-offs. Knowledge gaps were identified despite prior clinical experience in leptospirosis. Nurses self-reported predominantly optimal or acceptable practice, though this is a self-reported and unaudited measure that may be inflated by social desirability. Only 9 out of 115 healthcare workers had formal training on leptospirosis within the preceding two years. Awareness of national leptospirosis management guidelines was variable and, among medical officers only, was significantly associated with higher knowledge, though this and other subgroup findings should be treated as exploratory given the number of comparisons performed and, in one case, a very small subgroup (11 male nursing officers). The hospital demonstrated partial preparedness (17 of 23 checklist items met, 74%), with strengths in surveillance and basic clinical management, but gaps were noted in diagnostic capacity, treatment readiness, and structured communication mechanisms.

Conclusions and Recommendations

While self-reported clinical practices appeared broadly favourable, this should be interpreted cautiously in the absence of direct observation. Gaps in knowledge, formal training, and institutional preparedness were identified. Regular targeted training, improved dissemination and implementation of national guidelines, and strengthening of hospital preparedness systems are recommended to enhance early detection and effective management of leptospirosis, particularly in newly affected regions.