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Measurement and evaluation of noise levels at the vicinity of hospitals: A case study

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A study was carried out to determine the noise levels in and around hospitals where patients need a peace and quiet environment for speedy recovery. A total of seventeen hospitals were selected for this study; namely, eleven government hospitals, three Ayurvedic hospitals and three private hospitals. At each location, noise measurements were recorded during the morning, evening and night. Noise levels were measured at each location for a time period of not less than the 5 minutes. Several noise level descriptors were recorded during the measurement. Measurement points were selected at each location, near the hospital boundaries, hospital main entrances, OPD areas, consulting rooms and wards. A total of 853 measurements were recorded and analyzed.

The study reveals that for 45 % of the government hospitals, outdoor noise levels at the boundary exceeded prescribed levels for silent areas. During the morning session the noise levels exceeded the level prescribed for high noise areas in 5 % of the government hospitals and during the night session in 10 % of the hospitals. In addition, very high noise levels in all three sessions, which exceeded the recommended levels, were recorded from the government hospital wards in over 85 % of the hospitals.

The noise levels at the boundaries of all private hospitals exceeded the prescribed noise level for silent areas in all sessions. Noise levels at the main entrances too were high for private hospitals compared to government hospitals. The disparity between the private and government hospitals becomes quite evident especially, in the evening and night sessions. However, noise was comparatively less (only 30 % exceeding recommended levels) in wards of private hospitals, providing more comfort to patients. The study indicates the necessity of raising awareness through warning signs and by enforcing existing noise regulations to uplift the current standards.