

## **AN EFFECTIVE APPROACH TO BED BUG MANAGEMENT IN STUDENT DORMITORIES**

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**Abstract** The increased infestation of bed bugs (*Cimex lectularius*) in student dormitories is common due to frequent student turnover. Here, we described the long-term case of bed bugs occurrence in dormitories in Prague, Czech Republic. Since the construction of the student complex in 1965, bed bugs were managed through chemical treatments. Broader range of active substances previously available and low resistance in bed bugs populations kept the situation under control. However, the situation changed ten years ago, leading to a resurgence of bed bugs. Infestations became unbearable, and a rapid increase in student complaints led the dormitory management to work with the National Institute of Public Health and the National Reference Laboratory for Vector Control (NRL VC). Starting in early 2023, NRL VC began proposing essential corrective measures. Bed bugs samples were collected to check for resistance to three active substances. Procedures and rules for pest control were significantly revised. A comprehensive system for monitoring bed bugs occurrences and interventions was recommended, along with suggested structural modifications. NRL VC's oversight revealed significant resistance to three active substances and recommended using a different group of active substances for control. Clear and uncompromising rules for student cooperation during interventions were established, a PC program for monitoring infestations and treatment was developed, and highly effective structural modifications were initiated. As a result of NRL VC's recommendations, the bed bugs situation in the Prague student dormitory complex has stabilized. A comprehensive list of effective bed bugs management practices is presented in this paper.

**Key words** *Cimex lectularius*, student dormitories, resistance, bed bugs management