

Factors Influencing Bovine Tuberculosis Surveillance in Thai Slaughterhouses: A Multi-Regional Assessment of Knowledge, Attitudes, and Practices with One Health Approach

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Abstract

This study aimed to evaluate knowledge, attitudes, and practices (KAP) regarding bovine tuberculosis surveillance and analyze factors influencing KAP among Thai slaughterhouse personnel using a One Health approach. This cross-sectional research was conducted in slaughterhouses across five regions of Thailand from January to December 2023. The study sample comprised 208 participants, including owners or managers, meat inspectors, and slaughterhouse workers. Data were collected using a validated questionnaire and analyzed using descriptive statistics, chi-square tests, analysis of variance, correlation analysis, and logistic regression. Results showed moderate mean scores for knowledge, attitudes, and practices (5.28/10, 38.55/65, and 34.62/50, respectively). Statistically significant differences were observed in knowledge scores across education levels ($F = 3.427$, $p = 0.005$) and job positions ($F = 4.562$, $p = 0.011$). Correlation analysis revealed positive associations among knowledge, attitudes, and practices ($p < 0.05$), with a moderate positive correlation between attitudes and practices ($r = 0.543$). Furthermore, lack of training was identified as the most significant risk factor for poor practices (OR = 2.76, 95% CI: 1.45-5.24, $p = 0.002$), followed by lack of tuberculosis screening (OR = 2.31, 95% CI: 1.18-4.52, $p = 0.015$) and lack of health check-ups (OR = 1.87, 95% CI: 1.02-3.42, $p = 0.043$). The Knowledge-Practice (K-P) gap analysis revealed a K-P gap index of -31.14, indicating a discrepancy between knowledge and practice. These findings align with previous research showing the influence of education and job position on bovine tuberculosis knowledge. However, the higher practice scores compared to knowledge scores may indicate that personnel follow regulations without deep understanding, potentially affecting long-term surveillance efficiency. The results emphasize the need for developing targeted training programs focusing on knowledge enhancement and awareness-building, as well as fostering inter-agency collaboration in line with the One Health approach to enhance the efficiency of bovine tuberculosis surveillance in Thailand.

Keywords: bovine tuberculosis, disease surveillance, knowledge attitudes and practices, slaughterhouse, one health