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**ABSTRACT**

*Escherichia coli* infection is one of the most usual and extensively dispersed comprehensive public health concerns. A cross sectional study was directed to investigate the prevalence of *Escherichia coli (E. coli)* isolated from rectal swab of stray dogs in the randomly selected 12 areas of Chittagong City Corporation to assess the risk of possible transmission of *E. coli* from dog to human. Samples were collected during the period of February to May, 2015. Bacteriological isolation methods were done to detect *E. coli* for evaluating the public health crises. Out of the 83 samples the highest prevalence of *E. coli* was found (100%) in Pahartolli, Sholosahar, Alankar, Chawkbazar area and lowest prevalence in Bahaddarhat (0%) area. Therefore, it can be said that appropriate measures should be taken to prevent occurrence of zoonotic *E. coli* infection in human.

**Keywords:** *E. coli*, rectal swab, stray dog, prevalence.