TITLE: ASSESSMENT OF MICROBIOLOGICAL SAFETY IN LONG-STAY INSTITUTIONS FOR THE ELDERLY

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ABSTRACT:

The Long-Stay Institutions (LSI) are collective rest homes that serve elderly in a situation of lack of income and/or family. With the increase of the elderly population in Brazil, the demand for these institutions has increased. In LSI's, there is an increased risk of infections due to environmental conditions that can trigger an unfavorable clinical outcome. Sanitary surveillance for elderly care recognizes the quality of water and air as environmental risk factors in the LSI's. In view of the scarce datas about microbiological conditions of LSI, we evaluated the quality of air and water reservoirs in an ILP for the eldery located in the city of Fortaleza-Ce, in order to know the dynamics of space and prospect forms of intervention. Air analysis was performed in three environments: infirmary, bathroom and bedroom. We used the methodology of spontaneous sedimentation, with exposure of 25 mm plates, in triplicate, containing PCA and MacConkey media for 30 minutes. The plates were send to the microbiology laboratory for incubation at 37°C/48 hours. The amount of CFU/m³ was reached by the average CFU divided by the area of the plaque and multiplied by the ratio between the number of cells on the surface and the number of cells in the air, with a ratio of 23:1. For the microbiological analysis of the water, we performed the multiple fermentation tubes technique, in series of three tubes, in samples of water collected in sterile amber bottles of two storage supports and distribution of water for consumption. The water analysis did not showed contamination by total or thermotolerant coliforms. Likewise, the values found in the air analysis of both, PCA and MacConkey, were below that recommended by current legislation (7.5 x 102 CFU/m³). Therefore, we conclude that the water used in the LSI evaluated is adequate for the consumption of the elderly and indicates an appropriate sanitation of the water storage and distribution supports. As well, the amount of airborne microorganisms present in this LSI attend the current microbiological standards. Nevertheless, we emphasize the importance of periodic assessment of water storage as a preventive action against waterborne disease and, of the atmospheric air, due to its role in the dispersion of pathogenic microorganisms, for a future corrective action of the hygienic measures adopted.

Keywords: Atmospheric Air, Elderly Safety, Water of Consumption

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