

## Evaluation of Collection and Disposal of Hospital Waste in Hospitals and Healthcare Centers

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Currently, one of the environmental issues is waste of hospitals and healthcare facilities which due to hazardous, toxic, and disease-causing agents such as pharmaceutical, chemical and infectious disease, is of particular sensitivity. According to a 2002 survey by WHO, it was determined that 22 million people worldwide suffer from infectious diseases annually, because of contacting hospital wastes. Also based on a research conducted in 22 countries, 18 to 64 percent of hospitals wastes are not disposed properly [1]. The purpose of the study is to appraise collection and disposal of hospital wastes in hospitals and healthcare centers of Shahroud.

In this sectional study, 3 university hospitals (580 beds) and 10 healthcare facilities were investigated for six months (mehr-azar 89) at Shahroud. In order to determine the amount of waste, produced waste of an entire day was weighted in hospitals and health centers. In this research, proposed questionnaires of WHO for developing countries was used to evaluate collection and disposal system of hospitals waste. Collected data was coded and analyzed by SPSS ver.15.

Total average of produced waste in Imam Hussein, Khatam-al-Anbia and Fatemieh hospitals was 960.97, 277.57 and 262.33 kg per day, respectively. Regarding to the number of active beds and total weight of waste, the average of waste production per capita in Imam Hussein, Khatam-al-Anbia and Fatemieh hospitals for 3 periods was 2.67, 2.77 and 2.91 kg per day for each bed, respectively. According to the number of referrals and the

total weight of waste, the average of waste production per capita in three periods and in 10 healthcare centers, including Azima, Imam Musa, Nader, Inghelab, Mahdi Abad, Shahrak-e-Imam, Baqzandan, Mohammadi, 12 Farvardin and Bahar was respectively: 9.6, 3.27, 2.86, 2.6, 3.63, 2.73, 2.93, 3.2, 2.2 kg and the average per capita was 0.05 kg for each referral per day. All of hospitals and healthcare facilities use suitable and durable garbage bags for collecting and durable and washable trashes for storing and disinfection.

Results of waste amount in Shahroud hospitals indicate that per capita is 2.77 kg per day for each active bed. In a research by Mohammad-Baghaei et al. in hospitals of Tehran in 1989, amount of waste produced by 2.71 pounds per occupied bed is defined [2]. Yaghoubi-Far et al. also performed a similar research at hospitals of Sabzevar in 2005, per capita waste amount was determined 2.38 kg for any active bed [3].

Our results are compatible with above surveys. Regarding to importance of hospital waste issue, it is necessary to improve disposal of hospital waste in hospitals and healthcare centers by increasing staff awareness and by training them to identify diseases caused by exposure to waste hospital, using personal protective equipment such as masks and glove, vaccination of persons at risk and necessary standards of disposal.

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