

Designing the Management Plan for Health Care (Medical) Wastes in the Cities of Semnan, Mahdishahr and Shahmirzad

Authors : Rasouli Divkalaee Zeinab, Kalteh Safa, Roudbari Aliakbar

Abstract : Introduction: Medical waste can lead to the generation and transmission of many infectious and contagious diseases due to the presence of pathogenic agents, thereby necessitating the need for special management to collect, decontaminate, and finally dispose of such products. This study aimed to design a centralized health care (medical) waste management program for the cities of Semnan, Mahdishahr, and Shahmirzad. Methods: This descriptive-analytical study was conducted for six months in the cities of Semnan, Mahdishahr, and Shahmirzad. In this study, the quantitative and qualitative characteristics of the generated wastes were determined by taking samples from all medical waste production centers. Then, the equipment, devices, and machines required for separate collection of the waste from the production centers and for their subsequent decontamination were estimated. Next, the investment costs, current costs, and working capital required for collection, decontamination, and final disposal of the wastes were determined. Finally, the payment for proper waste management of each category of medical waste-producing centers was determined. Results: 1021 kilograms of medical waste are produced daily in the cities of Semnan, Mahdishahr, and Shahmirzad. It was estimated that a 1000-liter autoclave, a machine for collecting medical waste, four 60-liter bins, four 120-liter bins, and four 1200-liter bins were required for implementing the study plan. Also, the estimated total annual medical waste management costs for Semnan City were determined (23,283,903,720 Iranian Rials). Conclusion: The study results showed that establishing a proper management system for medical wastes generated in the three studied cities will cost between 334,280 and 1,253,715 Iranian Rials in fees for the medical centers. The findings of this study provided comprehensive data regarding medical wastes from the generation point to the landfill site, which is vital for the government and the private sector.

Keywords : clinics, decontamination, management, medical waste

Conference Title : ICMWM 2023 : International Conference on Medical Waste Management

Conference Location : Tokyo, Japan

Conference Dates : September 04-05, 2023