

Location and network design for preventive healthcare centers

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Abstract

One effective way to improve efficiency in a health-care system is that the number of peoples who access preventive services which in turn is integral part of many programs of healthcare reform .Under this circumstance, a greater flexibility to access at appropriate time and place is provided for those who are looking for health prevention services. Therefore, sufficient access to healthcare facilities is an important factor for implementing a successful preventive health care program, since it increases the level of community participation in prevention programs. The number of healthcare facilities and the location of each of them, are the two main causes of health network configuration. The achievement of the level of social welfare in which the accessible facilities are expanded, also issued a challenge for health care system. It can be clearly concluded that development of an analytical framework for efficient decision-making in regarding to preventive healthcare facility network is an essential to possibly increase the accessibility to these centers. In this way, the maximum public participation for preventive services is achieved. In this study, an uncertainty model for the design of preventive health network is developed such a way that both goals of the maximum level of public participation in a prevention program and also the minimum of the costs of constructing the healthcare facilities are satisfied

Key words: Healthcare prevention centers, locating, fuzzy, multi-objective

1. Introduction

It is much more efficient and cost-effective to prevent the illness than to cure it especially for incurable diseases in their early stages. In the past three decades, for savings in the significant cost of diagnosis and treatment, expanded and sustained national investments in prevention and public health programs has attracted enormous interest. That is why use of effective cost-saving services could yield significant healthcare savings.