## Introduction

The world civilization is the civilization of the city. Since the planning of urban living conditions and welfare of their citizens, the task of urban geography and geographers is to analyze the situation, offering solutions tailored to location. Research shows that without the construction of urban environmental planning, land use optimization model can not be found in cities. The main aspects of urban land use planning in the aftermath of the turmoil and problems of cities are taken into consideration. Also, poor deployment of application services in the city and non-compliance adjacent with privacy can cause a lot of other instabilities. Therefore, to meet these goals we want this service, the health care and scientific solutions for better serving our centers. The GIS spatial analysis in the fastest time possible with the appropriate metrics can help us to locate the optimal care hospital.

## Materials and methods

In this study, the AHP model of the network analysis is used to locate treatment centers in Semnan. Applications are as follows: Analytical Hierarchy Process One of the most comprehensive systems designed for multi-criteria decision making. AHP definition is: "a method by which decisions, decisions that can be taken is dependent on several criteria. This approach provides the possibility to formulate the problem as a hierarchical and also consider various quantitative and qualitative criteria".

One of the methods that can be precise, using it to analyze and evaluate the performance of hospitals and how to get paid, is "network analysis". The advantage of this method as "buffering" is that in this method, the interval between the origin and destination are determined to be reasonable and realistic. In this method, first, all the routes of communication or network access and provides Digital (Digital out for track and road traffic in the area has been based on actual directions) and then create the topology, information such as the streets,, Id, F-node and T-node was walking on the relationship between the spatial grid was created. Then, using the channel information, such as one-way or two-way, width of streets and intersections are added to the network for analysis were prepared

Therefore, in this study, to locate the correct contributing factors have been identified and classified based on the principles of GIS and modeling techniques have been used Shape file of map data become available and are in Block Base for the analysis was performed on them. X street map software also features Auto cad Map 2004 using a Shape file to be used later in the analysis and modeling and the map information have changed into the Block Base Shape file and the required analysis was performed on them. X street map software also features Auto cad Map 2004 using a Shape file to be used later in the analysis and modeling and finally, using the overlap index (Index Overlay) and network analysis tool for the analyst Net work function of radius and determine the best course of treatment centers Raster calculator tool for mapping susceptible areas by using the overlaps metrics and analysis of process model. Analytical hierarchy Process (AHP) for modeling and acting in locating health centers. In any research project, there are two main aspects:

1 - The researcher must specify exactly what will be discovered;

2 - Researchers have found that the best way to implement the plan

To do this in locating health centers of the first layer, selection, and prepared. These layers are:

1 - Populations (high density, medium density, low density);

2 - within reach;

3 - Land adjacent to and

4 - Design criteria.

**Finding and results**

Evaluation criteria are effective in locating and mapping centers are included separately.

*1. Population density*

The goal of treatment is to locate the centers, services for the majority of the population would be so much better with the increase in population density and the density of the location of centers is reduced.

*2. Network access roads*

Quick and timely measures can be effective in locating treatment centers because these centers to deliver timely diagnosis is important and high risk patients will reduce casualties. Otherwise, the patient may be irreparable damage. Based on these results, nearby or adjacent to the main road network, has particularly the higher value.

*Network Analysis and Treatment Centers*: Review of the clinical centers and the areas covered by the standards and regulations can be improved to locate the optimal location. One of the methods for the accurate analysis of how services can be paid for hospital location is network analysis. In this method, all network communication paths are available in a number of the existing network topology and the relationship of space between lines and by entering descriptive information about the performance of hospitals (hospital 1 km) on a road network is characterized by a range of hospitals.

**Conclusion**

Semnan is one of the industrial cities of great extent, but the lack of water has caused much of the population is of vast importance. It is a city that welcomes immigrants as future population growth will follow. The number of medical centers (hospitals) is low, so 3 is needed for the city hospital, so in this study, the AHP model of weighted criteria such as population density, proximity to land, Performance and road network.

Finally, two separate proposals can be presented as follows: Models and techniques: In a research work to enhance the accuracy of a single model, but not enough to be used several models. In addition to the models used in this study, other methods such as neural networks, fuzzy and genetic raise more precision and close to reality, are recommended.

Increasing criteria: Whatever the numbers of selected criteria and sub-criteria to be gained by workers are more, the results of the study are more accurate and closer to

reality. It is suggested that multiple factors and various measures to achieve the goal, to be considered.

In the end, according to the studies and the results obtained, optimal strategies for organizing and planning principles to reduce problems caused by the uneven distribution of health services in Semnan include the following:

Due to the need to build a hospital in Semnan (with regard to construction capita population) based on map locations for the construction of the hospital was proposed as an optimal space;

Specific regulations require hospitals to locate and monitor its implementation;

Not giving permits the establishment of incompatible uses adjacent to therapeutic activities;

Most municipalities and construction supervision of the proposed research and treatment centers in appropriate locations;

Better use of the capabilities of GIS techniques in spatial planning and applying it health crisis management;