

Inappropriate hospital site selection: A case report

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ABSTRACT

Introduction: Health centers as one of the main urban services, and one of the key factors in assessing the feasibility of sustainable development in cities have a high sensitivity to location and choice of accommodation. **Case Report:** Shirvan is the largest city after the capital of the province in North Khorasan of Iran. On the southern edge of the city of Shirvan, there is a seasonal river between the city and Ayatollah Hashemi Rafsanjani Hospital. The need to build a solid bridge is essential for safe access to the hospital, which, unfortunately, has not been achieved. The constructed roundabout passes approximately one meter from the river floor. In the spring of 2019, there was heavy rainfall in most parts of the country, and the area was not poor. The rains blocked access to Ayatollah Hashemi Rafsanjani Hospital as water flowed into the seasonal river. **Conclusion:** A hospital that should help itself to a crisis was itself a cause of the crisis in a short time.

Key words: Hospital, Site selection, Crisis, Flood

INTRODUCTION

Health centers, as one of the main urban services and one of the key factors in measuring the feasibility of sustainable development in cities, are highly sensitive to location and choice of accommodation¹. Choosing the right and optimal location for deploying medical applications and hospitals is so important that it can be said to deal with human health and life and cannot be neglected because it would cause irreparable health damage².

Hospital Site Selection at the city level and even outside of it is one of the specialties that city planners and managers have paid particular attention to in recent years³. In general, hospital location planning should be done separately for each case by urban, environmental, and structural experts, but there are general principles that are common to the whole world and cannot be overstated⁴.

For the construction of a hospital, one of the most important factors in locating it can be said to be the availability of communication and access roads to the hospital⁵. Access to the city's main streets, squares, and intersections are among the most important factors to note⁶. Other infrastructure needed to accommodate the hospital may also include public transportation such as the subway, city buses, and proximity to passenger terminals⁵. Locating in the vicinity of the urban green space and fire stations is also an advantage. Supplying the facilities and equipment needed for the chosen location, such as water, electricity, gas, sewage treatment plant, etc., are important advantages of hospital location⁵. Inhibitors and limits are related to

site selection, sex and land restriction, seasonal flooding...⁶

CASE REPORT

Shirvan is the largest city after the capital of the province in North Khorasan of Iran. Shirvan city has two hospitals with a population of about 157,000. Imam Khomeini Hospital, which is the old city hospital, is on the outskirts of one of the city's main streets and is easily accessible to people⁷. Ayatollah Hashemi Rafsanjani's 220 Specialized Hospital Hospital, which was commissioned in May 2016, is about 1 km from the southern margin of the city⁸. After operating this hospital, most of the general and specialized medical departments were transferred to this hospital. Imam Khomeini Hospital was transformed into a pediatric and gynecological hospital⁹.

On the southern margin of the city, there is a seasonal river between the city and Ayatollah Hashemi Rafsanjani Hospital. The need to build a solid bridge is essential for safe access to the hospital, which, unfortunately, has not been achieved. The constructed roundabout passes approximately one meter from the river floor (Figure 1).

In the spring of 2019, there was heavy rainfall in most parts of Iran, and the area was not poor. The rains blocked access to Ayatollah Hashemi Rafsanjani Hospital as water flowed into the seasonal river. This was at a time when several rivers were flooding in different areas of the city, and all relief organizations and organizations were helping them, and at this time, there

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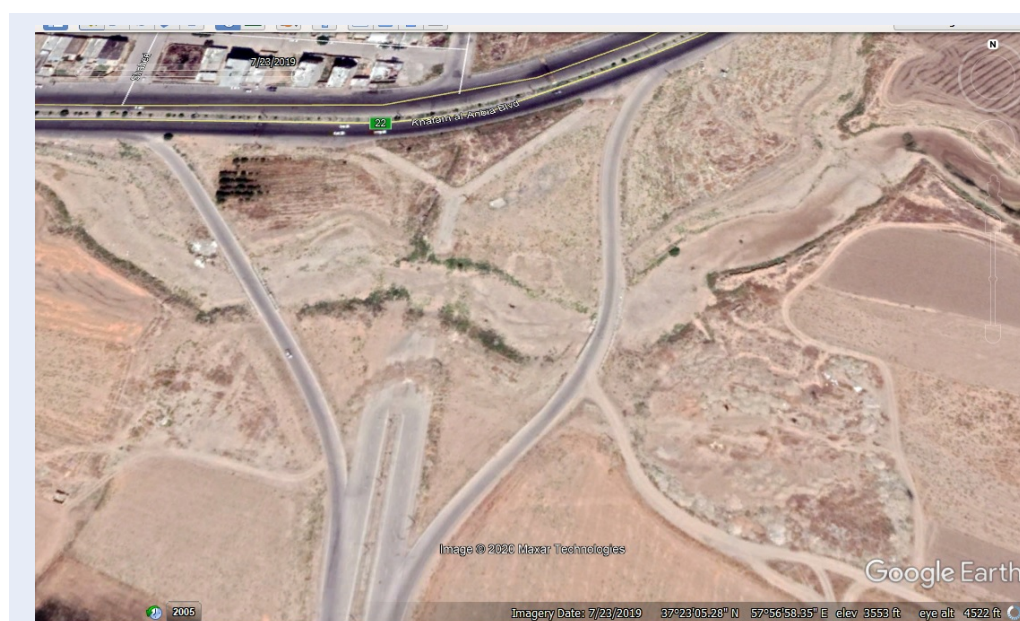


Figure 1: The need to build a solid bridge is essential for safe access to the hospital, which, unfortunately, has not been achieved. The constructed roundabout passes approximately one meter from the river floor

was a greater need to use the hospital's medical facilities for relief. Unfortunately, however, this was not possible due to the lack of safe access to the hospital, and all patients were referred to Imam Khomeini Hospital for Women and Children. The hospital that itself had to help with the crisis was itself a cause of crisis for a short time, and the needs of patients and hospital staff were met and replaced with heavy municipal vehicles.

Field visits show that after a few months, the situation is still the same as before, and no plans have been made to fix the problem and not repeat the problem at the beginning of the year.

DISCUSSION

It is not mandatory to use all these factors to build a hospital. Depending on the strategy of building hospitals, planners may discuss just some of these. For instance, in 2013, Kim *et al.* performed hospital placement for the elderly and considered factors that cover the actual health needs of the target group. Therefore, some of the criteria, including environmental issues (air pollution, noise, and sewage), were not considered¹⁰. In 2011, Soltani *et al.* used different criteria, likewise urban planning, traffic volume, and travel time, to select a hospital location in Panj Shiraz area. But they didn't include surrounding and land issues in their study¹¹. Wu *et al.* (2007) considered administrative criteria such as regulations, policymakers' attitudes, and even hospital staff demand¹². They also

didn't consider environmental concerns and access to infrastructure, such as major roads. The most important thing that has not been considered in the construction of our study hospital and has caused severe problems is the proper access to the hospital.

Xiao Hua Ho *et al.* (2014) expanded a model for identifying a suitable location for medical services in a large group of islands in Hainan Province, China. This model was based on minimizing travel distances for customers of these services. In the study, real demand and environmental issues are not considered¹³. The index considered in this study is not considered in the construction of our study hospital.

CONCLUSION

Despite the crucial role of hospitals in providing medical services in medical emergencies and the impact of hospital position on the quality of these services, few articles have considered the risks as the criteria for selecting a hospital site. Undoubtedly, staying safe and active in emergencies and disasters should be one of the main HSS goals of the Sendai Framework.

ABBREVIATIONS

None.

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AUTHOR'S CONTRIBUTIONS

All authors equally contributed in this study. All authors read and approved the final manuscript.

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Not applicable.

CONSENT FOR PUBLICATION

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COMPETING INTERESTS

The authors declare that they have no competing interests.

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