

The Impact of Private Hospitals on Surrounding Urban Area This Following Case Is for Study in Amman

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Abstract

This paper indicates Private hospitals sites in the city of Amman And the impact on the surrounding urban areas , Aspects of planning Such as changing land use and its impact on some of the social aspects Such as changing the residential areas, transformation and migration of population And the effect of future expansion of the hospital on his vicinity, Besides the limited and the lack of parking plus the occurrence of traffic jams , this research is also addresses Some problems related to private hospitals in the licensing laws and The foundations of siting these hospitals, Basically this search returned two cases of Jordan Hospital and Al-Khalidi .

Keywords: Landuse , traffic , urban standerd .

Literature Review

The main objective of urban planning is to find a solutions for urban problems that appear from some public services such as overpopulation, traffic , ...etc the need for planning and zoning have been emerged when residential communities began , when the new cities appears some services showed such as education, health and hospitals , the other objectives of urban planning in the cities is to improve the natural environment of the city , and improve the demographic conditions , economic, social and the relationship between communities and the city services to be distributed fairly to find a kind of harmony between all of them (Hamdan, 2008)

In 1972 the World Health Organization (WHO) decided to undertake a study on the planning, programming, design, and architecture of hospitals and other medical facilities in developing countries and to disseminate its results through a series of publications. After the publication of the 1st and 2nd volumes of WHO's "Approaches to Planning and Design of Health Care Facilities in Developing Areas," it was decided to conduct a series of country-based case studies, which would show how, under what constraints, and with what results the planning and achievement of the health care infrastructure was taking place in practice , some of (WHO) Criteria and considerations about w hospital site and location is :

- 1- The location of healthcare facilities should be suitable and appropriate in terms of its accessibility, quality of the environment, and safe for the community .
- 2- The healthcare site should be access by the network of roads and near to the public transportation system .
- 3- The location of a hospital need not necessarily be in the town center to avoid traffic congestion; but accessible .
- 4- The location of hospital is not suitable at noisy and polluted areas .
- 5- The site planning of healthcare facilities must be in accordance to the proposed and development strategy in the local plan as well as approved by the state authority.
- 6- The design of healthcare facilities should be a functional design to serve as the health centres for all communities; the building should reflect friendliness .
- 7- The design should take note the function and adjacency of the various work area or departments base on the workflow of patients and medical procedures so as not to obstruct;
- 8- The design should consider the requirements of emergency treatment by providing emergency access for vehicles in cases of emergencies .
- 9- The circulation for the facilities should be clearly organized and without obstruction with provision for safe pedestrian crossing, the disable, the elderly and children .
- 10- Healthcare facilities design should consider the local culture that is clean, organised and beautiful whilst establishing a community park .

1. Introduction

hospitals and health services Considered as important basic pillars in The successful and effective planning process for cities Since the services provided by these urban centers , Both for its residents or to residents of neighboring areas , Of the most important services that should be available in the city.

In recent years, Jordan entered waves of economic and technological development also the Evolution in Health Services . Recently, Appeared in the capital, Amman, a considerable number of privet hospitals Which were new elements to the urban plan for the city of Amman And their planning needs such as ground and wide network of roads and transportation should be thoughtful enough .

Where the ratio of the number of beds in hospitals Public and private sectors , Per 10,000 inhabitants (18) beds , (Ministry of Health, 2014) .

The private health sector services is important and has a significant impact on health services in Jordan ; As the number of hospitals in Jordan in (2009) 108 availability 11,357 beds, including : (Ministry of Health, 2014).

- 30 hospitals belonging to the Ministry of Health, provide 4358 beds 38.4% of the number of beds in the Kingdom.
- 11 affiliated Hospital Royal Medical Services of the Army in 2131 provides a bed, by 18.8% .
- Educational hospitals are University of Jordan Hospital, which provides 519 beds by 4.6% , King Abdullah founder Hospital, which provides 494 beds, the proportion of 4.3% of the number of beds in the Kingdom .
- 50 hospitals belonging to the private sector, the number of beds by 3168 beds 33.9 percent of the number of beds in Jordan .

What distinguishes the private health services sector that permanent evolution and growth, The number of private hospitals in Jordan have arrived at the end of 2014 to 44 private hospital licensed only in Amman ,A large sector competes with the government sector. (Ministry of Health, 2014) .

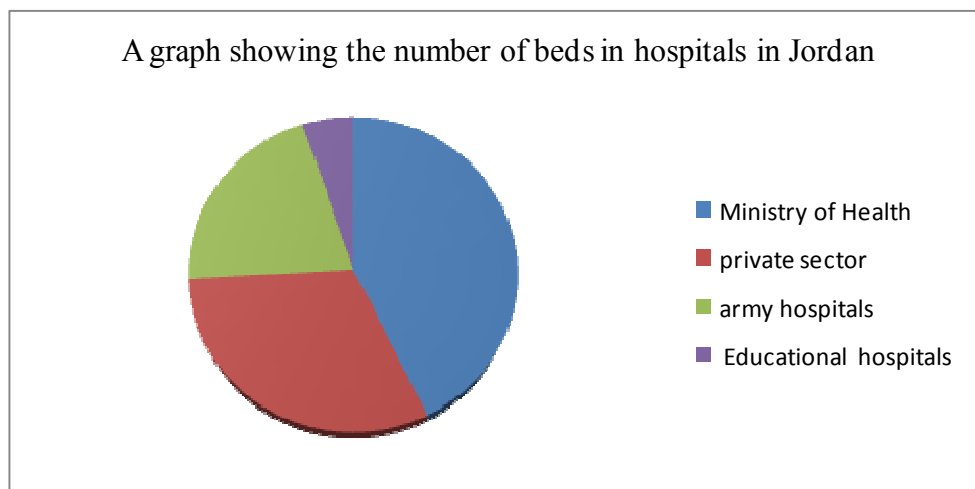


Figure 1. showing the number of beds in hospitals in Jordan . 2014.

2. Problems Of The Research.

In Amman; due to the high population density and complexity of the transport network, And the emergence of some of the randomness in the planning of some private hospitals sites , Which led to having arise and to improve the economic aspects, which reflected on the Amman city planning in general.

Recently spread private hospitals widespread in the capital, Amman , And got a demand of patients from within and outside Amman . It became the region or neighborhood that has a private hospital , Suffers from traffic overcrowding problems, And noise pollution, And sometimes problems with overpopulation, In addition to the lanes and streets leading to the hospital, That suffer from traffic jams, especially in the morning and evening. This is accompanied by overcrowding in seasonal periods to visit Amman ,To get treatment in these hospitals, Leading to population problems and environmental crises, stifling traffic, The problems in lining up cars But turning the uses of residential land to. commercial and medical uses , (Such as clinics, laboratories, pharmacies) , Which led to these problems, which is one of the main problems, Which must be studied This problem requires study and analysis, To get to the real magnitude problem And the impact of this problem on city planning , And finding solutions and proposals to reduce this problem, in order to avoid the negative effects arising from them as much as possible .

3. Selecting Private Hospitals Sites In Amman

The problem of private hospitals in Amman shows the absence of a specific methodology in selecting sites, And the absence of a specific law and thoughtful determines its location, So some random overlap appears in these hospitals Service, Which resulted in a range of urban problems affecting the areas juxtaposition the locations of these hospitals, Most of the private hospitals in Amman concentrated in the city center, Or on important service-sites, exception to outskirts of the city or the new expansion areas And some of them located near centers and important sites in the city, Causing a lot of pressure on the numbers and visitors to the area.

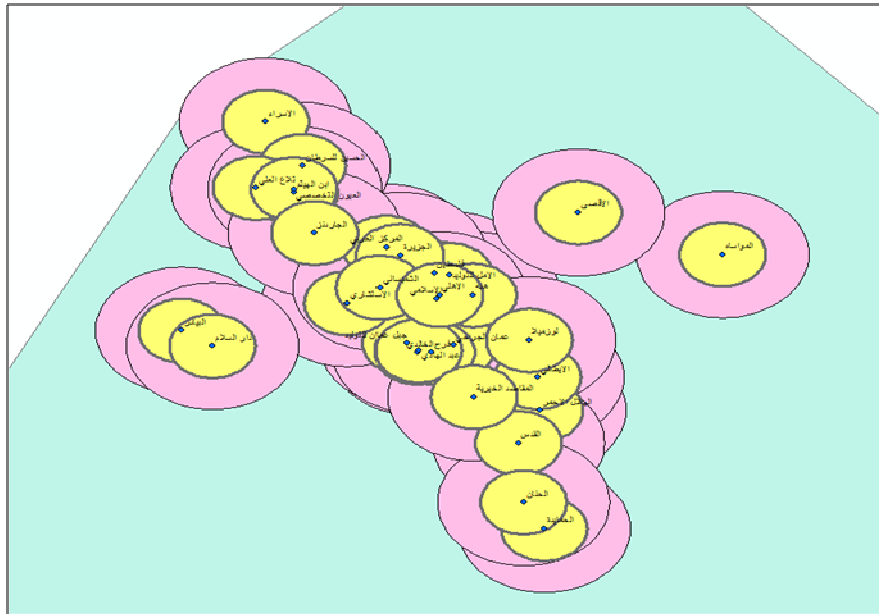


Figure 2. shows the private hospitals gathered in a specific area of Amman and overlap in the scope of service by using the GIS

4. Standards And Local Laws For The Selection Of The Hospital Site And License A Private Hospital

the entity responsible for licensing and private hospitals are in the ' Greater Amman Municipality' in Amman , Where the planning department and the master plan is to study acting any hospital proposal licensed in various regions of Amman .

Private hospitals design differs from public hospitals, Since the public hospitals are proposing thoughtful place within the general plan according to the criteria region, Allocate it a piece of land in and around within the full study and an infrastructure equipped , While private hospitals and locations are placed according to need and the current temporal circumstance, Without previous studies of the place where they can be place in use of residential land area, And depending on the law and legislation Amman Municipality it has reported from organizing private hospitals several cases, Starting the law in 1979 as amended in 2005 and 2014 , , And can be summarized uses Jordanian land laws and the law of the buildings and organizing as follows :

- 1- It may change the use of land in residential areas and allocated for the purposes of establishing housing for another use, such as hospitals or restaurants or hotels after obtaining the approval of the Commission. (Buildings law and regulation ,1979) .

It was found that a change in the use of residential land has led to :

- residential land prices rise in those areas because of changing the nature to the health services area .. Region
 - The region transformed from residential to economic investment area because of rental housing and turn it into a medical assistance to the hospital clinics ..
 - Escape and migration of a large section of the indigenous population of the area due to lack of appropriateness for living and the presence of guests and users coming from outside the region in order to visit the hospital.
- 2- It can be used in normal commercial land regulation area for purposes of the administration buildings for commercial purposes and public services and hospitals after obtaining the approval of the Commission. (Buildings law and regulation, 1979)

Show of this law that could put the hospital in the central business district or local according to the decisions of the Committee, And also change the land use of a commercial nature to a healthy and shops become stuck to the hospital, , Said that this change in land use sometimes leads to high traffic density due to the large number of users in the region for different purposes, Also lead to the creation of a Inappropriate environment is due to the presence of the hospital central commercial places because of what comes out of their nuisances and waste from commercial activities.

5. A Private Hospital License Requirements

The increase in demand for health services in Jordan led to the appear for a large number of private hospitals . To fill the shortfall and the great pressure on public hospitals, So those responsible worked for several years on the development of laws and the general requirements for approval The establishment of private health centers

and hospitals for all specialties, , And laws adopted over the past years, most recently Regulation No. 54 of 2014' Private hospital system' Can be summarized private hospital license terms by this system as follows :

- 1- That is connected in any other building. And it has been modified this paragraph in 2015 to become a "can not be connected to any other building unless the terms of hospital services, medical terms and health..
- 2- The facilities available in natural or artificial lighting and ventilation for use when needed .
- 3- have a parking vehicles, including at least one position per bed and the number of positions fit with number of employees in the hospital. And it has been modified this paragraph in 2005 to "provide one position for every 100 square meters of the private hospital building space.

It is worth noting that the laws did not mention some of the important determinants of the location of hospitals, especially within the layout of the city-wide or specific area and which of these determinants that Buildings System is not required by :

- 1- buildings law did not specify the distance between the hospital system, for example, less distance between the two hospitals nearby.
- 2- The system did not specify the number of buildings the streets surrounding the hospital or kind, for example, the existence of a sub and main streets.
- 3- buildings law did not specify what the nature of the neighborhoods, of private hospital.
- 4- Buildings law did not specify the scope of the hospital system service or the number of people likely to provide the service for them
- 5- those responsible did not propose a possible accommodation for hospitals, it has been standard ,chosen by the investor or landlord or owner of the land and then be studied by the committees.

Based upon the approval or rejection of a proposed license as a case study of each individual is a private hospital as the determinants of the proposed site by a specialized committee.

6. Some Of The Case Studies That Show The Impact Of Private Hospitals In Urban Areas

The selection of some private hospitals in Amman as a case study to show the extent of the negative impact of this hospital site on the surrounding urban areas, and has been selected two hospitals :

- Jordan Hospital, one of the largest private hospitals in Amman and resides in an important site in Amman .
- Khalidi Hospital, one of the first private hospitals, and hospitals where the expansion works have been.

6.1 Jordan Hospital :

Table (1) About Jordan Hospital

Located in	Jordan - Amman - Jabal Amman
Date of inception	1996 In
Numbers of beds	247bed

6.1.1 The Impact Of The Hospital To Change Land Use

Of urban effect monuments in Jordan Hospital obvious area is the change of land use, Where it was the general character of the land department and the organization is a residential organization "residential A" and " residential B" , And some commercial areas, which are located directly on the street, Currently use some of the land has changed because of the presence of the hospital from residential to a commercial organize, Due to the need for commercial services next to the hospital, where about residential buildings owners to invest and provide business services to the hospital users.

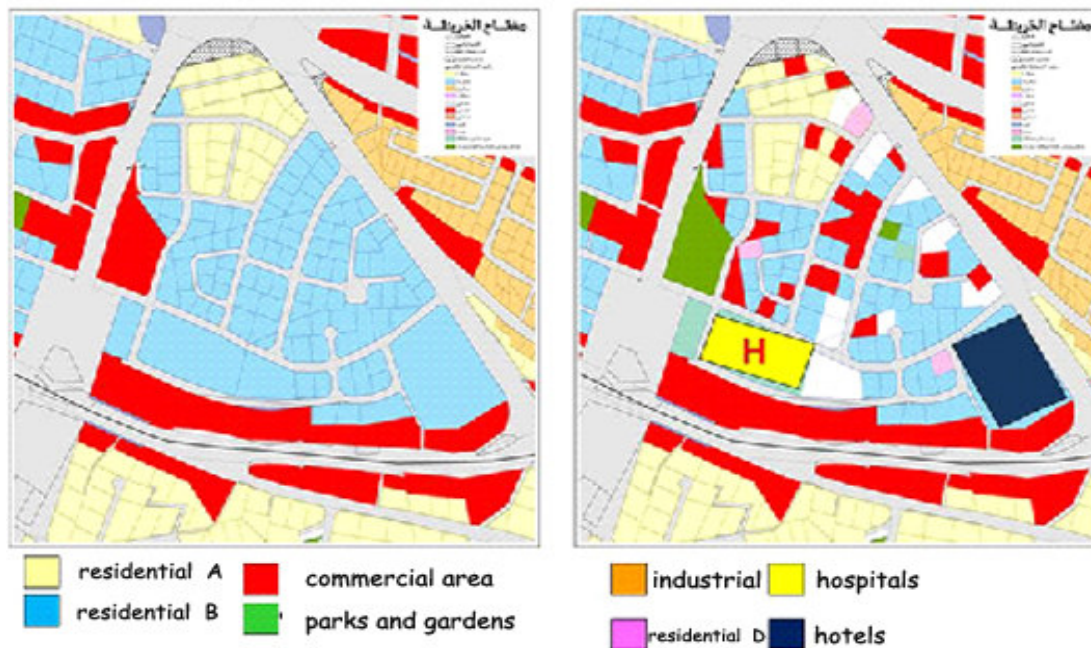


Figure 3. shows the original organizational chart before the existence of the hospital and the change in land use after the existence of the hospital .

6.1.2 Traffic Jams For Car Parking :

The existence of a hospital in the site is not intended and structured to build a hospital reflects negatively on the traffic density in Streets surrounding it and the adjacent residential buildings, , The more of these problems, the lack of sufficient number of parking allocated cars for visitors to the hospital, Which led to the infringement visitors on the places of residential buildings parking, and summed up the traffic and parking problems, including the following :

- 1- The difficulty of the arrival and residential buildings adjacent to the hospital because of the owners of high traffic density in those streets that are suited and were not designed for the existence of a hospital in the area.
- 2- infect visitors and users at the entrances to the hospital and places of cars lining, for residential building owners.
- 3- infringement on the pavements and pedestrian walkways causing annoyance and a mess in the region.

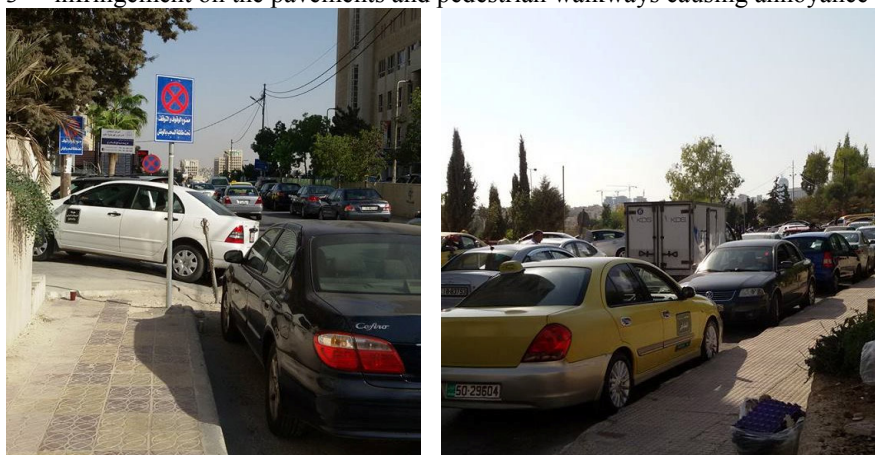


Figure 4. is placed cars lining up on the sides of the streets because of the limited number of parking in the Jordan Hospital .

6.1.3 The Random Gathering Of Medical Support Centers And Clinics Around The Hospital

Because of the hospital as a building permit independent and not taking into account the requirements of the other, such as hospital pharmacies and laboratories and medical clinics These support services spread random gathering is not studied enough around the hospital, and because of it has changed some of the uses of residential buildings and rented out and converted to clinics and medical centers ,These gatherings have :

- 1- traffic problems.
- 2- problems in changing the use of buildings from residential to medical services.

3- problems in the movement of pedestrians.



Figure 5. shows the medical complexes and clinics scattered around the hospital

6.2 Khalidi Hospital

Table (2) About Khalidi Hospital

located in	Jordan - Amman – Zahran
Date of inception	In 1978
Numbers of beds	160bed

6.2.1 Stages Of Expansion In The Khalidi Hospital

Khalidi Hospital is a private hospital in Amman, which received the biggest expansion of operations where it started at the beginning of its establishment with 23 beds and grew until it reached the process of expansion to 160 beds, The size of the large expansion of operations and without thoughtful in its construction site led to a number of urban problems around the hospital ,which directly affected them.

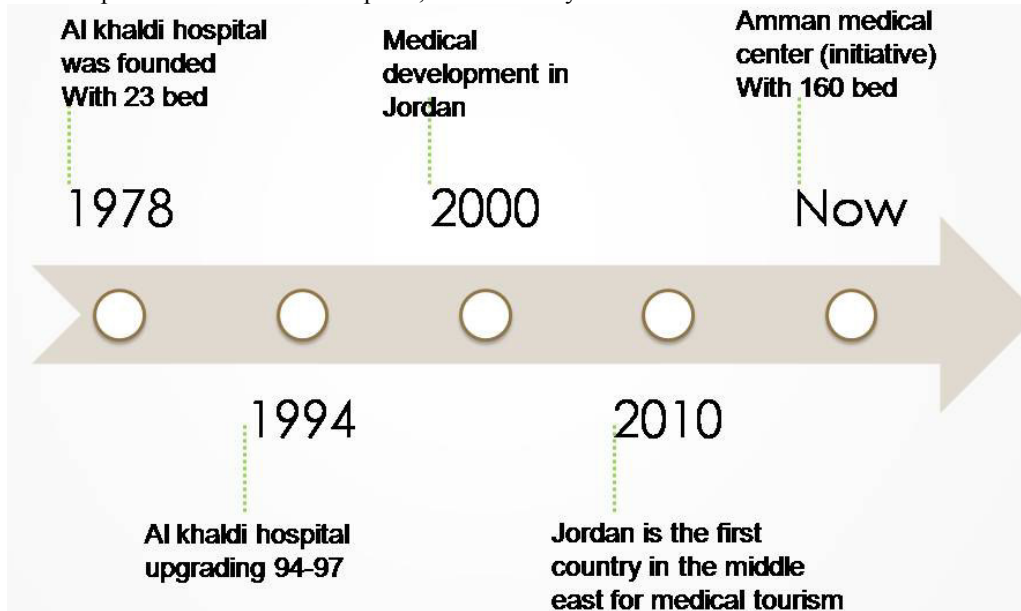


Figure 6. stages of development and expansion in the Khalidi Hospital

6.2.2 The Impact Of The Hospital To Change Land Use

According to the original regulation adopted by Amman Municipality and land regulation department, most Khalidi hospital area was once a residential organization, And when you create the hospital land use change that is near and along the street that connects to the hospital to clinics and offices and commercial buildings and population ratio has fallen dramatically because of high land prices and increasing the number of offices and shops, the hospital's health services, Of laboratories and pharmacies and medical clinics, private, leading to the large presence of visitors from expatriates to the region, And distracting people night and day, prompting building owners and residential land to move because of the discomfort and the aim of financial gain in order to invest in their buildings and turn them into private clinics and commercial offices, And the following figure

shows the organization of territories issued by the Greater Amman Municipality and the organization of the territories in 1978, the Department of planned before the existence of the hospital and shows the change that took place in lands use and the impact that hospital left in the region after it is created .



Figure 6. According to the monitoring of the actual uses of the land and buildings in the area , Khalidi Hospital turned out to be varied between :

- The existence of the hospital building on Ibn Khaldoun Street.
- All buildings on Front Street, which is located by the hospital turned to health services, including health centers and clinics, and offices and laboratories.
- The increase in the presence of hospitals around the hospital Khalidi, by becoming a medical area .

6.2.3 Traffic Jams And Car Parking

The hospital is located in the middle of a residential area turned to area parks and medical clinics, most of the streets surrounding the hospital's narrow streets one-way, Is not designed or equipped to receive a large number of users and visitors coming to the hospitals and clinics around It. The number of parking currently available do not fit, and stages of the hospital expansion and external positions in the region (Pay) service clinics, medical centers l ,not just in hospital. Which resulted in major traffic crises due to the wrong queue of vehicles on the sides of the road and Beat on the sidewalks and parked in places are not intended to stand .



Figure8. A statement of cars lining up on the sidewalks of pedestrians due to lack of enough places to line up - Source: researcher

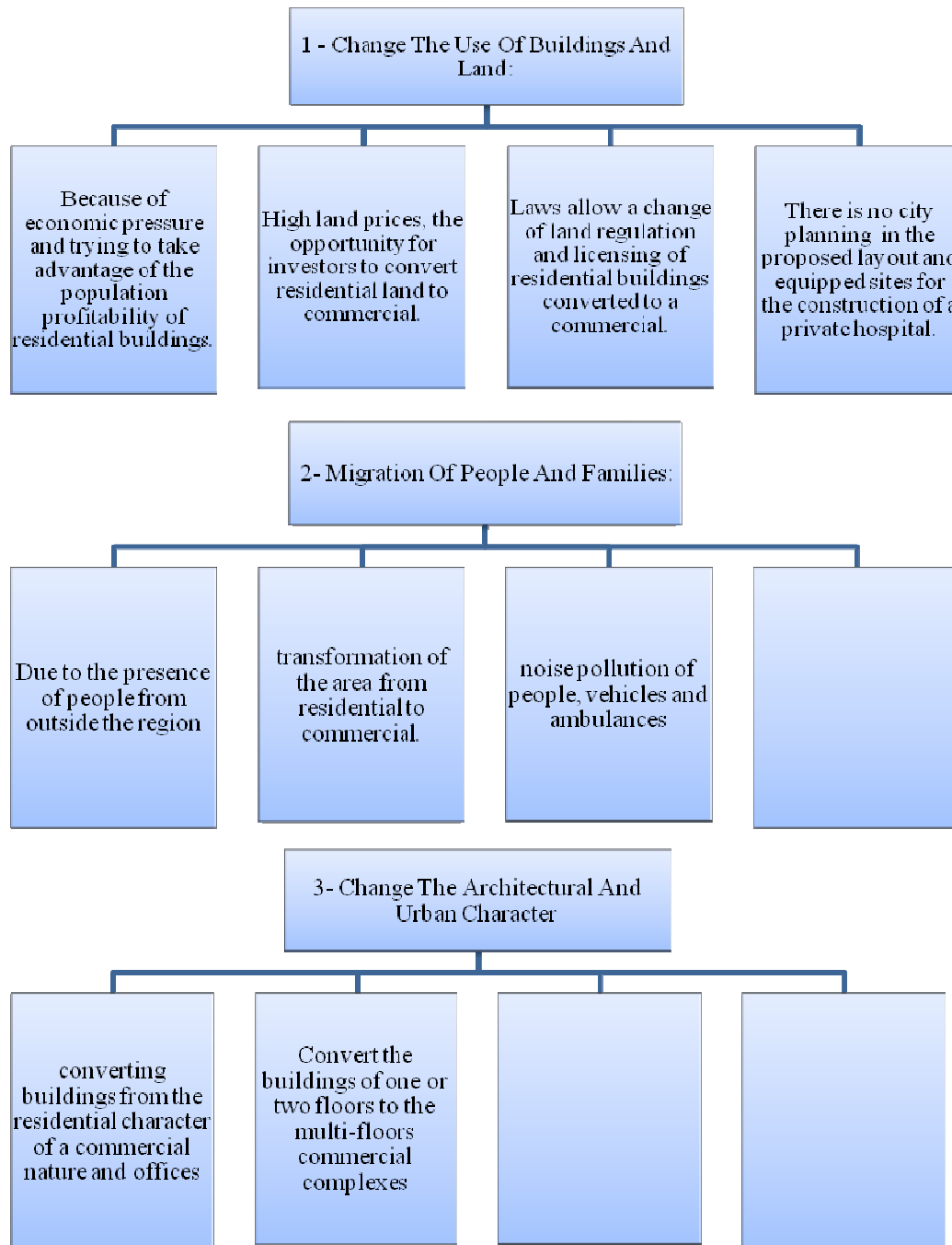
figure 9. shows the cars lining up on both sides of the street due to insufficient positions - Source: researcher

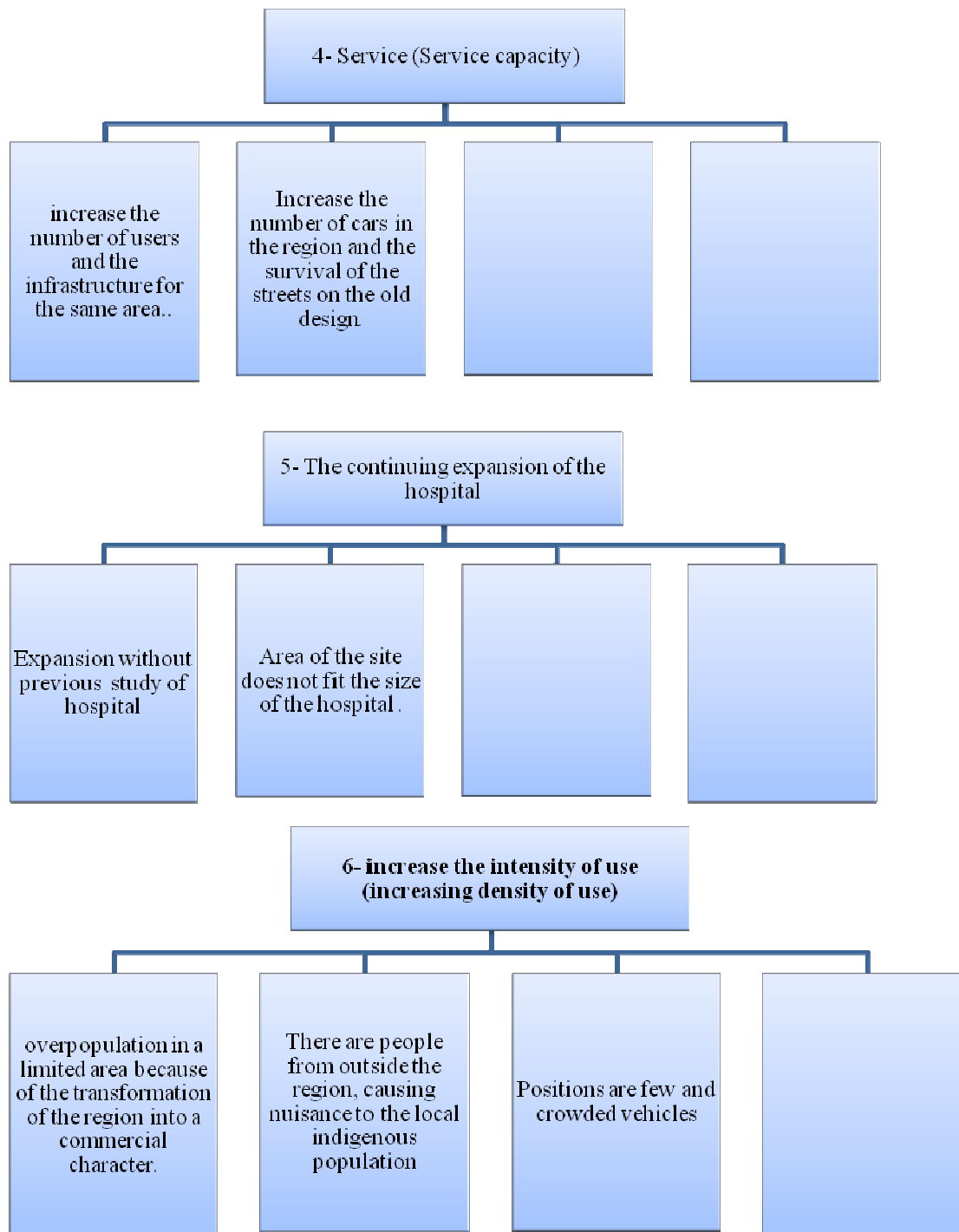
*General observations on the streets and sidewalks surrounding the hospital Khalidi and parking:

- 1- The increase in vehicle traffic during certain hours in the day and generally within hours clinics Time from 9:00 to 4 pm, and specifically during the peak time of 11 am to 2 pm in the afternoon.

- 2- There is ample parking, which makes the vehicle stand at random and wrong on the sides of streets, putting them at. Traffic violations .
- 3- Most of the street in one direction, causing a traffic crisis.
- 4- street systems and specific ratios do not follow appropriate site for a hospital (width, sidewalks, roads trends and paintings)

7. Conclusions :





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