

Contribution to the History of Hospital Facilities Construction Basic Typology of the Regional Hospital Facilities in Kosovo

PhD cand. Bardha Meka,

Faculty of Civil Engineering and Architecture, University of Prishtina
Bregu i Diellit, p.n., 10000 Prishtina, Republic of Kosovo,
bardha.meka@gmail.com

Dr.Sc. Vlora Navakazi,

Faculty of Civil Engineering and Architecture, University of Prishtina,
Bregu i Diellit, p.n., 10000 Prishtina, Republic of Kosovo,
vloranl@gmail.com

PhD cand. Elvida Pallaska,

Institute for Spatial Planning,
10000 Prishtina, Republic of Kosovo,
elvida.pallaska@ks-gov.net

ABSTRACT

Chronologically, the history of hospital facilities in Kosovo began at last decade of XIX and early years of XX century, followed by supplements, intervention and reconstruction through years. Actually, general hospitals in Peja, Gjakova, Prizren, Mitrovica, Ferizaj, Vushtri and Gjilan are identified as regional. University clinical centre of Kosovo belong to the tertiary care, but due to high flux of patients, it is acting as a general hospital too. Above mentioned hospitals were subject of this study. Since there is no proper evidence of systemized data regarding regional hospitals in Kosovo, this study attempts to perform a research on various aspects on this topic. In addition, to classify these hospitals, among others, regarding their construction period, typology, architecturally recognizable structure, spatial organization, by creating a proper data base which will enable serious analyses to be carried out. In this sense, initially all available information about relevant parameters was gathered - desk study and other recordings during the site visits were systemized.

Combined qualitative and quantitative analyses show the trajectory of an ad-hock development of healthcare facilities in Kosovo. The study suggests priorities regarding future intervention, which final goal is better image of hospital facilities in Kosovo

KEYWORDS: regional hospital, 20 century, evidence, quantitative and qualitative analyses

1 INTRODUCTION

Greece, Illyria and Rome were considered to be the centers of medical culture in Europe during antiquity.¹ Asclepius was the ancient Greek god of medicine and he was also credited with powers of prophecy². Cult of Asclepius was largely present in all Illyrian territories, including Dardania (today's

¹ Kosova, Prishtina 2013, pp.367

² Cartwright, M., *Ancient history Encyclopaedia*, , 20 June 2013

Kosovo). Hippocrates became one of the first Greeks to think of medicine as a science, and not part of religion (400's B.C). The word hospital comes from the Latin *hospitium* or a guest-house and originally denoted a shelter for the needy, which later transmuted into a place where the sick could recuperate. While, the temples of Asclepius placed faith in the power of sacred settings and ritual, ancient Roman hospitals were developed for military purposes with plans based on barracks. The military and the religious traditions are consistent threads in the development of hospitals right up to the 20th century. During the medieval and early Renaissance eras, universities in Italy and later in Germany became centers for the education of medical practitioners.³ At the same time, within years 1327-1355, in Kosova date the first hospital situated near the Decani Monastery, Prizren and NovoBrdo.

In 18 century, in France were designed and build several hospitals on pavilion typology. Florence Nightingale introduces this idea in the UK in the mid 19th century. The evolution of hospitals in the Western world from charitable guesthouses to centres of scientific excellence has been influenced by a number of social and cultural developments.⁴ Until the advent of motorised transport, hospitals tended to be sited where populations were concentrated and the prototypes of the modern hospital emerged with 18th and 19th century urbanization. Since the second half of the twentieth century to today, the architectural design of the hospital building has undergone great changes. A humane and humanistic vision of reality, together with the recent technological discoveries and new ways of treatment and care, influence the design choices in hospitals contemporaries.

2 HISTORICAL DEVELOPMENT OF MEDICINE AND HOSPITALS THROUGH THE CENTURIES IN THE TERRITORY OF TODAY'S KOSOVO

Initially all available information about relevant parameters was gathered - desk study and other recordings during the site visits were systemized and analysed.

2.1 Antiquity Period

In Dardania (today's Kosovo), as in other antic territories, worship for the God Asclepius has been confirmed through archeological discoverers. In ancient Separantum in Peja, a stone altar dedicated to the healing Gods, Asclepius and his daughters, Hygias and Panaces, was found. A similar monument was also discovered in Prizren, where besides the aforementioned Gods, a curved snake on a stick was displayed. The so-called Rizotomica writings provide information on the Illyrian Rizotoms, rendering the first descriptions on curative drugs and their application. Amongst Illyrian medical herbs, the most generally known were flag flower, in antiquity found with the name Iris Illyrica, and Valeriana, or by contemporary terminology, *Gentiana lutea*, named after King Gent.⁵

2.2 Medieval period

The hospitals in Kosova date as far as the medieval period. The first hospital was near the Decani Monastery (1327-1355), built by the chief master Dom Vitia Kuci, an Albanian from Kotor. The second one, with 20 beds, was built close to Prizren, in 1342 (Fig.1).

³ Barbara Mann Wall, "*History of Hospitals*", PhD, RN, FAAN, pp.1

⁴ Ibid, 3, pp. 1

⁵ *Kosova*, 2013, pp. 365



Figure 1: Ruins of St. Angeli monastery, Prizren, 1342

A large merchant colony from Republic of Ragusa lived within the town of NovoBrdo, well known for the famous mines. For their needs they build hospitals near churches. Doctors working in these hospitals were primarily of Italian and Albanian origin from Ragusa and Kotor.⁶

2.3 Ottoman period

During the Ottoman occupation, folk healers usually performed the art of healing using traditional practices and herbal remedies. Educated doctors appears somewhere in the nineteenth century who initially did the work in military health services in the field of medicine and pharmacy.

In the territory of Kosovo in 1871, was built the hospital named “Islahana” in Prizren (Fig.2) with 100 beds and one internal doctor. It was designated for the recovery of patients from infectious diseases, recognized as epidemic at that time. This hospital was functional until the Balkan wars in 1912⁷.

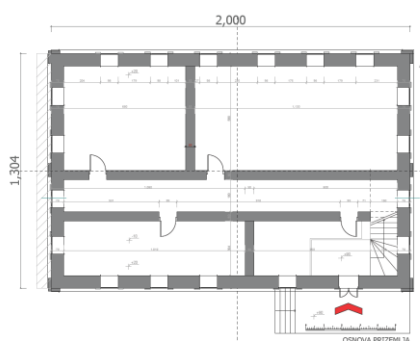


Figure 2: View and plan of hospital building “Islahana“, Terzi mahala, Prizren⁸

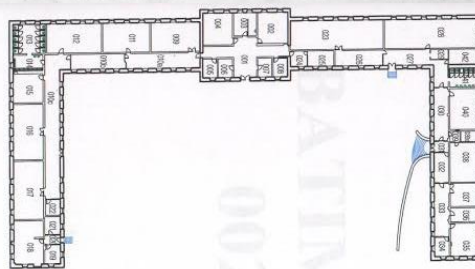
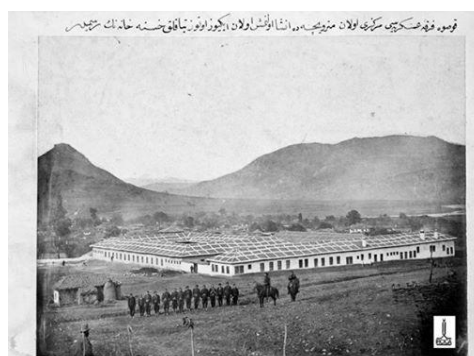


Figure 3: View and plan of the oldest building in the hospital complex in Mitrovica

In Mitrovica was the Hamidije hospital with 150 beds, constructed in 1872. At the end of the nineteenth century (1870), on the outskirts of the town Pristina, a hospital building for Turkish army was built (fig.4). In 1909 was finished and initially the facility served as a gymnasium in Turkish language until

⁶ Ibid 5, pp. 365-367

⁷ Ibid 5, pp. 365

⁸ Gil Konuk, I., „Kosova'da Osmani Mimar Eserleri I“, Ankara, 2006.

1912–1914. After the First World War was converted into the First City Hospital. Since 2006 this building is used by Ministry of health.⁹

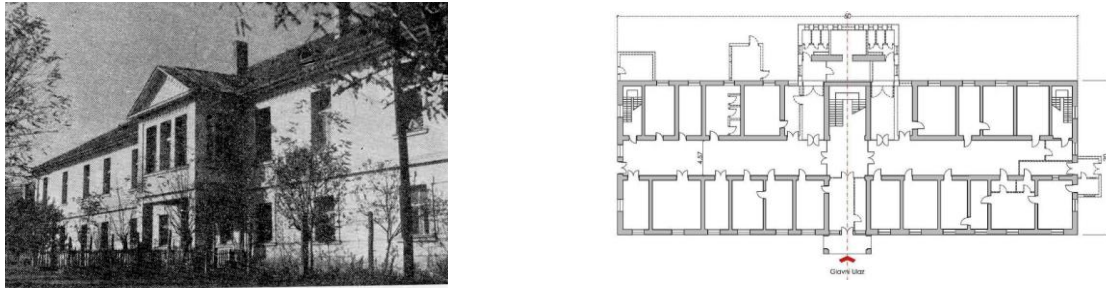


Figure 4: View and plan of the first hospital in Prishtina, 1918¹⁰

Ryzhdie Secondary School was opened in 1874 near the Suzi Celebi Mosque, and ran until the War World II, when it turns into hospital. In its vicinity, other facilities were constructed, creating a hospital complex. In 1979, after catastrophic floods, building was abandoned, and later used as a warehouse. In January 13, 1992 a burning fire overtakes the building. Today only ruins remained.

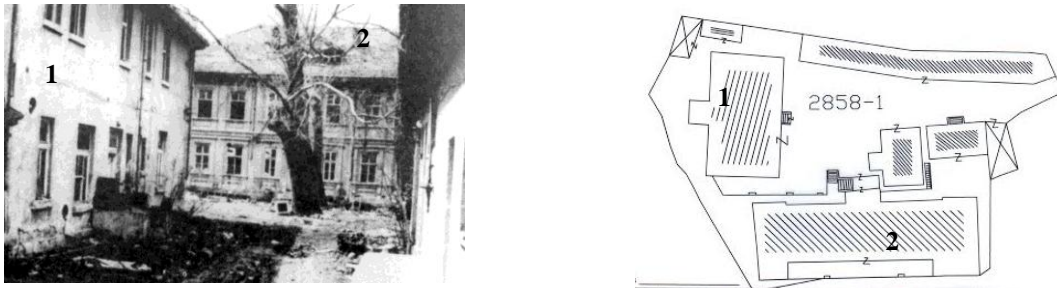


Figure 5: View and plan of the hospital building, known as Rusdiye (1. “Rusdiye”, 1874-1979, 2. Hospital built after 1945)

Mahmut Age Gjinolli House is located in the western part of town Vushtrri, near the river Terstena. Built by the end of the nineteenth century as a residential home-palace, later was used for municipal needs and then was adapted as city clinic. The way of composition, construction techniques, as well as preserved elements of this building, present a mixture of the Ottoman and native architectural style.

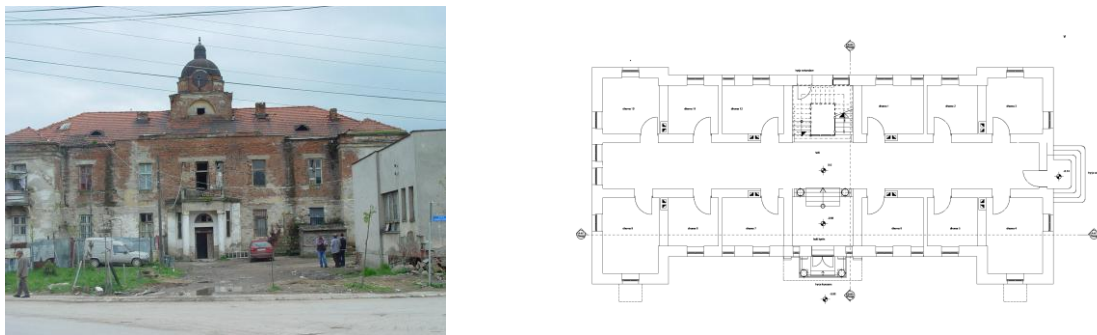


Figure 6: View and plan of the first hospital in Vushtrri¹¹

⁹ Navakazi, V. “The Influence of Western Architecture in the territory of Kosova during the 19 century and the beginning of 20 century, *Architecture of Public Buildings*”. Unpublished PhD, Sarajevo, 2012, pp. 130.

¹⁰ Ibid 9, pp. 130-133

2.4 Period between 1912-1918

From 1912 to 1918, when Kosova was invaded by Serbia, no actions for health protection was undertaken.

2.5 Period after WW1

In 1919, the suburban hospitals in Mitrovica, Peja and Prizren became functional. In 1920, the first nuclei of health services in Peja were created. Inpatient hospital services were developed in private homes (Kajabegoll Tower in Karagaq, Fig.7). In 1925 sanitary and epidemiologic service was established (today the National Public Health Institute, Fig.8)



Figure 7: Kajabegoll Tower in Karagaq, Peja, 1920



Figure 8: The hygienic-epidemiological institute, the first health institution in Peja, built in 1925¹²

In Gjilan, from 1932-1937, in a private house, the first outpatient service was organized. In 1934 the first healthcare clinic was opened. In the same year was set the first inpatient service. After WWII, former military barracks were transformed into the first hospital for internal diseases. (Fig.10). Institutional efforts continued by building Lung Hospital (Tuberculosis) in 1948-1957 and adapting former barracks for pediatrics (Fig.9) in 1958 and Infectious Disease Hospital in 1960.¹³



Figure 9: Pediatric ward, Gjilan, 1958



Figure 10: Internal medicine ward, Gjilan, 1946

On the verge of the Second World War, Kosova had 390 hospital beds available in total, mainly for internal diseases, surgery and contagious diseases. In 1955 two new hospitals were build. A new hospital in Prishtina was completed in 1960 and also one in Gjakova. In 1969/1970 (when the Medical Faculty opened in Prishtina) Kosova had 7 hospitals with 3,128 beds. During 2007/2008, the implementation of

¹¹ Hartimi i projektit për konservim-restaurim të objektit me vlerë historike,2010.

¹² Kosova, 2013, pp. 366

¹³ Mehmet, Sh., *Kronologjia shendetesore e Gejlanit*, 1995

secondary health care in Kosova was performed by 5 medical centers (regional hospitals) and two city hospitals (Ferizaj and Vushtrria).¹⁴

3 ANALYSIS OF CASE STUDIES

General hospitals in Prizren, Gjakova, Peja, Mitrovica, Gjilan, Vushtrri and Ferizaj are identified as regional. University Clinical Centre of Kosova (UCCCK) provides tertiary health care services to all residents of the Republic of Kosova, therefore, it will not be a subject of this study. As case studies, regional hospitals in Prizren, Gjakova, Peja, Mitrovica and Gjilan will be treated.

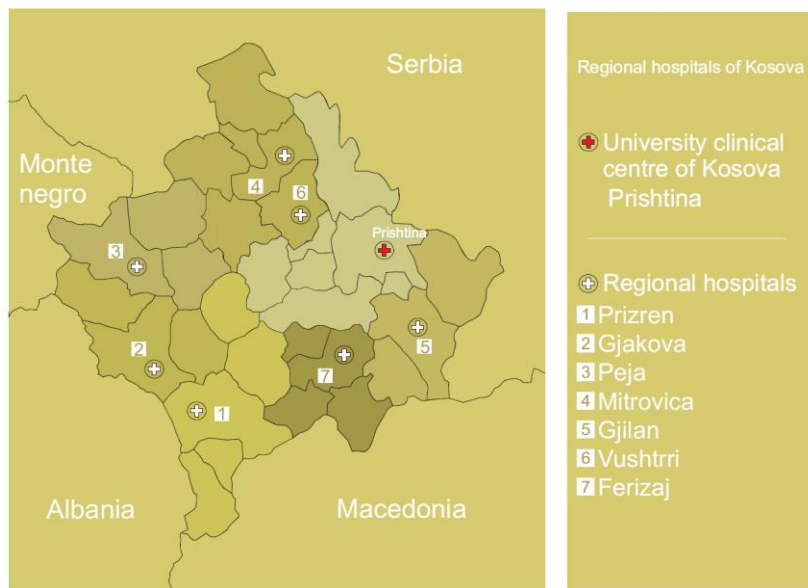


Figure 11: The Map of Regional Hospital buildings in Kosovo (2014)

3.1 Regional hospital in Prizren

Prizren Regional Hospital is located in the southern part of the city. The first building of this hospital was built in 1930, while in 1965 expanded in capacity. Currently, the Medical Centre in Prizren provides secondary health care for approximately 510,000 inhabitants. The hospital has 517 beds and 759 employees. Hospital consists of six medical departments¹⁵.



Figure 12: Regional hospital in Prizren, 2014

3.2 Regional hospital in Gjakova

¹⁴ Kosova, Prishtina 2013, pp. 377

¹⁵ Spitali Rajonal Prizren, <http://www.stetoskopi.com/node/827>

The oldest building in the hospital complex dates back to 1932 as a dispensary. Institutional Medicine in Gjakova began immediately after World War II, respectively, in 1945-46. The new hospital was finalized in 1960, with 130 beds. Gjakova Regional Hospital is located in the south-west part of the city, with a capacity of 470 beds and 558 employees. This hospital serves around 153,000 inhabitants. Health care in the hospital is organized into six departments, in 17 Wards and 21 organizational units-services.¹⁶



Figure 13: Regional hospital in Gjakova, 2014

3.2 Regional hospital in Peja

The Peja Hospital was founded in 1920 and served as a public district hospital. After the Second World War (1947), it had 80 beds available. In 1945, a Lung Hospital with 30 beds was opened in Peja. In 1977 the new hospital is build (surgical department), while in 1979 block of internal department. It is located in the western part of the city. There are 27 wards and units, 433 beds, 11 outpatient clinics and seven diagnostic services, covering five cities with 400,000 inhabitants.¹⁷



Figure 14: Regional hospital in Peja, 2014

3.3 Regional hospital in Mitrovica

The Mitrovica regional hospital came into being in 1936. In 1950 became general hospital of Mitrovica. This health facility is located in Mitrovica North. In 1999, due to new political circumstances, in the city centre of Mitrovica South, the Moroccan hospital was built. (Moroccan KFOR contingent). Adapted and expanded in the years 2009 and 2012, this hospital provides health services for approximately 220,000 residents.¹⁸



Figure 15: Regional hospital in Mitrovica, 2014

¹⁶ Spitali Rajonal Gjakovë, <http://www.stetoskopi.com/node/828>

¹⁷ Spitali Rajonal i Pejës, <http://www.stetoskopi.com/node/825>

¹⁸ Spitali Rajonal i Mitrovicës, <http://www.stetoskopi.com/node/830>

3.4 Regional hospital in Gjilan

The hospital is located in the southwest area of the city. New hospital was built in 1973 in the same location, consisting of departments for: internal diseases, surgery and gynecology. The next new hospital with 100 beds capacity was built in 1986, where gynecology and obstetrics were accommodated.¹⁹ The hospital is currently providing secondary health care for around 250,500 inhabitants. It has 6 department and 450 beds.²⁰



Figure 16: Regional hospital in Gjilan, 2014

4 BASIC TYPOLOGY OF THE HOSPITAL BUILDINGS CONSTRUCTED AT THE END OF XIX CENTURY IN KOSOVA

Hospitals in Kosovo represent a relatively broad spectre of organizational structures of specific content. By classifying them into certain types, will help to highlight questions raised related to this field of insufficient studies. In this sense, the lack of typology studies is evident, as well as the lack of comparative analysis related to established standards throughout developed countries.

Table 1 The table presents data regarding: the year of construction, the number of floors, total area of the ground floor of the whole complex and the total area of the ground floor of the main building.

	Regional Hospital Buildings in Kosova	Year of construction	Number of floors	Total area of the ground floor (cca m ²)	Total area of the ground floor/main building (cca m ²)	Total number of bed places ²¹
1	Prizren	1930,1965,2000s	1-4	9771.15	3952.40	521
2	Gjakova	1932,1945,1960, 1984, 2006	1-4	7484.34	3486.19	470
3	Peja	1920, 1977,1979 1999, 2005	1-5	13333.70	4248.57	433
4	Mitrovica	1872,1931,1950, 2009, 2012	1-3	2570.00	2570.00	151
5	Gjilan	1957,1973,1986, 2000s	1-3	7546.00	1553.00	450

According to the table 1, dynamics of construction of regional hospitals of Kosovo lies in the period,

¹⁹ Mehmet. Sh., *Kronologjia shendetesore e Gejlanit*, Gjilan, 1995.

²⁰ Spitali Rajonal i Gjilanit, <http://www.stetoskopi.com/node/831>

²¹ www.stetoskopi.com/node/824

starting from 1872 until nowadays. Number of floors varies from one to five. Total area of the ground floor of hospital complex differs from min. surface 1553 m², to the max. 13.333m² (in Gjilan, respectively in Peja).

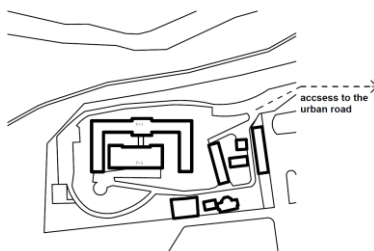
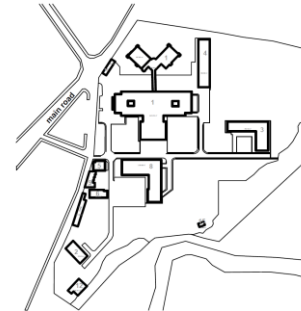
5 CLASSIFICATION OF BUILDING COMPLEX ACCORDING TO THEIR POSITION IN RELATION TO THE SURROUNDING URBAN ROADS



1. Hospital complex within urban roads, The complex is surrounded on four sides by urban roads. (Regional hospital in Prizren)



2. Hospital complex spread along the urban roads
Only one side of the complex is spread along the urban road.
Regional Hospital in Peja (a) and Gjakova (b)



3. Hospital complex situated in a considerable distance from urban road, Access to the hospital is through the internal urban road. (Regional Hospital in Mitrovica)



4. Hospital complex surrounded on three sides by urban roads.
(Regional Hospital in Gjilan)

The entrance point to the settlement of a health care facility must be sufficiently comfortable, providing proper road connection within the hospital complex, to ensure a perfect accessibility.²²

Regarding the position which the building occupies in relation to the urban roads, our analyses show four typologies. In two cases (Prizren and Gjilan), hospital complex is surrounded on all sides by urban roads (Prizren), respectively three sides (Gjilan), by creating more alternatives to access the location. In two cases (Peja and Gjakova) hospital complexes are spread along the road, thus access is limited and can create obstacles for the transport of specific target groups of users (emergency). In Mitrovica, the complex is situated in a considerable distance from urban road, which has its advantages because it uses internal road to access the hospital complex.

²² Terranova, F., *Edilizia per la sanita'*, UTET 2005, pp83

6 CLASSIFICATION OF TYPOLOGY OF HOSPITAL COMPLEX, BASIS FORM, FACADES AND FLOW IN WARD

We did not encounter a case of “compact” typology, but mainly, they belong to the “spread” typology²³, accommodated into two or more buildings. Consequently, difficulties in communication between departments appear; when departments are not connected with indoor structure and lack of proper communication between functional areas with high level of technological complexity.²⁴

Typologies regarding the basis form of the main buildings of the hospital complex were analysed. In this sense, we found a mixture of longitudinal rectangular plan (mainly “T”, “cluster and “I” types). Regarding the relationship between ward and care units, we can meet a combination of horizontal and vertical types.²⁵ As for the flow in ward, they are mostly “two face corridors” (1.2.3,5), then “one face”²⁶ and double corridor (Gjakova and Gjilan). The disorientation created by the intersection of paths between different users, both horizontally and vertically is evident. “The presence of a system of way finding assumes a fundamental role, contributing to the construction of mental maps.”²⁷ Also, there is evident a lack of public spaces.

²³ Giofrè F. (2002), *Innovazione nel progetto delle aree a elevata complessità tecnologica*, in Baglioni A., Tartaglia R. (a cura di) *Ergonomia e ospedale, il sole 24 ore Italia*, pp. 52-56.

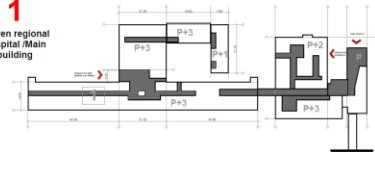

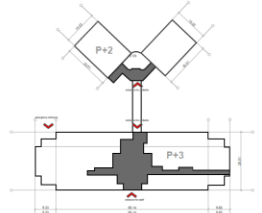
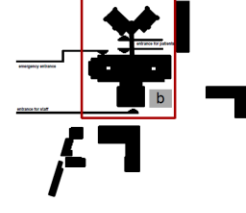
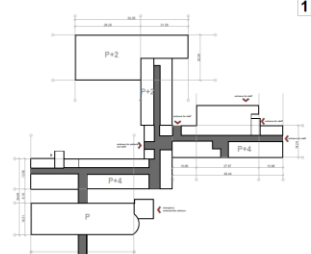


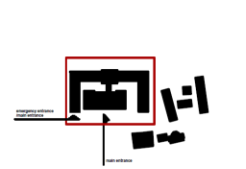
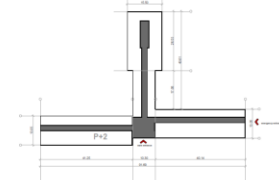

²⁴ Ibid 22, pp 83.

²⁵ Giofrè F. (2002), *Innovazione nel progetto delle aree a elevata complessità tecnologica*, in Baglioni A., Tartaglia R. (a cura di) *Ergonomia e ospedale, il sole 24 ore Italia*, pp. 52-56.

²⁶ Prasad, S., *The Architectural Review; Typology Quarterly: Hospitals*, 27 April 2012, <http://www.architectural-review.com/essays/typology/typology-quarterly-hospitals/8629443.article>

²⁷ Pellitteri, G., *Characteristics of the hospital buildings: changes, processes and quality*, D.P.C.E., University of Palermo.

Table 2 Classification of typology regarding: the hospital complex, basis form and flow in ward

Main buildings	Regional Hospital Complex
<p>1</p> <p>Prizren regional Hospital /Main building</p> 	
<p>2</p> <p>Gjakova regional Hospital /Main building</p> 	
<p>3</p> <p>Peja regional Hospital/Main building</p> 	
<p>4</p> <p>Mitrovica regional Hospital</p> 	
<p>5</p> <p>Gjilan regional Hospital</p> 	

According to analysis of the typology of hospital complex (tab.2) prototypes built before the war (through 1999) throughout Kosovo were identified. There are similarities in bases form and facades, for example, regional hospital in Gjilan, where maternal ward (a) was designed identically as a main building of the hospital in Prizren (b), while the main building in Gjilan (c) resembles the main building in Peja (d).

Also, regarding facades, Prizren and Peja (Fig.17,18) and Gjakova and Gjilan (Fig.19,20) are good examples of similarities.



Figure 17: Regional hospital in Peja



Figure 18: Regional hospital in Prizren



Figure 19: Regional hospital in Gjakova



Figure 20: Regional hospital in Gjilan



Figure 21: New facilities within the hospital complex after 1999, in regional hospital in Mitrovica and Gjilan

After the war (1999), new buildings and annexes built in hospital complexes, beside evident failures in function, regarding their exterior view, did not respect any criteria to be integrated into the hospital complex (Fig.21). There is no attention paid to the notion of fitting a building into its architectural context. It is a philosophy of design that suggests, by implication at least, that it may be better to be discreet than to be original.²⁸

7 CONSLUSION

Health care in areas of today's Kosovo territory appears since early ancient times. First hospitals appear in the middle Ages, mostly built near churches. There is testimony and traces of hospitals built during Ottoman period, mainly in the main cities of Kosovo. They are the facilities of particular values, which should be maintained and preserved as a cultural health heritage. First institutional efforts date back to the late nineteenth century to continue with greater intensity after WWII until nowadays to Regional Hospitals. Initially, their location has been chosen in the periphery of the city, but with the growth of the city it is becoming part of the centre. Certain hospital typologies are defined, regarding the position which the building occupies in relation to the surrounding urban structure, basis form, size and

²⁸ Goldberger P., *Architecture: Building in context*,
<http://www.nytimes.com/1981/12/03/arts/architecture-buildings-in-context.html>

characteristics of internal spatial organization. Regarding the position which the building occupies in relation to the urban roads, our analyses show four typologies. The typology of hospital complex belongs to the "spread" typology, accommodated into two or more buildings. Typologies regarding the basis form of the main buildings of the hospital complex were analysed. In this sense, we found a mixture of longitudinal rectangular plans. As for the flow in ward, they are mostly "two face corridors", "one face" and "double corridor".

Some of identified deficiencies in regional hospitals in Kosovo are due to *ad hoc* interventions in existing facilities, in cases when holistic analysis of the hospital facility is not properly performed. In some cases, access to the hospital complex is limited and can create obstacles for the transport of specific target groups of users. Difficulties in communication between departments appear; when departments aren't connected with indoor structure and lack of proper communication between functional areas with high level of technological complexity. The disorientation is present and it is created mainly by the intersection of paths between different users both horizontally and vertically and undifferentiated entries. There is a lack of general services for patients, staff and visitors. Hygiene condition of each hospital is unresolved despite considerable investment. This can have a direct impact on patient outcomes and recovery times. Besides problems identified, which can be seen as fundamental to future interventions, by observing actual trends, attention should be given also to the aspect the humanization.

Intervention in existing facilities presents a challenge today when hospital has become an increasingly undifferentiated and flexible architecture that can adapt to constant changes driven by innovation and medical practice.

REFERENCES

Atlasi i regjistrimit te popullise Kosove (Kosovo Census Atlas), 2011

Cartwright, M., 2013. Ancient history Encyclopedia

Gil, I.-Konuk. Kosova'da Osmani Mimar Eserleri I, 2006. Ankara

Giofrè F. 2002. Innovazione nel progetto delle aree a elevata complessità tecnologica, in Baglioni A., Tartaglia R. (a cura di) Ergonomia e ospedale, il sole 24 ore Italia, pp. 52-56,

Institucionet shëndetësore, Kosovë, Shtetërore

Kosova, a monographic survey, 2013. Prishtina

Mann Wall, B., History of Hospitals,

Mehmet, R. 1995. Kronologjia shendetesore e Gejlanit

Navakazi, V. 2012. The Influence of Western Architecture in the territory of Kosova during the 19 century and the beginning of 20 century – Architecture of Public Buildings “ Unpublished doctoral dissertation, Sarajevo, pp. 130.

Pellitteri, G., Belvedere, F., Characteristics of the hospital buildings: changes, processes and quality, D.P.C.E., University of Palermo, University of Palermo,

Prasad, S., 2005. Typology Quarterly: Hospitals, The Architectural Review, 27 April 2012, Terranova, F., Edilizia per la sanita'.

Web-1: <http://www.ancient.eu.com/Asclepius/>

Web-2: <http://www.architectural-review.com/essays/typology/typology-quarterly-hospitals/8629443.article>

Web-3: <http://www.nursing.upenn.edu/nhhc/Pages/History%20of%20Hospitals.aspx>

Web-4: <http://www.aia.org/aiaucmp/groups/aia/documents/pdf/aiab087217.pdf>

Web-5: <http://www.stetoskopi.com/node/824>