IDENTIFICATION OF INFLUENCE AREA OF HEALTHCARE FACILITY

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Abstract: Planning for the hospital plays a vital role in nowadays because of increasing population. Location of the urban health Centre is very important factor in planning. Aim of this of this study is to identify the satisfaction level of the public and also accessibility to urban health Centre. First of all it is important to identify the influence area or polygon of the urban primary health Centre. For that the opinion of the public was carried out to identify the urban health Centre which they are using and wish to use. If they are not satisfied with the existing condition, planning proposal should be carried out in their locality.

Keywords: Location of hospital, accessibility, influence area or polygon.

I. INTRODUCTION

One of the basic rights of human being is to get medical services. Good Health confers on a person or group’s freedom from illness - and the ability to realize one's potential. The health of populations is a different key issue in public policy address in every mature society often determining the arrangement of huge society. Health care covers not only medical care but also all features pro protective care too.

According to census 2011, 31.16% population lives in urban area and remaining population lives in rural area. Due to phenomenal growth in the population due to the migration and natural growth results in demand of new hospitals and also it becomes necessary to provide basic services to them. Hospital is one of the most important components of social services. Increasing demand of healthcare and limited resources cause to reorganize and improve healthcare operations.

This research attempts to identify the influence area of the health centre. Also the reachability of the urban health centre is identifying through the public survey. Than results obtain from these survey can be analyse and area from where most of the peoples are coming at that heath centre is identify and also so satisfactory level is also calculated through public survey.

II. BACKGROUND STUDY

The provision of affordable, good-quality, health-care services is a gradually difficult challenge. Due to the complications of health care services and systems, examining and understanding the use, delivery, organization, accessibility, quality, cost, financing, and results of health care services is main to updating government officials, providers, insurers, consumers, and others making decisions about health-related issues (Donald M. Steinwachs;
Ronda G. Hughes,). Health services researchers examine the access to care, health care costs and processes, and the outcomes of health services for individuals and populations. The location studies of health service centres are often concentrated on accessibility. Accessibility is defined as “the relative closeness or proximity of one place to another” (Tsou et al., 2005).

III. STUDY AREA PROFILE
South-East zone is selected as study area, Surat, Gujarat, India. Surat is located on the western part of the India in Gujarat state, along the river Tapi. Population of Surat is as per census 2011 around 4.47 million, density is 13680 persons/Sq Km. Surat has seven zones. As per census 2011, Surat is 8th number most populated city in the India. Surat city is economic capital of Gujarat state. Surat is the eighth largest city and ninth largest metropolitan area of India.

Figure 1 Study area
There are total 41 urban health center in surat city. One fourth of UHCs are in Old city area (CZ) which adds to 9% of total population. This is because services developed in early phase were old city centric. Highest no of urban health center are in central zone. This UHC satisfy
the population in that area. West and South West zone are developing zone so there is less need of health center in that area. Most of the urban health center problem arises in south, north, south-east and east zone of surat city. Mostly people’s lives in south-east zone are workers. They are dependent on industries. Because of the lower income they cannot use the higher level facilities so it becomes necessary to provide primary health centre for them. So main focus of this study is on south-east zone.

![Zone wise distribution of Urban Health Centres](image)

**Figure 2 Zone wise distribution of UHC**

### IV. METHODOLOGY

To identify the influence area of the urban health centre public survey carried out. For that, survey form was made with considering the basic aspects related to urban health centre like: proximity to urban health centre, reachability, infrastructure facility. According to the survey form survey was carried out at different urban health centre and data were collected according to it.

### V. RESULTS

After completion of the survey collected data were interpreted and following results were obtained:

Following figure 3 shows the accessibility of the people at urban health centre & figure 4 shows preferable distance.

![Accessibility](image)

**Figure 3 Accessibility at UHC**

![Preferable Distance](image)

**Figure 4 Preferable Distance**
Now the following figures shows the percentage of population at the urban health centre who have the easy accessibility at the urban health centre. And area from where they are coming are also shown in the figures.

**Figure 5 Mithikhadi UHC**

**Figure 6 Navanagar UHC**

**Figure 7 Umarwada UHC**

**Figure 8 Dindoli UHC**

**Figure 9 Limbayat UHC**

**Figure 10 Parvat UHC**
VI. CONCLUSION

In recent times increase in population leads to provide more basic services to the people with easy approach. Healthcare facility is the basic need of the every people so provision of the urban health centre is necessary within the locality. For effective and efficient utilization of the facility depends on the location of it. So proper location of the health care facility plays an important role in the planning. Location of the urban health centre should be in such a way that could serve a maximum number of peoples.

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