ZONE LOCATIONS FOR
HOSPITALS AND OTHER MEDICAL FACILITIES*

Progress in medical science has developed new types of institutions for the care of the ill and new types of buildings to house these institutions and their families. An intrinsic part of this progress in medical science has been the ever-greater improvement and refinement of techniques of isolation and control of disease transmission. Both of these developments affect the physical relationships between hospitals and medical facilities, on the one hand, and the structures in the three basic zoning divisions of residential, commercial, and industrial uses, on the other.

This information report will examine briefly the developments in medical practices which affect physical relationships between relevant land uses and the current practice with respect to zoning for hospitals and other medical facilities. Emphasis is placed upon the zoning ordinances that take into account the changing concepts of medical care as they affect medical buildings and the provisions which provide standards for these buildings and their sites.

HOSPITALS

Conferences with hospital officials have disclosed a trend in hospital policy which has direct significance for zoning. According to both the Department of Hospitals and the Hospital Council - coordinating body for all hospitals in the city - the hospital of the future will tend to be a general hospital, with divisions for special types of treatment: tuberculosis, mental disorders, and so on. This integration of services reflects the new philosophy of medicine: that the human

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organism is a single functioning unit, to be treated as such; and that help of some sort can be given to everyone (there are no new hospitals for "incurbables"). In accordance with this view, it would seem that no distinction in zoning can or should be made as to general or other hospital facilities.

Harrison, Ballard & Allen, Plan for Rezoning the City of New York (1950)

One of the principal problems in zoning for medical facilities of all kinds is definition and classification. What constitutes a "hospital," a "clinic," a "convalescent home"? Shall all kinds of structures for medical care be considered types of hospitals, or shall they be separated according to function, number of beds, type of patient, or some other characteristic, and on the basis of these characteristics assigned to different zones? The questions of definition and zone location are inextricably linked in zoning ordinances. Those communities that exclude from the general class of hospitals structures for tubercular, alcoholic, narcotic, insane, feeble-minded or contagious-disease patients also differentiate between the zones in which they may be located. In fact, it can be said that the usual purpose of making distinctions between types of hospitals is to regulate their zone location and site.

If a distinction is made between types of hospitals, we assume that there are reasons for making the distinction or that there have been reasons in the past. We assume that it makes (or has made) a difference to the community where hospitals of different sorts are located. We assume that in discriminating between types of hospitals we are accurately sorting out those that are harmful from those that are harmless to the surrounding property. In short, we make functional distinctions between medical facilities.

Thus, distinctions in an ordinance based on "harmfulness" are assumed to reflect a condition of harmfulness existing in the institutions themselves. If an examination of the institutions shows that a condition of harmfulness no longer exists, then the basis for this kind of a distinction no longer is valid. Obversely, if new conditions of harmfulness or incompatibility - resulting possibly from the multifarious developments of technology - have evolved, then these in turn should be reflected in the zoning ordinance regulations.

In the Middle Ages persons with contagious diseases were carried outside the city walls into the open country. Eventually, hospitals were erected beyond the walls for the purpose of isolating and at the same time caring for afflicted persons. For its period, this was sound practice. The means by which diseases were transmitted were not known, and methods of treating diseases were primitive. The only course was to isolate diseased persons - to put space between them and the centers of population.
Although the principle of isolation remains a fundamental method of controlling the spread of disease, the primary unit of isolation has shifted from the building in which the diseased person is housed to the person himself. When it was found that transmission of certain communicable diseases depended upon insect or animal vectors and that other diseases could be "caught" only by prolonged or close exposure to a person ill from the disease, hospitals for the treatment of communicable diseases were sometimes permitted to return to land within the city walls - or the municipal boundaries as they now had become.

The exclusion from cities or from certain districts in cities of sanitariums for the treatment of tubercular patients apparently has followed a similar course of reasoning. From the position of accepting tuberculosis as an ailment that could be lived with, society moved to the view that patients in an active stage of the diseases should be isolated and given special treatment. The therapeutic value of abundant sunlight and fresh air encouraged the growth of sanitariums in rural and semi-rural locations. At some point in the sanitarium movement for the treatment of tuberculosis the belief developed that the sanitariums themselves should, as a public health measure, be isolated and even excluded from an urban area.

Other special hospitals throughout history have been banned from municipal corporations, although their isolation has not been primarily to prevent the transmission of disease. Institutions for the care of the mentally ill are notable examples, where the main reason for their isolation was to see that the noise and violent behavior that reached beyond the institutional walls were far enough distant so that surrounding uses were not disturbed. Perhaps for similar reasons, institutions for drug addicts, alcoholics, or correctional purposes have been barred entirely or restricted to districts which tolerate other uses with "nuisance" characteristics. Or perhaps it has been the long finger of Mrs. Grundy that has singled out these institutions for isolation from respectable neighborhoods.

Communicable Disease Hospitals

In spite of the fact that medical control of disease transmission within a hospital and within its immediate environs is highly effective, a surprising number of local zoning ordinances continue to reflect the erroneous belief of past centuries that distance measured in terms of miles is necessary to protect the community against disease. Hospital staffs are concerned with the clinical isolation of disease within hospitals, with the problem of inadvertent disease transmission by hospital personnel, with the elimination of air-borne infections within hospitals, and with the dangers of cross-infection amongst patients with possible undetected communicable diseases. The environment through which disease can be transmitted is now recognized as being composed of a very small area - except, of course, in instances where an insect vector is involved or where some widely used substance such as milk or water is contaminated. To exclude from any particular location in an urban area a special type of hospital, or a hospital treating special types of cases, solely
on the grounds of danger to the public health because of the dangers of disease transmission is an action contrary to scientific findings on the methods and circumstances under which disease is transmitted.

That the segregation of hospitals treating communicable diseases is unjustifiable has been upheld in numerous court decisions; others have supported such segregation. Some of the cases cited below were concerned with an attempt to prohibit hospitals of a certain type from locating any place within the city limits; others dealt with particular zone regulations.

Of the communicable disease hospitals, tuberculosis sanitariums seem to come in for the most objections, probably because the historic contagious disease hospitals - "pest houses" - are obsolete and because, on the other hand, tuberculosis hospitals are increasing in number as a result of the wider and more effective program of detection.

An early case established the invalidity of an ordinance prohibiting maintenance anywhere in the city of a hospital for treatment of contagious or infectious diseases. In San Diego Tuberculosis Association v. City of East San Diego et al., 186 Cal. 252; 200 P. 393, Supreme Court, (1921), the court declared that such an ordinance was wholly unreasonable and not justified as an exercise of the police power. A few years later, a case arose in South Carolina under a city ordinance that prohibited the erection, maintenance and operation of a tuberculosis hospital within the city limits. This was Law et al., members of Spartanburg County Board v. City of Spartanburg, 146 S.E. 12, (South Carolina, 1929), in which the court found that this ordinance was void because it conflicted with a state act providing for the erection of a tuberculosis hospital in Spartanburg County and for the selection of a site by trustees of Spartanburg General Hospital. The court also found that such a hospital is not detrimental to public health in the city of Spartanburg. The municipality is powerless to prohibit that which the state authorizes, directs or requires. An act done by virtue of legislative authority cannot be declared a nuisance. The statute in question was declared valid, the ordinance invalid.

The case of Jewish Consumptives Relief Society v. Town of Woodbury, 230 App. Div. 228, 243 N.Y.S. 686, which concerned a zoning ordinance prohibiting hospitals for contagious diseases and tuberculosis within the limits of the town, brought out in the decision a number of sensible statements on this general point. It was found that a zoning ordinance cannot exclude a tuberculosis hospital from any part of the corporate area where a general health law authorizes location; it cannot violate state laws which do not specifically relate to zoning, for example, one authorizing locations of tuberculosis hospitals. Such an ordinance forbidding tuberculosis hospitals in locations authorized in accordance with health laws is void.

As long ago as 1926, the court recognized the invalidity of the argument that a tuberculosis sanitarium "contaminates" the surrounding neighborhood. In Jardine v. City of Pasadena, 199 Cal. 64, 248 P. 225, the neighbors sought to enjoin the city
from building a tuberculosis hospital on a selected block of land on the grounds that it violated the zoning ordinance and also because it would constitute a nuisance. Plaintiffs claimed, according to the court's review, that in the opinion of medical experts

there will be danger of the spread of contagious and infectious disease to residents in the neighborhood thereof such as the danger of infection from insects such as flies, fleas, or mosquitos, or from animals such as rats or other rodents, cats, dogs, or birds, or from children or feeble-minded people wandering into the hospital or into dangerous proximity thereto or from escaping patients, or from possible infection of the clothing of nurses, attendants, or from unknown carriers of disease.

In answer to this argument the court said:

Concerning this latter class of evidence it is in our opinion entirely speculative, and amounts to no more than the conclusion of these opinion witnesses that every hospital in which any infectious disorders are treated, regardless of the perfection of its construction and operation in accordance with the most up-to-date principles, methods, appliances, and preventatives, constitutes a menace to public health and a nuisance per se in its relation to dwellers in the vicinity of its proposed location. We cannot subscribe to such a doctrine, since to do so would result in the exclusion of all hospitals treating infectious diseases from cities and other places in the near vicinity of private abode, a conclusion obviously in conflict with the clearest mandates of public policy and the exercise of the police power in relation to public health.

A similar view was sustained in Board of Health v. North American Home, 77 N.J. Eq. 464, when the court refused to issue an injunction against a sanitarium for treating children with tuberculosis of the bone, reasoning that there appeared to be no real danger to the residents of the vicinity and that the mere fear of danger by uninformed persons was not sufficient ground to restrain the sanitarium. Also, in Cherry v. Williams, 147 N.C. 452, 61 S.E. 267, the court refused to restrain a person seeking to erect a tuberculosis sanitarium on his own property situated in a residential section of town on the grounds that there was reasonable fear of danger, holding that proof of danger to the health and life of persons in the vicinity was lacking.

Mental Hospitals

With mental institutions, and even with institutions for the care of epileptics, crippled children, and other physically handicapped persons, segregation is based, not on fear of contamination, but on other kinds of fears which are more difficult to
identify. Fear that the inmates may escape, that their unseemly behavior may be observed from the sites of residences on the edge of the grounds, and that noise of a particularly disturbing type will also offend, are all part of this attitude toward such institutions. In the days when all types and stages of mental, psychological, and even criminal disorders were placed in one institutions, some of these fears may have been justified.

However, diagnosis, classification and differential treatment of mental ailments have shown that the popular stereotype of the violently "insane" from whom society must protect itself is both outmoded and unrealistic. Some persons needing psychiatric care do not need hospitalization. From the standpoint of medical treatment, they are "mental patients." Hospitals caring for them are caring for the mentally ill, and according to some zoning ordinances, should, therefore, not be allowed in certain districts. Some types of mental illness require only short-term treatment, and others - for example, those associated with senility - will continue as long as the patient lives. Because of the legally established procedure set up by most states for the care of the mentally ill, there is a certain amount of segregation of types of cases on the basis of the severity of the ailment and its probable duration. Severe cases, for whom immediate or eventual cure is not foreseen and who must be committed to institutions for their own protection and for that of the community, are usually referred to state institutions for this purpose. The locations of these hospitals are generally selected by the state. Often, an isolated, semi-rural spot is chosen, although there is a growing body of evidence showing that physical isolation also means medical isolation.

The problem of the mentally ill will be with us for a long time. According to Facts and Figures About Mental Illness and Other Personality Disturbances, the patients at present in mental hospitals constitute 47 per cent of all patients in all hospitals in the United States.

It is estimated that there are about 9,000,000 people in the United States suffering from mental illness and other personality disturbances — about 6% of the present population, or about 1 in every 16 people. . . .

In addition to the people who go to mental hospitals, clinics or private psychiatrists for treatment of mental illness or other personality disturbances, it is estimated that about

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The National Association for Mental Health, Inc., in Facts and Figures About Mental Illness and Other Personality Disturbances, groups people needing medical, psychiatric, or other special care in the following manner: (1) the mentally ill; (2) persons with personality disturbances; and (3) the mentally deficient. This is not necessarily an accepted psychiatric classification, but it indicates the range of disorders falling within the general term "mental patient."
30% of all patients who go to general hospitals, and about 50% of all the patients who go to general practitioners are suffering from mental illness and other personality disturbances or physical illnesses associated with mental illness and other personality disturbances.

Furthermore, the number of hospitalized mentally ill is increasing at a more rapid rate than our total population, as the following chart shows:

Source: Council of State Governments

**Figure 1**

**TOTAL UNITED STATES POPULATION AND FIRST ADMISSIONS TO ALL MENTAL HOSPITALS 1937-1949**
A measure of the deficiency of hospital structures accommodating the mentally ill is seen in the estimate stated in *Facts and Figures About Mental Illness and Other Personality Disturbances* that

there is need for about 330,000 more "acceptable" beds in the state mental hospitals. There are only about 420,000 such beds today against a total need of 750,000 according to federal government standards of 5 beds for mental illness per 1,000 population.

The implications for community planning for hospitals arising from these figures go far beyond the scope of this report. It seems clear, however, that a reappraisal of zoning ordinance regulations with respect to hospitals treating mental cases is indicated in many communities.

While cases on hospitals caring primarily for mental patients have not been as numerous as those dealing with communicable disease, opinion has been almost evenly divided on the validity of their segregation. In *Jones v. Los Angeles*, 211 Cal. 304, 295 P. 14, (1930), the District Court of Appeals decided that a zoning ordinance that permitted hospitals for the insane in a thickly populated and densely settled district and at the same time excluded them from less dense districts was discriminatory, oppressive, and void. At the same time, it declared that an ordinance excluding additional hospitals, including institutions for the care and treatment of the insane and feeble-minded, was not an arbitrary and unreasonable classification but that it could not be retroactive in operation. In another instance, *Pilling v. Davidson*, Supreme Court of Nassau County, New York, August, 1941, 30 N.Y.S. 2d 97 (ASPO Newsletter, March, 1942), an ordinance that allowed the board of zoning appeals to grant a special exception for a sanitarium to care for the insane in a residence district was upheld.

Few cases have arisen in recent years regarding mental institutions. However, the essential similarity of care of mentally retarded children and care of convalescent cardiac children was inferred in *Rogers et al. v. Association for Help of Retarded Children, Inc.* , Supreme Court, Appellate Division, April 7, 1953, 120 N.Y.S. 2d 329 (5 ZD 102), where the transformation of a convalescent home for cardiac children to a school for the care of mentally retarded children was held to constitute a continuation of a previously existing nonconforming use.

**Integrated Medical Care**

In addition to these negative considerations which indicate that the functional reasons for the exclusion of "undesirable" hospitals no longer exist in reality, there are strong positive considerations which indicate that our thinking about hospitals and their location should be re-examined. These are summed up in the statement quoted at the beginning of this section—namely, that "the hospital of the future will tend to be a general hospital, with provisions for special types of treatment."
This statement is borne out in a number of writings by experts in the hospital field, a few of which will be referred to here.  

For example, the Hospital Council of Greater New York, in its Master Plan for Hospitals and Related Facilities for New York City, made a series of recommendations for the types and quantities of physical facilities required within its geographical jurisdiction. The inventory of existing facilities followed a classification corresponding to the types of hospitals in existence. Recommendations for future facilities followed the same classification in terms of types of illnesses or beds for these illnesses. As will be seen, the Council recommends a high degree of integration of special services with general hospitals.

**General Care Hospitals.** General care includes all medical and surgical specialities, and it may best be defined by enumerating those facilities which are not included. Such services are those for

1. Convalescent patients
2. Patients with long-term illnesses
3. Acute communicable diseases
4. Patients with tuberculosis
5. Patients with mental disease.

It is interesting to note, in the light of general zoning practices which have excluded hospitals for alcoholics, that the Council believes that "facilities for the care of alcoholic patients without psychiatric complications should be considered in the field of general care; those with such complications are provided for in the facilities for patients with mental diseases."

In its recommendations for the types of facilities classified outside of general care hospitals, the Master Plan report reflects the philosophy enunciated in Plan for Rezoning the City of New York, that "the human organism is a single functioning unit, to be treated as such." Specifically they urge that special facilities should be carried on in close connection with a general hospital. With respect to convalescent patients, the report concludes that

since approximately 70% of the patients requiring services in convalescence are those recovering from acute illness or injury in a general hospital, and since medical care is required for most of the patients, the master plan recommends that these beds be established in connection with general hospitals.

Similarly, with respect to facilities for patients with long-term illnesses, the report says that:

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2See BIBLIOGRAPHY for complete bibliographical references.
because over 50 per cent of the patients to be provided for in the 2.0 beds per 1,000 population will require active medical care, and the remainder medical care incident to custodial care, the Master Plan recommends that these facilities be established as units of general hospitals.

Facilities for acute communicable diseases:

Acute communicable diseases are those which are contagious and require isolation for the general welfare of the public. They occur mostly in children and are most prevalent during the early months of the year. Facilities for acute communicable diseases are never fully utilized throughout the year. The incidence of these diseases, and consequently the need for facilities for their care, is steadily decreasing. Extension of home medical and nursing care will undoubtedly further reduce the need for hospital facilities.

The care of acute communicable diseases should be the responsibility of the general hospital. Separate institutions for these patients are not indicated.

Insofar as facilities for patients with tuberculosis are concerned, two general types of hospitals are recognized as being needed. Procedures for early diagnosis must be carried out in general hospitals if early recognition of the disease is to be accomplished. Further, the Hospital Council believes that treatment during the initial stage or treatment of a surgical nature should be available in the general hospitals. The remainder of the treatment may be provided in hospitals established primarily for the care of these patients. "These hospitals should be established within the city, or just outside the city limits. Inaccessible hospitals are not indicated and reduce the opportunity for rendering complete care."

Regarding facilities for patients with mental disease, the Master Plan points out that

The care of psychiatric patients extends beyond those admitted to institutions for mental disease. Many individuals require psychiatric care and use of special facilities in addition to those who must be committed to institutions for their own protection and the general welfare of the community. All patients requiring psychiatric care do not require admission to a hospital. Extension of services for the ambulant patient will materially alter the needs for bed facilities. The Master Plan excludes facilities for mental defectives and for epileptic patients without psychosis.

There is ample evidence from other sources that the medical profession now believes that special ailments should have the benefit of treatment in a well-equipped
and adequately staffed general institution. A number of these references are listed in the bibliography at the end of this report. For example, Carl Menninger, in an article entitled "Future Psychiatric Care in Hospitals," states his conviction that psychiatric hospitals of the future will not be detached from the strictly medical and surgical hospitals, and that psychiatry has its place not only in medicine and surgery, but in every specialty of medicine. That care for the chronically ill should be integrated with the general hospital is propounded in an article by E. M. Bluestone, entitled "The Chronics: They Belong in General Hospitals." In "Tuberculosis Control in General Hospitals," the authors claim that there is no valid reason for not including the diagnosis and care of pulmonary tuberculosis in general hospitals and clinics. Climatic treatment of tuberculosis is recognized as inadequate, and the advances of surgical therapy have emphasized in recent years the necessity of centralizing the treatment of this disease in urban communities rather than in outlying districts.

Thus we must conclude that the functional trend in hospital care is the treatment of all types of medical cases in general care hospitals - with a continuation of special hospitals where their need is indicated. If this trend of medical integration is placed alongside the knowledge that communicable disease, and mental and other special hospitals or facilities are no longer inimical to the welfare of the community, then we see that there is no valid reason for distinguishing between hospitals classified by types of patients for purposes of differential zone location.

Zoning Considerations

If there no longer is justification for making a zone distinction between hospitals on the basis of types of medical services offered, then two questions arise: (1) Is there another classification we should observe for the purpose of zone location? and (2) The proper zones having been decided upon, are there still within those zones standards that should be maintained with respect to physical structures and the activities carried on within them? In brief, are there new or heretofore unrecognized functions of hospital structures that should be reflected in zoning ordinance provisions?

One approach to answering these questions is to identify and examine medical facilities and the structures that commonly make up these facilities. For the purposes of the zoning plan, this should be a fruitful approach, for after all, zoning is primarily concerned with the height, area, and use of buildings.

The Public Health Service of the Federal Security Agency has developed a functional classification of health facilities which is also particularly appropriate for zoning purposes. This classification is, therefore, reproduced in its entirety from

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"See BIBLIOGRAPHY."
HOSPITAL. An institution providing health services primarily for in-patient medical or surgical care of the sick or injured and including related facilities such as laboratories, out-patient departments, training facilities, central service facilities, and staff offices which are an integral part of the facility. Types of hospitals include general, mental, chronic disease and allied special hospitals such as cardiac, contagious disease, maternity, orthopedic, cancer, and the like.

MEDICAL CENTER. A group of facilities providing health services including medical research and other related facilities such as laboratories, in-patient and out-patient departments, training facilities, central service facilities and living quarters operated as an integral part of the facility.

PUBLIC HEALTH CENTER. A facility primarily utilized by a health unit for the provision of public health services, including related facilities such as laboratories, clinics, and administrative offices operated in connection therewith.

MEDICAL AND DENTAL CLINIC. (See page 26 following)

HEALTH UNIT OFFICE BUILDING. Office buildings, financed by public funds and constructed for exclusive use by state or local health units.

SCIENTIFIC LABORATORY. A facility operated for the primary purpose of performing medical or dental research, diagnostic, testing, analytical or clinical work having a direct relationship to the provision of health services. Examples of such scientific laboratories include, but are not limited to, those primarily engaged in medical research, or in the fields of Radiology, Hematology, Serology and Immunology, Allergy, Biochemistry, Basal Metabolism, Microbiology, Parasitology, Pathology, Histology, Cytology, Toxicology, and Pharmacology, and the like. Laboratories engaged in production controls or in the manufacture of products for commercial sale or distribution are not considered to be health facilities.

NURSING HOME. (See page 28 following)

REHABILITATION CENTER. A facility operated for the primary purpose of assisting in the rehabilitation of disabled persons and in which a coordinated approach by many professions is made to the
physical, mental and vocational evaluation of such persons and to
the furnishing of such services as are required. The term
"rehabilitation centers" includes special rehabilitation centers for
the blind, sometimes called "adjustment centers." Examples
include institutes for the crippled or disabled, health camps,
health and rehabilitation centers, curative workshops, and others
which are operated primarily for rehabilitation purposes. Schools
for the Blind, Deaf, etc., are a responsibility of the Office of
workshops, which have the primary purpose of enabling persons to
earn money, are the responsibility of the Construction Controls
Division, National Production Authority.

SCHOOL OF NURSING. A facility, ordinarily affiliated with a hospital,
operated for the primary purpose of training nurses, including such
schools when university-owned.

MORGUE. A facility, usually publicly-owned and operated, where
dead are temporarily kept for disposition, identification or autopsy
purposes. Mortuariai facilities, such as Funeral Homes, are the
responsibility of the Construction Controls Division, National Pro-
duction Authority, Washington, D.C.

SANITATION SYSTEMS. Refuse disposal systems, such as sanitary
land-fill operations, publicly-owned incinerators, free-standing
incinerators and dumps, regardless of ownership.

Water service facilities such as water supply, sewer construction,
and drainage programs are the responsibility of the Water Resources
Division, National Production Authority, Washington, D.C.

HOSPITAL AND OTHER HEALTH FACILITY HOUSING. Residential
structures connected with hospitals and other health facilities,
such as staff residences, nurses' homes, dormitories, and quarters
for employees.

With the exception of the first three definitions (hospital, medical center, and pub-
lic health center) these facilities may appear in any combination within any hospital,
medical center, or public health center. Thus, the size range of hospitals or med-
ical centers is extremely broad. A general hospital may have 50 beds, 200 beds, or
a thousand or more, depending upon the population size of its service area. A
medical center may have 1,000 beds as in the three hospitals of the hospital center
planned at Ponce, Puerto Rico, or 5,000 as in the six hospitals of the Chicago
Medical Center. A hospital may or may not have a resident training program,
whereas in the medical center, teaching and training are an essential element. A
hospital may be one building, or it may be several buildings and still not constitute
a center. A medical center, on the other hand, is essentially a group of buildings, usually consisting of a general teaching hospital, a medical school, and one or more special hospitals.

For the purposes of zoning ordinance regulations, we see that there is a vast difference between the small, 50-bed hospital, contained in one unit, surrounded by wide, landscaped grounds, and the recently evolved medical center on several hundred acres of ground. Whereas the unitary hospital may be entirely compatible with uses in a residential district, the medical center, because of its large size and the diverse types of land-use that compose it, may constitute a special district in itself.

Although the Public Health Service definitions of health facilities give some idea of the scope of special land uses that can be expected in a hospital or medical center, it may be useful to explore tentatively some of the implications for zoning arising from their existence. One type of scientific laboratory, for example, is the blood bank - a standard feature in many hospitals. In at least one large American city, this seemingly innocuous feature has unexpected "nuisance" characteristics. Being the blood bank for a region, it attracts large numbers of persons who, viewing their blood as a commodity, are not the type of individuals to be filtering through a residential district on their way from a transportation terminal to the blood bank. Animal laboratories, sometimes housed in special animal buildings, are another feature to be considered.

Other aspects of the hospital plant which may adversely affect nearby residential uses are public restaurants, laundry operations, and hospital power plants. Ambulance entrances and delivery drives and areas are obviously undesirable "neighbors." Traffic generated by the hospital should have a minimum adverse effect on the surrounding neighborhood. Off-street parking is, of course, an elementary consideration, but one of the most important.4

If the hospital or hospital group has a program of resident training for physicians, a nursing or medical school, then the facility in part takes on the characteristics of a university campus, and zoning regulations for dormitories may be appropriate. Out-patient programs provide another complication with respect to traffic and public transportation facilities.

The considerations that have been briefly discussed here may be augmented by the reader who has had experience with land-use planning for hospitals. However, these considerations alone lead us to the conclusion that the matter of zone location and

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4Off-street parking recommendations as developed by David R. Levin in Zoning for Parking Facilities, Highway Research Board (1950) are reproduced in the Appendix. These cover hospitals, sanitariums or convalescent homes, medical or dental clinics, and welfare institutions.
site standards for hospitals is a very complex one. Perhaps one solution will be in
the eventual development of performance standards for hospitals - quantitative
measurements of the effects of the legitimate activities of hospitals. In the mean-
time, it should be possible to determine objectively what constitutes desirable,
minimum lot sizes or acreages for different hospitals; what constitutes desirable
lateral distances from other structures (both from the standpoint of the other
structures and from the standpoint of the hospital); and what lateral dimensional
standard should be observed for access drives and service areas.

Site Criteria

Before passing to an analysis of existing zoning ordinance provisions for hospital
regulation, a brief enumeration of locational needs for hospitals may serve to round
out the picture on hospital location. There is widespread acceptance, among hos-
pital planners, on the criteria for site selection. The following statements were
excerpted from Design and Construction of General Hospitals, published by the
Modern Hospital Publishing Company, Inc., Chicago. Some of these may be modi-
fi ed where a medical center is the unit being planned instead of the unitary hospital.

1. Accessibility. The accessibility of a site for ambulant and non-
ambulant patients, visitors, staff members, and personnel, and for
the delivery of supplies, must be considered. The modern hospital
designed to handle acute cases should be reasonably accessible to the
center of community activity, but located in an uncongested district
so that unnecessary noise and parking and traffic problems can be
avoided. . . .

2. Public Utilities. The hospital should be situated near adequate
sewerage, water, electric, telephone and gas facilities. If these
utilities are distant from the site, the expense of installing extensions
and connections may be excessive. . . .

3. Nuisances. The site chosen for the hospital should be free from
undue noise, such as that emanating from railroads, freight yards,
main traffic arteries, schools and children's playgrounds. It should
be removed from industrial or topographical conditions which would
encourage breeding of flies, mosquitoes or other insects. The site
should not be exposed to smoke, foul odors or dust, or so located that
prevailing winds from a nearby industrial development will bring smoke
or objectionable odors to the hospital. Proximity to a cemetery is
undesirable for a hospital site. Exposure of the building to adjacent
fire hazards is to be considered with these other factors.

Not only must such nuisances be avoided at the time of construction,
but consideration should also be given to any probable future develop-
ments of an objectionable nature in the immediate area.
4. **Orientation and Exposure.** The site should be chosen with consideration for proper orientation of the structure so that every patient's room will receive sunlight at least during part of the day and proper advantage can be taken of prevailing winds in the interest of natural ventilation.

5. **Cost.** The initial cost of the site naturally is important, but the total cost including the expenditures required to make the site suitable for a hospital structure must be considered.

6. **Dimensions.** The dimensions of the site will be affected by the type of plan adopted. Obviously, a multi-story building can be placed on a site smaller than that required for a one-story building of the same capacity. In any case, the plot chosen should allow for future expansion of at least 100 per cent in building area, and still retain attractive grounds and obviate objectionable appearances of overcrowding.

Thought may be given to the possibility of subsequent provision for communicable disease, psychiatry and other special services. On the other hand, too large a site results in costly upkeep. Recreation areas are not required for patients of general hospitals, but some provision is necessary for tennis courts and other recreational facilities if nurses or internes are to be housed.

Sufficient space must be available to accommodate the various traffic lines coming to the institution and ample parking space must be provided. The new hospital, if at all possible, should be built at some distance back from the sidewalk line. Within limits, the farther back the building is located, the better.

7. **Topography.** Ideally, the building is best located on relatively high ground in order to take advantage of natural drainage. The elevation should not be so great, however, as to be a handicap to ambulant patients who approach on foot.

8. **Landscaping.** The psychological effect of attractive grounds on patient welfare, public good-will and staff morale cannot be overestimated.

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**Zoning Ordinance Provisions**

It is encouraging to note that nearly as many zoning ordinances now reflect the functional needs of hospitals and the protective needs of the neighborhood as do those that simply relegate hospitals to a mixed use or industrial zone. Where communities
have evaluated the merits of hospital location, they have also considered what steps should be taken to protect the surrounding properties. It is believed, however, that we have just made a start in this direction of correlating zone location, site location, neighborhood protection, and the needs of the medical facilities involved.

A. Hospitals in the Big Ten

It is commonly known that hospitals tend to locate in centers of population and that it is in the metropolitan areas where the vast medical centers and the wide variety of medical services are found. This being the case, it may be fruitful to examine the zoning ordinances in effect in the ten largest cities in the United States to see how health facilities have been accommodated in the areas of their highest incidence.

For purposes of analysis, the ordinance provisions of the ten largest cities have been arranged in order of permissiveness, i.e., those that are least restrictive in the matters of zone location and type of facility are placed higher on the list than those that are more restrictive in these respects. The range of zones in which hospitals of different types may locate is indicated in each case.

New York, New York (Amended to December 31, 1944). Hospitals and sanitariums are specifically permitted in residence districts. No distinction is made as to type of hospital or sanitarium. A list of uses prohibited in business and subsequent districts does not mention hospitals. Presumably, then, hospitals may locate in any district in New York City.

The Plan for Rezoning the City of New York recommends that this policy be continued: "The criteria for hospital location being parallel to those for dwellings, and the importance of a good environment being certainly no less for the sick than for the well, it seems reasonable that zoning should admit hospitals to Residence Districts of any type."

Baltimore, Maryland (1931). This ordinance is prohibitory throughout, and hospitals are nowhere mentioned among prohibited uses. Presumably, they may be located in any district in Baltimore.

Boston, Massachusetts (Revised November, 1948). A hospital, home for the aged, convalescent home, or sanitarium may be located in single residence districts if the health commissioner and the building commissioner approve the location as being not detrimental or injurious to the residential character of the neighborhood, and after public notice and hearing. No distinction is made between types of hospitals. These facilities continue as permitted uses through the local business district. Commencing with the general business district, a list of prohibited uses fails to mention hospitals. Apparently, they would not be prohibited from locating in commercial and industrial districts, although the intent of the ordinance seems to be to encourage their location in residence districts.
Philadelphia, Pennsylvania (Amendments to September 1, 1947). Hospitals, sanitarium, eleemosynary and public institutions (other than correctional), provided any such use is not prejudicial to the public health or welfare, are permitted in all residential districts. No distinctions are made as to types of hospitals or sanitariums. In residential A and B districts, they shall be located at least 75 feet from any adjoining lot or lots; in residential C districts they shall be located at least 50 feet away. This is a "pyramid" type ordinance, and hospitals are not prohibited in any of the succeeding districts.

Washington, D.C. (February, 1950). Hospitals, sanitariums, and clinics for human beings are permitted in the residential "A," "B," "C," and "D" area districts. (Falling under the area districts are sub-categories of "A" restricted-area, "A" semi-restricted-area, and "B" restricted-area districts which are to be construed as use districts. These latter are essentially residential, and do not permit the institutional uses allowed in the residential "A," "B," "C," and "D" area districts.) No distinction is made as to type of hospital.

Los Angeles, California (September 6, 1952). A pattern of hospital location, based on the one hand upon type of district and in the case of residential districts upon density, and, on the other, on type of hospital and number of beds is worked out in some detail in the Los Angeles ordinance. This correlation, resulting in rather complex ordinance requirements, is particularly appropriate for a municipal corporation which embraces a wide variety of land uses and a wide range of residential densities.

In our list of ordinances, this is the first instance where health facilities for the care of contagious, mental, or drug or liquor ailments are separated from other types of hospitals. (Cleveland, Chicago and St. Louis also make this distinction.)

See TABLE I on following page.

Cleveland, Ohio (Amended to September, 1947). Hospitals and sanitarium, including orphanages, nursing, rest, convalescent, old folks' and similar "homes" and not primarily for contagious diseases nor for the care of epileptics or drug or liquor patients nor for the care of the insane or feeble-minded are permitted in "A," and "B" dwelling house districts. "Charitable institutions not for correctional purposes" must be located not less than 50 feet in an A-dwelling house district, and 40 feet in a B-dwelling house district, from any adjoining private property in the same district not used for similar purposes. Board of appeals may vary the distance after public notice and hearing.

Same uses are permitted in apartment house districts; designated distance must not be under 30 feet.

Hospital, sanitarium, convalescent, rest or nursing home and orphanage or home for the infirm and aged permitted in Retail Business district. Since the notable
<table>
<thead>
<tr>
<th>District</th>
<th>Type of Facilities</th>
<th>Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>A-1 Agricultural</td>
<td>Hospitals or sanitariums excepting clinics, and</td>
<td>Minimum lot area of 5 acres, minimum average width of 300 feet. Hospitals and</td>
</tr>
<tr>
<td></td>
<td>hospitals or sanitariums for contagious, mental, or</td>
<td>sanitariums not exceeding 50 beds may be located on lot not less than 2 acres.</td>
</tr>
<tr>
<td></td>
<td>drug or liquor addict cases.</td>
<td>Buildings must be at least 50 feet from all lot lines.</td>
</tr>
<tr>
<td>A-2 Agricultural</td>
<td>Hospitals or sanitariums (with above exceptions).</td>
<td>Less than 50 beds.</td>
</tr>
<tr>
<td>RA Suburban</td>
<td>Hospitals or sanitariums (with above exceptions).</td>
<td>Minimum lot area of 2 acres.</td>
</tr>
<tr>
<td>R5 Multiple dwel-</td>
<td>Hospitals or sanitariums (with above exceptions).</td>
<td>Lots must have 2 acres, provided that buildings with a capacity of over 50 beds</td>
</tr>
<tr>
<td>dwelling</td>
<td></td>
<td>shall have an area of 5 acres or more. The yard requirements following pertain:</td>
</tr>
<tr>
<td>C1 Limited</td>
<td>Hospital, sanitarium or clinics (with the above</td>
<td>The height, yard, and area requirements of the district shall be observed.</td>
</tr>
<tr>
<td>commercial</td>
<td>exceptions).</td>
<td></td>
</tr>
<tr>
<td>C2 Commercial</td>
<td>Hospitals or sanitariums (no exceptions listed).</td>
<td>Ditto</td>
</tr>
<tr>
<td>C4 Commercial</td>
<td>NOT PERMITTED: Hospital or sanitarium.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Any zone</td>
<td>Hospitals or sanitariums (no exceptions listed)</td>
<td>100 beds or more as a CONDITIONAL USE determined by the City Planning Commission.*</td>
</tr>
<tr>
<td>RS, R1, R2, R3,</td>
<td>Hospitals or sanitariums (no exceptions listed).</td>
<td>Less than 100 beds as a CONDITIONAL USE determined by the Zoning Administrator.**</td>
</tr>
<tr>
<td>R4, CR, C1, or</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C4 zones</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

""".. if it finds that the proposed location .. will be desirable to the public convenience or welfare and will be in harmony with the various elements and objectives of the Master Plan."

""".. if he finds that the proposed location .. will be in harmony with the general purpose and intent of the 'Comprehensive Zoning Plan' and will not be materially detrimental to the character of the development in the immediate neighborhood."
exceptions are not listed, it is assumed that they are included under the general term of hospitals and sanitariums. Distance must be not less than 30 feet.

Detroit, Michigan (Amended to February 1, 1942). Hospitals, asylums and sanitariums permitted in RM4 (50-foot height) Multiple Dwelling district. (Note: "asylum" generally means institution for the care of the insane, when used in the zoning ordinance.) Also pyramidal, this ordinance does not prohibit hospitals in any of the succeeding districts.

Chicago, Illinois (1942). Hospitals permitted in the apartment house district. Hospitals or sanitariums for the care of contagious diseases or incurable patients and institutions for the care of the insane or feeble-minded are special uses and may be permitted in the apartment house district by the board of appeals after public hearing and provided it has been determined that the special use "... is necessary at that location for public convenience." This ordinance also being pyramidal, hospitals are permitted in succeeding districts. The special-use institutions apparently are restricted to location in the apartment house districts.

St. Louis, Missouri (1950). Convalescent or nursing homes, and hospitals, except those for criminals and those solely for the treatment of persons who are mentally ill or have contagious disease are allowed as a USE EXCEPTION in any district. Appropriate conditions and safeguards may be imposed by the board of public service when authorizing a special permit. Apparently no particular provision is made for the excepted special hospitals, except that they are not listed among uses prohibited in the local business or subsequent districts.

In summarizing zone regulations for hospitals in the ten largest cities, we find that six cities do not distinguish between types of hospitals, and apparently permit hospitals for care of patients with communicable or mental diseases to locate in any zone where general hospitals may be located. Of the four that do distinguish between types of hospitals, Los Angeles makes allowance for the "undesirable" types to be located in any residential zone subject to size limitations and approval of the city planning commission or the zoning administrator. This ordinance also is noteworthy because it does not permit hospitals in the C4 commercial zone nor in any of the subsequent commercial or industrial zones. Although neither St. Louis nor Cleveland apparently anticipate construction of the "undesirable" hospitals in any residential district, it should be noted that the wording does not preclude general care hospitals having psychiatric or communicable disease divisions. St. Louis is placed last in the sequence by virtue of the fact that hospitals are treated as use exceptions instead of outright, permitted uses. Depending upon how it is administered, this ordinance may be no less adaptable than others with respect to zone location of hospitals.

One comment with respect to wording of ordinances should be made. Although many hospital provisions typically say, "hospitals excepting hospitals or sanitariums for
contagious, mental, or drug or liquor addict cases" this statement cannot absolutely be taken to mean that any general care hospital treating cases of the specified types would be excluded. In all likelihood, it means special hospitals for these particular purposes. A less ambiguous wording would have a modifying word, such as in St. Louis where hospitals solely for the treatment of the special cases are excluded, or as in Cleveland, where the phrase "not primarily for contagious diseases, etc." is used.

In general, then, the current trend of integrated medical care is recognized in the zoning ordinances for the largest cities. With the exception of Los Angeles, however, little has been done in the way of site standards in the zoning ordinance.

B. Hospitals in Smaller Cities

For comparative purposes, permitted zone locations and site standards for other cities have been summarized in Tables II and III following. The cities and counties listed represent no particular preference, and have been selected simply because they contain certain qualifications regarding hospital location beyond the mere statement that "hospitals are permitted in such and such a zone." The division of the data into two tables - regular hospitals and special hospitals - has been made to indicate the type of requirements that can be developed where distance is a mitigating factor. In the case of minimum lot areas, for example, these standards could be applied as well to a general care hospital having special services if a realistic appraisal of the situation would require them.
<table>
<thead>
<tr>
<th>City or County</th>
<th>Zone</th>
<th>Minimum lot area</th>
<th>Min. distance of any building from bounding lot or street</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>*Anchorage, Alaska</td>
<td>R-3 Multiple-fam.</td>
<td>40,000 sq. ft.</td>
<td>50 feet</td>
<td>-</td>
</tr>
<tr>
<td>*Berkeley, California</td>
<td>R-4 Multiple-dwelling</td>
<td>-</td>
<td></td>
<td>By use permit</td>
</tr>
<tr>
<td>Charlottesville, Virginia</td>
<td>A-1</td>
<td>-</td>
<td>50 feet</td>
<td>Min. distance does not refer to street line</td>
</tr>
<tr>
<td>Cheltenham Tp., Montgomery Co., Pa.</td>
<td>Residence A</td>
<td>-</td>
<td>Front, side, and rear yards of 200 feet</td>
<td>Applies to Residence A districts only</td>
</tr>
<tr>
<td>Cincinnati, Ohio</td>
<td>Residence C</td>
<td>-</td>
<td>50 feet</td>
<td>-</td>
</tr>
<tr>
<td>Durham, North Carolina</td>
<td>R-10 One-family</td>
<td>-</td>
<td>100 feet</td>
<td>By use permit Exterior appearance shall be in appropriate harmony with residential character of the area</td>
</tr>
<tr>
<td>*Grand Forks, North Dakota (proposed)</td>
<td>R-2</td>
<td>2 acres</td>
<td>50 feet</td>
<td>-</td>
</tr>
<tr>
<td>Greensboro, North Carolina (proposed)</td>
<td>Commercial</td>
<td>-</td>
<td>50 feet</td>
<td>-</td>
</tr>
<tr>
<td>Hamilton, Ohio</td>
<td>Any zone</td>
<td>-</td>
<td>Additional distance of 2' for each foot of building height</td>
<td>By special permit of city council, subject to protective restrictions and after public hearing</td>
</tr>
<tr>
<td>City or County</td>
<td>Zone</td>
<td>Minimum lot area</td>
<td>Minimum distance of any building from bounding lot or street</td>
<td>Other</td>
</tr>
<tr>
<td>---------------------</td>
<td>-----------------</td>
<td>------------------</td>
<td>-------------------------------------------------------------</td>
<td>--------------------------------------------</td>
</tr>
<tr>
<td>*Highland Park, Michigan</td>
<td>R-M Multiple dwelling</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Madison, Wisconsin</td>
<td>Residence B</td>
<td>-</td>
<td>50 feet</td>
<td></td>
</tr>
<tr>
<td>Muskegon, Michigan</td>
<td>R-2 residential</td>
<td>-</td>
<td>50 feet</td>
<td>As a special exception</td>
</tr>
<tr>
<td>Nashville, Tennessee</td>
<td>Residence A</td>
<td>-</td>
<td>Additional distance of 1' for each foot in height of building in excess of 35'</td>
<td>70' or 6 stories is building height maximum</td>
</tr>
<tr>
<td>Painesville, Ohio</td>
<td>Residence District</td>
<td>-</td>
<td>30' side yard</td>
<td>By permit, after 14-day period of examination</td>
</tr>
<tr>
<td>*Seattle, Washington</td>
<td>Residence Second</td>
<td>-</td>
<td>Side yard not less than 15' nor less than 3&quot; in width for each foot of building height</td>
<td>Where located on a boulevard or parkway, shall be set back not less than 30' from margin thereof</td>
</tr>
<tr>
<td>Tucson, Arizona</td>
<td>R-2 Multiple residence</td>
<td>1½ acres</td>
<td>25 feet</td>
<td>Aggregate coverage of all buildings not to exceed 20% of area; consent of 75% of property owners opposite and abutting</td>
</tr>
</tbody>
</table>

*Special types of hospitals not excepted.
### TABLE III

**SPECIAL HOSPITALS (MENTAL, CONTAGIOUS DISEASE, ETC.):**

**ZONE LOCATIONS AND STANDARDS**

<table>
<thead>
<tr>
<th>City or County</th>
<th>Zone</th>
<th>Minimum lot area</th>
<th>Min. distance of any building from bounding lot or street</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maryland-Washington Regional District in Prince George's Rural-County, Maryland</td>
<td>residential</td>
<td>25 acres</td>
<td>200 feet</td>
<td>&quot;Protective man-proof fencing where necessary&quot;</td>
</tr>
<tr>
<td>Charlottesville, Virginia</td>
<td>A-1</td>
<td>-</td>
<td>200 feet</td>
<td>-</td>
</tr>
<tr>
<td>Muskegon, Michigan</td>
<td>R-2</td>
<td>4 acres</td>
<td>100 feet</td>
<td>As a special exception</td>
</tr>
<tr>
<td>Hamilton, Ontario</td>
<td>H (community shopping &amp; commercial)</td>
<td>-</td>
<td>100 feet</td>
<td>-</td>
</tr>
<tr>
<td>Providence, Rhode Island</td>
<td>C-2 General commercial</td>
<td>-</td>
<td>-</td>
<td>As a special exception</td>
</tr>
<tr>
<td>Tucson, Arizona</td>
<td>R-2</td>
<td>One entire block, 3 acres</td>
<td>50 feet</td>
<td>If authorized by Board of Adjustment, Bounded by streets on all sides. Aggregate coverage of all buildings not to exceed 20% of area. Consent of 75% of owners of all properties directly opposite and abutting streets bounding site</td>
</tr>
<tr>
<td>Los Angeles County, California</td>
<td>All agricultural zones</td>
<td>-</td>
<td>-</td>
<td>By special permit</td>
</tr>
<tr>
<td>Kansas City, Missouri</td>
<td>Any zone</td>
<td>-</td>
<td>-</td>
<td>By special permit of board of zoning adjustment.</td>
</tr>
<tr>
<td>Greensboro, N.C. (proposed)</td>
<td>Institutional</td>
<td>-</td>
<td>200 feet</td>
<td>-</td>
</tr>
</tbody>
</table>
Minimum Requirements:

A. Acreage or plot area
B. Distance of main structure from residential property line
C. Distance of psychiatric or communicable disease wing from residential property line
D. Distance of ambulance, blood bank, animal building, or other special area from residential property line
E. Distance of driveway entrance from residential property line
F. Yards
G. Off-street parking
H. Building height
I. Buffer planting strip

Figure 2

Diagrammatic Representation of Site Standards That May Be Applied to Hospital Sites
MEDICAL AND DENTAL CLINICS

Some of the difficulties surrounding the regulation of clinics derive from definition, but more fundamentally, they arise from the fact that clinics are a relatively new form of institution for medical care and treatment. The first type of clinic is an outgrowth of the original hospital dispensaries for the "medically needy." Being an integral part of a hospital, the special clinic or out-patient department, whether a part of the main structure or a smaller building somewhat removed from the main hospital, usually offer no particular difficulty in zoning administration. There is, however, an interesting provision in the zoning ordinance for Painesville, Ohio, (amended to 1951), a small city which is divided into five districts: residence, apartment house, commercial, industrial, and special class. In order to prohibit in the residence district a clinic building unrelated to a hospital, the following provision pertains:

Buildings may be constructed and/or used as clinics, dispensaries or offices for physicians, surgeons, dentists and technicians associated with the medical profession in that portion of any U-1 residence district or property immediately adjoining any publicly owned hospital grounds or upon the opposite side of any public street upon which publicly owned hospital grounds or upon the opposite side of any public street upon which publicly owned hospital grounds abut; and in connection with such clinics, dispensaries or offices, residences or living quarters of any physician, dentist, surgeon or technician associated with the medical profession, and having an office therein, may be included within said building. Such permits may be granted by the board of zoning appeals only after a fourteen (14) day period of examination.

The second type of medical clinic is that which is associated with public health service. Occasionally, a health department clinic also is housed in a hospital out-patient department, but more often it has separate quarters rented or built especially for the purpose. The Federal Security Agency, in its Special Information Bulletin No. 7, defines a MEDICAL AND DENTAL CLINIC as:

a facility organized and operated for the primary purpose of providing health services in more than one medical or dental specialty for out-patient medical or dental care of the sick or injured, and including related facilities such as laboratories and other service facilities operated in connection with the clinics.

The third type of clinic is the private group clinic consisting of several physicians in cooperative practice using joint or common office facilities, equipment and, sometimes, auxiliary personnel. Usually there is a centralized administrative and financial arrangement. Clinics of this type may range from small groups of only three or four physicians working together, to a very large group of seventy or
eighty professional men, including physicians, dentists and pharmacists. Whatever the size, there are no regular overnight accommodations for patients.

Definitions of clinics in zoning ordinances are characteristically simple, and most ordinances have not found it necessary to define clinics as such, but use the term only in connection with other medical facilities. As with hospitals, clinics for the treatment of animals are sometimes specifically excluded in the definition of clinic. In the zoning ordinance of Dallas, Texas (amended to 1949) a clinic is defined as "an institution or station for the examination and treatment of ill and afflicted out-patients." Long Beach, California (amended to 1951) qualifies the term clinic as referring to "dental or medical, allowing overnight cases only in emergency cases." In Bell, California (1949), a clinic is defined as "a place used for the care, diagnosis and treatment of sick, ailing, infirm and injured persons, and those who are in need of medical or surgical attention, but who are not provided with board or room or kept overnight on the premises." A rather unusual definition is found in the zoning ordinance of Montgomery County, Maryland (1950), in which the term "medical clinic building" means "a structure housing under one roof complete diagnostic and treatment facilities for ambulatory out-patients."

Regardless of whether the clinic is a public health facility or a private group clinic, its physical and functional characteristics are the same for the purposes of the zoning ordinance. However, in preparing the zoning plan, it would be well to have in mind the knowledge that there are different proprietary types of clinics; that they may either be a part of a large plant, or they may be isolated structures; and that the whole field of clinical treatment is undergoing development. Because of the growing popularity of the term "clinic" it would probably also be wise to specify medical clinics to preclude the interpretation that the term might mean legal, architectural, engineering, automobile, real estate, speech, reading, animal, and other types of corrective or trouble-shooting institutions and concerns that have nothing to do with medical care of human beings.

Almost without exception in the ordinances examined, clinics, when they are mentioned, are listed along with other places for the treatment or care of human ailments. Thus it is quite common to see a clause which permits in a certain district hospitals, convalescent homes, old people's homes, maternity homes, children's nurseries, religious, educational and philanthropic institutions, doctors' offices, etc. Clinics, then, are one type of a number of related medical facilities which the zoning ordinance permits in a specified zone, and though these facilities appear in different combinations, no instances have been encountered where clinics are treated singly. An idea of the current practice regarding clinic location can be gotten from Table II.

Few distinguishing standards have so far been developed for clinics. One exception is Anchorage, Alaska (1952), where medical clinics along with churches, libraries and museums, clubs, and professional offices are permitted in the R-3 multiple-family district, provided that no portion of the structure containing such use shall
be less than 15 feet from any adjacent residential lot. Another is the Maryland-
Washington Regional District in Montgomery County, Maryland (amended to 1950),
where a medical clinic building may be permitted in any residential zone by the
board of zoning appeals if noise, traffic, etc. are guaranteed not to affect adversely
the surrounding neighborhood and if the following spatial standards are observed:
Total area, 40,000 square feet; frontage, 200 feet; setback, 40 feet from all
property lines.

CONVALESCENT HOMES

Like clinics, convalescent homes are a relatively new development in medical care.
Medical authorities agree that the supply of facilities in most urban centers for the
treatment of persons recovering from illness is far from adequate, and that much
remains to be done in the development of both quantity and quality as related to
community need.

As with clinics, there is some confusion over the type of facilities included in the
term "convalescent home" and many ordinances take care of the situation simply by
grouping them with hospitals, clinics, etc. An examination of the function of the
convalescent or nursing home suggests that they are a special type of institution
with special needs of their own. The Federal Security Agency uses the general term
NURSING HOME and defines it as:

a facility which (1) provides nursing services on a continuing basis;
(2) admits the majority of the occupants upon advice of physicians as
ill or infirm persons requiring nursing services; (3) provides for
physicians' services or supervision; and (4) maintains medical
records. Such facilities may also provide other and similar medical
or nursing services. Examples of nursing home facilities that pro-
vide health services may include, if they comply with all the above
criteria, nursing homes; convalescent homes; maternity homes; rest
homes; sanitoriums; veterans' homes and soldiers' homes; homes
for the aged; institutions for the feeble-minded, epileptic, cerebral
palsied, and the like.

This definition establishes professional standards which would be outside the pro-
vince of the zoning ordinance to require. However, as a summary of the functions
of the nursing or convalescent home, it can be used as a basis for making decisions
regarding the proper zone location for such uses.

At present there is a wide variety of types of structures used for nursing homes.
We are all familiar with the converted mansion type of convalescent home and the
smaller "family dwelling" type of building, with only a few rooms designated for
patients. A survey of nursing homes in California ("Progress in Nursing,
Convalescent and Rest Homes," by Bernice L. Hotchkiss, in Hospitals, January, 1953) revealed that nearly one-half of the nursing homes licensed in that state were one-story structures. The same survey showed that the number of beds in a home may range from under 10 to over 100. In their present state of structural heterogeneity, the convalescent home could be considered as a sort of cross between a hospital and a multi-family dwelling with some of the characteristics and some of the needs of each.

Partly because convalescent homes have, in many cases, started in large estates or large dwellings, and partly because of the popular idea that wide expanses of countryside are in themselves conducive to recovery, there has been a tendency to believe that convalescent facilities should be located far out in the country. Isadore Rosenfield, in his authoritative work, Hospitals - Integrated Design (Progressive Architectural Library, Reinhold Publishing Corporation, 330 West 42nd Street, New York, 1951), states categorically that convalescent facilities should be in, or as near as possible to, the community served, and at a distance that is consistent with a wholesome environment. Distance, he says, is not conducive to convalescence in most cases.

With the steadily increasing percentage of old people in our population, and with the growing community awareness that the nursing home fulfills a special type of need in our society, new and perhaps larger building types can be expected to develop for these purposes. Some of these indications can be seen in current architectural magazines which show new building types for new types of health care. Rosenfield believes that when we begin to plan functionally for specific types of medical care the structures resulting will be in forms that are unpredictable at the present time.

As mentioned above, convalescent homes in the zoning ordinance are often run in with other types of medical facilities, and it is therefore difficult to make any conclusive generalizations about the zones in which they are customarily located. In a few instances, however, separate standards have been developed for convalescent or nursing homes. Probably because of their "homelike" character and because they seem to be a particularly innocuous form of medical institution, these standards mostly deal with number of patients - a factor which directly bears upon the size of the structure involved.

The zoning ordinance for the Maryland-Washington Regional District in Montgomery County, Maryland, presents the most fully developed standards encountered for nursing homes. Depending upon the board of zoning appeals and their finding that the institution will not constitute a nuisance because of traffic, noise or number of patients being cared for, and that it will not adversely affect the character of the surrounding residential community, a care home or nursing home may be located in any residential zone in accordance with the following standards:
<table>
<thead>
<tr>
<th>Number of persons cared for</th>
<th>Total Area</th>
<th>Frontage</th>
<th>Setback</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not more than 5</td>
<td>7,500 sq. ft.</td>
<td>50 feet</td>
<td>Same as in area regulations for the residential zone in which proposed to be located</td>
</tr>
<tr>
<td>More than 5 but not more than 10</td>
<td>15,000 sq. ft.</td>
<td>75 feet</td>
<td>Same</td>
</tr>
<tr>
<td>Eleven or more</td>
<td>20,000 sq. ft.</td>
<td>150 feet</td>
<td>25 feet from all property lines</td>
</tr>
</tbody>
</table>

In Lorain, Ohio (1948), a convalescent home, home for the aged, or children's nursery is defined as "any dwelling with not more than ten sleeping rooms where not more than fifteen persons are housed or lodged and furnished with meals and nursing care for hire." These homes are permitted in R-3 residence districts. Similarly, in Kansas City, Missouri (1951), a convalescent home or old folks' home for not over twelve patients may be located in an R-3 multi-family residential district. In Madison, New Jersey (1949), residential density standards are applied to convalescent homes where it is required that the lot area shall be not less than 1,500 square feet per patient.

Los Angeles County, California (1951), in a commendable departure from automatic pyramiding of uses, explicitly prohibits dwelling and hospital uses from the zones thought to be not fit for human habitation. Among other specifically named uses which may not be located in these districts are institutions or homes for the treatment of convalescent persons. The forbidden areas are (1) M-2 and M-4, heavy manufacturing and unlimited manufacturing; (2) Zone C, Quarries; and (3) "areas subject to inundation" as labelled in the zoning ordinance.

APPENDIX

Off-street Parking

Hospitals

Because of the character of the use involved, it is particularly important that adequate parking facilities be provided in connection with hospitals. The need for facilities consists of at least four elements, namely,

1. the arrival or departure of patients,
2. visitors of patients, during visiting hours,
3. staff and visiting doctors, and
4. employees, including nurses.

Peak hours, at most hospitals, generally coincide with the afternoon and evening hours.

The ratio of doctors, internes, nurses and other employees to the patient or bed capacity of a hospital may be quite significant in a study of parking requirements. Standards in this field have been evolved by the United States Public Health Service, based upon their contact with hospitals the country over. It has been found, for example, that in general a hospital requires as many employees (including doctors, nurses, etc.) as it has patients. On the average, one nurse is required for each six patients, plus ten per cent more for dietitians, etc. One staff doctor is required for each six patients, and one interne for each ten patients.

Accordingly, it is suggested that one parking space, of the standard size,* be provided for each four patient beds (excluding bassinets) in a hospital, plus one space for each staff or visiting doctor (based on the average number), plus one space for each four employees, including nurses. Off-street parking space for hospital ambulances and similar vehicles is not included in these proposals, and it is obvious that separate and additional provisions should be made for these needs.

It should be noted that the need for off-street parking facilities will vary as between public and private hospitals. Because a substantially greater number of patients in the lower income groups are found in public than in private hospitals, perhaps a lesser number of parking spaces are needed." (pp. 37, 39)

*"A parking space is defined as an area of appropriate dimensions, of not less than 180 square feet, net, exclusive of access or maneuvering area, or ramps, columns, etc., to be used exclusively as a temporary storage space for private motor vehicles; truck loading and unloading space shall not be included in such area; when the application of a unit of measurement for parking spaces to a particular use or structure results in a fractional space, any fraction under one-half shall be disregarded, and fractions of one-half or over shall be counted as one parking space."
Sanitariums or Convalescent Homes

It is obvious that all other things being equal, a sanitarium or convalescent home probably will require less parking facilities, on a unit basis, than a hospital, largely because the number of visitors and their frequency are substantially less. It is suggested therefore, that one parking space be provided for each six patient beds in a sanitarium or convalescent home, plus one space for each staff or visiting doctor (average), plus one space for each four employees, including nurses. (p.40)

Medical or Dental Clinics

For the type of clinic which:

consists of a staff of private doctors operating a joint enterprise, as such, with substantially more requirement and facilities than would be found in the ordinary doctor's office:

A standard ... is three parking spaces per doctor, plus one additional space for every two employees. The designation of three spaces per doctor is based on the probable need of one space for use by the doctor, one space for use by the patient being treated, and the third space for use by the patient waiting to see the doctor. The needs may be considerably in excess of these, depending upon the nature of the clinic and its standing in the profession. (p.40)

Welfare Institutions (such as asylums, homes for aged, orphanages, and similar institutions)

The very nature of these property uses is such as to generate only a minimum amount of parking demand. Moreover, because of the wide variations in the requirements of these facilities, it may be practically impossible to formulate any significant standards. Notwithstanding, specific provision of parking facilities for the staff and employees of such institutions is desirable. Accordingly, it is suggested that one parking space be required for each doctor, staff or visiting, associated with asylum, home for the aged, orphanage or other similar institution, plus additional spaces equal to 75 per cent of the number of employees, plus such additional space for business and social visitors as shall be determined by the board of zoning adjustment (or other local body) to be desirable, in light of the needs of the particular use dealt with. (p.41)
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