ENVIRONMENTAL HEALTH FACTORS IN NURSING HOMES

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Nursing homes fill an important need in the community of today. With an increased demand for homes for our aging population, public health workers have become involved with the control of those factors in the nursing home that have an effect on the health of the occupants. Many of the public health factors have a direct relationship to the environment of the home. It will be my purpose to discuss the environmental health factors and show how the sanitarian can contribute to the control of these items in the nursing home.

ORIENTATION TO THE NURSING HOME

During the past few years a great deal of attention has been given to the problem of providing adequate care for the chronically ill and the aging citizens of our communities. The nursing home has been identified as the principal means of providing this type of care.

The need for nursing homes has greatly increased during the past decade. The "Nursing Homes and Related Facilities Fact Book" (1) reports that "the number of elderly in the United States is increasing at the rate of more than 1000 a day." In 1962, persons aged 65 and older totaled more than 17 million, 8.8% of the total United States population.

In addition to the rapid increase in number of elderly people, there is also a gradual increase in the life span, particularly in the female population. Other factors include a change in family pattern with fewer three generation families residing in the same household; assured income from retirement plans; and an ever-present desire to avoid being dependent upon family members. All have contributed to the demand for additional nursing home facilities.

During this same period a great deal of interest has been shown by official and voluntary health and welfare agencies in particular and the public in general concerning the well-being of patients in nursing homes. This concern has resulted in the development of control programs by State and local agencies. National groups have also contributed by proposing standards and establishing guide lines for nursing home requirements.

TYPES OF NURSING HOMES

There are several types of institutions which come under the general classification of nursing homes. There are also numerous definitions being used to describe the types of nursing homes. As set forth in the publication "The Condition of American Nursing Homes" (2) four categories of nursing homes are now generally accepted.

1. Skilled Nursing Home, which provides skilled nursing care as its primary and predominant function. It is a facility equipped for the accommodation of individuals who are not in need of hospital care but who are in need of nursing care and related medical service.

2. Personal Care Home
   a. With skilled nursing care, providing such care only as an adjunct to its primarily domiciliary or personal care function, or
   b. Without skilled nursing care, providing personal services such as required by older persons. The persons in these homes usually are not bed patients and do not need skilled nursing care but do need assistance with essential activities of living in a protected environment.

3. Sheltered Homes or Residential Facility, which provide a minimum of services, such as meals and limited room custodial service. These are boarding homes for aged persons who need a minimum of help and can manage their own care and affairs.

4. Combination Facility, which provides services in two or more of the categories listed above and therefore cannot be classified exclusively as a particular type of facility.

In spite of the confusion created by the various definitions of nursing homes and related institutions, the basic health factors are generally the same. A sanitarian capable of providing consultation to a skilled nursing home can just as well provide a similar service to the other types of institutions. So for the purpose of convenience in this discussion, the term "nursing home" is used as an inclusive term for all institutions of this type.

HOUSING HYGIENE

Nursing homes have a dual responsibility in terms of providing their clientele a home with a certain amount of protection as well as nursing and medical care. The relationship between health and housing
has been presented by the Committee on the Hygiene of Housing of the American Public Health Association. The Committee submitted the "Basic Principles of Healthful Housing" (3) as:

1. Fundamental physiological needs.
2. Fundamental psychological needs.
3. Protection against contagion.
4. Protection against accidents.

It was stated in the recently published "Nursing Homes - Environmental Health Factors" (4) that "these basic concepts are applicable to a greater degree in the nursing home than they are to domestic housing usually considered in public health programs." Knowledge of housing problems and related health matters is required in the nursing home control program.

Environmental Health Factors

The demands on the sanitarian in reviewing the requirements of an existing or future nursing home are extensive. Environmental health factors such as site location, water supply, sewage and waste disposal, food sanitation, laundry operation, safety and accident prevention are all important aspects of the nursing home. Matters within the knowledge of the trained sanitarian include:

1. Site Location. A nursing home should be located convenient to transportation but away from objectionable surroundings. The building should be placed so as to avoid flooding and yards should be graded to permit use by the occupants of the home.
2. Water Supply. Nursing homes should be provided with a safe and adequate supply of water under pressure. When possible an approved community system should be utilized because of the known quality and quantity of this type of supply. When it becomes necessary to depend upon an individual supply, acceptable standards for location and installation of the system (5), for the chemical and biological quality and for an adequate quantity under pressure must be followed. Routine testing of the individual systems should be required by the control agency.
3. Sewage Disposal. A municipal sewerage system is desirable for the disposal of liquid wastes because the volume is too great for satisfactory operation of septic tanks and soil absorption methods of sewage disposal. If a private system is necessary, careful attention should be given to make certain adequate design and construction standards are observed (6).
4. Solid Waste Disposal. Proper collection, storage and disposal of all solid wastes (garbage and other refuse) of a nursing home is essential to maintain a sanitary environment. Careful attention to this item will help prevent the attraction and propagation of insects and rodents, avoid the development of offensive odors and reduce the possibility of transmission of infection to employees and patients (7, 8).
5. Food Sanitation. Studies of the food needs of older people show that nutrition may be the most important single factor affecting health (9). Good sanitation practices in the kitchen and serving area are also imperative to the health of the patients. Such basic requirements as adequate refrigeration, proper dishwashing, safe food storage, preparation and serving practices are essential. Sanitarians should apply and refer to food sanitation requirements in guides such as food service manuals (10, 11) and equipment standards (12).
6. Laundry. The collection, sorting and washing of soiled and the storage and distribution of clean articles is an important factor in preventing the spread of infection. Sanitarians should be able to evaluate and advise on laundry handling and laundering methods (13).
7. Housing. The requirements of the physical plant are stipulated in most regulatory standards for nursing homes. In addition Building, Zoning, Fire, Safety, Plumbing and similar structural requirements have special sections applicable to institutions. The sanitarian acquainted with this multiplicity can be helpful in guiding an operator through the maze of regulatory provisions. Manuals as the "Nursing Home Standards Guide" (14) and similar publications are useful in planning and evaluating a nursing home. The sanitarian should give special attention to safety and accident prevention aspects in homes for the elderly.
8. Other Factors. Heating, ventilation, lighting, screening, convenience and adequacy of toilet facilities, and housekeeping problems are some of the other environmental health factors.

Training Needs

As indicated in the above list of environmental health factors, extensive knowledge is required to become an effective participant in a nursing home control program. A trained and experienced sanitarian has the background for this type of assignment. However to develop competence in this somewhat specialized field of environmental health, authorities have recommended advanced training for personnel selected for this activity. An example of a training program for sanitarians has been documented in the "Papers presented at the Hospital and Nursing Home Sanitation Seminar for Local Health Department Sanitarians" held in March, 1962, by the Michigan Department of Health (15).

As indicated in the selected reference list attached to this paper, there is an extensive amount of study.
material available for the sanitarian. The U. S. Public Health Service has been helpful by assembling detailed resource material in such publications as "Nursing Homes - Environmental Health Factors" (4) and "Nursing Homes and Related Facilities Fact Book" (1).

**Inspection and Consultation**

The sanitarian should be sufficiently well equipped not only to carry out a comprehensive inspection of a nursing home but should also be able to provide consultation on nursing home problems. Guiding rather than forcing people to comply with necessary and desirable provisions for the well-being of people is the philosophy of most health departments. A consultant must be equipped with knowledge of the requirements and also the reason for and practical solution to the fulfillment of the regulations.

As you may have suspected from the scope of the public health factors related to nursing homes, other professional staff are also involved with the control program. In some jurisdictions, nursing personnel conducted the inspectional service in the institutional field and only call upon the sanitarian or engineer when necessary. The trend, however, is to utilize the "team approach" with nurses and sanitarians serving as the principal team members and medical and engineering personnel available for consultation. This team arrangement provides the capabilities required to resolve the most complex health problem.

Training programs, as mentioned above, are essential to develop a broad perspective for the inspection and consultant staff working as a team in a nursing home control program.

**Summary**

Nursing homes fill an important need in the care of the elderly in our communities. The public health factors related to nursing homes have been presented and discussed. The extent of those factors involving the environment have been shown in order to establish the scope of the field. The relationship between the types of problems and the normal activities of a trained and experienced sanitarian have been mentioned. In order to qualify for such an assignment it is proposed that the sanitarian have a background of basic sanitation knowledge in water supply, waste disposal, food sanitation and housing hygiene.

In order to deal effectively with the problems of nursing homes by evaluation and consultation, extensive training of staff is indicated. Because of the scope of a control program it is recommended that the sanitarian can fill an important position on the team, along with nursing, medical and engineering personnel. The sanitarian should be able to deal effectively with the environmental health factors of nursing homes.

**References**


9. Standards of Care for Older People in Institutions, Section I - For Homes for the Aged and Nursing Homes, The National Committee on the Aging of the National Social Welfare Assembly, 1953.


