

Editorials

Importance of the Physical Environment for Older People

A recent news release by the National Endowment for the Arts¹ characterized an agreement between four federal agencies (Health and Human Services, Administration on Aging, Housing and Urban Development, and the Department of Agriculture) aimed at "improving the design of facilities in order that older people may live with dignity in an environment that takes their need into consideration." While this initiative may not itself produce any major innovations, it is evidence of the increasing recognition of the special needs of elderly persons in the design of their environment. It is apparent that the emerging fields of human factors design, rehabilitation engineering, and others are beginning to refocus some of their attention from space travel and Vietnam veterans to the special needs of the elderly.

Physicians and other medical care providers are very aware of the physiologic impairments that occur with acute illness such as respiratory or renal failure, and the need for "environmental modifications" such as respirators or dialysis. They are often less cognizant of the need for environmental modification to compensate for the slow, less dramatic loss in individual function that occurs with the aging process itself or with the chronic illnesses that affect the elderly. It is essential, however, to recognize the importance of small, ongoing modifications in the physical environment that may allow the elderly individual to maintain a level of function despite a loss in individual functional ability. Although some interventions in the physical environment are not directly in the purview of the physician, the physician can and should be an advocate for well-designed physical environments for the elderly.

No matter where an elderly person lives, be it at home, in an extended-care facility, or temporarily in an acute-care hospital, the physical environment must always function to maximize, in terms of the activities of daily living, the person's independence, individual choice, opportunities for social interaction or for privacy, and safety and security. We must be sensitive to a whole array of factors in the person-environment interaction such as: 1) reduced physical activity and autonomic nervous system dysfunction and ambient temperature (eg, sedentary elderly people generally require a higher ambient temperature to avoid hypothermia)^{2,3}; 2) the "senile gait" and other mobility problems and accessibility to buildings and to destinations within buildings (eg, barriers such as side

walls, stairs, elevators, curbs, uneven sidewalks, etc)^{4,5}; 3) visual impairment and legibility factors within buildings (eg, room numbers, signs, arrows, lighting, colors, and textures)⁶; 4) cognitive disorders and orientation to spaces regarding their order and predictability (ie, ease of finding desired destinations)⁷; and 5) increased physical vulnerability and the need for a building secure enough to keep out intruders or uninvited visitors.⁸

An approach to environmental settings that takes into account certain psychosocial and physiologic concomitants of aging and disease is essential: one recognizing that many 80-year-old persons cannot handle the same level of environmental complexity as most 25 year olds, that sensory impairment may necessitate a different order of stimuli intensification and orchestration, and that one's position on the life span continuum has a lot to do with the types and amounts of space needed (eg, the very old spend most of their days within limited interior spaces and thought must be given to what types of environmental compensation can mitigate this limitation). It is clear that we are only at the threshold of what should come to be a major focus for research and planning: the design and provision of environments that support and enhance the function of the elderly person.

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