

# Housing Singapore's Frail Elderly in the Next Millennium

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## ABSTRACT

**This paper looks at the design of housing for an ageing population in the coming years, particularly the frail elderly, and at criteria which an architect would need to apply to provide for their social needs and various physical disabilities which may accompany old age. Recent local and overseas initiatives in providing special housing for elderly people are discussed and some proposals are made for more universal solutions, in the form of "lifetime homes".**

**Keywords:** elderly, frail, housing, disability, accessibility, safety, adaptable

## INTRODUCTION

The number of elderly people in Singapore will increase significantly in the next twenty years, and they will have higher expectations than their predecessors - not least in where and how they choose to live. Of this ageing population, a significant number will be classifiable as being frail, and consequently vulnerable to hostile or hazardous environments. For architects, the problem will be to provide appropriate housing, without it becoming identified as "old-folks' ghettos". Separate housing provision for elderly people is often viewed with scepticism in Southeast Asia, where the extended family is cherished for keeping generations together and reducing dependence on the State or charity. Although it may be most prudent for frail elderly people to continue to be cared for in the family circle, the home environment may not be adequate for their needs, or they may be unable or unwilling to live there for a variety of reasons.

Contrary to general belief, it is not only those without family support or adequate income who may live alone; a recent HDB survey found that "... fully 77% of elderly parents with married children preferred to live by themselves. In reality, 65% of married children managed to live with or near their parents, suggesting that the elderly are prepared to put up with their children, but would prefer to be on their own"<sup>(1)</sup>. Whether elderly people opt to live with their families or not, housing design must go further to accommodate their needs comfortably and securely. Even when living within the larger family circle, personal independence - to be able to go about one's daily routine of toilet,

personal care and generally looking after oneself, is vital to the well-being and dignity of the individual, regardless of age or ability.

## Current housing initiatives for the elderly in Singapore

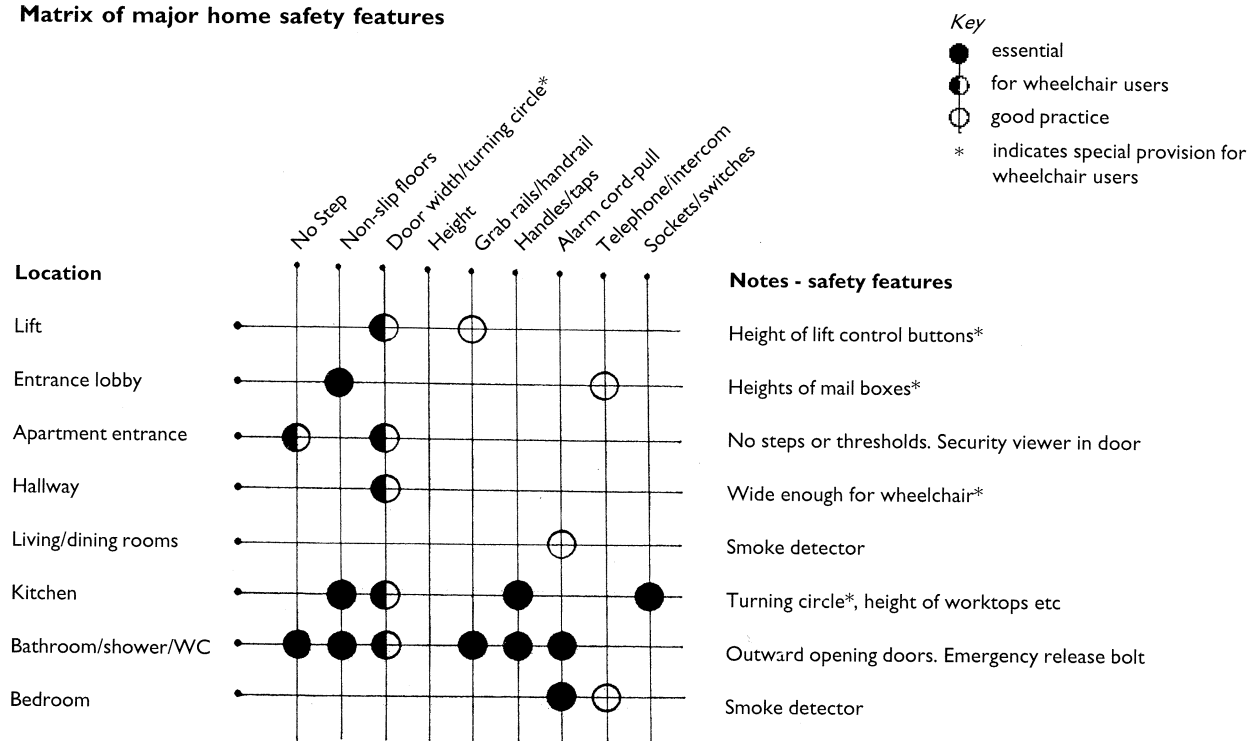
Allocation policies and balloting methods by the Housing and Development Board (HDB) promote the retention of the family group, giving priority to those with ageing parents wishing to take adjacent apartments. For single people, old or young, HDB upgrading schemes include a joint venture with the Ministry of Community Development (MCD) wherein suitable blocks have been remodelled to provide one-room rental "elderly-friendly" flats. Public areas of these blocks are modified to make them more accessible, with lift lobbies and common areas at all floors, formed by removing some of the units. Lighting levels, both natural and artificial, are improved in public areas, whilst within the dwellings, doorways are widened and thresholds and steps removed, allowing use by people in wheelchairs. In the kitchen, lowered worktops, power points at reachable heights and lever-type taps to sinks are provided, with clothes-drying facilities modified to make them safer. Pedestal water-closets replace the squat type, and handrails are fitted in WCs and showers, so that even a frail elderly person may live independently.

For emergencies, the flats can have an alarm system with emergency cord-pulls located in bathrooms and living rooms, with external indicators to summon help. At ground level, Seniors' Activity Centres have been built, shared with elderly people in the locality, and incorporating rooms for therapy or counselling. Significantly, young people, not normally eligible for HDB flats, may rent these units with the ratio of elderly to young residents in this "Congregate Housing" kept to around 50:50 - to avoid creating old-folks' ghettos and to foster multi-generational spirit between tenants.

## Sheltered homes and retirement villages

Sheltered housing to cater more to the special needs of ambulant frail aged is to be built in both public and private sectors. Design guidelines for such housing stress the value of residents living independently but integrated into the community. Sites close to facilities such as polyclinics, shops

## Matrix of major home safety features



and community centres are preferred. Such developments will house up to 150 residents in a variety of barrier-free, self-contained units, each with kitchenette, toilet and shower. Communal facilities include a multipurpose hall cum dining room, as the social centre of the home. Other current proposals include a condominium-style "retirement village" by NTUC Income, to be built near to town-centre facilities, aimed at "initiating a new healthy lifestyle" for retirees, to "integrate rather than isolate them from society". A similar proposal by the Salvation Army includes single and adjoining apartments, nursing home and gerontology clinic.

Various configurations of such housing groups are becoming more common in Northern Europe, where individuals in later middle-age decide to "move in time", perhaps developing their own "Seniors Co-housing", planned and equipped to accommodate their individual and common needs as they age. Other schemes incorporate a variety of housing units, self-contained flatlets, sheltered housing and more specialised nursing home or dementia-care units, all under the same roof. In such a development, an individual can move to more sheltered care, if health deteriorates, within the same building, so avoiding the trauma of having to leave a familiar place and friends<sup>(2)</sup>.

### Understanding the design implications of ageing

Most architects have limited experience of designing for the elderly. Unless disease or accident strikes, ageing usually does not suddenly happen, or bring immediate frailty; elderly people adjust to cope with the gradual loss of physical ability, such as weakening eyesight and hearing, or reduction in

stamina or gripping strength. But because this process is gradual, and through personal pride, they may be unwilling to make any radical change in their way of life, to modify their habits or habitat for safety's sake, or even to move to a more suitable place. Because of their increased vulnerability, however, frail elderly people need an environment which allows them to carry on with their normal lives conveniently and safely - even if they are less mobile than they were. This is true whether they live alone, in the family home or in specially designed accommodation, but few places actually provide such safe conditions.

Falls account for a high proportion of accidents involving the elderly; poor eyesight and the inability to regain balance quickly enough after tripping increase the risk of falling - and frail bones may never mend. In almost every home, accessibility is hindered by steps and other potential hazards which go unnoticed, such as slippery floors, lack of handrails or high storage shelves. Accident-prevention and provision for summoning help in case of emergency, ought to be priorities when designing or choosing a home - but rarely are.

Few people think objectively about retirement and old age, to move or to "stay-put", although a fall or health problem could precipitate the trauma of having to leave the family home and adjust to unfamiliar surroundings, not necessarily of their own choice. In a survey amongst the "new elderly" in Denmark, high priority was given to good housing and the ability to stay in one's own home as long as possible. "It is important to move while you still can to a place you choose before other people move you to a place they choose", was one poignant comment<sup>(3)</sup>.

### **Accessibility and adaptability as design factors in housing**

Accessibility is now a legal requirement for new and refurbished buildings used by the public, but in almost every country where Codes are in force, these do not apply within the dwelling itself<sup>(4)</sup>. The elimination of unnecessary barriers and hazards, both within the home and in the public domain, is a concept vital to the planning of any habitat. Properly designed, any form of housing can allow the elderly person to "age in-place", even when they become frail. The "Lifetime Homes" concept proposes that all dwellings should be built to standards, allowing for economical adaptation as necessary that will meet the changing needs of the occupiers throughout their lifetime: "The design features (of Lifetime Homes) help parents with young children as much as grandparents who come to stay. The homes can cope with life events such as a teenager breaking a leg and being in a wheelchair for a few weeks. The homes are easy to adapt if a member of the household becomes disabled or frailer in old age. Lifetime Homes look no different from others in the street"<sup>(5)</sup>.

Examples of this type of housing in Europe incorporate accessibility features such as adequate space for wheelchairs, floor surfaces which are non-slip and level and, in the case of two-storey houses, handrails on both sides of staircases and steps (to allow for a hemiplegic person to go up and down safely) and space provision for a wheelchair lift at a future time. Places to mount safety fittings are provided but, because some occupants find that features such as handrails look too "institutional", these are fitted only as required, or else these are designed to be discreet. In bathrooms, for instance, handrails can double as towel rails or the edges of sanitary units can be designed to form hand-grips.

### **Key principles for designing housing for the elderly**

*Accessibility* - the elimination of unnecessary barriers, (stairs, steps, kerbs, narrow doors and corridors, etc.) to facilitate use even by a person in a wheelchair.

*Visitability* - the ease with which a disabled or elderly person can visit or entertain and be able to move about the dwelling - including using the toilet.

*Safety and security* - reducing the risk of accidents (inside and outside), such as slipping and falling, and providing better lighting levels to increase safety. For emergencies (falls, illness, intruders), an alarm call system is essential.

*Ease and convenience* - designing with empathy for the limitations experienced by elderly people in daily activities - such as reaching, bending, gripping door knobs and controls with arthritic hands etc. Some forms of activity, mental and physical, may be beneficial for a person's well-being.

*Dignity* - allowing the individual to carry out

personal daily activities as independently as possible, without having to feel beholden to others. Even within the extended family, considerate design and appropriate aids to daily living might spare the elderly person some of the indignity of needing assistance for toileting, dressing, moving around etc.

*Mobility* - planning for optimal movement for elderly, disabled or frail people, even if they use a wheelchair, within the home and outside it, including vertical circulation. Usable public transport should be an adjunct to this.

*Amenity* - facilitating reaching daily objectives - healthcare and social service centres, shops, pharmacy, friends' homes, places of worship and other daily activities, bearing in mind personal limitations.

*Community and social connections* (organised or informal) - promoting participation in Community Centre or Day-Activity centre etc., giving a meaningful routine, being neighbourly and having a purpose in life, such as watching over children in playgrounds, or "lending a hand".

*Affordability* - optimising the individual's ability to live happily within his/her means, including capital outlay and minimal costs for energy, maintenance and daily transport; not being dependent on family or having to take on extra financial commitments to survive.

*Adaptability* - allowing for future modification to prolong the habitability of the dwelling for the full life-span of the occupants, with minimal cost or structural alteration.

### **CONCLUSIONS**

Housing for elderly people should be seen as part of a wider view of a more accessible, user-friendly urban environment. If healthy and fulfilling lifestyles are to be achieved for the growing population of senior citizens, to make Singapore a world-class city, housing provision for them must respond to diverse needs in many ways. Designers should cease to regard the needs of the frail elderly as "specialised provision"; it is better that good "loose-fit" solutions should be employed which incorporate "universal" design features for the safety and amenity of all users, young and old, fit or disabled, thus encouraging "ageing in place" rather than institutionalisation, and creating a range of housing types with the potential to be adapted for the occupant's individual needs as he or she grows old with dignity.

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