

**The Prerequisites of the Elderly People for
Living at Home - Criteria for Services.
Results from the EU-Project Elderathome.**

Georg Gottschalk

Danish Building and Urban Research Institute (DBUR)

Danish Building and Urban Research Institute
P.O. Box 117, DK 2970 Hoersholm
E-mail: gg@dbur.dk

Partners:

TTS Institute, Finland
ProAsolutions; Spain
Danish Building and Urban Research Institute (DBUR), Denmark
VTT Building and Transport, Finland
Wageningen University, the Netherlands

The prerequisites of the elderly people for living at home - criteria for services. Results from the EU-project: Elderathome

The focus of the EU-project Elderathome was to develop criteria for dwellings, surroundings and services so that elderly people could live longer independently.

Various methods has been used in developing a general model which can be used as a tool for analysing present guidelines, standards and regulations and as a generator of new ideas for criteria and concrete solutions generally or specifically for the individual elderly person.

In this model, called The Ball Model, four main variables are taken into consideration for dwellings, surroundings and services:

- abilities of the elderly person
- activities at home and in the surroundings
- resources
- qualities

The overall model is the same for dwellings, surroundings and services, but the contents of some of the variables are different.

This paper deals generally with model and its use and specifically with the service part.

(This project was made by the Work Efficiency Institute (TTS) and the VTT Building Technology in Finland, the Wageningen University (WU) in the Netherlands, the company ProA Solutions (ProA) in Spain and the Danish Building and Urban Research Institute (DBUR) in Denmark)

Introduction

The Elderathome project started in April 2001 and finished in April 2004 It was a project under the Fifth Framework Programme¹

The focus of the project was to develop criteria for dwellings, surroundings and services so that elderly people could live longer independently.

While the word criterion is often taken to mean something exact and quantitative, we present criteria that are more qualitative suggestions about what should be considered and how various important elements should be taken into account. This more open approach is justified because of the focus on the future: we need to remain open to new solutions, and because of the ambition to combine the possibilities of the dwelling, surroundings and services in flexible and creative ways.

The aim of the criteria is to give guidelines to ensure that the dwelling, the surroundings and the services are suitable for an elderly person. The other aim is to raise awareness and to help the elderly and other parties involved to think about the possible changes in the dwelling and in the surroundings and to assess the need of services. The users of the criteria will be the elderly themselves as well as their family, local community and private providers of services, the apartment house companies, product designers and the construction professionals.

The criteria will help the planning process when the special needs of the elderly have to be taken into account. The purpose of the criteria is awareness waking – giving the guidelines to the planners and to the occupants rather than giving strict instructions.

The three sets of criteria were developed separately, but they followed a roughly similar approach. First the existing guidelines, rules, standards or practices in each area were collected, analysed and compiled into a preliminary set of criteria. Expert groups were asked for comments and corrections. The resulting draft was not satisfactory because it focused on the desired characteristics of solutions in great detail without recognising the overall context of independent living.

The framework was thus considered and analysed anew. The goal was to formulate criteria for dwelling, surroundings and services, which would take into account the complexity and the totality of the elderly people living at home. This exercise resulted in 3 sets of activity cards (for dwellings, surroundings and services) and a common Model of Independent Living – called The Ball Model.

There are four main variables in the model: The **activities** of the elderly persons in question, the **resources** in the dwelling and in the surroundings and in the form of available services, the **qualities** of habitation, surroundings and services and the cognitive, physical and sensory **abilities** of the elderly persons.

For selected activities of the elderly the activity cards link the criteria in the form of performance specifications to the qualities, the abilities and the resources.

¹ Quality of Life and Management of Living Resources
Key Action 6: The Ageing Population and Disabilities
Thematic Priority 6.4: Coping with functional limitations in old age

This paper deals primarily with the criteria for services.

The paper has two Parts. Part I is about the development of the Ball Model. Part II is an example of how to use the model by combining activities of the elderly, criteria for these activities and resources, qualities and abilities.

Part I: Development of the Ball model

1. Development of criteria - the ball model

The ball model was first developed for criteria for the dwelling and later adapted to the criteria for surroundings and services. The model describes the idea of different variables needed to be taken into consideration when promoting the well being and supporting frail elderly living independently at home.

For services the overall model is the same as in the original model for dwellings, but the contents of two of the variables (qualities and resources) are different. The variables are to be taken into account when identifying the criteria for services in order to obtain the fitness for use and the usability of elderly.



Figure 1. The general ball model

The Ball model is a tool for identifying new knowledge and formulating criteria out of them and analysing the existing guidelines, standards and regulations. It shows the critical points or the issues that should be taken into consideration when finding appropriate services for various groups of elderly and for individual elderly persons. The model serves as a planning tool for empirical cases and is a generator of new ideas. The purpose of the criteria work is awareness waking – giving suggestions to the users and the planners of services rather than strict instructions.

The model focuses on different **activities**. Ability to cope with daily activities is not only dependent on person's capacity, but also on the operational conditions and requirements of the living environment. The chosen main activities are:

Care and keeping fit

Eating

Personal hygiene and dressing
Recreation, communication and self-actualisation.

The supporting activities are:
Gardening and maintenance,
Housework (food making, textile care, cleaning)
Personal business.

The Ball Model also takes into consideration the cognitive, physical and sensory **ability**. The impairments with the abilities are more common among elderly people - especially the oldest elderly - than in other demographic groups. The impaired abilities often lead to a need of outside help services or arrangements in the dwelling and surroundings. They are especially significant when considering independent living at home for frail elderly persons.

Like the Ball models for dwellings and surroundings **qualities** is also one of the main variables in the Ball Model for services. Due to the character of services, this variable is, however, very different from the physical character of the dwelling and the surroundings. In the Ball Model for Services the variables for qualities are:

- *Variety*
- *Availability*
- *Affordability*
- *Transparency*
- *Adaptability and user influence.*

The first three of these is the main focus of another European comparative research project: “*Social protection for the dependency in old age*” (Pacolet et al. 2000). The last three are additional important principles of the Danish Service Act. The importance of these particular variables was furthermore confirmed by interviews in the early part of the project with some elderly persons in the four countries about their needs and wishes and ways of handling their present situation.

The Ball Model for Services takes like the models for dwellings and surroundings into account **resources**. The content of that variable, however, differs from the variable of resources of the dwelling and surroundings. In the Ball Model for Services resources are the help the elderly person can get from the spouse or other members of the household or from family members living outside the household and relatives. It can also be help from communal and private home help service, neighbours or volunteers. Resources are also the dwelling and the surroundings. If the dwelling and the surroundings are accessible and adapted, there is less need of help from others or from service providers.

2. More about the content of the variables in the Ball Model for Services

2.1 Activities

In the Ball Model for Services, the services are considered through the activities of the receivers of services. They are divided into the main activities and supporting activities, both of which can be carried out with the help of service providers if necessary. The categorising has been progressed during the project. It covers the essential activities, which take place in the dwelling and the surroundings. Focus is upon activities where you can get help from service providers if you need

help to perform these activities. The activities are:

Main activities

Care and keeping fit is the main action, which covers activities like exercise, home health care, medication, measuring blood pressure, cutting nails and shaving and doing the hair.

Eating covers the small-scale food preparing e.g. heating the half-prepared food, dining, and the storage of the food, dishes and waste, washing up the dishes and separating the waste.

Personal hygiene and dressing covers washing oneself, going to the toilet and dressing up.

Moving is the main activity that covers walking inside the dwelling and going out from the dwelling, opening the doors, carrying things and climbing the stairs.

Recreation, communication and self-actualization covers entertainment, social life, hobbies and studying, outdoor recreation, watching TV and listening to the music.

Supporting activities

Gardening and maintenance is the supporting action, which covers the duties like the repairs of the ventilation or the pipe system, mowing the lawn and snow clearing.

Housework covers cooking, textile care and cleaning. There are lots of activities including in the housework, like washing, cutting, boiling, freezing, hanging the clothes, vacuuming, mopping and wiping. Housework activities are also small duties like changing a battery to a fire alarm, cleaning the hood and changing the draperies.

The ball model activities can be compared with the Activities of Daily Living (ADL)- indicators, which are often used in the geriatric research of a functional capacity. Coping with activities of daily living indicates the functional capacity of a person and furthermore the functional capacity indicates the coping with the everyday life. The activities are divided into the Physical Activities of Daily Living (PADL) and the Instrumental Activities of Daily Living (IADL). The physical activities of daily living are eating, drinking, sleeping, dressing, washing one and moving (Rissanen 1999).

The main activities are similar to physical activities of daily living while the supporting functions are similar to instrumental activities of daily living. The difference between the concepts is the wideness. The activity at home is a wider concept than the activity of daily living. For example, 'Personal hygiene and dressing' covers several activities among others washing oneself, toileting and dressing.

2.2 Abilities

Most elderly living in the general housing stock do not have problems with the physical activities. In a Danish representative study from 1988 with elderly people 70+ living in the general housing stock gave for example these results (Platz 1989):

	70-79 years	80+ years
	Pct.	Pct.
Dressing		
Can without problems	90	77
Can but with some trouble	7	19
Cannot without help	3	4
Washing oneself		
Can without problems	89	72
Can but with some trouble	6	16
Cannot without help	5	12
Cut toe nails		
Can without problems	65	34
Can but with some trouble	10	14
Cannot without help	25	52

Table 1. How elderly in the oldest age groups cope with some important personal activities

As for these 3 activities only the very complex activity of cutting toenails was a problem for the majority of the oldest age group 80+. It is complex because you have to combine coarse and fine motor functions, eye and hand co-ordination and keeping the balance at the same time.

The Instrumental Activities of Daily Living are less fundamental to health and well being than Physical Activities of Daily living. They are more complex activities, like housework, cooking and using phone. These activities are more bounded with culture and sex, than ADL-activities. Even simple activities are not dependent on person's physical capacity, but on the interaction between a person and environment. (Rissanen 1999.)

From Sonn and Åsberg, 1991 here quoted from Pacolet et. Al., 2000 more specific definitions are given. They are used for constructing the Katz Index of ADL. There are 10 activities: 4 I-ADL and 6 P-ADL activities: In executing one of the 10 activities and older persons can be either

- Independent. You can perform the activity without help (= 0 points)
- Partly dependent. You can perform the activity only by help by another person (= 1 point)
- Dependent. You cannot perform the activity or you need assistance to do at least some part of the activity. (= 2 points).

The definitions of the two last points (partly dependent and dependent) vary a little according to which activities it is about.

In summing up the points of these 10 activities you can thereby make a mobility scale = Katz index. If the total is 8 or more you are very dependent = intensive care dependent.

The following 10 activities are included in the Katz index:

- Shopping
- Cleaning
- Transportation
- Cooking
- Bathing
- Dressing
- Toileting
- Transfer (Means moving in and out of the bed and in and out of chair or needs assistance with some part of the activity.)
- Continence

- Feeding

The Danish National Institute for Social Research has in more surveys used a simplified version of the Katz index. It is called a physical ability index.

There are six variables:

- Ability to get around outdoors
- Ability to get around indoors
- Ability to walk on stairs
- Ability to wash oneself
- Ability to dress
- Ability to cut toe nails

As in the Katz index zero point is given if the person perform this activity alone without trouble. One point is given, if the person can perform the activity with some trouble. If the person cannot perform the activity two points is given. Thereby you have scale from 0 to 12. If a person has 0 on this scale, this person is fully able or fully independent. If a person has 7 or more on this scale this person needs help to one or more of the activities and is therefore more or less disabled.

In a survey from 1989 (Platz, 1989) about 800 randomly selected person 70+ years living in the general housing stock were interviewed. As to ability they were subdivided into four sub groups: men/women and 70-79 years/ 80+ years.

In another survey from 1997 (Platz, 2000) about 6.000 randomly selected persons in six age groups (52, 57, 62, 67, 72 and 77 years) living in the general housing stock were interviewed. As to ability they were divided in 12 groups: Men/ women and 52 + 57 years/62 + 67 years/ 72 +77 years.

A third study (Hansen and Platz, 1996) covered elderly 80-100 years

The results of these studies as to the physical mobility index for various age groups are shown in two tables below. As to the age groups, you can say that the first age group are people in the mid fifties, in the mid sixties, in the seventies, above 80 years and above 91 years.

Men	Physical ability index for men in different age groups						
Age group	0	1 - 2	3 - 4	5 - 6	7+	Total Pct.	N
"52 + 57"	92	6	1	1	0	100	1.324
"62 + 67"	82	14	2	1	1	100	835
70 - 79	63	17	9	6	6	101	196
80+	34	27	18	6	15	100	131
91+	16	61			23	100	45

Table 2. Physical ability index for men in different age groups

Women	Physical ability index for women in different age groups						
Age group	0	1 - 2	3 - 4	5 - 6	7+	Total Pct.	N
"52 + 57"	87	9	2	1	1	100	1.307
"62 + 67"	77	16	4	1	2	100	892
70 - 79	50	27	11	5	7	100	222
80+	24	21	16	16	23	100	270
91+	4	39			57	100	105

Table 3. Physical ability index for women in different age groups

(For the oldest age group 91+ years 3 index intervals were combined because there was very few persons in this age group.)

As one can expect the physical ability decreases with age. These tables indicate at which age a substantial share of the elderly people will experience so many problems with their physical abilities that they are in need of help to at least one activity.

- In the age group 70-79 years only 6-7 pct. of the elderly needed help in performing at least one of the activities (the physical ability index is 7+).
- In this age group 2/3 of the men and half of the women were fully able (the physical ability index is 0).

- In the age group 80+ 15 pct. of the men and 23 pct. of the women needed help in performing at least one of the activities
- In this age group 1/3 of the men and 1/4 of the women were fully able

- In the age group 91+ only 1/4 of the men, but more than half of the women needed help to perform at least one of the activities.
- In this age group about 1/8 of the men, but only 1/25 of the women were fully able

So in the younger age groups of elderly men and women in the fifties and sixties hardly any needed help. For those in the seventies, the situation was nearly the same. Only 6-7 pct. in this age group needed help to perform at least one of the activities. It is only in the age group 80+ you find a substantial share (16-23 pct.) who need help to perform at least one of the activities.

It is also interesting to notice the different situations for men and women. Life expectancy is shorter for men than for women, so in the oldest age groups there are far more women than there are men. The surviving men in these age groups are, however, not as frail as the surviving women. So the vast majority of those in need of help is elderly women 80+ years.

The performance of some instrumental activities is not only dependent upon age, sex and fragility, but also upon household composition. Cooking can serve as an example of this and of the size of the problem for elderly households living independently:

Cooking	Men 70+		Women 70+	
	Married	Not married	Married	Not married
Able to cook alone	27	57	82	79
Able with some trouble	3	5	8	10
Not able	7	17	8	9
Do not know if they can	62	21	2	3

Table 4. The ability to cook for married an unmarried men and women 70+ years (Platz, 1989)

So for married men 70+ cooking is not a favourite task. Only about 1/4 is able to cook. Most do not even know if they are able to cook. For unmarried men 70+ the situation is the opposite: 2/3 of the unmarried men 70+ are able to cook. Most women 70+ (married or not)- are able to cook. But from the tables above (table 2 and 3) it was clear that elderly men were generally more able to perform daily activities like walking indoor, walking on stairs, washing one self etc. When married men are not able to cook this is therefore a cultural phenomenon. If trained many unmarried men would be able to cook and therefore would not need help for this activity. Probably the reason why 1/5 of the unmarried men 70+ does not know if they are able to cook is that they get help for this activity

instead of training.

In the ball model, three areas of disabilities are taken into account. They mainly place themselves in the physiological and psychological functioning. They are cognitive, physical and sensory disabilities, which are more common among elderly people - especially the older elderly people 80+ - than in other demographic groups. The above disabilities often lead to a need of outside help or arrangements in the dwelling and they are especially significant when considering independent living in proportion to a dwelling.

The ability areas in the criteria are based on the division of European standardisation organisation (CEN/CENELEC Guide 6). The cognitive disabilities are divided into alertness, concentration and memory. The physical disabilities are balance, dexterity, movement, manipulation, reach, seizures, and strength. Further the sensory disabilities are hearing, seeing, smell/taste and touch.

As people get older, there can be some influence on cognitive abilities. Older people may have more difficulty concentrating and continuing to pay attention to a task. Changes in the sleep/wake rhythm can cause sleepiness and thus people can be less alert during the day. Memory can fail. Conditions such as dementia, which is more predominant among older persons, leads to progressive intellectual decline, confusion and disorientation. (CEN/CENELEC Guide 6.)

In old age, manipulation can be impaired by inability to use both hands when carrying out an activity. Speed of manipulation also declines as a result of slower reaction time and slower movement. Movement can be impaired in many ways. Walking speed and step length and height can be reduced, the range of movement in the joints of arms, legs and spine can be restricted and difficulty carrying out a controlled and co-ordinated movement can appear. The strength and endurance usually reduce by ageing. (CEN/CENELEC Guide 6.)

3.3 Resources

As to services focus in this project is on resources in the form of the various services available from public and private service providers and the third sector (volunteers). The social relationships are also very important to take into account when supporting and improving the independent living of elderly. The spouse is often a resource or "a service provider".

As can be seen from table 4 above about cooking it is mostly not a problem for older married men, if they are not able to cook. If their spouse dies first they might get a problem with cooking and therefore they might ask for services like meal-on-meals. On the other hand it can be seen from the same table that most elderly men living alone are able to cook. So another solution many elderly widowed men use is to learn to cook.

For the elderly coping with daily activities at home can be improved by making the dwelling and the surroundings more suitable for his/her needs. Thereby the needs of services can be reduced. Services should not be a substitute to a bad design. If an elderly person cannot do the shopping herself because she cannot get in and out of the dwelling because of stairs, for instance, escort service or delivering of goods to the home is a substitute to a bad design. If buses, trains and platforms are constructed so people using walkers or wheelchairs can get in and out without help the need for special transport systems for disabled is minimised.

There are many kinds of community services for frail elderly. Home help for practical and/or personal matters is the most common type of help. The Danish Service Act does not use the words "old" or "elderly persons" when describing the conditions for receiving these kinds of help. The

services are for persons - old or not - who due to temporary or permanent reduced physical or psychological abilities or special social problems are not able to perform certain activities and therefore need help.

3.4 Qualities

The Ball Model puts forward the qualities of the services. The qualities are connected with improving the quality of life of the occupant like fulfilling herself and having social interaction. People seemingly face some changes in their lives when they get older. Not all elderly have disabilities, but the prevalence of disability or limitations is the highest amongst this demographic group. As shown earlier, this is mostly the case for the oldest age groups 80+ years. In this age group, a substantial share (about 15-25 pct.) needs help in at least one daily activity - mostly elderly women.

As previously mentioned the qualities used in this deliverable are:

- *Variety*
- *Availability*
- *Affordability,*
- *Transparency*
- *Adaptability and user influence*
-

3.4.1 Variety

The existence of a variety of services is an important quality of services. The greater the spectrum of services the better a fit can be made with the specific needs and wishes of the elderly who need help to perform certain activities.

The previous mentioned European study on the dependency (Pacolet et. al., 2000) shows the fast development throughout 15 member states of the EU + Norway during the last two decades. *"The study identifies eight systems of permanent residential and semi-residential services for elderly, 17 temporary residential and semi-residential services for elderly and 22 community services. This variety illustrate the diversification that has taken place in this sector over the last two decades, and it was only possible within a context of a further expanding welfare state."* (Pacolet et. al. 2000).

Depending on how you define and group the services you can get different lists of services. In the service part of the project, the following list was developed:

1. Getting around or getting goods into the home

- Shopping help (Escort services)
- Delivering of goods from shops/books from libraries/medicine from pharmacies etc.
- Transport services
- Meal distribution

2. Practical jobs in and around the house

- Cleaning services
- Odd jobs services (e.g. checking fire alarm, cleaning air filter)
- Clothing care
- Laundry services

- Help for cooking
- Help for snow clearance
- Help for gardening

3. *Technical improvements at home*

- Technical aids
- Tele-alarm and telecommunication services
- Home adaptations

4. *Health and personal care*

- Health advisory services
- Preventive activities (check-up visits for the need of help or changes at home or participation in activities, vaccination, yearly check up by GP's)
- District nursing
- Health services
- Mental health services
- Help for dressing
- Personal hygiene services (bathing, foot care)
- Mobile hairdressers
- Mobile dental service

5. *Social*

- Social work
- Social centres for the elderly
- Recreational services (gym, excursions, and studies)
- Day care
- Old age tourism

6. *Temporary stay*

- Short stay in old-age homes or nursing homes
- Rehabilitation homes

7. *Other*

- Security services
- Advice service about moving or making adaptations
- Information services about the various services and the conditions for having them
-

3.4.2 Availability

A prerequisite for getting access to a certain service is that the service is available and that the elderly person, household or family know that this kind of service is available and on which conditions it is available in the area where the elderly household lives.

All the above-mentioned services are not available in all European countries. In fact in some European countries, there are only a few community services. Therefore elderly in need of help will have to move to residential or semi-residential settings with services in order to get help or they will have to rely on their family. There are also differences as to availability within some countries where there are more services available in the urban areas a few or none in the countryside.

3.4.3 Affordability

Affordability is another prerequisite/quality of services. If you cannot afford a service it, it is not of much use for you. Throughout Europe there are various ways of financing services. Services - to the extent that they exist locally - can be financed fully or partly by taxes or by various health insurance schemes or mostly by the elderly person or the family.

A prerequisite for living independently is of course not only a question of availability and affordability of services. It is also a question of affordability of the rent and other housing and living costs.

3.4.4 Transparency

In order to get access to an available service you will have to know that this particular service exist. According to the Danish Service Act it is up to the local authorities which kind of services they will deliver and on which conditions. They are, however, obliged to publish their policies in these matters. Thereby the elderly and their families can compare the offered services in different municipalities. In praxis, the offered services do not differ much. Some local authorities introduced for instance home help and district nursing around the clock and some years later these services existed in all municipalities.

If meals-on-wheels for instance is available, this will be published. The same goes for the conditions for getting this service (the assessment of needs) and the character of the service (delivering of hot and/or cold and/or frozen food), the possible other choices (character and amount of food) and the price for this particular service.

The most common services like home help for practical and personal matters, meals-on wheels, connection to alarm systems, district nursing and the possibility to visit a day centres for the elderly are probably well known by the elderly in countries where these services exist. From the interviews made in the early part of this project, it turned out that some of the more special services were not as well known. Some elderly Danes said they were willing to pay for adaptations of their dwelling should they become frailer and needed removal of thresholds, the installation of ramps etc. They did not know that these services actually were free of charge. The same was the case with special transportation services for disabled. Elderly who were not disabled and who did not use these services did not know the rules and some did not know of the existence of these services. They would only need to know the detailed rules if and when they experienced problems, which could be solved by or compensated for by these services.

Information about services can be provided in many ways, for instance:

- Pamphlets you can pick up at libraries, post offices and other public places
- Periodical papers sent to all receiving old age pensions or other public pensions (younger people with disabilities).
- Information offices
- Special information and advice phone lines
- Web pages

Special types of services like the possibility of housing adaptations or respite care might not be as well known as home help. The same is probably the situation for the various kinds of special equipment frail elderly persons can get or lend. Therefore the service of obligatory, preventive visits to the elderly 70+ might be one of the more efficient ways of informing about services, of detecting needs and proposing individual solutions.

3.4.5 Adaptability and user influence

Some private services like window cleaning might be available for all who pay all the costs themselves. In this case you have 100-pct. user influence.

Most EU countries subsidize services like home help for practical and personal matters to some degree. Therefore you can only get these services after an individual assessment of your needs. In this assessment the three other variables of the ball model and also other individual circumstances are taken into account:

- which activities do you need help for
- which abilities do you have in relation to these particular activities
- which resources of yours should be taken into account (the dwelling, the surroundings, help from the spouse or family members)

In the guidelines to the Danish Service Act it is underlined that:

"Help should be provided and organised in close collaboration with the client and support the client in keeping or regaining a physical or psychological level of function or rectify special social problems. It is important to keep attention to the activating goal that is an essential element in the aid. The primary goal of the help is to make the client independent of help. If this is not possible the goal is to make the client capable of performing as many activities as possible." (Guidelines 1998, chapter 5)

There are often more solutions to the same problem. If the problem is the preparation of meals, for instance, one solution could be training for newly widowed men. This would be in line with the guidelines quoted above. Another solution could be meals-on wheels and here there are various ways: the delivery of hot, cooled down or frozen meals. From the interviews made in the early stage of this project, we saw that some elderly disliked frozen food very much. So if it is the only form of meals-on-wheels locally available there is not enough user influence on these elderly. A third solution could be to have meals more days a week in a day centre for the elderly or in a community centre and if needed transportation to and from the centre. Some of the interviewed elderly preferred this solution.

So for many activities that the elderly person needs help for there is more than one solution and the elderly person should have influence of which one it should be.

A final aspect of user influence is the right to appeal decisions taken about the kinds of services and the amount of services (a number of visits of home-helpers pr month or per week, a number of hour's etc).

REFERENCES:

CEN/CENELEC Guide 6: Guidelines for standards developers to address the needs of older persons and persons with disabilities. 2002. [Electronic document]. [Referred 2002-11-15]. Available: http://www.cenorm.be/BOSS/supmat/refdoc/resources/c_clcgd006.pdf.

Rissanen, L. 1999. Vanhenevien ihmisten kotona selviytyminen. Yli 65-vuotiaiden terveys, toimintakyky ja sosiaali- ja terveystalvelujen koettu tarve [electronic document]. University of Oulu: Kansanterveystieteen ja yleislääketieteen laitos, 1999 [referred 2002-11-15]. Available: <http://herkules.oulu.fi/isbn9514254414/>.

Platz, M. 1989. "Gamle i eget hjem" [Older people living at home] SFI rapport 89:12, Copenhagen
Hansen, E. B, and Platz, M. 1996 "Gamle danskere" [Old Danes].AKF. Copenhagen

Platz, M. 2000 "Danskere med livserfaring" [Danes with life experience] SFI 008, Copenhagen
Pacolet, J. et al 2000 "Social Protection for Dependency in Old Age. A Study of the fifteen EU Member States and Norway. Ashgate

Vejledning om sociale tilbud til ældre m.fl. 6 marts 1998 . Socialministeriet [Guidelines for social offers for the elderly]

Part II. The criteria for services – the Ball Model and the Activity Cards

1. The criteria for services

The criteria for the services are a combination of the Model of independent living (The Ball Model) and the Activity cards.

In the criteria process a model of independent living called "the Ball model" has been created. The aim of the model is to raise the consciousness of dwellings, surroundings and services for the elderly and to help them and other parties involved considering these matters. The criteria for the services will help the planning process when the special needs of the elderly have to be taken into account.

1.1 The Model of Independent Living – the Ball model

The Ball model describes an idea of taking different variables into account when evaluating the fitness for the use of dwelling, surroundings and services for elderly people. The variables in the Ball model are selected to cover different areas of living. One can also use it as a tool in analysing the present knowledge (guidelines, standards and regulations) and formulating the comprehension of elderly habitation out of them. That means for example evaluating the products and combinations of products and services in order to detect critical points. The Ball model serves also as a planning tool and a generator of new ideas. The purpose of the criteria is awareness waking – giving the guidelines to the planners and to the elderly rather than giving strict instructions. In the model four main variables are introduced: abilities, activities, resources and qualities.



The Ball Model

Activities

Main activities

CARE AND KEEPING FIT

PERSONAL HYGIENE AND DRESSING COMMUNICATION AND SELF-ACTUALIZATION

Supporting activities

GARDENING AND MAINTENANCE

HOUSEWORK (COOKING, WASHING, CLEANING)

MOVING

SHOPPING

Resources

Human resources.

Elderly himself/herself and with the help of the spouse and/or other family members or other relatives

Services providers

- -Municipal home help service
- -Private home help service
- -3rd sector service (volunteers)

Services available for all in the surroundings (accessibility)

Services in the surroundings especially for elderly

(for instance day centers for the elderly and special transports services for elderly and disabled)

Material resources

- Income
- Machines and appliances
- Products

Qualities

Variety

Availability

Affordability

Transparency (of various types of available services)

Adaptability (to individual and changing needs) and user influence (right of appeal of decisions of delivered services)

Abilities

Cognitive (alertness, concentration, memory)

Physical (balance, dexterity, movement, manipulation, reach, seizures, strength)

Sensory (hearing, seeing, taste/smell, touch)

1.2. Activity Cards

The model of independent living is concretized in the form of Activity Cards. The Activity Card describes what the activity is about. Secondly, a suggested performance specification that specifies the potential activity has been put into a table. The information in the Activity Card is organized from left to right – from the performance specification to the variables. Thirdly three variables (quality, ability and resources) are listed through which one can look at the activity to find solutions. In the Activity Cards, the variables are not mentioned if they are not relevant concerning the performance specification. The Activity Cards are suggestions for the help (services) available taking into account the concrete situation and requirements of the elderly person.

HOUSEWORK 1: Cooking

'Housework' covers cooking, textile care and cleaning. There are lots of activities including in the housework, like washing, cutting, boiling, freezing, hanging the clothes, vacuuming, mopping and wiping. Service providers can do parts of the housework.

	Performance specification	Variable		
		QUALITY	ABILITY	RESOURCES
	<p>It is possible to have a hot meal every day. There are different ways of taking care of cooking depending of one's choice and the availability and price of the services.</p>	<p>Availability Affordability Adaptability and user influence</p>	<p>Cognitive (alertness, concentration, memory) Physical (balance, dexterity, movement, manipulation, reach, seizures) Sensory (hearing, seeing, taste/smell, touch)</p>	<p>Products Service providers Services Appliances</p>
<p>The concrete solutions are not necessarily the same for all days of the week and all times of the year. By combining the various alternatives a variety of concrete solutions can be found like:</p> <ol style="list-style-type: none"> 1. You cook by yourself <ul style="list-style-type: none"> ▪ You use ready made or half-prepared meals. ▪ You take training courses in cooking. 2. Someone from your family (other relatives) cook with you or for you. 3. A service provider (home-helper) comes to your dwelling and cooks for you. 4. The meal is cooked in the central kitchen. <ul style="list-style-type: none"> ▪ You get meals-on-wheels in the form of hot, cooled down or frozen meals if possible after your own choice. You re-heat the cooled down or frozen meals in a microwave oven at a time of the day when you wish to eat. ▪ You decide the size and number of the dishes if this is possible. ▪ You decide the menu's to the extent this is possible. 5. You have your meals outside home. <ul style="list-style-type: none"> ▪ One or more times a week depending of your choice and the availability of this service you eat in a day centre for the elderly or a similar place with reduced prices (a community centre). This might be combined with transportation services. ▪ One or more times a week depending of your choice you eat at the cafeteria. ▪ At special occasions or more regular depending on your choice and your economy you eat in restaurants. 				

HOUSEWORK 2: Cleaning

	Performance specification	Variable		
		<i>QUALITY</i>	<i>ABILITY</i>	<i>RESOURCES</i>
	It is possible to get your dwelling cleaned depending of one's choice and the availability and price of the services.	Availability Affordability Adaptability and user influence	Cognitive (alertness, concentration, memory) Physical (balance, dexterity, movement, manipulation, reach, seizures) Sensory (hearing, seeing, smell, touch)	Services Appliances Income Relatives
<p>By combining the various alternatives a variety of concrete solutions can be found like:</p> <ol style="list-style-type: none"> 1. You do it yourself <ul style="list-style-type: none"> ▪ You use good equipment and appliances. ▪ You use modern technique like automatic vacuum cleaner. 2. You get help from the family members inside or outside the household with the cleaning tasks. 3 You get help from home-helpers for common cleaning tasks like vacuum cleaning. 4 You pay service providers for extra cleaning tasks like window cleaning. <ul style="list-style-type: none"> ▪ If the amount of cleaning or the regularity of cleaning performed by home-helpers does not satisfy you, you appeal the decisions taken about this. 5 You do changes at home to help cleaning. <ul style="list-style-type: none"> ▪ You stretch some cleaning tasks over longer periods. For instance you don't do the vacuum cleaning in all rooms the same day. ▪ You reduce the amount of cleaning by changing some of the furniture or by getting rid of carpets. ▪ You reduce the amount of cleaning by not using all rooms regularly. ▪ You reduce the amount of cleaning by moving to a smaller and/or more modern dwelling. 				

HOUSEWORK 3: Washing

	Performance specification	Variable		
		<i>QUALITY</i>	<i>ABILITY</i>	<i>RESOURCES</i>
	It is possible to get your textile (cloths, linen, curtains etc) washed regularly.	Availability Affordability Adaptability and user influence	Cognitive (alertness, concentration, memory) Physical (balance, dexterity, movement, manipulation, reach, seizures) Sensory (hearing, seeing, smell, touch)	Services Appliances Income Relatives
<p>By combining the various alternatives a variety of concrete solutions can be found like:</p> <ol style="list-style-type: none"> 1. You use a washing machine in your home or in the house laundry (or in the neighbourhood.) 2. Family members inside or outside the household help you with washing. 3. You get help from home-helpers to the washing. 4. You pay service providers for doing the washing. 				

Personal hygiene and dressing

	Performance specification	Variable		
		<i>QUALITY</i>	<i>ABILITY</i>	<i>RESOURCES</i>
	It is possible for you to get in and out of bed, to use the toilet, to get washed, to cut toenails and to get dressed.	Availability Affordability Adaptability and user influence	Cognitive (alertness, concentration, memory) Physical (balance, dexterity, movement, manipulation, reach, seizures) Sensory (hearing, seeing, touch)	Services Appliances Income
<p>By combining the various alternatives a variety of concrete solutions can be found like:</p> <ol style="list-style-type: none"> 1. You have a motorised hospital bed to make it easier for you to get in and out from the bed. 2. You have a home-helper to assists you e.g. twice a day. 3. You get clothes that are easier to use, you get equipment to use to make part of the dressing process easier and/or you get assistance from home-helpers. 4. To cut toenails you get it done in a day-care centre (might be combined with the use of transportation services) or you get a service provider to give you a pedicure in your home. 				

Communication and self-actualisation

	Performance specification	Variable		
		<i>QUALITY</i>	<i>ABILITY</i>	<i>RESOURCES</i>
	It is possible to get help and communicate with service providers and other people and to participate in various activities.	Availability Affordability Adaptability and user influence	Cognitive (alertness, concentration, memory) Physical (balance, dexterity, movement, manipulation, reach, seizures) Sensory (hearing, seeing, touch)	Services Appliances Income
<p>By combining the various alternatives variety of concrete solutions can be found like:</p> <ol style="list-style-type: none"> 1. An emergency alarm system can be installed in your dwelling if there is a risk of falling and you know it might be difficult to get up and get the telephone in order to ask somebody for help. 2. The transportation services can be used when participating in activities with other people or in activities especially for elderly people e.g. in day centre for the elderly or in a community centre for all age groups or an association or a club. 3. The regular visits from voluntary "visit friends" can be applied if you are lonely and you do not like to get out. 				

Gardening

	Performance specification	Variable		
		<i>QUALITY</i>	<i>ABILITY</i>	<i>RESOURCES</i>
	It is possible for you to keep your garden	Availability Affordability Adaptability and user influence	Cognitive (alertness, concentration, memory) Physical (balance, dexterity, movement, manipulation, reach, seizures) Sensory (hearing, seeing, smell, touch)	Services Appliances Income Relatives
<p>By combining the various alternatives a variety of concrete solutions can be found like:</p> <ol style="list-style-type: none"> 1. You do it yourself <ul style="list-style-type: none"> ▪ You use good equipment and appliances. ▪ You use modern technique like automatic lawn mower. 2. You get help from relatives or you pay for or you apply for gardening service. 3 You make changes and let your garden rearrange so it is easier to keep. 4. You move to another dwelling with a smaller garden or to a flat with a balcony. 				

Shopping

	Performance specification	Variable		
		<i>QUALITY</i>	<i>ABILITY</i>	<i>RESOURCES</i>
	It is possible to get daily necessary goods into your home even if you cannot perform the shopping yourself or if you have difficulties only with carrying heavy merchandises.	Availability Affordability Adaptability and user influence	Cognitive (alertness, concentration, memory) Physical (balance, dexterity, movement, manipulation, reach, seizures) Sensory (hearing, seeing, touch)	Services Appliances Income Relatives
<p>By combining the various alternatives a variety of concrete solutions can be found like:</p> <ol style="list-style-type: none"> 1. You use special transport services for disabled persons to and from shopping centers. 2. You are escorted to the shops by a helper one or more times a week. 3. You get help for family members inside or outside the household to some of the shopping jobs. 4. A service provider (home-helper) does the shopping or only the shopping of heavy merchandises for you one or more times a week. 5. You use mobile shops serving the area and stopping outside the individual homes or groups of homes. 6. You use the delivery services provided by some shops to people that for some reasons are not able to do the shopping themselves. 7. You can also reduce the need for daily shopping by applying for meals-on wheels service if you also need this service 				

Mobility

	Performance specification	Variable		
		<i>QUALITY</i>	<i>ABILITY</i>	<i>RESOURCES</i>
	It is possible for you to get around inside and outside your dwelling and to get to places like shopping centre, cinemas, community centre, parks, museums, pharmacies, GP's etc. and to visit friends and relatives in the surroundings.	Availability Affordability Adaptability and user influence	Cognitive (alertness, concentration, memory) Physical (balance, dexterity, movement, manipulation, reach, seizures) Sensory (hearing, seeing, touch)	Services Appliances Income Relatives
<p>By combining the various alternatives a variety of concrete solutions can be found like:</p> <ol style="list-style-type: none"> 1. You buy or apply for a roller or a wheelchair. This solution is often combined with housing adaptations like the removal of thresholds or even installation of ramps. 2. An electrical wheelchair will enable you to get further around. 3. A roller or a wheelchair can also be combined with escort services or help from relatives. 4. You use special transport services if the local public transport is not designed also for wheelchair users. 				

Care and keeping fit

	Performance specification	Variable		
		<i>QUALITY</i>	<i>ABILITY</i>	<i>RESOURCES</i>
	It is possible for you to get various (health) care services.	Availability Affordability Adaptability and user influence	Cognitive (alertness, concentration, memory) Physical (balance, dexterity, movement, manipulation, reach, seizures) Sensory (hearing, seeing, touch)	Services Appliances Income
<p>By combining the various alternatives a variety of concrete solutions can be found like:</p> <ol style="list-style-type: none"> 1. District nursing 2. Yearly check up by GP's 3. Health advice services 4. Mental health services 5. Yearly vaccinations 6. Training by physiotherapists 7. Short stay in rehabilitation homes 				