

Enhancing quality of life through adaptation of the visual environment

**The use of light, contrast
and markers to assist elderly
people in care homes**

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The Marmettes Centre in Monthey, and the Foundation for people who are deaf-blind in the French part of Switzerland (FRSA).

The Central Union for the Blind (UCBA), and its department of research into low vision.

The Geneva federation of care homes for the elderly (FEGEMS), for its support.

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Preface

In autumn 2003, the FEGEMS (the Geneva federation of care homes for the elderly) held a meeting to study architectural and institutional concepts to be applied to care homes for the elderly dependant on medical care. In this context, the participants discussed the advisability of creating specialized care homes for elderly residents who shared a similar pathology. Even though such homes would easily comply with the level of care required for residents with orientation problems or illnesses such as Alzheimer, they would not be appropriate for the care of elderly people with low vision. This finding was confirmed by a study on the subject carried out by the ABA (Association for the Blind).

The Association therefore decided against the construction of homes specializing in the care of partially sighted people (probably more than one would be required), and we think they came to the right decision. It was decided to explore other possibilities for improving the care and conditions of partially sighted residents within these homes.

This publication serves two purposes; firstly, it aims to make the public more aware of the problems encountered by people with low vision in their daily lives, and thus lead to a greater understanding; secondly, it provides a considerable amount of information about structural and architectural changes which could be incorporated in these homes, many of which are quite simple.

The FEGEMS welcomes this initiative for several reasons: The recommendations made in this publication for changing the visual environment in these homes come at a very favourable moment; in Geneva, there are currently several projects in progress for the transformation or construction of care homes for the elderly who require healthcare. Most of these projects were undertaken with the aim of improving the quality of life in these residences, as well as improving their functioning and management. The enthusiasm and the energy that such projects usually generate are very conducive to innovation. The study and exchange of information with regard to visual environment are of real value in this context.

Furthermore, far from simply putting forward abstract theories, this publication has the merit of proposing practical approaches, and possible architectural solutions which are realistic and achievable. The publication contains many illustrations and concrete examples drawn from the practical experience of the authors, and numerous references are provided.

Finally, this initiative encourages the pooling of experience and resources for the benefit of the EMS. Active collaboration with the nursing staff and management of these institutions would increase their awareness of the difficulties arising from partial sight, and facilitate the search for measures to enable every resident to live in a secure and comfortable environment, whatever their visual acuteness.

For all of the above reasons, the FEGEMS fully supports this project.

Roaid Quagia

Geneva Federation of Medical-Social Residences (FEGEMS)

Foreword

When partially sighted people prepare to enter a care home, they may choose the location because of its proximity to family and friends, or to their previous place of residence, preferring to stay within a familiar environment. Others seem to prefer that their identity as a partially sighted or blind person be recognized, and choose the Vallon care home as their residence. This is a specialized home for the blind and partially-sighted, which was created by the ABA, an association for the welfare of blind and partially sighted people in Geneva.

The availability of this choice is very important. People who decide to enter a care home (an EMS) usually do so because they are old and their general state of health is not good, no longer enabling them to live alone. Poor vision is an additional handicap to their daily routine, and needs to be taken into consideration in an effort to improve their quality of life in a care home.

The ABA would like to share its specialized knowledge by the distribution of this brochure, which was made possible by the work of Marie-Paule Christiaen, an occupational therapist specializing in visual deficiency at the Centre for Information and Rehabilitation (CIR) since 1980.

This brochure was compiled and distributed with the financial assistance of Pro Visu. Its aim is to diffuse information on the characteristics of low vision and its consequences. It is also intended to provide information for the improvement of the visual environment to permit partially sighted residents of care homes to achieve independence and integration with greater ease.

We hope that the information contained within this brochure will help the vast group of people responsible for the care of residents in homes to improve the daily lives of the residents, as well as provide information and inspiration for future architectural construction and renovation. This group includes the directors, the founding committees, architectural designers, nursing staff, technical advisers and occupational therapists.

The ABA also hopes that this brochure will be an additional tool to support and enforce its message for the treatment of clients of the Centre for Information and Rehabilitation.

Particular attention was given to the graphic line used as an illustration for the chapter entitled «Facilitating access to information».

André Assimacopoulos
President of the ABA

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Introduction

Elderly people residing in a care home are in a difficult position, not only because of their numerous physical deficiencies, but also because their living environment might actually contribute to their handicap, by confronting them with obstacles which might be preventing them from carrying out their daily routine with ease. In addition, these care home residents may have health problems which may reduce mobility and decrease sensorial and cognitive faculties.

Occupational therapists specialized in the problems of visual deficiency have acquired the experience and the competence that enable them to evaluate the best means of using residual vision. By publishing this brochure, we hope to share our knowledge and experience, so that the persons concerned feel less handicapped, and that their families, friends and professional carers may also benefit from this information.

In the brochure, we have tried to illustrate the environment as perceived by partially sighted people who usually experience either blurred vision, lost central vision, or a reduced visual field. Light dazzle and difficulties with low contrasts cause additional strain or even real suffering.

We have set out principles which can be applied in order to achieve optimum improvement of visual perception; these include good use of light, contrasts, magnification and markers. We also show examples of changes to visual environment which might help elderly people achieve more independence despite their low vision. You will discover some of the examples that were created for the clients of the CIR and for the Vallon residence. We have also highlighted examples of institutional visual aids in collaboration with the Clinic of Ophtalmology at the University Hospital in Geneva (HUG), the Centre for Handicraft and Leisure (CAD), and also with the Centre des Marmettes in Monthey, which is a new care home for deaf-blind people. These suggestions are an additional tool to be used in conjunction with the recommendations and standards set out for residents with reduced mobility. Ideally, we would recommend the creation of residences using the Universal Design, since this would be beneficial to every potential care home resident. But, for the moment, it seems advisable to focus our recommendations on the improvement of the visual environment, because the general public still seems to lack knowledge on this subject.

EMS are care homes which strive to meet the specific needs of their residents, and to assist them in this task, we have compiled a reference list setting out the names of publications and web sites containing design standards and recommendations.

Vision in old age

It is important to note that in old age a person's eye-sight begins to decline, even without any particular visual disease, and accommodation and ability to perceive low contrasts become difficult. The gradual decline in vision can be an insidious and progressive process which, initially, may not cause any interruption to daily activities. This loss of eyesight often leads to a lower quality of life. Good vision permits compensation of other deficiencies, such as auditory impairment and problems relating to balance. The person's orientation and mobility faculties are diminished, particularly in a new or an unfamiliar environment.

Low vision is not easy to define. This state of “in between” - between good vision and complete blindness - is a mystifying concept. The complications and difficulties arising from this vary greatly, depending on the amount of damage to the visual system. To complicate matters further, the vision will fluctuate according to the variations in the person's general health, as well as to environmental changes.



How can we tell if a person is partially sighted?

Sight impairment is very seldom detectable by the appearance of the eyes. There are no physical signs - such as a wheelchair for a person who can't walk - and this makes the detection of visual disorders even more difficult for people in contact with the person concerned. How can we imagine the difficulties encountered by a partially sighted person? How is it possible that someone cannot recognize the silhouette of the Mont-Blanc on a clear day, but can squash the moth flying around in his or her cupboard? Without explanations of these difficulties, we lack understanding and may even be sceptical.

Is every person who wears glasses partially sighted?

If a person has myopia, hyperopia or astigmatism, glasses can be worn to correct the default, and a clear and precise image is obtained on the retina. When close sightedness becomes a problem with age, reading glasses may be necessary, to maintain a comfortable reading distance of 30 centimetres.





A person is considered partially-sighted when he or she can no longer read print the size of newsprint, or travel safely and independently in unfamiliar places, even when wearing correctly prescribed glasses.

We have put together some visual simulations which will permit you to leave your usual visual environment for a few moments, and to experience the environment of a partially-sighted person. The pictures used for this document have their limitations, but they try to illustrate the different types of ocular damage. We have chosen situations encountered by every care home resident on a daily basis; a staff member coming into the room, or a meal in the dining room of the residence.

Types of visual damage

Blurred vision

When we focus on an object, the image is projected onto the retina, passing through the cornea, the lens and the vitreous body. Any alteration to the transparency of these parts, for example by a cataract, results in an increasingly foggy image, which makes any type of activity more difficult:

- **The contours of objects become less sharp.**
- **Visual details become more difficult to discern.**
- **Colours appear faded.**
- **Light sources appear too bright and cause dazzle.**



Impairment of central vision

The central part of the retina, called the macula, contains receptors (the cones) which permit the perception of colours and details, and damage to this zone leads to a loss of visual sharpness. When the person concerned focuses on something, he or she does not receive adequate visual information:

- **It becomes difficult to recognize faces, and to greet acquaintances.**
- **It is impossible to perceive details.**
- **Inadequate lighting makes work impossible.**

The partially sighted person is unable to carry out any precision work, and obtaining information is very difficult, as the person cannot read texts or his own handwriting. The most common cause of central vision loss is age-related macular degeneration (ARMD).



Reduction in peripheral vision

The periphery of the retina is a wide sensorial zone, which captures movement and visual flow. Damage to these receivers (the rods) result in fragmented vision.

- **The image is seen as through a keyhole.**
- **Difficulties are even greater in reduced light.**

Problems of mobility are encountered in large and complex spaces, and organisation of domestic tasks is difficult, even though the person concerned is able to perceive very precise details in good daylight.

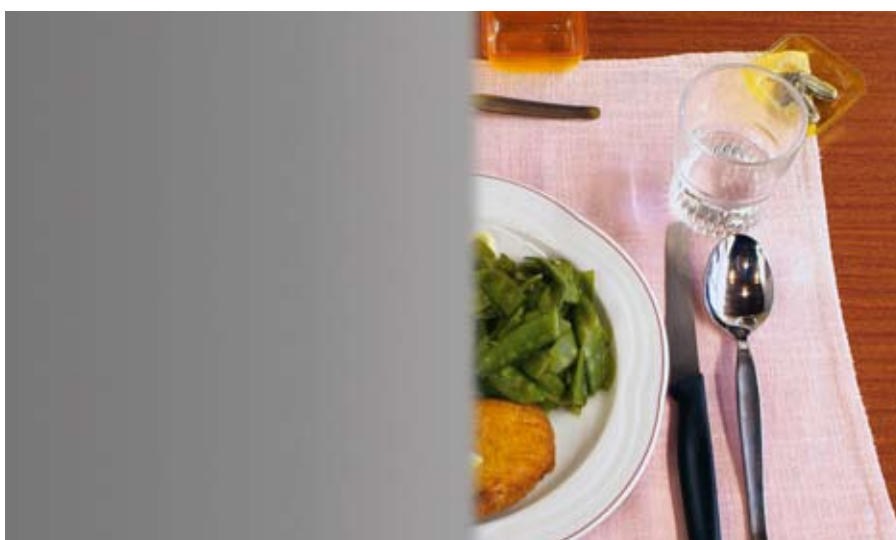


Homonymous hemianopsia

Lateral homonymous hemianopsia is an example of reduced vision caused by brain damage. Visual information captured by the receptors in the retina is partially processed by the brain. For people who experience this condition:

- **The left part of the visual field is lost.**
- **The person cannot see any obstacles on his left side, causing him to bump into these objects.**
- **When reading, the beginning of lines cannot be seen.**

The persons concerned are not always aware of these problems initially, and this might cause them to fall when walking around. They do not automatically compensate for these limitations by moving their head, to obtain the visual information on their left side.



Deterioration in perception of low contrasts

The ability to distinguish shades of colour decreases with age and with certain eye disorders. This decline affects all activities and, in particular:

- **The ability to recognize the features (the modules) of a face.**
- **The ability to see a glass on the table, either full or empty.**
- **The ability to distinguish the value of different coins.**
- **The ability to read a newspaper.**

When the persons affected are in familiar surroundings, they develop strategies to compensate for these deficits. They learn to recognize colours of objects familiar to them, such as their armchair, their jacket or their radio. They wait for their visitors to start talking so that they can identify them. They use their sense of touch to check the level of the drink in their glass, or to identify the coin in their hand.



The impact of light

Elderly people require more light to carry out their activities with ease than young people. Some elderly people require strong lighting, while others prefer muted half-light because they are dazzled by bright light.

Reduced faculty of adaptation to light changes

Partially sighted people are handicapped by the greater amount of time it takes them to adapt to changes in light. When the persons concerned move from a brightly lit place to a dark room, their eyes have to adapt rapidly to this new visual environment. The person are therefore forced to stop for a few moments.

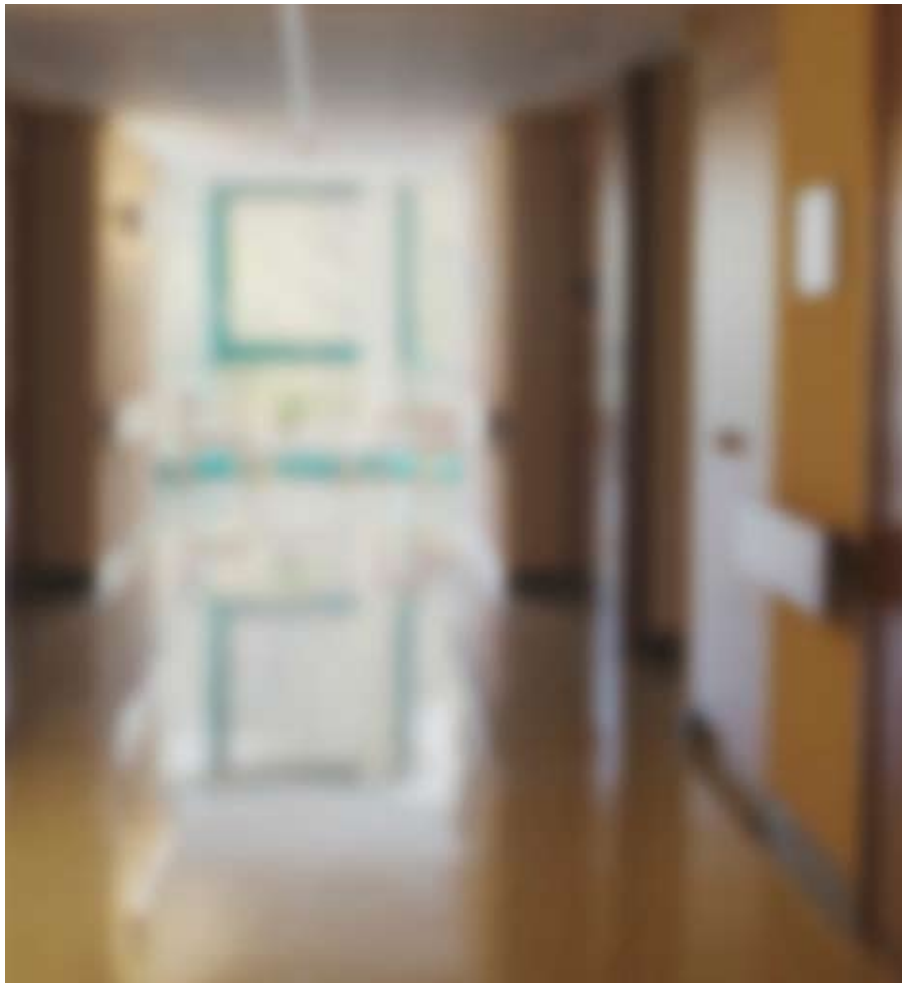
Light sensitivity and dazzle

Dazzle is a temporary visual disturbance which is provoked by an over-bright light stimulation. It causes real difficulty for partially sighted people, and in some cases may cause pain and oblige them to reduce their activities. This light sensitivity can be aggravated by:

- **Sources of bright light in the visual field which are aggressive to the eye.**
- **Alternating zones of shade and light which force the eye to adapt, and cause discomfort and fatigue.**
- **Light reflections on the floor of a corridor illuminated by a bay window at the end, causing the person to feel insecure.**

The persons concerned can obtain light protection by wearing a visor or tinted glasses, but then risk being in total darkness when they cross a shady zone. When seated indoors, the person has to choose a place with his back to the window.

When lying in bed, the light bulb or fluorescent tube should not be visible. In extreme cases, where light causes real pain, the person should be provided with blinds or curtains to reduce the amount of light entering his room, or to obtain semi-darkness. A variable light switch device permits the person to control the amount of light he needs for different activities.



Recommendations for the improvement of the visual environment

Visual acuteness, the ability to perceive details, is a relative measure, which depends both on the visual environment and the ocular condition of the person receiving the visual information.

Improving lighting

Elderly people seldom have adequate lighting, whether they are in their own home or in communal surroundings. In a communal residence, the positioning and choice of light fixtures have to be undertaken bearing in mind the different sight problems and the activities to be carried out in a particular place.

The entrance hall and stairs require lighting of about 300 lux, whereas a work place requires 1000 lux. It is important that the article that needs to be seen is well lit; installing lighting near or inside a wardrobe enables the person to find the garment he wants with ease, and putting lighting near or inside a cupboard enables the person to find a glass without having to feel around.



The different sources of light

Daylight is a natural source of light which is cost-free and of an intensity that no artificial source can equal, but it varies according to seasons, the time of the day, and whether or not it is cloudy outside. This makes it difficult to control. It is possible to regulate the intensity and diffusion of daylight entering a room by installing blinds at the windows.

Artificial light is produced by glowing light bulbs, halogens and fluorescent tubes. The new generation of fluorescent tubes use very little energy and do not produce much heat. These energy-saving light sources can be permanently used to illuminate passages and pathways to make them safe and secure at a very low cost. These light tubes are available in different colour nuances, ranging from white to yellow and blue-white. It is important to discuss the choice of light with the persons concerned since they are the only ones who can judge the conditions that are the most beneficial to them. We have noticed that one person may find reading easier with a blue-white light, while another person finds reading with a yellowish light easier, and this choice of colour lighting does not seem to be linked to any specific eye disorder.



Distribution of light

Light fixtures placed at regular intervals provide basic lighting for an area which needs light. This lighting can be achieved either by ceiling light fixtures, or by fixtures which reflect the light from a bulb onto a light coloured wall and wall surface or the white ceiling.



Additional support lighting is indispensable for areas used for precision work, where strong lighting is required, even in daytime. However, this is not a substitute for standard lighting. The eye is able to adapt to this additional light level. The light-bulbs or tubes should not be visible, they should be hidden by a deflector or a cover as a person lying in bed could suffer from the glare of the light, if the ceiling light or fluorescent tube were placed directly in his field of vision.



Without doubt, bathroom lighting is the most complex. The safety norms have to be respected, and this can hinder the choice of personalized solutions. It may not be possible to use additional lighting which could be useful for some residents, to help them see the slippery bathroom floor.

Lighting can be used to help differentiate certain areas:

- In a corridor, a luminous line can be used to indicate the right direction.
- In the room used for different activities, the basic lighting should provide light of the same standard as that designated for precision work, without shadows.
- Lighting in the living room should be soft and muted, to create a relaxing and welcoming environment.
- In the cafeteria, glowing balls of light add warmth and incite the residents to take a break.

Light switches

Light switches are sometimes difficult to locate, and this can be improved by installing light switches framed by a contrasting colour. In addition, light detectors, which switch on automatically when a person enters a room, provide instant lighting so that the person is not in complete darkness.



Reduction in glare or dazzle

Dazzle, or light glare, is a disturbing element to visual comfort. This discomfort is triggered by light which is too bright, or badly distributed. Variations in light, from bright to shade, force the eye to respond rapidly, and this causes discomfort and fatigue.

Reducing variations in light

Variations in light, such as in a room that has dark walls and a window letting in bright light, can cause discomfort. This problem can be improved either by installing blinds or curtains at the windows, or by adding light fixtures to brighten the dark walls. If a workspace is lit by an office lamp in a semi-dark room, this light source can cause glare and discomfort. To improve this situation, it is necessary to provide better basic lighting in the whole room.

Reducing light reflection

Steps should be taken to avoid light reflections, which bounce off shiny articles like bay windows, lacquered paint or stratified and varnished table tops.

Blinds can be installed at windows at the end of corridors in order to filter the amount of light coming in, thus reducing light reflection.



Increasing the contrasts

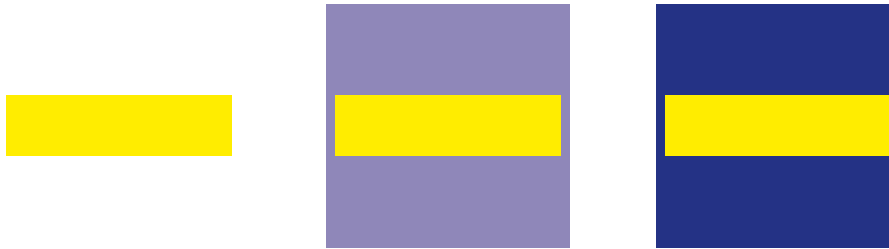
The amount of contrast visible between surfaces in the same area depends on their sheen. The sheen of a surface depends on the amount of light it receives, and its properties of light reflection; the lower the contrast, the greater the necessity to increase lighting. Special attention should be given to the constituent features of the environment:

By the use of colour

The use of contrasting coloured surfaces will facilitate daily life.



The colour choice depends on the background colours.



The yellow band becomes a guide line or marker, when used in contrast to a dark background. The blue band becomes a marker when it is distinguishable because used in contrast to a light background.



Making the contours of objects more visible

Elderly, partially sighted persons may see their environment as a blur. They see the components as fields of colour, and do not receive sufficient visual clues to analyze this information. This causes insecurity and it is important, therefore, to increase the number of visual clues. For example, a white porcelain plate can be seen more easily on a table with a pastel coloured tablecloth, if dark coloured place mats are used under the plates. The alarm button on a light coloured wall is easier to see if it is framed by a dark colour.



Note: A mat which is too dark in colour can be mistaken for a hole if the person is not able to distinguish the different textures.

Space adjustment

The objectives for the living environment should be to increase security by eliminating obstacles, avoiding zones of alternating light and dark, to improve visual perception, and by using tactile and sound markers.

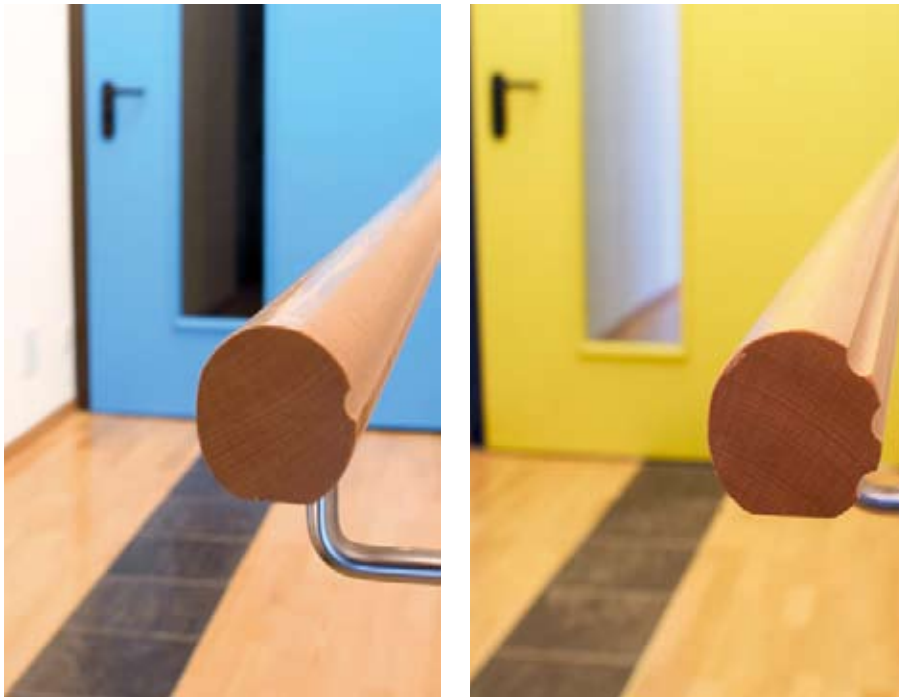


Providing orientation markers

The architectural design of the care home should be easily understandable. Good design should facilitate orientation, and avoid long distances between the different living areas. The layout, the lighting and the furnishings should make it easy to identify the different locations, living quarters or communal areas.

Corridors should have contrasting ramps or banisters, lights placed to form a line indicating the shape and direction of the area, and also highlighting the emergency exits. Signs should be used to distinguish different areas and different floors, to facilitate orientation, and contribute to a feeling of security for the residents and their family. Colour codes can be used to distinguish the different floors, and pictograms or name or numerical signs can be used to identify communal areas.

These spatial markers facilitate orientation and movement within the home.



Reducing obstacles

Mobility impairment and the need to use special mobility equipment or wheelchairs have led to the development of corridors which are free of obstacles. This applies to the interior of the residences, and the same care should be applied to the exterior. Pavements should be made safe areas, for example, by ensuring that no big tree roots which deform the paving and make it hazardous are present. If work is carried out to these areas, the new surface should be levelled to the surrounding area to make the whole surface safe. No fixed obstacles should be on these pathways. Mobile or temporary obstacles, such as trolleys carrying linen or cleaning equipment, should be put away in a storage room when not in use.



Choice of surface coverings, from floor to ceiling

The floor should be light-coloured and non-slip. The shape of the room can be highlighted by a skirting board or by a line of tiles around the edges in a contrasting colour. Pastel colours should be used for the walls, choosing a different colour for rooms on each floor. The environment created by these methods can help the residents to find their bearings with greater ease. To reduce the risk of glare from the walls, the colour white and shiny tiles or paint should not be used. Rough wall surfaces or staples should not be used, as they can cause injury. Any sharp angles in the room can be rounded off by using special synthetic protectors in contrasting colours. These are beneficial to the residents, and also prolong the life of the equipment. Door frames and door handles should be in a colour which contrasts with the colour of the door and walls.

The ceilings should be white. This is not a simple recommendation, it is necessary because white allows for a better diffusion of light.



Converting the living areas

In this chapter, we review the principles to be applied when converting visual environment, taking into account the characteristics and limitations of the different areas used by the residents.

The means of access

The entrance

On the outside, a flat levelling surface, with no step, will facilitate access and make the entrance easily visible. Automatic sliding doors are advantageous, and if the doors are made of glass, there should be markings at eye and hip levels (160 cm. and 80 cm.) In the entrance hall there should be adequate, evenly-distributed lighting, and the strength of this lighting should measure at least 300 lux at ground level. On the floor, different colours or textures should be used for each new area, to make them easily distinguishable.

The elevator

There should be clearly labelled panels, both outside and inside the elevator. The buttons used to select the floors should have big or tactile numbers, and they should be well lit. The command panel should be simple and the buttons should have raised numbers which light up when selected. It is even possible to install a tactile display to show the progression of the lift journey, and this can be combined with vocal information.



The stairs

Particular attention should be given to the marking and lighting of staircases. The steps should be of the same size and height throughout, and the entry into each new flight of stairs should be the same, and marked by a support, framed to be easily visible. The stair banisters should extend by 30 cm. at each end to enable the person to utilize them while still on flat ground, before the slope. The beginning and end of each flight of stairs should be signalled by a coloured line at ground level. The edge of each step should be marked by a contrasting colour. A gate can be used to make the landing more secure. The stair lighting should be installed in such a way that no direct light source is visible, no matter where one is on the stairs. The lighting should be even and there should be no shadowy passages anywhere on the staircase.



The corridors

In the corridor, railings can provide support and a sense of security. Colour contrast and lighting should be used to supply additional visual guidance, and indicate directions. Specific colour codes can be used to identify the doors of each room. However, the doors to service rooms should be the same colour as the walls, to blend in and be less noticeable.



The exterior

In the park, railings and banisters should be used to facilitate independent movement. Tactile markers can be used to indicate different path directions, or the path leading back to the entrance. The edges of the pavements should be painted yellow, to provide a guiding line.



Communal areas

The reception area

This area should be easy to recognize and very accessible. The colour of the reception desk should be in contrast to the colour of the floor.

The entrance hall

A big clock and a permanent calendar should be installed, to facilitate time-orientation. Large, open areas should be divided up by a group of armchairs, a big pot of flowers or separation panels as these can provide support or rest places.





The toilets

If possible, these should be situated at the same place on every floor. To facilitate identification, large and explicit pictograms should be used, and should be visible either when standing or from a wheelchair.





The dining room

In the dining room, basic lighting should be provided by several ceiling light fixtures, to facilitate orientation and enable the residents to find their table. Additional, support lighting in the form of wall or table lamps can be provided, to suit the layout of the tables and the needs of the residents. At each table, an additional hanging light can be provided to illuminate the meal. This light can be individually adjusted for each person, and permits him or her to identify the contents of the plate and to manoeuvre with ease.



The activity rooms

The basic lighting should be suitable for a variety of activities. It should be possible to carry out precision work without the problem of shadows, and it should also be possible to lower the lights for the projection of films.

A reading corner can be provided, with books and magazines which have been specially adapted (the “large print” collection). Armchairs and reading tables should permit an ergonomic position, and support lighting should be provided. This might be table lamps or standing lamps with moveable fluorescent heads.

The private living quarters

Ideally, the persons concerned should be consulted when adaptations are being made to their living environment. These are based on principles that cannot be reduced to a simple prescription.

The bedroom

This room has to be adapted to the specific needs of the resident. Curtains and blinds should be installed at the windows, to control the amount of daylight entering the room. There should be a variable light switch, to adapt the artificial light to the strength necessary for each activity, and an additional lamp should be provided on the night-table, with mobile positioning - this is useful for reading in bed, or for taking medication.

The inside of the wardrobe should be sufficiently lit to facilitate the location of a garment.



When people first enter a care home, they should be given assistance to help them find their way around, and to put away their belongings. If there is a television in their room, they should be able to watch it from close-up, either from their armchair or from their bed. The screen should be at eye level.





The bathroom and the WC

The positioning of the bathroom mirror requires special attention so that the resident can use it with ease. Safety norms have to be respected and this might mean that it may not be possible to satisfy every person's needs. A resident may require additional lighting, but this may also not be possible because of safety considerations. The tiles should be neither too dark, because of light absorption, nor too bright, since this would cause glare. The water taps and other accessories should be in a contrasting colour, to be distinguishable from the walls and supports. Wet floors can cause falls, so non-slip tiles are recommended.



Facilitating access to information

In institutions, a great deal of information is posted up on notice boards; the menu for the week, programme of activities, safety regulations, etc., and often the quantity and location of these notices make them very difficult to read for partially sighted residents.

If the residence has its own newspaper, this is usually too difficult to read because of its layout, the choice and size of the letters and of the font, or the low contrast between the ink colour and the paper. When a document is prepared, it is important that the information it contains be clear and precise, and that the presentation be adapted to the needs of the readers.



Choosing the right visual aids

It is difficult for a partially sighted person to read a newspaper, a magazine or his correspondence. These items seldom have sufficient contrast between the colour of the ink and the colour of the paper. The right choice of visual aid elements is important; white or cream coloured paper, with a mat finish. Printing on a coloured background, or on a background picture, should be avoided for items which are published regularly. For people who are very sensitive to light glare, pastel coloured paper can be used, and the print should be very dark. It is essential that the different colour combinations be tried out with the person concerned, to determine the one which is of maximum benefit.

Menus and activity programmes should be composed with a simple layout, and any copies which are distributed should be of good visual quality (particular care should be taken with the quality of photocopies). For notices and signs, light coloured letters on a dark background can be beneficial. An information board may be made up of a large, dark coloured background with light coloured writing on it, that can be seen from far, and can be read when the person gets close to it. It is important to limit the size of these notice boards, to make them accessible to residents who are of short height, or in a wheelchair.

The use of typography to improve legibility

A document should be conceived bearing in mind the recipient, and the message to be transmitted. Aesthetic considerations should be limited. The typeface should be chosen carefully, and it is preferable to choose a typeface without embellishment, rather than the traditional serif font.

In the lay-out for documents such as menus, the text should be aligned on the left. Spacing between the letters can be increased, to avoid confusion between certain letters or groups of letters (“i n” can be mistaken for “m”). Spacing between the lines can also be increased, to enable the reader to see the following line with greater ease.

Magnification of the text can facilitate readability. A calendar or agenda with large-sized numbers enables the person to mark his appointments with a thick felt-tipped pen, so that he does not need a magnifying glass to use it.

Processing of texts makes it possible for certain documents to be adapted to suit individual needs.

The following examples of texts, using different sizes and different typefaces, can serve as a model for designing a list of most frequently used telephone numbers. There should be sufficient ink in the printer or photocopier to produce copies with good contrast. The amount of magnification required establishes the best way to present the text. Publishers offer a large selection of books which are printed with a character size of 16.

Here is a résumé:

Preferable choice:

Simple typefaces without embellishment

Elderly, partially sighted people are handicapped when the environment they live in prevents them from carrying out their usual activities. This environment is not solely defined by architectural dimensions.

Arial 12 - Frutiger 12

Big type face

Elderly, partially sighted people are handicapped when the environment they live in prevents them from carrying out their usual activities. This environment is not solely defined by architectural dimensions.

Verdana 12

Bold characters

Elderly, partially sighted people are handicapped when the environment they live in prevents them from carrying out their usual activities. This environment is not solely defined by architectural dimensions. Bold

Arial 12 - Frutiger 12

Magnification of format

Elderly, partially sighted people are handicapped when the environment they live in prevents them from carrying out their usual activities. This environment is not solely defined by architectural dimensions.

Arial 16 - Frutiger 16

Increasing spacing

Elderly, partially sighted people are handicapped when the environment they live in prevents them from carrying out their usual activities. This environment is not solely defined by architectural dimensions.

Arial 12 - Frutiger 12

Formats to avoid

Type face using serif

Elderly, partially sighted people are handicapped when the environment they live in prevents them from carrying out their usual activities. This environment is not solely defined by architectural dimensions.

Times New Roman 12.

Type faces which imitate manuscript (handwriting)

Elderly, partially sighted people are handicapped when the environment they live in prevents them from carrying out their usual activities. This environment is not solely defined by architectural dimensions. Monotype

Corsiva 16

Italic letters

Elderly, partially sighted people are handicapped when the environment they live in prevents them from carrying out their usual activities. This environment is not solely defined by architectural dimensions.

Italic Times new roman 12

Typefaces using high letters

Elderly, partially sighted people are handicapped when the environment they live in prevents them from carrying out their usual activities. This environment is not solely defined by architectural dimensions.

Helvetica compressed 12

Conclusions

The difficulties which a partially sighted, elderly person encounters are not always noticed by family and friends. Some of these people live in familiar surroundings, where they know their way around, and people who know them do not always realize what an effort it takes for them to gain adequate information. The persons concerned will use different strategies to manage; for example, at dinner time, they will follow the person in the neighbouring room in order to find the dining room. Some of these strategies can be hazardous. For another person, the strategy could be to give up on the activity, rather than deal with the difficulty it involves.

Welcoming new residents to a care home requires great care. If the persons concerned are partially sighted, they should be shown around, introduced to the other residents, shown the different locations, and helped to put away their belongings. This guided introduction to the home will permit the resident to feel more secure, and to take part in the activities.

When the environment is adapted to suit the needs of partially sighted, elderly people, they become less handicapped and gains independence. The conversions undertaken should be carried out following advice from professionals specializing in low vision, in collaboration with the professional staff of the care home who know the residents, and the people themselves.

Although these recommendations are mainly for partially sighted, elderly people, we are convinced that they will be of benefit to the other residents. In an institution, all the residents benefit from an environment which facilitates their daily lives.

This environment is not solely defined by architectural dimensions. The attitudes of the people in contact with the residents also form part of this environment. The staff should be made more aware of the problems, and given information and training to help them detect low vision. This will enable them to take the necessary steps to facilitate the daily life of the residents. We have noticed that the problems of sensorial deficiencies and their consequences are not well known. Family, friends and acquaintances of the elderly people should also be made more aware of their difficulties, to complement the work of the professional staff looking after them. Simulations and similar tools can be used to make this family circle more attentive to the problems of the partially sighted person, and thus modify their own behaviour.

The specialist services can give advice to the professional workers who make home visits and to the staff in care homes to help them determine the needs of the elderly person concerned. A personalized solution can then be worked out.

To find out more

Sources of information

L'Association pour le Bien des Aveugles et Personnes Malvoyants (ABA)

(The association for blind and partially sighted people, living in the Canton of Geneva)

www.abage.ch

This association can provide assistance through the intermediary of its two centres:

Centre d'Information et de Réadaptation (CIR)

(The Centre for Information and Rehabilitation)

Route du Vallon 18 - 1224 Chêne-Bougeries

Tel. +41 22/349.10.64

Fax +41 22/349.31.76

E-mail infoarea@abage.ch

This centre aims to increase awareness of the problems of partial vision, and provides service and information to assist you in finding the means of improving the life of an elderly, partially sighted person.

For more information, contact infoarea@abage.ch.

Le Foyer du Vallon

(the Vallon, a specialized care home)

Route du Vallon 16 - 1224 Chêne-Bougeries

Tel. +41 22/305.08.08

Fax +41 22/305.08.58

E-mail emsvallon@abage.ch

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http://www.irdpq.qc.ca/publication/guide_universelle_accessibilite.htm

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