## Stress reduction by using Art in an Intensive Care Unit

Åke Forsgren, BA



## Åke Forsgren, BA

Åke Forsgren is Secretary of Culture at the Culture Department, Uppsala County Council. The Culture Department works with

cultural issues at a regional level - strategically, financially and consultatively – as well as within the county organization. Åke Forsgren is responsible for integrating art in hospital wards, health care centres, dental clinics and other facilities. Artworks and artistic treatments of specific features in buildings are commissioned and developed in cooperation with architects, interior designer and other consultants in the planning process. The purpose is to create a supporting and stimulating environment for staff and patients. Additional aims are to make contemporary art accessible to a broader public and to support artists. Åke Forsgren has a Bachelor of Arts from the Department of Art History at Uppsala University, where he also has lectured.

### General background on Uppsala County Council, Uppsala University Hospital and the 1% Rule

Uppsala is the fourth largest city in Sweden, situated 70 km north-west of Stockholm. In Sweden, County Councils (CC) are a middle level of government, in between the national and the local level. The CC has its own political organization and its own tax funding. Its major objective is health care but the CC is also responsible for regional development, public dental care, public transport and cultural development. The Uppsala University Hospital has 1, 100 beds and a staff of 8, 000. It serves the county and, in several specialities, also the regional and national needs. It's also a hospital for training and education, in cooperation with Uppsala University.

Most Swedish public builders have adopted the 1%-rule, earmarking 1% of building costs for artistic enhancement. Artists are involved in the planning process to develop artistic solutions and embellishments in architectural settings. In hospitals, these are often executed as commissions, due to the complexity of ward premises. Uppsala CC, being a major operator, has an annual budget of 3 MSEK (270 000 €) for art.

## THE NEONATAL ICU AT UPPSALA UNI-VERSITY HOSPITAL

#### Background

The neonatal ICU is a total rebuilding of older premises with an area of 1, 900 sq m (19, 000 sq f). It includes twelve incubator-places in three ICU rooms, two rooms with six places for intermediate care, nine separate family rooms and two isolation rooms. There is also an operating room and sufficient space for administration, supervision and the usual staff and family needs. The neonatal ICU was planned to meet new standards for neonatal intensive care (see http:// www.nd.edu/~kkolberg/DesignStandards.htm) These standards specify physical requirements (space, light, sound, equipment, communication etc) but also stresses the emotional needs of the infant, the parents and the whole family. An important objective was, therefore, to empower



Figure 1 Floor pllan

parents to active participation in care giving, both beside the incubator and by using the Kangaroo method (maximum skin contact between infant and parents). This objective was met by planning extra space for parents beside the incubators and as the infants recover offering rooming-in and of course extra consideration of the parents' needs from staff.

However, what is a normal working place for staff is perceived as a strange and frightening high technology milieu for parents – especially with a sick infant. An equally important objective was therefore to reduce environmental stress factors and to create a positive setting. Stress reduction was a touchstone in several aspects; in planning and choosing lighting, choice of materials to reduce sound, the desire to lead day-light as far as possible into the building, to use discreetly designed or concealed fixtures and fittings etc. But there was also an ambition to add "positive stress", that is to stimulate parents and staff with artistic means, thus making the whole setting a more positive experience.

#### **Artistic Cooperation**

The change in focus from medical functions to parents' (and infants') experience of the milieu demanded new views and new competencies in the planning process.

To get new ideas, a project was formed together with the University College for Arts, Crafts and Design in Stockholm. 10 graduate students in the Department of Textiles worked on the theme "How does it feel – how do we make it feel better?" They held seminars on health care design, visited other wards and interviewed staff and parents on positive and negative aspects of the ward setting, especially on the effects of interior design, coloring, technical appliances etc.



The students worked with separate room functions. They decided to work within the theme "Nature". Partly because they thought that under these special circumstances, nature might offer a soothing effect in contrast to the technical side. Partly because the theme still allowed large variation in techniques, motives, expressions, etc.

#### **New Proposals**

After a month, ten models and proposals for different rooms were presented, along with inspiration and background material, technical solutions and requirements for the execution. The proposal's impact and feasibility were discussed at a joint meeting with the art group, architects, technical consultants and staff. They were evaluated according to the dual objectives of stress reduction and added values/stimulation. Six proposals were chosen and further developed in cooperation with the architects. Several adjustments and alterations were made due to practical considerations and program changes. In cooperation with interior designers the proposals were used as a basis for coloring, furnishings and textiles through the whole setting – thus creating harmony in the usually fragmented impression of a modern hospital ward. The proposals were then integrated in the building plan, handing over parts of the execution to the contractor.

#### **Five Examples**

These are different approaches to artistic cooperation, they might be called Integration, Redesigning architecture, Redefining functions, Developing materials and Art as unifier.



Figure 2 ICU int

#### **ICU Rooms – integration**

An important objective in the ICU rooms was to put parents at ease in spite of the high-tech environment. It was necessary to handle the "overall unit design" - the visual impact of the ICU - as well as addressing the sometimes conflicting needs of parents and infants vis-à-vis staff.

The artist proposed to divide the room into a lighter middle zone for staff's needs and darker zones along the walls for the infants. The walls are white in the middle and have dark blue hues in the periphery.



Figure 3 ICU Floor screen

The floor is patterned with big squares, lighter in the middle and lined with blue. Low screens with colour-matched fabrics are used for temporary seclusion.



Figure 4 ICU Wall

To emphasize the walls, an enlarged foliage pattern was designed, painted blue on blue. It is abstract at a close range but more clearly nature-like at a distance.



Figure 5 Bench milieu

The central work bench is designed with rounded forms and a white Corian top, which is easy to clean but foremost – due to its thickness – reduces sound. The dividing cabinetry has the same top material but a dark zebrano laminate.



Figure 6 ICU incub. devider

A variety of light fittings are used, with subdued and indirect armatures over the incubators and more normal lighting over the work zone. The milieu is developed as a totality in close cooperation between the artist, the architect, the interior designer and other consultants. It is impossible to conceal so much equipment but the elaborate handling of details, colouring





Figure 7 Silent Room

and materials creates a setting that counterbalances "technology-stress" and gives a positive impression. (A major setback might be noted: parent participation and care in the Kangaroo method demands furniture that can serve both as a chair and a recliner. It should also have adjustable height. No such furniture was found on the market, and this limits parent participation to some extent.)

### Silent Room – Re Designing Architecture

Sorrow and mourning is an everyday experience in this ward, both for parents and staff. The only available area for mourning and leave taking was a windowless room in the middle of the building. Instead of making mock windows or elaborate paintings to compensate for the lack of view, the artists decided to work with the architecture and materials. A hallway was created by using a partition wall. The wall has opaque glass panels with integrated lighting, the floor has blue and grey tiles and the walls are painted a darker green grey colour. The inner room has a different expression. Walls are painted white; the floor is dark tinted oak instead of ordinary plastic flooring.

A painting directly on the wall picks up the colours in the room and introduces an organic or vegetative pattern.

The furnishing is adapted to the colouring and expression of the room. The lighting is treated with great care. Tube fittings placed above the ceiling give an indirect light through the slits, a couple of wall luminaries activate the back scene and a few recessed ordinary bulbs illuminate the centre.



Figure 8 Silent room entry

By dividing up the area the artists made an "emotional passageway" to difficult experiences. By playing down decoration but enhancing materials, lighting, colouring etc they created a calm setting for conversations and leave taking. It is also neutral vis-à-vis different tastes and religious creeds.



Figure 9 Silent room cieling

# Children's Waiting Area - Re defining functions

The waiting area for children was planned in a long and narrow room with a standard set of small furniture. This solution was judged as "meagre" and neither welcoming nor stimulating for children. The artist redefined the functions. To guide the viewers' interest along the wall she made a cut-out forest silhouette in many layers. For activation she made a big soft sculpture that children can climb on, rest on the soft top and hide in the holes. Instead of the play table, a long sofa was designed. Children can cuddle with siblings and parents and use toys and books, stored in the holds below.



Figure 10 Kid entry wall

This room is so articulated that it's perceived as a secluded oasis in the ward. It is also a room where kids can be physically active as well as rest, mourn and be comforted – and these are important functions in a ward that welcomes the whole family.

#### Staff Rooms - Developing materials

The two rooms for supervision, charting, etc are located between the ICU rooms and the corridors. Staff wanted openness for visibility and light transmission into the corridor but also seclusion. These needs were met with sandblasted windows. The artist used a nature motif – a branch – and varied the motif in size and positioning.

Sandblasting permits both light transmission and a limited view through the windows. The blasted areas also vary in lightness according to angel of view. The motif thereby gives a varied rhythm and impression of sunbathed foliage through the corridor. This was judged as a great improvement compared to the usual solution with blinds. The same motif was used to screen off the reception room, which has similar needs for both seclusion and openness.

# Isolation Rooms – a motif as unifying factor

The isolation rooms are fairly small, especially the adjoining room for parents. This was considered a problem, since parents and infants often stay in isolation for a long time. The artist decided to use a cloud pattern as a general motif. The pattern is painted on the walls in the parent's room, printed on curtains, and sand blasted on dividing glass doors. The use of a single motif creates unity through the cluttered rooms. The cloud pattern is appreciated, both as a "wall-opener" and in the dual function of abstract design and a play with figural interpretations. The glass doors are especially appreciated since they, besides light, provide seclusion without use of unhygienic drapes.



Figure 11 Isolation family room



Figure 12 Staff Room



Figure 13 Glass detail

#### **Family Rooms**

The family rooms are not artistically decorated, though parents can choose a print to hang in their room during the stay.. However, the objectives of stress reduction and creating a positive setting had a strong impact on the design.

The rooms are furnished in a hotel fashion with a bed-settee, easy chair, desk etc. Each room has a different colouring. Necessary medical equipment is collected in a ward panel, though outlets are concealed with flaps. Other fittings are equally treated/hidden to make the milieu more like home than a hospital ward.



Figure 14 Family room

#### Sum Up

Artists working with commissions take the whole milieu into consideration, thus making an extra check of the visual and practical devices. They have competencies in colors, spatial conception, design, etc from which the staff can benefit. A major consequence of this project was that the artists' involvement improved staffs' knowledge of how the milieu is perceived as a totality, and especially by someone who does not work there everyday. In these aspects, artists can reduce negative stress in the ward settings. The family rooms are but one of many examples of how the artist's proposals and suggestions strengthened staff's commitment to a better and more articulated ward setting. In the aspect of positive stress – or stimulation - artistic involvement is perceived on three levels:

1 Physical: architectural features like floors; walls; windows; glass sections etc can be further developed and articulated, thus creating a better milieu

2 Expressive: Artistic articulation – whether figurative or non-representational - adds cultural stimulus, i.e. feelings, opinions, experiences, memories etc

3 Experience: Cultural stimuli engage the beholder in other and wider experiences than the actual situation of the affliction. This increases well-being and is a positive stimulus for parents, staff and visitors.

Artists can articulate the staff's general intentions, values and views in a visual form, thus embedding these views in the architectural setting of the ward and creating a uniform statement of the premises. This also leads to the staff's greater involvement and continued commitment to creating and maintaining a positive milieu. The theme of this conference session is Improving healing performance through "Aesthetics". "Art" and "Culture". I would advocate that, in the general trend towards a more humanistic, salutogenic hospital design, these factors are already an established means to better healing performance. I hope to have shown some of the benefits of taking these factors seriously - without quotation marks - and in using artistic cooperation in health care design on a regular basis.

