IMPROVING THE PATIENT EXPERIENCE

Friendly healthcare environments for children and young

2004

STATUS IN WALES

INFORMATION
Improving the patient experience

Friendly healthcare environments for children and young people

NHS Estates
With the biggest building programme in the NHS under way, designing healthcare facilities that positively enhance the patients’ experience and treatment is central to our policy. This means addressing such issues as privacy and dignity, communication, entertainment, nutrition, cleanliness, comfort, control and the supply of information. To meet the standards expected by today’s – and tomorrow’s – patients, we need to ensure that the design of hospitals and healthcare facilities embodies sound principles from the outset.

“Improving the Patient Experience” is a series of publications designed to stimulate and inspire all those involved in designing, procuring, developing and maintaining healthcare buildings to look for new and inventive ways to improve the environments for patients and staff alike. They contain best practice case studies, advice and guidance on how best to implement and manage programmes for change in both new buildings and areas for refurbishment.

Other titles currently in development are:

- Welcoming entrances and reception areas
- Cleanliness in hospitals
- Restaurant services at ward level
- Ward layouts with privacy and dignity
- The art of good health
- Catering services for children and young adults
My rights as a child are

To have someone I love with me whenever possible
To be told what is happening to me
To ask questions and be given answers I understand
To not be alone if I am sad
To be able to play even if I have to stay in bed
And...
That people are honest with me
That the people who care for me understand children’s needs
That I am safe, that my body is my body
That I am respected as a real person with feelings and rights of my own
That my well-being is the most important thing
And I am part of a family

This poem originally appeared in the journal Maternal & Child Health and is reproduced here with the kind permission of Manukau Health, New Zealand.
Foreword

Children who need to spend time in a hospital environment for whatever reason – whether as patients themselves or perhaps as visitors to family and friends – can, I’m sure, find it stressful. Entering a hospital complex or any unknown environment can be daunting for adults let alone children and young people. Every effort needs to be made to make healthcare environments friendly, welcoming and where appropriate focused on the healthcare needs of children.

Taken alongside the forthcoming Children’s National Service Framework, this new guidance is intended to enable any current deficiencies in the provision of suitable environments for children and young people’s healthcare needs to be addressed. I hope that anyone involved in the planning of new facilities, and/or the refurbishment of existing ones, will read this document as an integral part of their preparation before embarking on their plans.

I particularly welcome this document as a first step towards giving children and young people the recognition they deserve as people in their own right, with their own needs.

Professor Al Aynsley-Green
National Clinical Director for Children
Acknowledgements

Birmingham Children’s Hospital
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Great Ormond Street Hospital for Children
The Middlesex Hospital
Royal Alexandra Children’s Hospital, Brighton

Child with bird mobile. COURTESY OF ARTS FOR HEALTH
This strategic guidance is part of a suite of NHS Estates publications in the new series entitled “Improving the Patient Experience”. It will be of interest to anyone involved in the healthcare profession and is essential reading for anyone participating in planning and designing new facilities or refurbishments.

It also forms the overarching publication for a series of new Health Building Notes (HBNs) being produced in support of the “modules” of the new Children’s National Service Framework (NSF). In developing and implementing the NSF, there will be a specific focus on different aspects of children’s services. External Working Groups (EWGs) have been set up to look at:

- hospital services;
- maternity services;
- mental health and emotional well-being;
- disabled children;
- the ill child;
- the health of all children and young people;
- children in special circumstances; and
- medicines.

Each of these modules will emphasise:

- putting children and young people at the centre of their care;
- fitting services around their needs and their families’ needs;
- listening to children and their families;
- tackling inequalities; and
- identifying services delivered by the right people at the right time.

This overarching guidance aims to address the current deficiencies by identifying the core principles of providing a friendly environment for any child or young person who accesses healthcare facilities, for whatever reason. Subsequent guidance will identify the implications for the built environment for each module of the NSF, where appropriate, starting this year with two new HBNs, “Hospital accommodation for children and young people” being produced in collaboration with the Hospital Services EWG and “Mental health facilities for children and young people” with the Child and Adolescent Mental Health EWG.

Evidence-based care should be supported by evidence-based design.

Although reference is made frequently to the hospital, the broad principles set out in this guidance are applicable to any health or social care setting. Existing facilities may need to accommodate some of the recommendations over time.

Chapter 1 describes the initiatives and events that have led to the current drive to improve services for children and young people. It outlines the key messages from visits to hospitals, strategies for planning and designing facilities and key principles for children’s services. The basic needs of babies, children and young people are summarised in terms of their development.

In the NHS Plan, the Government outlined its intention to engage with the general public in a widespread and continuing dialogue about what they expect from their NHS. This includes seeking and acting on the views of children, young people and their parents regarding the built environment. Some planning teams have adopted this strategy for a number...
of years. Chapter 2 outlines the main findings from these projects.

Planning teams are faced with a considerable challenge since they must ensure that facilities predominantly designed to meet the needs of adults are also child-friendly. Chapter 3 outlines the key considerations when planning healthcare facilities and improving existing facilities including security, safety, privacy and dignity, catering, rest and sleep, play, education, childcare and youthwork. The benefits of artwork in the hospital are also emphasised.

Studies clearly show that the design of spaces, together with sensitive lighting, colour, sound attenuation, texture and material specification are essential to the child’s immediate well-being, healing process and ultimate outcome. The final chapter sets out design guidelines relating to each of the five senses based on research findings.

The appendices include some useful resources, for example, the EACH Charter for Children in Hospital.
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Main corridor, Derbyshire Children’s Hospital.
REPRODUCED BY KIND PERMISSION OF THE MEDICAL ILLUSTRATIONS DEPARTMENT, SOUTHERN DERBYSHIRE ACUTE HOSPITALS NHS TRUST
In common with adults, every baby, child and adolescent has the right to expect that their healthcare needs will be met by the health service. Indeed there is a duty to nurture children and to protect their best interests. The majority of healthcare facilities are not as child-centred as they should be. Children are sometimes admitted and cared for in bespoke adult facilities that have no provisions for children at all.

Through the implementation of the NHS Plan, the Government is determined that the health service will be reconfigured in a way that meets the needs and expectations of all patients and visitors who use the service, and of the staff who deliver it. Improving the built environment in which healthcare is delivered by innovative planning and design is one of the central tenets of this new philosophy.

The principle of consulting children and their parents is central to best practice as defined within the Children Act (1989). Revisited in 2001, the Children Act Now observed: “children have a status as child citizens” and so have “the right to have their voices heard and to participate in any decisions affecting their lives” (CAN 2001, p.3). This challenges healthcare planners and designers to incorporate the views of children and their carers.

The Children’s National Service Framework

In response to recommendations made by the Bristol Royal Infirmary Inquiry (The Kennedy Report, 2001), a National Clinical Director for Children’s Services has been appointed. As Chair of the Children’s Taskforce, the National Clinical Director for Children has been tasked, in particular, with developing a Children’s National Service Framework (NSF) “as a matter of urgency” (p.458).

The new post and the new NSF are intended to focus on children’s well-being as a whole and not be restricted to children’s health in narrow clinical terms. The NSF will produce a series of standards across NHS and social care services for children. It will draw on knowledge from a diversity of bodies and experts, including the views of children and their families, to ensure that the standards are both relevant and appropriate for implementation.

In developing and implementing the NSF, there will be a specific focus on different aspects of children’s services. External Working Groups (EWGs) have been set up to look at:

- hospital services;
- maternity services;
• mental health and emotional well-being;
• disabled children;
• the ill child;
• the health of all children and young people;
• children in special circumstances; and
• medicines.

Each of these modules will emphasise:
• putting children and young people at the centre of their care;
• fitting services around their needs and their families’ needs;
• listening to children and their families;
• tackling inequalities; and
• identifying services delivered by the right people at the right time.

Facilities for children and young people

Until recently, outside the confines of a purpose-built children’s hospital, maternity unit or paediatric ward in an acute general hospital, few facilities could be described as child-friendly. In many cases, paediatric-trained staff and protocols for the care of children are lacking. In some hospitals, there are still signs on doors to adult wards and departments saying that children under a certain age are not permitted to visit.

Planning teams are faced with a considerable challenge since they must ensure that facilities predominantly designed to meet the needs of adults are also child-friendly.

Many children and young people are not patients but still require access to healthcare facilities, for varying numbers of visits and lengths of time. They may also require acute care in their own home; some of these children have long-term needs, but others will have attended an Accident & Emergency (A&E) department and then been discharged to home care.

In an average A&E department, 25% of the patients will be less than 17 years old, of which 15% will have a minor or in some cases a major illness, and 85% will have an injury, a small number of which will be major trauma. Of the children with minor or major illnesses, 75% are younger than 5 years old, and 75% of these are babies less than 1 year old.

A number of NHS trusts have now secured funding from the Capital Modernisation Programme 2000/01 and invested some of this in building separate areas for children within A&E departments. Audits completed by Action for Sick Children have also demonstrated an increased awareness of the needs of children and young people in A&E and out-patient departments.

In 2002, however, a number of out-patient and A&E departments still contain no child-related resources at all. In others, there are small play areas that are badly maintained, poorly stocked and unsupervised, and which offer only dreary appeal to children. There are often no nappy-changing or feeding facilities.

When a parent, family member or carer is admitted to hospital and separated from a baby or child, it can be extremely distressing for both the adult and the child and inevitably causes disruption in routine. Bringing them together on a regular basis can reassure and comfort both parties and may well have a positive effect on recovery. Only in rare circumstances is it necessary or appropriate to prevent a baby or child visiting a member of their family or a friend.

The needs of parents with a child in hospital have been neglected with regard to the provision of overnight accommodation. This will be addressed in HBN 23 “Hospital accommodation for children and young people”, to be published later this year.

Adult mental health units are of particular concern to experts in childcare. Many adults who are in-patients for long periods, some of whom require frequent re-admission, have children who visit them regularly. Few units, if any, address the needs of the children and young people who visit.

The principles outlined in this guidance are applicable to all hospital facilities, including mental health units.
Background: Significant milestones

Platt Report

More than 40 years ago, the Platt Report (1959) on the “Welfare of Children in Hospital” focused on the fact that children cannot be treated in the same way as the adult population with regard to their healthcare. Their needs are specific and meeting these needs not only involves the baby, child or adolescent but also their families and significant others. As a direct result of the report, the National Association for the Welfare of Children in Hospital (NAWCH) was founded. This organisation, subsequently renamed Action for Sick Children, has been instrumental in protecting children’s rights and influencing best practice concerning their care.

Court Report

“Fit for the Future” (The Court Report 1976) added to this body of knowledge by recommending that children’s services should be integrated and advocated “a child and family centred service in which skilled help is readily available and accessible”. The continuous development of the child was a central theme in this report.

Department of Health

“The Welfare of Children and Young People in Hospital” (DoH 1991) was written as a guide for carers and includes the “cardinal principles” of care. Its implications will be addressed in subsequent guidance.

The NAWCH

The NAWCH published a seminal report in 1990 called “Setting standards for adolescents in hospital”. The report starts from the premise that “adolescents are a distinct consumer group” who are frequently admitted to wards with much younger children or much older patients. Significantly, it notes that “in an appropriate environment and with care designed specifically for them, adolescents will recover quicker, particularly when their emotional, educational and social needs are understood” (p.7).

The report emphasises the different rates at which children mature into adolescence and adulthood and stresses the need for this to be taken into account. Adolescents value their privacy, dignity and independence, but at the same time still depend to a varying extent on their parents and significant others, particularly when they become ill. The effects of illness and stress can affect adolescents’ coping strategies, which may lead to regressive patterns of behaviour and needs.

Adolescents require their own facilities in a self-contained unit distinct from, but perhaps adjacent to, the paediatric wards and managed by the children’s service, caring for a variety of conditions. This could be within a trauma unit or cancer unit in an acute hospital or a bespoke adolescent unit in a psychiatric hospital, or as an integral but distinct part of a children’s hospital. Patient numbers should be sufficient to provide peer support.

The needs of the young person should dictate the locus for adolescent care and not the specialism of the unit. Specialists should go to the unit rather than small numbers of adolescents going to them.

EACH Charter

At the first European Conference on Children in Hospital in 1988, the European Association for Children in Hospital (EACH) produced a Charter with the aim of incorporating it into the laws, regulations and guidelines in each country (see Appendix 1). Visit http://www.each-for-sick-children.org. This is based on the NAWCH Charter from 1984, which was recognised by the Department of Health.

United Nations

The United Nations (UN) published the Convention on the Rights of the Child in 1989. A number of global initiatives have since taken place supported by, among
others, the World Health Organization (WHO), UNICEF and Child Advocacy International.

**Baby Friendly Initiative**

One of the UN initiatives, launched in the UK in 1994, is the UNICEF UK Baby Friendly Initiative (BFI). It aims to increase the prevalence of breastfeeding by improving the care provided to pregnant women and new mothers by the healthcare services. This includes a welcoming and supportive environment for breastfeeding in hospitals, with the right for mothers to breastfeed in all public areas, or in a designated private area if they prefer. A free poster can be downloaded from the website for use by any organisation – http://www.babyfriendly.org.uk.

**Child Friendly Healthcare Initiative**

Complementing the BFI, an expert group has founded a movement called the Child Friendly Healthcare Initiative (CFHI), which aims to “facilitate a process by which child health services will become more child friendly and subject to sustainable improvements” (Southall et al 2000, p.1054).

There are 12 CFHI standards, some of which refer specifically to the sick baby or child being cared for in the hospital environment (Appendix 2). Others, however, are generic and imply that every hospital as a public service provider must ensure that it has facilities that are child-friendly.

**Action for Sick Children**

In 1996, Action for Sick Children published “Health Services for Children and Young People”, detailing the rights of the child and describing standards and best practice for children’s healthcare. This was developed with children, young people and their families and covered general practice, community services, hospital services and child and adolescent mental health, together with an audit checklist for each service.

**Sure Start**

The Government programme “Sure Start”, initiated in 1999, aims to improve the health and well-being of families and children before and from birth, by spreading good practice. It stresses the need for inter-agency, inter-sectoral working that embraces children and their families as equal partners. Sure Start has produced guidance entitled “Preparing a strategy for capital works and facilities” (see p.14).

**The Children’s NSF**

The Kennedy Report (2001) called for the urgent implementation of the Children’s NSF, which should include “a programme for the establishment of standards in all areas of children’s acute hospital and healthcare services”. (p.458, paragraph 173).

Work on hospital care for children has been taken forward by an EWG fast-tracked from the rest of the NSF in response to further recommendations in the Kennedy Report. The remit of this group is to define standards to ensure that children and young people accessing care in hospital are given the best possible care and treatment in an age-appropriate way. Some of the standards may need to be achieved over time.

**Key messages from visits to hospitals**

A number of children’s hospitals were visited in December 2001/January 2002, with the expectation that best practice and innovative design in child-friendly facilities would be identified on such sites. They included new hospitals and old sites, some of which are scheduled for replacement within the next five years. The standard of furnishing and fittings varied considerably and a chronic lack of space was a recurring theme.

Even so, a number of innovative ways of making healthcare facilities more child- and adolescent-friendly were identified from these visits. Evidence has also been obtained from other hospitals based in the
UK and internationally, the best examples of which have informed this document.

Several key messages emerged during the visits:

• Maturity does not necessarily depend on age.

• Children and young people should not be viewed as a homogeneous group.

• Each child has an individual life experience with differing bio-psychosocial influences.

• A child-friendly environment engages children without diverting them from the realities of healthcare.

The key question is how we provide healthcare facilities that meet the needs of all children and young people and their families who require them.

Strategies for planning and designing facilities

The NHS Plan (DoH 2000) outlined a series of changes that would enable patients or their representatives to have their voices heard as equal partners. From April 2002, every NHS trust must have established a Patient Advice and Liaison Service (PALS). The PALS “must actively seek the views of service users, carers and the public to ensure more effective services” (DoH 2002, p.11) and take action to “translate views into changing practice appropriately” (p.16). When developing a business case, a planning team must, therefore, include a PALS officer, who will represent the views of children and their carers. The PALS officer will liaise with external agencies and voluntary organisations in order to give an informed view. Experts in caring for children, for example, paediatricians, children’s nurses and play specialists, should also be co-opted onto the planning team to ensure a child-friendly approach.

The Sure Start guidance “Preparing a strategy for capital works and facilities” (forthcoming) is a very useful instrument that should be used by all planning teams when setting their objectives. Sure Start suggests that planning teams should:
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- enable the participation of parents and children in the process;
- ensure facilities are accessible;
- promote equal opportunities in terms of access to services and facilities;
- link to existing services and involve them in developing the programme;
- create high-quality places and space;
- create child-friendly environments; and
- work in partnership with relevant organisations to deliver capital works.

A useful checklist is provided in Appendix 4 in this guidance. Further information about the Sure Start programme can be found at http://www.surestart.gov.uk.

Principles for children and young people’s policies and services

The Children’s NSF team believes that all policies and services for children and young people should be:

1. Centred on the needs of the young person
   The best interests of the child or young person should be paramount, taking into account their wishes and feelings.

2. High quality
   Policies and services should aspire to and reach high standards of quality for the benefit of their customers – the
children and young people should gain from them.

3. Family-orientated
   Full recognition must be given to family members – including extended and chosen family – who contribute significantly to the well-being of children and young people.

4. Equitable and non-discriminatory
   All children and young people should have access to, and be enabled to participate in, services that they need, when they need them, in a way which respects diversity and their individual needs.

5. Inclusive
   Policies and services should be sensitive to the individual needs and aspirations of every child and young person taking full account of their race/ethnicity, gender, sexual orientation, ability or disability.

6. Empowering
   Children and young people should have opportunities to play an effective role in the design and delivery of policies and services.

7. Results orientated and evidence-based
   High quality research, evaluation, monitoring and review should ensure that decisions that affect children and young people are well informed.

8. Coherent in design and delivery
   Services should be woven together in a coherent, integrated and cross-sector form where it is evident how progress and change expected for children and young people will be achieved.

9. Supportive and respectful
   Policies and services should be delivered in a manner that is respectful and supportive of children and young people and ambitious for their futures.

10. Community enhancing
    Communities should be empowered to make positive changes for their children and young people, so that improvements can be owned and sustained locally.

The needs of babies, children and young people

A child’s individual needs cannot be categorised by age alone. The transition between ages is seamless and some children, particularly those who experience long or frequent admissions to hospital, are delayed in development or have sensory impairment. Equally, some children have needs in advance of their age. Flexibility based on an individual needs assessment is therefore the key to good practice.

The majority of newborn babies are cared for and supervised by their parents every hour of every day. Most are discharged from a maternity unit within hours or within a few days of their birth and will not need to return to a hospital as an in-patient for the rest of their childhood. Children are likely to require treatment in an A&E department at least once in their lives. They may also need to accompany their parents as a visitor.

Babies and pre-school children

Healthcare facilities should be able to accommodate the everyday needs of babies and young children, most of which centre on eating and drinking, playing, urinating, defecating and sleeping.

Young children, although beginning to demonstrate their independence, are unable to differentiate between a safe and unsafe environment and consequently
INTRODUCTION

Most pre-school children need about 12 hours sleep, but some may need only 8 hours and others 14 hours (see p.37).

School children

Designers should be aware that as children grow older they have an increasing concern for privacy and autonomy.

Security and safety remain key considerations as children take more risks.

For children and young people in hospital, whether long-stay, short-stay or recurrent admissions, it is important to minimise as far as possible the disruption to normal schooling by continuing education as normally as possible. The provision of facilities for education is therefore another key consideration (see p.38).

Adolescents

The WHO defines an adolescent as someone who is aged between 10 and 19 years.

Adolescents develop physically and emotionally at different rates. Assessing the needs of every individual is therefore paramount (see p.12).

The separate needs of adolescents may be best met by providing separate facilities, but this is not always the case, and flexibility is often important (see HBN 23 “Hospital accommodation for children and young people”, in progress, for guidance). Where there is choice, then the views of the young person need to be taken into account.

require constant supervision. A child’s physical and psychological development is a continuous process and the majority of children acquire new skills and knowledge daily. Curiosity is normal and therefore security and safety are key considerations in designing facilities (see p.30).

Young children learn mainly through play and it is therefore a critical part of their development. “The times when they are not learning much are the times when they are bored” (Health Education Authority (HEA; now Health Promotion England) 1999, p.41). The provision of facilities for play is therefore a key consideration (see p.37).

Young children prefer a routine and this, according to the HEA, will help them to sleep through the night, become continent day and night, and behave reasonably well in public and in private. A hospital visit may disrupt their routine completely, so it is important that a hospital is as welcoming and comfortable as possible within the constraints of a clinical environment.
Main entrance, Princess Elizabeth Orthopaedic Centre. 
Artist: Ray Smith. 
COURTESY OF EXETER HEALTHCARE ARTS

Falling leaves mobile, Chelsea and Westminster Hospital. 
Artist: Sian Tucker. 
COURTESY OF ARTS FOR HEALTH
In the NHS Plan, the Government outlined its intention to engage with the public in a widespread and continuing dialogue about what they expect from their NHS. This includes seeking and acting on the views of children, young people and their parents regarding the built environment.

As can be seen from the following sections, some planning teams have adopted this strategy for a number of years. Although there is little information available concerning the views of children, young people and their parents about healthcare facilities in general, the information relating to children’s hospitals or paediatric wards and departments in acute general hospital can be usefully applied to all healthcare facilities planning.

General findings

L4A (1990): “Building the Best”, Derbyshire Children’s Hospital

In 1990 a number of staff, parents and children were consulted about the plans for the new Derbyshire Children’s Hospital. The project team appointed external consultants (L4A) to undertake this review, subsequently reported in the document “Building the Best”. Their focus was to involve the general public in “planning, in developing design briefs, and in policy making” (p.3). Derbyshire Children’s Hospital was to be so good that “even the adults want to come” (p.4). The hospital cares for children of all ages, sick or well, able-bodied or disabled, with varying levels of dependency. A home-from-home environment for children, young people and their parents was the optimum standard to be achieved.

From the workshops, a number of areas for consideration arose:

- identity
- atmosphere
- welcome/reception
- play
- the outside environment
- access
- environmental control
- the role of art.

First impressions of the hospital were seen as extremely important. Reception areas needed to be welcoming to invite people to come further into the building, “like the lounge of a nice hotel”.

More space was needed, but at the same time the respondents did not want to lose the cosy feeling that was evident at the old hospital. Examples of words used in the “wish list” were “fun”, “comfortable”, “intimate” and “domestic”.

Facilities for play and recreation were high on the wish list, including provision for the needs of disabled children and children with...
Boy playing table football (posed by models). COURTESY OF JOHN BIRDSALL IMAGES

Model exercise, Anshen Dyer study. COURTESY OF ANSHEN DYER ARCHITECTS
learning difficulties. Toys appropriate to the different age groups were also requested.

The external environment was mentioned frequently. A view of green spaces and gardens, and the opportunity to see things moving such as birds or wind sculptures, was seen as very important.

Important issues for all age groups were:

• environmental control regarding noise levels (the 4–7-year-olds particularly disliked hearing crying babies);
• temperature control: “It’s either too hot or too cold”;
• smell (pleasant “like the smell you get when you sit by water” or unpleasant “antiseptic that makes you feel scared” or “cabbagy”); and
• a dislike of fluorescent lights.

Anshen Dyer (1999): Great Ormond Street Hospital for Children

In 1999, Anshen Dyer architects published the results of a project that they had undertaken on behalf of Great Ormond Street Hospital for Children NHS Trust. The aim of the project was “to listen to the experiences of the people” who used the hospital. Through a series of concept sessions with children and parents, the architects were able to identify what people thought were good points and their suggestions for improvements.

Three concept sessions were conducted – one with young children, a second with teenagers and the third with a group of parents. Anshen Dyer concluded: “some of what we heard was predictable, and had heard before from the staff. Some was new to us. Some was inspiring”.

Young children aged 8–12 years old participated in a question-and-answer session and then drew pictures of the way they would like any part of the hospital to be. The final activity involved the children designing and decorating their hospital bedroom using empty shoeboxes.

Teenagers, in the same study, were asked to share their views about the whole hospital campus (see p.23). The project team then raised specific topics about the wards, playrooms, individual bedrooms, computers, computer software and art in the hospital.

Parents gave their opinions about their accommodation and their overall experience and made suggestions for improvement (see p.25).

The Anshen Dyer team concluded that the key design considerations for children and young people should be:

• a welcoming environment;
• evidence of activity;
• use of colour;
• natural daylight;
• a view of green spaces;
• the need for privacy (for children and their parents);
• accessibility; and
• a greater use of art that appeals to all age groups.

These key design considerations could equally be applied to the adult population.

Civi (2002) study

Another recent study (Civi 2002) takes account of the physical and psychosocial needs of child patients in the design of children’s hospitals. Civi interviewed a number of children and their parents, and staff, at four UK hospitals:

• Kingston: a district general hospital with a small children’s unit;
The views of children

Derbyshire Children’s Hospital

The 4–7-year-old children in the Derbyshire project wanted to have their parents near them at all times. The need for good accommodation for families is therefore extremely important. Appropriate, clean and working toys suitable for each age group are required. Children want to be able to find their own way around the building.

Great Ormond Street

The young children in the Anshen Dyer study made a number of observations relating to privacy, space, storage, light, colour and a suitable homely environment including a window with a view. Televisions and computers were seen as important as a source of entertainment. Interestingly, a number of these children designed single bedrooms with en-suite facilities. All children used strong colours and energy in their choice of décor. The drawings reflected the views expressed.

London’s Health

Another report (London’s Health 2001) shows clearly that it is possible to obtain the views of even very young children if the right methods are used. Nearly 100 children between the ages of 5 and 11 years shared their views by drawing or painting pictures, and by talking with experienced interviewers. On the whole, these children were positive about their previous visits to GP surgeries and community-based healthcare facilities “especially where efforts were made to amuse them in the surgery or waiting room” (p.7). For those who had been in hospital, boredom and missing their friends were key issues.

They complained of having to wait too long and of having nothing to distract them during their wait. Some noticed the “nasty smell” of the hospital, but they appreciated the reward system of being given, for example, a sticker or a badge when they had been very brave! (Care should be taken if commercial sponsorship is accepted.)
Bristol Children’s Hospital

In a study conducted in Bristol at the old Children’s Hospital (the new one was recently opened), children expressed similar views (Redshaw & Smithells 2000). Although only a small number of children were interviewed, all of them directly or indirectly expressed the need for more space, less noise from other children and their parents, more privacy, brighter decoration, more comfortable bedding (several mentioned duvets), more uninterrupted sleep and more of their own toys around them. Parents also commented on the lack of space, privacy, noise levels and boredom being particularly difficult to cope with. Staff expressed similar frustrations and were aware that the environment was not the best in which to care for children.

The views of young people

The views of the adolescents in the Anshen Dyer study were similar to those of the younger children. More space, light, colour, a view (“there should be green space”), age-appropriate décor, and the need to be segregated from younger children were all seen as important. They were happy with the IT resources available. The young people in the Derbyshire study also wanted more suitable décor. They asked for better facilities for their parents, with some preferring their parents not to sleep in the same room but to remain close by. “The overriding sentiment was one of concern about the parent’s needs, more so than the child’s own personal privacy”.

Young people’s wish list

A “wish list” donated by young people in Nottingham provides a useful starting point for those planning facilities for young people:

General principles

Young people in general at the hospital wanted:
• a youth work project;
• a young people’s policy;
• a young people’s special interest/working group (for staff);
• a young people’s committee (for patients);
• information booklets;
• health information booklets in toilets;
• baby-changing and condom machines in toilets;
• an outdoor area for patients; and
• patient information boards in each area.

Out-patients

Young people attending the out-patient departments wanted:
• appropriate décor and furnishing;
• possible age-banded clinics or time slots;
• appropriate entertainment for all ages;
• a suggestion box or graffiti board;
• an information board;
• a snack bar area; and
• trained staff and volunteers for all ages.

In-patient facilities for young people

Young people attending in-patient facilities wanted:
• a young people’s unit or youth room with a kitchen facility;
• a playroom – separate from the under-10s;
• appropriate décor and furniture for all ages;
• trained staff for all ages;
• a suggestion box or graffiti board;
• a patient’s information board;
• appropriate entertainment for all ages;
• information booklets; and
• appropriate catering portions – not just for kids.

Visiting arrangements

Regarding visiting arrangements, young people wanted:
• an internet café for health information and advice with advice/support worker linked in;
• a “trendy” food area that attracts young people, with pool tables;
• a gym; and
• a crèche.

Dedicated facilities
Viner and Keane (1998), in their report "Youth Matters", reviewed 159 publications relating to the care of young people in hospital. The need for dedicated facilities for young people emerges strongly, supported by other recent studies including Kari et al (1999). They used self-administered questionnaires to find out the views of young people (aged between 12 and 18 years) from three schools in London on healthcare delivery, sex and education. More than 50% of those admitted to a paediatric ward, and more than 75% admitted to an adult ward, did not like being placed with young children or older people. They concluded that designated adolescent units were essential for reasons of peer contact, privacy, mobility, independence and educational continuity.

Few young people in the Derbyshire study wanted to be in a shared bedroom, but if they did they wanted to be with people of the same age.
Single room accommodation

Viner and Keane interpreted the need for "socialisation" as the need for multi-bed rooms, however adolescents also need their privacy. This latter finding is supported by other recent reports (Anshen Dyer 1999; Civi 2002; Kari et al 1999; L4A 1990), each of which asked the views of young people directly through structured interviews or focus groups.

The young people in the Derbyshire criticised “constant interruptions by staff”, “nurses watching you change”, “little children playing up and down the ward”. They wanted “curtains with your own light”, and ideally “walls and doors with a please knock sign”.

The ideal solution is the provision of single bedrooms where young people can have their privacy and entertain their family or personal friends without intrusion, along with designated areas where they can socialise with other patients when they choose.

Viner and Keane rely very heavily on references that are more than two decades old. The more recent qualitative studies are more representative of the views of young people today. With smaller families, more children have their own bedroom and hence their own personal space, leading to changing expectations among young people. The Wanless Interim Report (2001) envisages that within 20 years single en-suite bedrooms will be the norm (p.123, paragraph 8.73).

The views of parents

The Anshen Dyer team asked parents about their overall impressions and experience of their accommodation and the quality of resources. The parents were happy to praise the good aspects but were initially reluctant to criticise the facilities. The team shared the findings from the concept sessions with young children and the teenagers, which gave the parents confidence to express their views.

Areas of concern were lack of privacy, space, noise levels, lack of natural light and having to sleep in the same room as other parents if their child was in a multi-bed area.

Parents felt that teenagers over 11 years old need their privacy and should be accommodated in single rooms.

Décor was again highlighted as important, with the observation that most reflects trends for young children and is therefore unsuitable for teenagers.

A study completed in 2001 (Tope et al), although focusing on A&E departments and minor injury units, produced findings applicable to all healthcare facilities. Lack of designated parking areas for people with young children, located close to the entrance, is of particular concern. The security and safety of people and their possessions are crucial. Secure storage areas for buggies and prams are needed. A designated play area for children, with close access to WCs, nappy-changing and baby-feeding facilities, is essential. Areas designated for children should be decorated in bright, cheerful colours with appropriate sound insulation. Clean, “quiet” toys are needed to keep children occupied while they are waiting.
Too few hospitals configure their services for the benefit of patients and this is a frequent criticism of many departments. Services should not be provided in islands of isolation for children or adolescents for the convenience of staff.

It is not always possible to provide separate facilities. Planning teams are faced with a considerable challenge since they must ensure that facilities predominantly designed to meet the needs of adults are also child-friendly.

Where facilities are shared with adults, such as imaging departments and out-patient departments, diversionary tactics should be installed to keep a child interested and amused. This does not necessarily imply the use of fluffy toys and teddy bears (which can be a source of cross-infection), rather the imaginative use of artwork and moving or tactile models that will also be of interest to young people and adults.

Guidance on dedicated facilities for children will be provided in HBN 23 “Hospital accommodation for children and young people” (NHS Estates, in progress).

This chapter outlines some key considerations when planning healthcare facilities and improving existing facilities including security, safety, privacy and dignity, catering, rest and sleep, play, education, childcare and youthwork.

The benefits of artwork in the hospital are also emphasised.

**General**

**Access to healthcare facilities**

Babies, children and young people will require access to most patient and public areas, either as patients or visitors with or without their carer. Ease of arrival at, and easy access to, healthcare facilities should therefore be a primary consideration. Modes of transport, public or private, and their proposed relationship to the main entrance of the building should be discussed by the planning team from the onset of a new project. Car-parking spaces, with an increased width for each bay, designated solely for use by people with young children, should be identified. These designated bays should be signposted clearly. Some hospital trusts in England provide free or subsidised parking for these spaces.

Access into the building itself will be deemed appropriate if the entrance meets the criteria laid down in the Disability Discrimination Act and outlined in HFN 14 “Disability access” (NHS Estates 1996). Entrances that meet the needs of people in a wheelchair or who are hard of hearing or have a visual impairment will meet the needs of people with babies and young children. Doors should be wide enough to enable carers with children in prams or buggies to enter and should have automatic...
Children’s waiting area.
COURTESY OF NHS PHOTO LIBRARY

Loch Ness monster, Derbyshire Children’s Hospital.
REPRODUCED BY KIND PERMISSION OF THE MEDICAL ILLUSTRATIONS DEPARTMENT, SOUTHERN DERBYSHIRE ACUTE HOSPITALS NHS TRUST
openers and closers. There should be adequate turning and passing spaces in corridors and lobbies and around the building. Adequate provision should be made for pram and buggy parking.

Reception and waiting areas
Every entrance should be welcoming and friendly in a way that will interest and stimulate children, at the same time appealing to the adult population.

There are a variety of strategies that can be adopted to enhance general circulating spaces that will be of interest to the whole population (see “Welcoming entrances and reception areas” – NHS Estates 2002). The décor chosen should be acceptable to every culture. Interesting, stimulating and thought-provoking design can include:

- lighting features
- water features
- sculptures
- tactile models
- working models, for example automatons
- 2D artwork, for example murals
- aquaria
- plantscapes.

See p.41 “Artwork in the hospital”.

Corridors, stairwells and open spaces should incorporate similar strategies. The journey to children’s departments should not be stressful for parents or children and thought should be given to the sights and experiences children will be exposed to en route.

Wayfinding
The directions and entrances to each department, ward or public facility should be signposted clearly (see “Wayfinding” – NHS Estates 1999). In addition to signposts that are clearly written in large letters, pictures or icons that depict what is down the corridor or behind the closed door can be entertaining for children and adults alike. Coloured stripes and other design features can also be added to floors. Multi-lingual signs may be appropriate in some hospitals, depending on the user group.

Consideration should be given to the element of control it is possible to give children over their environment. A child faced with pictorial signposting can experience mastery over wayfinding. This simple tactic engages a child with his or her environment and demonstrates a child-friendly approach.

Posters, photographs of staff that the child may meet and case histories can be
displayed for information and interest. These should be kept up to date. Many hospitals unacceptably display montages with gaps where a photograph has been removed or worse still crossed out.

**WCs and nappy-changing facilities**

There should be WCs and nappy-changing facilities immediately inside the main entrance and also at regular intervals on every floor of the building in a large hospital. All such facilities should be clearly signposted. There is no need to routinely install WCs specifically designed for children in general areas, since children are used to using adult facilities in their own homes and the WC can also be used by the accompanying adult if necessary. There is in any case a current trend for low-level suites. In child-specific wards and departments, there may be a case for installing child-specific WCs, however this remains a local decision. Child-specific access resources such as a step in front of a wash-hand basin should be included.

**Keeping children secure**

The planning and design team should ensure that a balance is struck between creating an “open” environment and ensuring the safety and security of babies, children and young people, including preventing the risk of abduction. This is especially important for babies. Constant supervision of the baby or young child by either the parent or a member of staff is essential. When a baby, child or young person is visiting the premises, the carer has ultimate responsibility unless they arrive as a patient and their physical or mental condition prevents this.

Direct access from the street should be avoided. The use of closed-circuit television (CCTV) and recognition devices should be considered at the planning stage. The door should be controlled so that it allows immediate egress in the case of fire or other emergency, but does not allow unauthorised entry. It can be operated by a close proximity card and/or operated from the communication base. Lever handles at a high level generally will prevent children from “escaping” from their supervisors.

A designated office for use by security officers, and the police, if present, should be installed at the entrance with supplementary CCTV support. The patient entrance should be clearly visible from this office.

**Preventing children from having accidents**

In the UK every year more than 1 million children younger than 15 years of age have...
an accident and visit an A&E department (RoSPA 2000). Soft tissue injuries, open wounds, bone injury and concussion are frequent outcomes of a slip, trip or fall by a child, with older children being the most likely to sustain a fracture. Many accidents happen in the home. The most serious accidents happen in the kitchen or on the stairs, however most occur in a living room or play area.

Inadequate supervision by the carer and “a lack of familiarity with surroundings” (RoSPA 2000, Factsheet p.4) are frequent causes of accidents.

When a baby or child leaves the familiar surroundings of their home, they become more vulnerable as far as safety is concerned. The healthcare environment not only presents similar risks to those they encounter at home, but also a variety of new possibilities.

Accident prevention through careful planning and design is crucial.

**Reasons why children have accidents**

Children have accidents for a number of reasons:

- They are small in stature. They may not be able to see an obstruction or an adult may not be able to see them.
- They are naturally inquisitive and are not so aware of potentially dangerous situations.
- Boys in particular are prone to “showing off” and pushing their abilities to the limit. Horseplay is a frequent cause of accidents.
- Stress or over-excitement puts a child particularly at risk.
- Inexperience; a child is not able to interpret new situations or environments in the same way as an adult.
• Inadequate supervision; children are attracted by unusual or different things, such as a bottle of medicine.

RoSPA (2000, p.5) acknowledges that children vary in their rate of development but gives a useful guide to the dangers a child faces at different ages (see Table 1). Children with physical disabilities or learning difficulties may not fit the age–activity ratio.

**Preventing or minimising the risks in the healthcare environment**

Many of the suggestions for preventing or minimising the risk of accidents in the home outlined by RoSPA are relevant to healthcare facilities. Many strategies for children are equally applicable for able-bodied adults and most particularly for people with a disability. The prevention of accidents on healthcare premises is described in detail in HFN 14 “Disability Access” (NHS Estates 1996). The Disability Discrimination Act 1995 lays out the statutory requirements for access in public buildings.

The Child Accident Prevention Trust (CAPT) has published many reports on accident prevention (see “Useful contacts”, p.71).

**Slips, trips and falls**

Nearly 40% of all children’s accidents involve a fall, particularly tripping or slipping over on the same level. Some involve falling from a height and tend to result in injuries of a more serious nature. Stairs and windows are a particular hazard for young children.

The risks can be prevented or minimised with the following measures:

- **Stairs should be well lit (natural or artificial light)**
- **Stairs should be well maintained. Daily checks for damage should be made. Any deficiency should be reported immediately and if necessary the staircase closed until the repair has been completed.**

<table>
<thead>
<tr>
<th>Age</th>
<th>Activity</th>
<th>Accident prevention</th>
</tr>
</thead>
<tbody>
<tr>
<td>0–6 months</td>
<td>Wriggle and kick, grasp, suck, roll over</td>
<td>Do not leave on a raised surface</td>
</tr>
<tr>
<td>6 months–1 year</td>
<td>Stand, sit, crawl, put things in mouth</td>
<td>Keep small objects out of reach</td>
</tr>
<tr>
<td>1–2 years</td>
<td>Move about, reach things high up, find hidden objects, walk, climb</td>
<td>Never leave alone, place hot drinks out of reach</td>
</tr>
<tr>
<td>2–3 years</td>
<td>Be adventurous, climb higher, pull and twist things, watch and copy</td>
<td>Be a good role model and be watchful. Place matches and lighters out of sight and reach</td>
</tr>
<tr>
<td>3–4 years</td>
<td>Use grown-up things, be helpful, understand instructions, be adventurous, explore, walk downstairs alone</td>
<td>Continue to be a good role model, keep being watchful but start safety training</td>
</tr>
<tr>
<td>4–5 years</td>
<td>Play exciting games, can be independent, ride a bike, enjoy stories</td>
<td>They can actually plan to do things and carry them out. Rules are very important to them, as long as everybody keeps to the same ones. They enjoy learning. Continue safety training</td>
</tr>
<tr>
<td>5–8 years</td>
<td>Will be subject to peer pressure and will still forget things</td>
<td>Still need supervision, guidance and support</td>
</tr>
</tbody>
</table>

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Table 1. Guide to the dangers faced by a child
KEY CONSIDERATIONS

• There should be no tripping hazards on the staircase.
• Stair rails should be robust and fitted to both sides of the staircase.
• In designated areas, safety gates should be installed.
• Child-resistant locks should be fitted to all windows.
• The floor space beneath a window should be kept clear of anything that could be climbed on by a child.
• Floor areas in general circulation areas should be kept clear of obstructions.
• Babies should not be left unattended on raised surfaces.
• Windows that open onto courtyards where children play constitute a hazard. Raised planting, for example, beneath them can prevent children sustaining injuries while running. Centre-pivot windows are to be avoided. Windows should preferably be of the sash-type with restrictors.
• Children should be supervised at all times by their nominated carer.

The risk of fire, burns and scalds

Children are fascinated by fire; 46% of all fatal accidents to children involve fire, usually at home (RoSPA 2000). Strategies for fire prevention, detection and intervention are well defined and rehearsed in the healthcare sector, however fire still occurs.

Children (most particularly young children) are also at risk of burns and scalds. These may result from hot drinks, kettles, radiators and hot water taps.

The risks can be prevented or minimised with the following measures:
• Children should not be able to access flammable materials.
• In designated smoking areas supply appropriate containers for extinguishing and disposing of cigarettes.
• Keep children out of kitchens, and away from hot drinks dispensers.
• Use cordless kettles in catering areas.
• Small children should never be left alone in bathrooms or beside wash basins. Hot water from hospital taps is frequently labelled as dangerous, but small children cannot read. Children can suffer extensive burns from hot water.
• The ambient temperature of the hot water system should be regulated centrally or a thermostat valve should be fitted to hot water taps (see HGN “Safe hot water and surface temperatures”, NHS Estates 1998). Thermometers should be provided. Any concerns about the water temperature should be reported immediately to the maintenance department. A temporary notice warning of the danger should be placed where a carer can see it immediately.
• Radiators and hot water pipes should have a protective covering.
• Care should be taken when warming babies’ bottles in jugs of hot water. The water should be discarded before being taken to a baby’s bedside.
• Babies and children should have adequate sunscreen applied before playing in outdoor areas.
• All small power electrical socket outlets should be cover-plated or made inaccessible.

Glass-related accidents

Many accidents and deaths each year involve glazing. Injuries also occur as a result of broken drinking glasses or bottles and china crockery.

The risks can be prevented or minimised with the following measures:
• Safety glass in windows and doors should be to BS 6206 standards (British Standards Institution 1981; under review). Laminated glass is good for safety and security. All glass should be able to withstand the impact of a person falling against it.
• Doors should have low-level viewing panels to ensure that a baby, toddler or young child can see and be seen from either side of the door.
• Shatter-resistant film can be fitted to existing doors as an interim measure to enhance safety.
• Fittings or furnishings that incorporate glass should be to BS 7376 and BS 7449 standard (British Standards Institution 1990, 1991).
• Broken glass should be cleared away immediately and disposed of safely.
Young children should not be served food or drinks in glass or china containers.

**The risk of poisoning**

More than 36,000 children are treated for poisoning annually in the UK. Ingestion of medicines and household cleaning products is the most frequent form of poisoning. Eating leaves or berries from plants is another common problem (RoSPA 2000). There is a statutory requirement for the safe custody and storage of drugs on healthcare premises, however vigilance is still required.

The risks can be prevented or minimised with the following measures:

- All medicines should be kept out of sight and reach of children.
- All housekeeping cleaning materials should be stored in a locked cupboard.
- Cleaning materials, particularly chemicals, must be left in their original containers, which should be marked clearly as toxic (see the Control of Substances Hazardous to Health (COSHH) Regulations 1999).
- Any toxic materials (such as fresh air sprays) left in WCs or bathrooms should be stored in a locked cupboard at a height that is not accessible to young children.
- Equipment that a young child can climb on should not be left underneath shelves or cupboards.
- Plants and foliage used for landscaping should not be poisonous or capable of irritating the skin.

**The risk of suffocating or choking**

Babies and young children instinctively put objects into their mouths. Choking on, inhaling or swallowing food, small toys or other items represents a significant risk for this age group. A baby or young child can choke or suffocate silently and unseen even when other people are near them. Death or permanent injury can result.

The risks can be prevented or minimised with the following measures:

- In designated play areas, age-appropriate toys should be chosen. They should be kept clean and maintained carefully.
- All toys that are the property of trusts must comply with BS 5665. They should be inspected regularly and discarded immediately if faulty (see Appendix 3, Example of toy safety policy).
• Babies and young children should not be able to reach toys designed for older children.
• Cords on window blinds or curtains should be kept short and out of reach of young children.
• Food items such as peanuts should not be made available (to avoid the risk of inhalation and allergic reaction).
• Food served from restaurants or canteens on healthcare facilities should not represent a significant risk to young children, for example, a fruit salad where apple slices are too large.

The risk of drowning
Children can drown in less than 3cm of water. They should be under constant supervision when in or near water (RoSPA 2000, p.9).

The risk of drowning can be prevented or minimised with the following measures:
• Babies and young children should never be left alone unsupervised in the bathroom, particularly if there is water already in the bath.
• Water features such as ponds or waterfalls should be designed to prevent a child running or falling into or climbing over a barrier. Water should be no deeper than 2–3 cm.
• Buckets and bowls of water should not be left unattended. The water should be disposed of immediately once a job is completed.
• Carers should always be present when young children are near taps, and the hot water tap should be secured (see above).

Protecting a child’s privacy and dignity

Babies, children and young people have as much right to their privacy and dignity as the adult population. The Human Rights Act (1998) makes it clear that any form of degradation is not acceptable. The most significant implication of the Act for the health and social services is the requirement to protect the privacy and dignity of patients and their family and friends.

Single sex accommodation is important in protecting a patient’s privacy, but in relation to children and young people there are many other issues to consider. This will be addressed in more detail in subsequent guidance.

Consideration should be given to differing cultural requirements regarding, for example, access to bath or shower facilities.

Procedures such as a clinical examination of the ear, nose or throat or the taking of a blood sample should not be undertaken in a hospital corridor or general circulating area. Children should be supervised and chaperoned at all times when they are being examined.

Catering services for babies, children and young people

A free publication is given to each new mother in England on the birth of her first baby (“Birth to Five”, HEA 1999). This document provides a wealth of advice on a variety of baby- and child-related issues. Chapter Five “Feeding your child” focuses on good practice regarding choice, preparation and storage of food and drink for babies and young children.

The Better Hospital Food (BHF) programme is currently developing a range of general principles and recommendations regarding the provision of catering services for children and young adults. Visit the BHF website at http://www.betterhospitalfood.com and see also “Catering services for children and young adults” (NHS Estates 2003).
With regard to children, the aim of a hospital catering service should be to ensure that the food on offer meets their nutritional needs. The service should also be delivered in a manner, and in an environment, that encourages children to eat the food on offer.

A range of factors can have an adverse impact on children’s eating habits when in hospital. In addition to the anxiety that can be caused by hospitalisation and the effects of treatment, these can also include the environment, which may be very different from that which they are used to, and the foods on offer, which may also be different from those they are used to. It is therefore important to do all possible to create an atmosphere which will make children feel comfortable about eating. For children, especially younger children, this includes making mealtimes fun.

Studies suggest that improving the eating environment could improve both nutritional status and general well-being. For most people, eating is a social occasion and every effort should be made to ensure that this is provided for.

**24-hour services**

Ward kitchen supplies should include a range of foods which can be quickly and easily prepared at ward level to meet patients’ needs outside the normal mealtime service. Typical products which should be made available include toast, baked beans, tinned pastas, for example ravioli, spaghetti and soups, in addition to the children’s Snack Box. Where there are no ward kitchens, then this facility should be available from elsewhere within the hospital.

**The right place to eat**

Hospitals should, wherever practical and possible, ensure that children eat together in a social group. Children should be provided with the opportunity to eat in a dining room or other suitable location which resembles a home rather than a hospital. The involvement of parents/family/friends should be encouraged and facilitated.

**Crockery, cutlery and tableware**

Hospitals should ensure that crockery, cutlery, trays and other tableware are attractive and suitable to children and adolescents.

**Menus/ordering**

Menus for children should be exciting, reflect modern trends, be attractively presented and be easy to understand and appropriate to the age range targeted. They should describe appropriately and accurately the dishes on offer. The use of pictures is recommended. Hospitals should provide at least two menu designs – one for age ranges 1–11 years and a second for 12 years upwards. The content of these menus need not differ. (Templates will be available in the near future on the BHF website.) All patients and/or their parents/family/friends should be involved in choosing the meals they want wherever this is possible.

**Patient satisfaction surveys**

Hospitals should ensure they have in place a regular survey, designed for children and adolescents, which offers the opportunity for patients to express views on the catering service.
KEY CONSIDERATIONS

Rest and sleep

The majority of babies and young children require long periods of rest and sleep. Many sleep for varying lengths of time and at varying intervals during the day as well as at night. In common with adults, a child who is unwell may sleep for longer periods than usual. Babies and young children who are not patients but visitors to the hospital will still need to sleep when necessary.

A child who is tired but unable to sleep because of, for example, extraneous noise or bright lights becomes increasingly distressed and fractious. This is unacceptable for the child, the parents or carer, and for other patients and visitors. Most babies and young children sleep when they need to, providing they feel warm enough, comfortable, well fed and secure. Quiet, softly lit areas should be provided where a parent or carer can sit with a baby or child who needs to sleep.

Adolescent patients complain of the noise of crying babies. The nursing needs of young children are incompatible with those of adolescents. The noises and activities of the adult setting are equally inappropriate. Teenagers need sleeping, rest and recreation facilities particularly suited to their needs.

The importance of play

“Play is a natural part of childhood, and a vital factor in the mental, social and emotional growth of children” (National Association of Hospital Play Staff)

Children of all ages should be encouraged and helped to play with toys in a safe and supportive environment (see Appendix 3. Example of toy safety policy). Parents, siblings, other family members and friends can all make play an enjoyable, stimulating and educational experience. A play specialist has an important role (see Appendix 4).

The children at Derbyshire Children’s Hospital indicated good play facilities as a high priority. Desirable features are:

- a crèche for children less than 5 years of age – this should be equipped with soft toys, sand and water, a home corner, climbing frame and slide;
- a noisy indoor play area (as the authors observed, this frequently involves the hospital corridors at present);
- a quiet indoor play area for activities such as reading and sitting at a computer;
- an outside play area for patients and visitors;
- a TV room; and
- opportunities to get to know other children through play.

A parent who has an out-patient appointment or who is visiting another family member or friend may be accompanied by a child/children. All healthcare facilities should include a designated play area for children who are not patients. This area should be supervised at all times.
Sure Start recommendations for play facilities

According to the Sure Start initiative, play facilities should provide opportunities for:

- a varied and interesting physical environment (for example, things at different levels, spaces of different sizes, places to hide, natural and man-made things, and places to inspire mystery and imagination);
- challenge in relation to the physical environment;
- playing with the natural elements – earth, wind, water, air;
- movement – for example, running, jumping, rolling, climbing;
- manipulating natural and fabricated materials;
- stimulation of the five senses;
- experiencing change in the natural and built environment;
- social interactions;
- playing with identity;
- experiencing a range of emotions; and
- access to external play areas.

Sure Start considerations for external play areas

Identifying safe and secure outdoor spaces in which children can play is particularly important. Planning teams should consider the following:

- space – making the most of what is available;
- zoning – different areas for different types of activity and environment;
- seating – important for socialising;
- shelter – enabling children to experience seasonal variations;
- variety and diversity – for example, equipment and planting; and
- management – developing the strategy.
KEY CONSIDERATIONS

Education in hospital

Local education authorities have a legal obligation to ensure that children of compulsory school age who cannot attend school because of illness or injury have access to a suitable education. Education may be provided in a number of ways, for example, through the provision of a hospital school or hospital teaching service, home teaching, or an integrated hospital/home education service. The following applies whenever education is provided within hospital settings. The aim is always to minimise, as far as possible, the disruption to normal schooling by continuing education as normally as incapacity allows. Education can also play an important role in the recovery process.

In November 2001, the Department for Education and Skills (DfES) issued jointly with the Department of Health new statutory guidance “Access to education for children and young people with medical needs”, which sets out minimum standards of education for children and young people who cannot attend school because of their medical needs. Copies may be obtained from DfES publications, PO Box 5050, Sherwood Park, Annesley, Nottingham. Telephone 0845 6022260, Fax 0845 6033360, e-mail dfes@prolog.uk.com. It can also be accessed on the DFES website at http://www.dfes.gov.uk/sickchildren. A four-page summary of the guidance is also available.

The guidance forms part of the joint approach by the DfES and Department of Health, which recognises the important role of education in the well-being of children and young people. The key standards include:

- Pupils are not at home without access to education for more than 15 working days.
- Pupils who have an illness/diagnosis that indicates prolonged or recurring periods of absence from school, whether at home or in hospital, have access to education, so far as possible, from day one.
- Pupils receive an education of similar quality to that available in school, including a broad and balanced curriculum.

It is vital that hospital accommodation is designed in a way that promotes and facilitates arrangements for the education of children. This should:

- provide sufficient separate teaching and storage space;
- be close to paediatric wards;
- be designed, furnished and equipped to meet pupils’ needs;
- make provision for a variety of teaching methods, including Information and Communications Technology (ICT); and
- take account of those children and young people with disabilities.

In planning accommodation, account should be taken of the space requirements of ICT and its growing potential, which should be fully utilised to support education.

Many children have a variety of temporary or permanent physical disabilities, such as hearing or visual difficulties or mobility problems, with many being confined to a wheelchair. The DfES/DoH guidance points out that from September 2002 degenerative conditions will be covered by the provisions of Part IV of the Disability Discrimination Act 1995 (p.19, paragraph 4.9).

The DfES together with NHS Estates are currently updating Design Note 38 “Meeting the Educational Needs of Children in Hospital”, which is due out shortly.

Youth workers

“Youth work changes lives. It provides opportunities for young people in a wide range of settings. It helps them develop the personal skills they need to make a success of their lives. It allows them to influence and shape their lives and the services available to them. There are few more important investments than in the future of young people, and few better ways of delivering change than through good youth work.” (David Blunkett, then Secretary of State for Education and Employment, 2001)
Examples of work undertaken by a hospital youth worker include:

- leisure activities (inside and outside of the hospital and residential areas);
- educational projects (social skills, life skills, health information and oppression);
- achievement schemes (youth achievement awards, patient volunteers, etc.);
- patient participation (youth committees);
- support work (advocacy, advice and information); and
- teaching (medical and non-medical students).

Where youth workers are part of the team, there should be accommodation to ensure they can interact with the young people.

**Childcare strategy and funding**

The development of a childcare strategy for the NHS will play a key role in the recruitment and retention of staff. The NHS Childcare Strategy centres on providing good-quality, accessible and affordable childcare. The main focus of the strategy currently is the development of around 150 on-site nurseries by 2004. Around a further 7,500 places will be created by 2004.

Funding of over £70m is available in the next 3 years to build around 150 on-site nurseries with places subsidised at an average of £30 per place, per week.

Nurseries will need to reflect the needs of staff working in the NHS, for example, by offering flexibility to accommodate shift work, extended opening hours, Bank Holidays and weekend opening and short notice cover.

All staff should have access to a childcare co-ordinator by April 2003 to fulfil the requirements for Improving Working Lives Practice Accreditation, although many NHS organisations will be providing this service much sooner than that. The childcare co-ordinator will act as an advisor and advocate to parents working in the NHS.

The Government has pledged further funding building up to £100m to expand the NHS Childcare Strategy. This funding will be utilised to widen the current NHS Childcare Strategy to meet other childcare needs and extend support beyond the provision of on-site nurseries, and to support local childcare strategies, led and implemented by childcare co-ordinators on the ground. The current childcare initiatives will be extended to cover primary care. Further guidance for the NHS will make it clear that the needs of GPs and their staff should be taken into account when planning and allocating future childcare provision.
Artwork in the hospital

Artwork may be expressed in many forms such as paintings, murals, prints, photographs, sculptures, decorative tiles, ceramics, textile hangings and furniture. It should be integral to the healthcare built environment.

Artwork can celebrate life, allay children’s fears, work out anxieties, make them laugh, educate and indeed distract for long periods of time. It should impart the appropriate messages such as hope, joy, love, dignity, peace, tranquility, energy, comfort, security, safety, growth and life. It can be used to prompt sensory responses, usefully forming an extension of a Snoezelen room.

Artwork can be used as landmarks in wayfinding across hospital sites and within the hospital facility, for example, in the form of icons, sculptures and water features.

Artwork selection for individual child groups, and regular “turnover” or exchange of artwork, is essential.

Kathy Hathorn, Vice-President of American Art Resources, assists hospitals across the USA in selecting appropriate artwork for specific patient groups. Hathorn, who was the art consultant for the redesign of Health Control in Océee, Florida, selected pictures of palm tree groves to mirror the trees growing outside the facility. “The artwork was designed to trigger sensory responses – to draw on the five senses”.

Artwork in patient areas

Ulrich (1983, 1984) has undertaken research in the field of art in the healing environment, which can be usefully utilised.

Artwork is of special benefit in day rooms, wards and treatment areas. Successful art programmes for paediatric patients can employ artwork that is comforting and nurturing. This is especially true in paediatric long-term care settings such as bone marrow, cardiac or orthopaedic units.
Lily-pad sculpture, Central hall, Rotterdam Children's Hospital.
COURTESY OF ALBERT KRAMER, KRAMER KUNSTWERKEN, ROTTERDAM, THE NETHERLANDS
This will be addressed in subsequent guidance.

Ceiling-mounted artwork is essential for children who spend long periods of time in bed, couches or trolleys. Kinetic forms of art such as mobiles have proved to be very effective in distracting children in wards and diagnostic and treatment areas as well as waiting areas and corridors.

Being away from one’s family for extended periods of time is lonely and frightening for a sick child. Lorna Linda Hospital in the USA has used photographs and images of humour, playfulness and family, friendship and pets to alleviate these fears.

Current practice

Many trusts and healthcare facilities now employ an artist in residence to manage art activities and distribution.

Works of art and craft can lend special identity to a space and help give it a sense of locality.

“Building the Best” (Derbyshire Children’s Hospital workshops) advises that artwork by children should be prominently and well displayed. This includes work created by children in hospital and by children linked to the hospital, “Children talked of the possibility of getting other children to know the hospital through collaborative projects”.

Advice should be sought from experts on:

- obtaining grants. In some cases, moneys for art within a capital scheme can be matched by grants from charities of regional arts board;
- ensuring quality in all art and craftwork;
- locating art and craftwork;
- selecting artists and craftspeople; and
- curatorship of artwork.

Sources of artwork may be:

- local museums;
- schools;
- colleges and universities;
- local artists; and
- art galleries.
Mosaic panel designed by local children, Wooden Spoon House, Trust Arts Project, Lambeth

Detail from swim fountain at Royal Devon & Exeter Hospital

Rotterdam Children's Hospital.
COURTESY OF ALBERT KRAMER, KRAMER KUNSTWERKEN, ROTTERDAM, THE NETHERLANDS
Sense-sensitive design

Studies clearly show that the design of spaces, together with sensitive lighting, colour, sound attenuation, texture and material specification are essential to the child’s immediate well-being, healing process and ultimate outcome. Sense-sensitive design is key. Regular monitoring of health environments after completion is important, using the same “sense-sensitive” parameters used in the initial design stages (see Table 2, p.56).

Sensory receptors

The five senses are:

- sight
- touch
- hearing
- taste
- smell.

They are all important, since it is through these receptors that the total environment is experienced. These senses operate simultaneously to help children understand and navigate within their environment. The information picked up by a child’s sensory receptors is converted into a form that the brain can integrate, interpret, compare and store. Children are demanding of their immediate environment in many ways.

The seven ages of children are:

- foetus
- neonate
- infant
- preschool
- primary school
- secondary school
- transition to adulthood.

They are important in terms of the development of a child’s sensory receptors and their physiological state. For example, the endocrine system, which interprets sensory data into emotions, is developing and at times may be extremely volatile. The more information available, the better the designer will be able to tailor environments to all stages of child growth.

Disabled children suffering the loss of one or more senses may be even more reliant on the remaining senses. The loss of one sense very often heightens the acuity of the others.

Medication can affect the senses, for example, primary colours can overstimulate and appear dark or black at night, causing some children to hallucinate. Hearing can similarly be affected.

Understanding the true dimensions and limitations of the senses enables the designer to create a truly responsive environment that can assist in healing.

In addition to the five classic senses, there are other less well-known ones. Sense of
balance is important when a child is bedridden, disabled or running a high temperature. The environment should ensure that colour, pattern and light do not deceive in terms of horizontal and vertical planes. Sensory stimulation rooms for children with complex health problems or special needs can be invaluable.

Muscle sense is important when adopting differing postures, for example, sitting or lying down. Anthropometric and ergonomic data in respect of a child’s size and form should be researched carefully when developing interior and exterior environments.

Other sense cells located in various parts of the body inform the brain if one is hungry, thirsty or full of waste matter. These work in a similar way to the sense receptors in the skin.

**The sense of sight**

The eyes are extensions of the brain and continue to develop after birth. Newborn babies see only light and shadow. Later they become far-sighted, holding their toys at arm’s length to examine them. At 4 months, babies see stereoscopically. Peak vision is attained at the age of 6–8 months.

Light and colour are the two key aspects of sight that have the greatest impact on the patient’s overall well-being.

In any healthcare environment, a percentage of patients will be blind or partially sighted. The following impairments are common:

- a limited field of vision – being unable to see to the sides or up and down;
- some loss of central vision – limiting the ability to see fine detail;
- acute short-sightedness – seeing the environment as a continuous blur;
- uncontrollable oscillations of the eyeball – leading to an inability to see objects clearly; and
- night-blindness – a sensitivity to light and a tendency to be dazzled by glare.

These patients are more reliant on other sensory clues and beacons such as smell, sound and tactile surfaces.

The environment should always be “honest” and not deceptive, for example, light and shadow should not visually distort the form of surrounding objects. Visual deception can stimulate hallucinations at night-time, in the early hours or mid-sleep (and may be exacerbated by potential effects of some forms of medication, for example sedation).
Light quality and quantity varies daily.

COURTESY OF NIGHTINGALE ASSOCIATES
Light

“Second only to fresh air ... I should be inclined to rank light in importance for the sick. Direct sunlight, not only daylight, is necessary for a speedy recovery.” (Florence Nightingale 1860)

“In a dark place the sick indulge themselves too much in various fancies, and are harassed by imaginings devised in an alienated mind, since no external phenomena can fall on their senses; but in a bright place they are prevented from being wholly in their own fancies, which are rather weakened by external phenomena.” (Asclepiades of Bithynia, c. 50BC)

Every object we see, we see as a result of light energy – either light emitted by the object or light reflected from it. Without light, colour would not exist. Light not only affects us via our eyes but through our skin, even to reach the brain through our skull. The therapeutic value of sunlight has been recognised for thousands of years by the Assyrians, Babylonians, Egyptians, Romans and Victorians.

The diurnal cycle of night and day and the spectral properties of light are essential to our endocrine systems, the time-setting of our biological clocks, immunologic responsiveness, control of infections, regulations of stress and fatigue, sexual development and the functioning of nervous systems.

The quality and quantity of natural or artificial light has a major impact on the body's healing processes and may help to reduce length of stay for paediatric in-patients.

Lighting has been used as a therapy in clinical settings. Most notably, phototherapy is used to treat neonatal jaundice in place of blood transfusions. Ultra violet light is frequently used to treat a dermatological condition – psoriasis. Full-spectrum light is used to treat seasonal affective disorder, which is thought to result from suppression of melatonin production during the dark, overcast winter months, at which time people are exposed to artificial lighting that is frequently deficient in certain wavelengths. A result of this deficiency is depression, moodiness and a craving for carbohydrates. It is important to note that certain children may be receiving phototropic drugs, making them sensitive to light.

The impact of full-spectrum light, whether natural sunlight or artificially manufactured daylight, is important in environments for hospitalised children. Children relate to the outdoor environment more than most adults and are used to playing outdoors.

The benefits of full-spectrum lighting appear to be:

- shorter reaction times;
- better visual acuity;
- improved motor skills;
- less physiological fatigue;
- vitamin D synthesis; and
- overall improved performance.

Low light at night has been associated with better sleep patterns after discharge. See “Rest and sleep”, p.37.

Colour

The majority of pre-school children focus on colour rather than “form”. Between the ages of 7 and 9 years, children experience a colour/form transitory period. From the approximate age of 9 years into adolescence, children focus increasingly on form over colour.

Orange, pink and red, in this order of preference, are the favourite colours of children between the ages of 3 and 6 years. Preference towards the heated colours decreases and an interest in cooler colours increases as children grow out of their impulsive mood swings, into an age of greater reasoning and emotional control.

Children demonstrate sensitivity to colour harmony at the age of 4 years.
As children grow up, hue is more important than colour saturation and brightness. Girls between the ages of 6 and 17 years prefer warm colours and boys prefer cooler colours.

Children of different ages are stimulated by differing colours and pattern combinations:
- Infants appear to respond to complex patterns.
- Toddlers react to real objects and bold colour.
- Older children and teenagers generally prefer a neutral background to which they can add their own particular decorations.

Adolescents sometimes impulsively wish to paint their rooms totally black or red. They sometimes wish to express their confusion and insecurity as they come to terms with the physical and emotional changes of puberty.

There are studies concerning colour preferences in differing cultures and these should be studied by designers.

Saturated yellows may detrimentally affect REM activity in sleep. Green can make a child with cancer feel nauseous. Clinicians’ experiences at the Bristol Children’s Hospital have shown that purple can have the same nauseous effects. Red can have powerful associations with blood for some children.

Colour is a powerful tool and should be carefully specified for each specific child group in the same way as one would prescribe medication.

**Design guidelines**

**Natural light**

All spaces occupied by children, parents, siblings and staff for long periods of time should afford natural daylight with an outside view. Opportunities should be made for children in beds and cots to be positioned on terraces, balconies and verandas or in courtyards. Sunlit wards with larger windows and low sills seem to improve the morale and recovery of patients. Adjustable features can give a degree of sense of control to patients and staff over their environment.

Careful window design is essential. Fenestration should be designed from the inside as well as the outside. It should be light-adjustable so that natural light can be modulated with, for example, brille soleil or glass cavity microblinds. Low sills with deep window reveals can be very appealing to children.

Whenever possible, solid partitions should be reduced and/or replaced with glazed or part-glazed partitions or dwarf walls which will help to transmit and disperse daylight throughout the department. Screening should be used in order to provide exclusion for privacy and emergency reasons.

Designers should ensure best possible glazing orientation. Vulnerable south-facing glazing should be carefully designed allowing controlled daylight/sunlight to penetrate the hospital environment. This can be achieved with internal, interstitial or external blinds and louvres. Window shape and size and detailing of reveals can be modulated accordingly. Such control will avoid excessive sunlight, glare and solar heat, which can be dangerous and cause severe discomfort, particularly to children in beds and cots and especially incubators. Anti-sun glass distorts the natural light spectrum. It should be avoided where possible as it can hinder accurate diagnosis.
One should recognise that light quality and intensity varies according to the seasonal cycles, diurnal cycles, weather conditions and indeed location.

**Artificial light**

Indirect lighting should be used extensively in public areas and patient recovery areas. Designers should develop a lighting scheme that will help to promote a high-quality image and create a non-threatening, restful environment in these areas.

Equally spaced light fittings along corridors and hospital streets should be avoided. These may have a stroboscopic effect on patients travelling along corridors in a trolley or bed. A reflected, diffused light is a better solution.

Luminaries should not be mounted on ceilings immediately above patients in an incubator, cot, bed, trolley or couch situation. Light should be designed to reflect off walls and ceilings.

Task and examination lighting should be of the required intensity with low-contrast, glare-free background illumination. Children generally have very reflective skin. Artificial lighting in patient areas should enable changes to a patient’s skin tone and colour to be easily identified under diagnosis. Particular attention should be paid to the head end of the patient in a cubicle, recovery, examination or treatment area.

Where possible, all lighting should be dimmer-controlled.

“Building the Best” (L4A 1999; Derbyshire Children’s Hospital) records the following: “Light – Dislike of fluorescent light, buzzing or non-buzzing was clear. Natural light, and subdued lighting were requested.”

**Colour**

Neonates’ immature eyes recognise bright primary colours like red, blue, yellow and green, rather than subtle hues like buttermilk or mimosa. Primary colours can be used as orientation tools between spaces in the navigation of their new environment.

Soft pastels with less colour saturation are best specified in sleeping areas and spaces of quiet activity.

The effective use of colour and tonal contrast, particularly tonal contrast, can assist blind and partially sighted people in navigating the healthcare environment.

In the Middlesex Adolescent Unit, the predominant colour is blue, especially in the main ward and circulation areas. An almost identical colour selection is found in the Adolescent Unit in the Birmingham Children’s Hospital.

Manchester Booth Hall has developed very good colour visual environments with “happy rooms” in multi-shades of yellow, orange and reds and “calm rooms” in shades of blue and violet.
Certain hospitals such as the Birmingham Children’s Hospital have actively encouraged and involved children of respective ages to select colours in specific areas such as day areas, play areas and adolescent rooms.

The sense of touch

Touch is the confirmatory sense. Through touch we gather information confirming the information provided by the other senses.

Often forgotten is the skin, which is the largest sensory organ – the organ of cutaneous sense. The skin’s various sensory structures pick up information about pressure, heat, cold and pain. The other sensations such as tickling, itching, burning, creeping and crawling derive from combinations of these.

Children are the great touchers and explorers, learning by using sensitive fingers, tongues and lips to confirm what they see. They explore and then run back to adults for the tension-reducing touch.

Physical contact is the ultimate signal to infants and young children that they are safe. At about age one, children frequently develop an attachment for a comfort cloth or a soft cuddly blanket, pillow or teddy, dragging it around with them, stroking and caressing it. It provides the security of touch when the parent is not there.

Touch separates “me” from “not me”. It is important in forming a body image and a sense of self. Evolution of body image develops as a child begins to interact with the environment.

Design guidelines

The careful specification of varied textured and tactile surfaces is essential in a children’s environment. They introduce interest, variety and comfort, attenuate sound and assist in wayfinding for the partially sighted. They can form an integral part of a child’s play, learning process and sensory development.

Finishes should be robust enough to withstand relentless impact from children’s activities. Finishes and fabrics should be washable to ensure hygiene among a very tactile population.

Very careful attention should be paid to the detailing of furniture and fittings. The design should avoid trapped fingers, heads, feet and toes. Where possible, sharp edges and corners on all planes should be avoided. Post-formed, rounded edges can help minimise the risk of injury.

Tactile floor and wall surfaces can be used to convey important information to visually impaired patients about their environment. Often, the sense of touch in this group will be heightened to compensate for loss of sight. Distinctive changes in internal and external floor and ground surfaces may help define safe routes. Changes in texture can warn of potential hazards or provide directional information.

In addition to Braille, other textural markers can be used, such as shape coding of handrails (notches or grooves cut out or embossed into handrails to identify location). Neighbourhood and departmental icons can be adhered to walls and handrails to further assist touch navigation.
Plants can be used for landmarking and wayfinding. It is important to specify plant types that provide continuity throughout the seasons.

Ambient temperatures should be controlled with thermostats in all patient rooms.

Derbyshire Children’s Hospital is exemplary in providing tactile environments that appeal to many age groups.

The “touch tour”, which forms part of the “Five-Sense Tour” (see p.56), is key to designing for the blind or partially sighted.

The sense of hearing

There are basic psychological and physiological responses to pleasant and unpleasant sounds. Pleasant sounds, such as music, rain, the wind, the sea, songbirds and bees, can calm, create a sense of well-being and create sensations of pleasure affecting the limbic system. They can have an analgesic or painkilling effect and improve the function of the autonomic nervous system, as well as being able to reduce blood pressure, heart and respiration rates. There are pleasant sounds that help release endorphins instead of adrenals.

Any unwanted sound is classified as noise. Noise can increase heart rate, blood pressure, respiration rate and even blood cholesterol levels. It can hamper healthy weight gain, disturb sleep patterns and impact negatively on hormonal balances. Children often have a higher ambient noise threshold than adults.

Florence Nightingale recognised the vital importance of a quiet and restful environment as an essential aid to recovery. As she stated in her “Notes on Nursing” (1860) “unnecessary noise … is the most crucial absence of care which can be inflicted either on the sick or well”.

Design guidelines

Sound should be considered in the early planning stages when deciding key space adjacencies of individual rooms and departments. Juxtaposition of noisy spaces with quiet areas, for example, playrooms and bed areas, should be avoided. This can avoid unnecessary and costly sound insulation later. Children are often a noise source in themselves and should be shielded from other patient groups.

Every effort should be made at the planning stage to ensure that patient areas are well away from sources of noise, for example, external traffic and plantrooms. Bed areas and intensive care units are particularly sensitive areas that require a well-controlled sonic environment. High-stress areas such as A&E waiting areas and examination cubicles also require special attention.

Designers should take great care in the selection of appropriate finishes, fabrics, furniture, floor coverings and fittings. All these elements are able to absorb or reflect sound. Sound can be modulated with appropriate interior design detailing, for example, baffles and plane modulation. All furniture, fittings and equipment with moving parts should have silent movement and closures, for example doors, windows and waste bins. Mechanical and electrical engineers are to ensure correct specification
SENSE-SENSITIVE DESIGN

and location of plant equipment, avoiding excessive airborne and structure-transmitted sound. Outside, combinations of dense evergreen planting, landscaped mounding and fencing can be used as acoustic buffers.

Care should be taken in the specification of floor, wall and ceiling material to ensure short noise reverberation times in sensitive areas. Designers should consider modelling ceiling and wall profiles to deflect sound, or reduce secondary and tertiary sound waves by reducing ceiling heights in these areas.

Traditional noise sources such as telephones, alarm panels and monitors should be assessed and monitored in individual spaces. Policies should be in place to turn down tones on phones and nurse-call systems at night. Nurse-call systems that activate dome lights and individual pagers and telephone sounds modulated to lower frequency are all possible alternatives. Certain children’s wards in the Chelsea & Westminster hospital have adopted a rest period regime whereby televisions, lights and radios are switched off for one hour each afternoon. Noisy footwear will disturb patients, especially at night.

Opportunities for auditory privacy are essential and provision should be clearly identified at an early stage in planning. For example, a child reading, doing homework, playing chess or sleeping should be shielded from children at play, overactive teenagers or a screaming child in pain. “Space within a space” designs are a possible solution.

Children should always have opportunities of listening to music, be it with headphones, ambient background music or visiting musicians. Appropriate background and foreground music should be carefully selected for each age group. The sonic environment should be re-assessed carefully throughout the day. Courtyards and landscaped areas close to child patient areas should be designed with landscape planting which encourages song birds and bees.

For the blind or partially sighted, sound can be a helpful and positive source of information. Common sounds within the environment can act as auditory clues or beacons, that is, to aid orientation and warn of hazards, and should not be suppressed or totally eliminated.

“Building the Best” (L4A 1999; Derbyshire Children’s Hospital) records the following: “Noise – Crying babies were high on the list of negative experiences, most noticeably of the 4–7 year olds. Leaving aside such drastic solutions as no babies, distress does not seem to increase on hearing the distress and discomfort of others. A separate babies’ ward was suggested, and a separate quiet room, off the general ward, to which a crying child might be taken to be comforted. We also note that ‘the nurse should not be allowed to talk at night or only if they whisper!’”

The sense of taste

Of all the senses, the sense of taste offers the least information. Tongue-mapping reveals areas of the tongue that are sensitive to sweet, sour, salty and bitter tastes. Research has shown that children are born with a desire for sweet tastes. Their first food and milk contains lactose, milk sugar. A sweet taste generally means a food is calorifically and nutritionally good for children. Both illness and medication often alter the sense of taste.

Children will generally test their environments using all their senses including the sense of taste. They may suck, bite, lick and chew most materials available, especially if they have missed meals prior to an examination. In their early years, children will pop anything in their mouths. They may drink bath water, suck plugs, eat crayons and indeed swallow coins, marbles and paper clips. Thousands of children are treated for poisoning annually in the UK.
Children can experience changes in temperature with their mouths, especially when teething. They sometimes find relief in licking the glass on windows and mirrors and biting stainless steel handles.

**Design guidelines**

Materials should be robust enough not to break, fragment, shred, tear or splinter too easily. Building products and materials should conform to British Standard recommendations and the Association for Environment Conscious Building Guidelines.

Materials and components should not be toxic in themselves. They should not have been treated with toxic or hazardous building products such as formaldehyde, wood preservatives, dieldrin, creosote, benzene, xylene, toluene or white spirit.

Furniture designers should ensure that all cupboards designed to contain products such as cleansing and sterilising agents and medication are “child-proof”.

Landscape designers should ensure that flowers, foliage, fruits and berries selected for internal and external landscaping are not poisonous or capable of irritating the skin.

Children have changing and varied tastes for food and drink. A child’s need for sustenance is more frequent and children can be more emotionally demanding than other patient groups. These needs should be reflected in the careful disposition, number and size of pantries, dining areas and food preparation areas (see “Catering for children and young people”, p.35).

**The sense of smell**

The olfactory sense is often underestimated both as a cause of stress and, when positive, as a therapy. Some claim that smells are retained more acutely in memory than are visual images or sounds. They can stimulate associations and evoke strong feelings.

Odours help mothers bond to their newborn. A mother cuddling her infant will invariably brush her nose in the baby’s hair to inhale his or her sweet aroma, and this aroma can be de-stressing in its own right. A mother can probably identify her baby by its smell as much as by its cry.

Body odours are produced by bacteria metabolising secretions from various skin glands. The most repellent odours result from the apocrine glands being activated when frightened, excited or aroused – emotions which can clearly be activated in a seemingly alien and hostile environment.

It is widely believed that sensitivity to smell increases during pregnancy. The majority of mothers experience an increased sensitivity to all odours, usually with adverse effects.

In hospitals, medicinal smells can produce anxiety. Unpleasant odours are known to increase heart rate and respiration. Some research has shown that olfactory messages reach the brain faster than auditory or visual ones. In the past, many hospitals had unpleasant smells. Carbolic solution was often used to mop up floors. Cleanliness practices were less well developed and the absence of air-conditioning meant that many windows remained closed.

The field of aromatherapy is one aspect of a holistic approach to healing. Research has demonstrated that smelling specific floral and fruit fragrances slows respiration, lowers blood pressure and heart rate and relaxes muscles. Fragrances have also been found to reduce pain. Pleasant smells encourage the release of endorphins, one of the body’s most powerful pain-killing hormones. If fragrances are able to relax people, then they can enable them to focus their attention on other matters.

**Design guidelines**

Even new hospitals have areas of residual bad smells, for example, day rooms where inadequate ventilation has left unpleasant odours from earlier meals. Deep-plan buildings, which offer little perimeter glazing
to patient areas, are even more susceptible to unpleasant smells and are totally reliant on air-conditioning. Courtyards, balconies and terraces can be integrated to allow natural cross-ventilation.

Planners should ensure that certain rooms and departments are not juxtaposed, for example, oncology facilities with food preparation areas. Some patient groups may be particularly smell-sensitive, for example, patients with oncological illness, patients post-anaesthesia, trauma cases and patients with head injuries.

Designers should avoid absorbent materials which are difficult to clean and retain long-lasting smells. Where possible, finishes should be seamless and coved between planes.

Some fabrics, furniture and fittings increase the amount of dust and chemical molecules in the air, often triggering allergies, asthma and eczema. All attempts should be made to specify appropriate materials for very sensitive paediatric environments. Sprays and aerosols should be avoided for the same reasons. Scandinavian countries, like Sweden, have very stringent laws concerning such air pollution. Designers should review this legislation, especially for such sensitive environments.

NASA research (1989) has shown that a number of indoor plants, such as aloe vera, ficus, schefflera, palms and spider plants, can readily absorb benzene, trichlorothylene, formaldehyde and carbon monoxide without by-products.

Mechanical air ventilation and conditioning should be designed for adequate air changes in respective departments. WCs must have adequate air ventilation and extractors, especially those allocated as en-suite to single or multi-bed areas.

Planners should ensure that waste removal is properly considered and that new ways are found to dispose of varying grades of refuse.

In the past, building materials like mortars and plasters were impregnated with varied smells which would assist in differentiating one area of a building from another. Cladding materials such as cedar and redwood have unique fragrances which can equally assist in wayfinding, especially for the blind or partially sighted.

Where appropriate, landscaped areas and courtyards should be designed with trees, shrubs and flowers that have pleasant scents such as lavender, camomile, gardenia, jasmine and lilac. Plants produce fragrance from their leaves, stems, fruit and bark as well as from their flowers. Fragrant plants can create a sense of well-being for all, but can also provide orientation clues for the partially sighted.

“Building the Best” (L4A 1999; Derbyshire Children’s Hospital) records the following: “Smell – Described by one child as ‘an antiseptic smell that makes you feel scared’, by another as ‘cabbagy’, hospital smells certainly make a lasting impression. ‘Good’ smells were thought to be – ‘like new clothes’ or ‘a nothing smell, like the smell you get when you sit in water’. Natural ventilation and extraction fans were mentioned.”
The Five-Sense Tour

Rush-Copley Medical Centre in the USA has developed an extremely useful Five-Sense Tour tool. “It is used to assess our hospital from the patient and visitor’s perspective”. The concept is to be constantly aware of the multiple sensory experiences and impressions that create a hospital setting conducive to healing children.

This is a useful checklist that individual trusts can self-administer to evaluate their facilities. It will help create and maintain a truly therapeutic and patient-focused environment. There are four objectives:

1. Make note of the positive things that should be preserved.
2. Make note of the things that are not seen that should be introduced.
3. Make note of the negative things that should be eliminated.
4. Make note of the negatives not seen that should continue to be avoided.

There are three steps:
1. Observe
2. Evaluate
3. Implement.

Good design guidelines for children's environments

Table 2 sets out useful benchmarks by which standards may be attained and improved upon.

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<thead>
<tr>
<th>CHILD AGE</th>
<th>FIVE SENSES</th>
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<td></td>
<td>SIGHT</td>
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<td>Pre-school age</td>
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<td>Primary school age</td>
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<td>Secondary school age</td>
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<tr>
<td>Young adult age</td>
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Key

New-build
- A. Essential to have sense-sensitive design
- B. Very desirable to have sense-sensitive design
- C. Good to have sense-sensitive design

Refurbishment
- a. Essential to have sense-sensitive design
- b. Very desirable to have sense-sensitive design
- c. Good to have sense-sensitive design
Appendices

Appendix 1
EACH Charter for Children in Hospital

The EACH (European Association for Children in Hospital) Charter is a list of the rights for all children before, during or after a stay in hospital. The goal of EACH and its member organisations is to achieve a binding commitment to the implementation of these rights in all European countries.

• Parents are invited to provide or arrange to provide the support and care their children need.
• Those in public office are invited to create the framework within which the parents may become active in the care of their child in hospital.
• Those involved in the care of sick children are invited to get acquainted with the rights of children in hospital and to act in accordance with those rights.

Please refer to the recent Annotations to the Charter (EACH 2002), which are intended to provide a better understanding of the ten points of the EACH Charter for the rights of children in hospital.

1. Children shall be admitted to hospital only if the care they require cannot equally well be provided at home or on a day basis.
2. Children in hospital shall have the right to have their parents or parent substitute with them at all times.
3. Accommodation should be offered to all parents and they should be helped and encouraged to stay. Parents should not need to incur additional costs or suffer loss of income. In order to share the care of their child, parents should be informed about ward routine and their active participation encouraged.
4. Children and parents shall have the right to be informed in a manner appropriate to age and understanding. Steps should be taken to mitigate physical and emotional stress.
5. Children and parents have the right to informed participation in all decisions involving their healthcare. Every child shall be protected from unnecessary medical treatment and investigation.
6. Children shall be cared for together with children who have the same developmental needs and shall not be admitted to adult wards. There should be no age restriction for visitors to children in hospital.
7. Children shall have full opportunity for play, recreation and education suited to their age and condition and shall be in an environment designed, furnished, staffed and equipped to meet their needs.
8. Children shall be cared for by staff whose training and skills enable them to
respond to the physical, emotional and
developmental needs of children and
families.

9. Continuity of care should be ensured by
the team caring for children.

10. Children shall be treated with tact and
understanding and their privacy shall be
respected at all times.

Appendix 2

CFHI Standards and Guiding Principles
for Healthcare Providers

Based on the UN Convention on the Rights
of the Child (UNCRC).

Healthcare providers, organisations and
individual health workers share a
responsibility to act as advocates for
children and to reduce their fear, anxiety
and suffering by ensuring that:

• children are admitted to and kept in an
in-patient health facility only when this is
in their best interests;

• the highest attainable (best possible)
level of care, evidence-based when
possible, is provided for all children and
pregnant women;

• the health facility environment is secure,
safe and hygienically clean;

• the resources and expertise are available
to provide dedicated (separate),
age-appropriate care in partnership with
parents in child-friendly surroundings;

• children and their parents/carers are
kept consistently and fully informed
and involved in all decisions affecting
their care;

• children have equal access to health
services and are approached without
discrimination as individuals, with their
own rights to privacy, dignity, respect
and confidentiality;

• the physical and psychological pain and
discomfort of children is assessed and
controlled;

• when children are severely ill, under-
going surgery, or have been given
systemic analgesia and/or sedation,
trained health workers and the
necessary resources are available to
provide appropriate critical and
emergency care;

• children attending a health facility are
able to play and learn;

• children are protected from abuse by
appropriate and clearly defined systems
and are supported by health workers
familiar with the signs and symptoms of
child abuse;

• the health of children or pregnant
women is monitored and promoted; and

• breastfeeding is supported and optimal
nourishment is provided by the
promotion and practice of globally
acceptable feeding programmes.

Each of these standards/guiding principles
is supported by a number of key
components (supporting criteria). The
principles and their supporting criteria
attempt to encompass all aspects of healthcare for children.

**UNCRC**

The 54 articles in the UNCRC have been ratified as international law by 191 of the world's 193 countries. They relate to the rights of children to:

- survival
- development
- protection
- participation.

**Some of the key contents**

Article 1: states that for the purpose of the convention a child is a human being under the age of 18 years;

Article 6: recognises a child's inherent right to life;

Articles 12 & 13: the right to the expression of views and freedom to do this;

Article 19: the right to protection from violence and all forms of abuse, including neglect;

Article 23: the right of a physically or mentally disabled child to enjoy a full and decent life;

Article 27: the right to a standard of living adequate for physical, mental, spiritual, moral and social development;

Article 24: the right to enjoy the highest attainable level of health;

Article 27: the right to an education;

Article 31: the right to play; and

Articles 32–38: the right to protection from exploitation including sexual exploitation; and

Article 42: recognises the duty of the state to ensure that children's rights relating to health are made known.

A standard is a professionally agreed level of performance, appropriate to the population addressed, which is observable, achievable, measurable and desirable.

The 12 suggested “child-friendly standards” for health workers are derived from the following UNCRC articles:

- Keeping children out of hospital: Articles 9, 24, 25, 3;
- “Best possible” management and treatment: Articles 2, 6, 23, 24, 37;
- Security and safety in a health facility: Article 3;
- Care delivery: Articles 5, 9, 14, 37;
- Communication: Articles 9, 12, 13, 17;
- Equity of care and rights as an individual: Articles 2, 7, 8, 9, 16, 23, 27, 29, 37;
- Pain management and palliative care: Article 19;
- Critical care, emergency care and resuscitation: Article 6, 24;
- Play and learning in a health facility: Articles 6, 28, 29, 31;
- Child protection: Articles 3, 11, 19, 21, 20, 25, 32, 33, 34, 35, 36, 37, 39;
- Health promotion – Health education and monitoring: Articles 6, 17, 23, 24, 33;
- Nutrition: Articles 3, 24, 26, 27.

Please visit [http://www.childfriendlyhealthcare.org](http://www.childfriendlyhealthcare.org) for further information.

**Appendix 3**

**Example of toy safety policy**

_Courtesy of Great Ormond Street Hospital for Children._

**Selection of new toys**

1. All toys must comply with Government Safety of Toys Regulations and European Community Regulations i.e:

   (a) be made wholly to British Standard Institute 5665 Regulation Mark (the British Toy and Hobby Manufacturers Association launched the “Lion Mark”, which is displayed on packaging of toys which have been manufactured to BS 5665 standard);
(b) carry a European Community (EC/CE) mark; and
(c) in some cases carry warning notices.

2. Always purchase well-known brand names who make toys to the highest specifications.

3. Always check the suitability of toys before purchase and ensure that children are given toys suitable for their age. Look out for warning such as “Not recommended for children under 3 years”.

4. Always assess the risks related to the ability of children, particularly toys for the under 3’s. This is the responsibility of the person supervising the child at play.

Flammability
1. Toys must not constitute a dangerous flammable element while in a child’s environment. New toys will carry a warning sign. If in any doubt over a second-hand toy, discard the toy.
2. Toys must not be explosive or likely to explode.

Chemical properties
Toys must be so designed and constructed that when used as intended or in a foreseeable way they do not present a health hazard by ingestion, inhalation or contact with the skin, mucous tissues or eyes.

Electrical toys
Electric toys must not be powered by electricity exceeding 24 volts.

Hygiene
Toys must be so designed and manufactured as to meet the requirement of hygiene and cleanliness in order to avoid any risk of infection, sickness or contamination.

Maintenance of toys
All toys should be regularly cleaned and maintained, no less than once a week. Particular attention should be paid to baby toys and those toys given to children who are at risk from infection. Baby rattles and teethers should always be soaked in Milton between patients and should not be shared.

Any toys found to be broken or dangerous should be discarded immediately. Toys shall be divided into three categories for the purpose of cleaning:

1. Hard toys
These should be cleaned on a regular basis with detergent and hot water. Where possible they should be immersed. Otherwise thorough cleaning of all surfaces should take place. They should be rinsed and where possible dried to prevent water retention.

2. Electrical toys
The surface of these toys should be wiped with either detergent or alcohol wipes.

3. Soft toys
These should be washed before recirculation, after use by a child. They should be machine-washed at the highest temperature practical. A quick method of drying is desirable preferably in a tumble-dryer.

4. Paper, books, posters, etc.
Books and posters can be surface-wiped with a damp cloth. However soiled paper should be discarded. Check regularly for wear and tear, signs of mildew and any insect infestation if in storage.

5. Infection precautions
Extra care with infection precautions should be taken with children who are being nursed. Toys should be selected that can be easily cleaned or discarded after use.*

The trust’s infection control policy must be adhered to at all times.

* See also “Infection Control in the Built Environment” (NHS Estates 2001)
# Appendix 4

## Sure Start checklist

### Table 3. Assessing accommodation requirements

<table>
<thead>
<tr>
<th>USE</th>
<th>USE (YOU NEED)</th>
<th>NO. OF ROOMS</th>
<th>NO. OF PEOPLE TO FIT</th>
<th>CAN IT BE SHARED</th>
<th>SHOULD IT BE ON:</th>
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<tbody>
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<td><strong>INDOOR</strong></td>
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<td>Nursery</td>
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<td>Table work</td>
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<td>Role play</td>
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<td>Wet and messy work</td>
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<td>Indoor physical activities</td>
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<td>Quiet activity (separate area?)</td>
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<td>Large-scale construction</td>
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<td>Multi-sensory play</td>
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<td>Information technology</td>
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<td>Toy library</td>
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<td>Book library</td>
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<td>Advice/interview rooms</td>
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<td>Baby rooms</td>
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<td>Breast feeding room</td>
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<td>Changing room</td>
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<td>Sleep room</td>
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<td>Working/training kitchen (for parents and children?)</td>
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<td>Special education needs facilities?</td>
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<td>Staff facilities</td>
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<td>Separate offices for ? staff</td>
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<td>Open plan for ? staff</td>
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<td>Meeting rooms for staff tea point</td>
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<td>Staff and parent training rooms</td>
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<td>Community/meeting room</td>
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<td>Café</td>
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<td>Food preparation for café food store</td>
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<tr>
<td>USE</td>
<td>TICK USE (YOU NEED)</td>
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<td>Reception</td>
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<td>Buggy park</td>
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<td>Waiting area</td>
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<td>Display area</td>
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<tr>
<td>Adult toilets</td>
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<td>Children's toilets</td>
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<td>Laundry/utility room</td>
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<td>Cleaner's room</td>
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<td>Rooms for partner organisations</td>
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<td><strong>OUTDOOR</strong></td>
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<td>Garden/play area</td>
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<td>Soft play</td>
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<td>Hard play equipment area</td>
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<td>Sandpit</td>
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<td>Circular path for tricycles, etc.</td>
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<td>Covered area</td>
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<td>Seating area for parents</td>
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<td>Store for outdoor equipment</td>
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<td>Vegetable/flower patches</td>
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<td>Planting for exploration and play</td>
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<td>Children's seating</td>
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<td>Area for babies</td>
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<td>Natural habitats</td>
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<td>Parking</td>
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<td>Disabled parking</td>
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<td>Servicing vehicles</td>
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<td>Pedestrian routes to entrance</td>
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Appendix 5

The hospital play specialist

Play specialists adapt and work in any environment where children are being treated. Their specific professional training underpins interventions of play in healthcare in order to (from Webster 2001):

- acknowledge that children coping with illness and stress often need active help from an appropriately trained adult in order to be able to play in this environment;
- understand the effects of hospitalisation on babies, children and adolescents, including how this can impact on their family, especially siblings;
- help promote the continuing development of the child and promote a link with familiar activities recognisable from home;
- ensure a welcoming environment which reflects an appropriate range of cultural awareness;
- create a safe, normalising environment where stress and anxiety are reduced and feelings can be shared;
- observe children’s ways of coping and the behaviour that they demonstrate through play, and thereby help assess their levels of understanding and feeling; act as an advocate for the child when appropriate using these observations;
- identify specific play strategies to support children’s needs, providing activities and toys appropriate to development and condition – this may involved focused play such as pre-admission support, play preparation, distraction techniques and therapeutic, child-directed support such as sensory, messy and projective play activities;
- use such focused play in partnership with family and staff groups caring for the child to help support and promote family-centred care plus raise coping skills between children and the people caring for them;
- mitigate stresses caused by hospital experiences through continuity of care and teamwork;
- where appropriate, help prevent any long-term effects of regression and lack of confidence or skills caused by illness and stress through encouraging the child to engage in developmental play;
- help children come to terms with their illness and their hospital experience as necessary, for example through the use of individual play sessions with specific therapeutic aims;
- help children regain their independence, self-esteem and a sense of realistic control over their environment;
- encourage parental involvement in play and empower them in caring for their child in hospital, helping to normalise their daily routines;
- support siblings by including them where possible in hospital life and encouraging them to communicate their needs and concerns; and
- utilise the combination of normalising, focused and therapeutic play, to actively

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### Table 4. Guideline space requirements

<table>
<thead>
<tr>
<th>USE</th>
<th>GUIDELINES</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Nursery space for under-2’s</em></td>
<td>3.7 sq. m per child</td>
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<tr>
<td><em>Nursery space for 2–3-year-olds</em></td>
<td>2.8 sq. m per child</td>
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<tr>
<td><em>Nursery space for 3–5-year-olds</em></td>
<td>2.3 sq. m per child for 3–4-year-olds</td>
</tr>
<tr>
<td><strong>Outdoor nursery play area for 3–5-year-olds</strong></td>
<td>9 sq. m per child</td>
</tr>
<tr>
<td>*<strong>staff open plan</strong></td>
<td>3 sq. m per person</td>
</tr>
<tr>
<td><em><strong>Staff closed offices</strong></em></td>
<td>10–15 sq. m</td>
</tr>
</tbody>
</table>

Source: *Children Act 1989, **DfEE “Designing for 3 to 4 year olds” and ***Commission for Architecture and the Built Environment (CABE)
include and support children with their healthcare experiences, as stated by the Children Act 1989 and NICEF/Action for Sick Children’s millennium targets 2000.

The first three aims described in the Play Service Mission Statement 2000–2001 of the Chelsea & Westminster and Royal Brompton & Harefield NHS Healthcare Trusts are:

- to provide the highest standard of developmental play facilities in all areas in the hospital where children are cared for;
- to provide an essential degree of normality for a child and family in abnormal surroundings; and
- to create this environment to help mitigate stress and anxiety for all the family.

All healthcare facilities should strive to achieve these aims.

Appendix 6

Reference group

Al Aynsley-Green
Nuffield Professor of Child Health, Institute of Child Health and Great Ormond Street Hospital for Children; National Clinical Director of Children’s Services; Chair, Children’s Taskforce

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Action for Sick Children

Andrew Clarke
Child Friendly Healthcare Initiative

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Corine Kamminga
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Lorraine Morris
Department for Education and Skills

Sue Nicholson
Child Friendly Healthcare Initiative

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Andrew Radford
United Nations Children’s Fund; Baby Friendly Initiative

Jane Scott
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Rosie Tope
HERC Associates, Lead Author

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Play Therapist, Chelsea & Westminster

Anthony Williams
Consultant in Neonatal Paediatrics, St George’s Medical School

Jo Williams
Director of Social Services, Cheshire; Children’s Taskforce

Phil Walmsley
Clinical Nurse Manager, Queen’s Medical Centre, Nottingham
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How child-friendly are you?

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**Other useful websites**


Commission for Architecture and the Built Environment (CABE) http://www.cabe.org.uk

For 11–14-year-olds: http://www.lifebytes.gov.uk

For 14–16-year-olds: http://www.mindbodysoul.gov.uk

Patient Association: http://www.patients-association.com

Patient Concern: http://www.patientconcern.org.uk

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Patient Association: http://www.patients-association.com

Patient Concern: http://www.patientconcern.org.uk
Useful contacts

British Association of Play Therapists
31 Cedar Drive
Keynsham
Bristol BS31 2TY

The Child Accident Prevention Trust (CAPT)
18–20 Farringdon Lane
London EC1R 3AU
Tel 020 7608 3828
E-mail: safe@capt.org.uk

Child Friendly Healthcare Initiative
http://www.childfriendlyhealthcare.org
E-mail: cai@compuserve.com

National Association of Hospital Play Staff
NAHPS Information Officer
c/o Coram Family
Coram Community Campus
49 Mecklenburgh Square
London WC1N 2QA

National Children's Bureau Library and Information Service
This has the most extensive information resource on children’s issues in the UK. The reference library contains over 30,000 publications, 350 British and international journal titles and a vast database of child welfare organisations.

Telephone Enquiry Line
+44 (0) 20 7843 6008
http://www.ncb.org.uk/info.htm

The Royal Society for the Prevention of Accidents (RoSPA)
http://www.rospa.co.uk

The Sick Children’s Trust
Tel 020 7404 3329
http://www.sickchildrenstrust.org
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