THE PHYSICAL WARD

Little has changed since Lindheim noted in 1972 that "the medical and architectural literature has long lacked any serious study of the physical environment of a hospital for children, and of that environment's relation to and impact on the total, critical milieu surrounding the child, including its medical, psychological, social, recreational, and educational aspects."(p.vii). Information on the physical environment of adolescent wards comes from three main sources- surveys of young people themselves, ^{2,6} reports from recently established new wards, ^{6,9} and one now dated large scale survey of facilities of AU in North America. ^{10,11}

Policy guidance for hospitals on the physical environment of an AU is limited, being confined to suggesting space for socialising, hobbies, homework and a quiet area, storage of personal belongings, access to kitchen facilities, and provision of accommodation for family members. 12.13

THE PLANNING PROCESS

Information on developing a planning process for an AU is extremely limited. Important points include:

- the planning process for the AU should focus on the needs of the adolescent. A balance must be struck between clinical needs (provision of a safe clinical environment e.g. fixed ward routines, maximal surveillance and access to patients, microbiological safety etc.) and those of patients (provision of a non-institutional and homelike environment e.g. privacy, comfort, flexibility)¹⁴
- the planning group must involve representatives from all staff groups in the hospital in line with hospital philosophy of care. Most importantly, young people themselves should be involved in all stages of planning.⁴

LOCATION OF WARD

Four models for the location of the AU can be found: 15-18

- a. AU placed centrally in the hospital with equality of access to all hospital departments.
 - This model facilities access by medical and nursing staff from many different specialities, important in an AU taking patients from many different specialist services.¹⁷
- b. AU placed within or adjacent to the children's ward. 4.18 This model maintains the integration of adolescent and children's services, and facilities ease of access for shared staff such as junior medical staff, social workers and allied health professionals. Colocation with paediatrics also allows flexibility in the use of beds for either adolescent or paediatric patients depending on need.
- c. AU placed with a flexible or "swing" zone at one perimeter adjacent to an adult ward.¹⁹ This model allows one area of an adult ward to be designated as an AU and retains flexibility of occupancy depending on bed need.
- d. AU in a "swing" location between the children's and adult beds.
 In this model, a flexible number of beds are allocated to adolescents in a space between a children's and an adults ward, with flexible boundaries between the three areas depending on bed occupancy.¹⁵

Only one very dated study has examined the location of AU. In a large 1970 study of units in North America, Rigg et al 1970 found that one third were co-located with children's wards while approximately two thirds were free standing units separate from both children's and adult wards.¹⁰

The only available study of adolescent opinion on the location of an AU favours having a freestanding unit within a children's service; Farrelly found that 83% of young people favoured sitting the AU within the children's hospital compared to 10% for an adult hospital.³

Conclusions

We believe that the preferred model for an AU is a free standing unit situated adjacent to the paediatric department with good access for staff from all specialities. AU that form part of a children's (preferred) or an adult (less desirable) ward can meet some of the needs of young people, but will be unable to offer all the facilities of a dedicated AU.

The three way "swing" model presented in the American literature would not be possible in the UK because of the requirements for children under 16 years to be nursed by registered children's nurses. Additionally, the appropriate ward culture for an AU is unlikely to develop in a space that may be occupied at any time by children, adolescents and adults.

WARD BEDS

While paediatric providers are increasingly moving towards building all single bed cubicles (personal communication, Natalie Robinson, Great Ormond Street Hospital), the suitability of single rooms for adolescents is debatable. The desire for increasing privacy is one of the key developmental tasks of adolescence, however most authorities recommend that young people enjoy hospital better and achieve better functional outcomes when sharing with other adolescents. For young people with chronic or life-threatening illnesses, shared occupancy rooms can provide opportunity for company, conversation, and friendship which may help prevent depression and social withdrawal.

A mix of bed room sizes is desirable. ^{13,15} Two or four bed rooms are recommended by most authorities. ^{15,20} A small number of single rooms are important, particularly for sick patients and those requiring isolation. ^{15,18} The survey by Rigg et al of AU in North America showed that most then existing AU followed these guidelines; the ratio of beds to rooms for most units was around 2:1. ¹⁰

The bed areas of the AU should be bright and lively but with colour-schemes appropriate to young people rather than children. ^{1,21} Adult sized beds must be provided. ^{4,15,22} Adolescents should be encouraged to personalise their bed spaces by the provision of wall mounted corkboards behind beds for hanging posters, ^{9,14} by providing sufficient space for personal belongings. ¹²

Conclusions

A mix of room sizes is important. Providers should seek to avoid the preponderance of single rooms that is increasingly common in paediatric wards. The need for peer interaction is as important in adolescence as the desire for personal privacy - this can often be best achieved in two or four bed rooms with proper private and sound-proofed curtaining and adequate toilet facilities. Allowing young people to personalise their bed space areas is important to improve psychosocial outcomes.

When adolescents must be nursed on children's or adult wards, adolescents are likely to prefer to be in single rooms rather than bed bays where they are mixed with younger or older patients.²²

BATHROOM AND TOILET FACILITIES

Washing and toilet facilities feature strongly in adolescent critiques of inpatient facilities.20 Over one - third of hospitalized adolescents find typical ward washing and toilet facilities distressing because lack of privacy, interruption by staff and young children, lack of showers, and the need to conform to ward routines.⁶ Facilities should be constructed with the specific needs of adolescents rather than children in mind i.e. privacy and lockable facilities, showering rather than bathing, shaving, hair -drying and applying makeup. 13,20 Toilet facilities should not open directly off public spaces, and group shower or toilet facilities must be avoided. Separate facilities for males and females should be considered if space allows.18 Facilities for the disposal of sanitary towels must be provided.

RECREATIONAL AND PSYCHOSOCIAL FACILITIES

The design of recreational and psychosocial facilities is of paramount importance in meeting the needs of the young person in hospital. Only one survey of recreational facilities in hospitals in the UK has been undertaken. Of 12 hospitals who responded to the survey (63%), only 8% had any separate recreation facilities for young people.⁵ A separate survey of adolescent opinion of hospitalization reported that 94% of adolescents complained there was not enough to do in hospital, with problems particularly acute in evenings and weekends.⁶ A further small survey reported that 80% of young people nursed in children's wards reported feelings of isolation resulting from lack of leisure activities and spaces for peer interaction.4

The following areas are required to meet the needs of young people for peer contact, family contact, and personal time.

a. Recreation room

A room dedicated to recreational and social activities is central to the functioning of an AU, and to maintaining the psychological and social (as well as medical) health of young people in hospital. 1,5,12-14,19,21 Over 80% of adolescents surveyed wanted to have a room for socialisation with peers in the survey undertaken by Reddibough et al.⁶ Desirable equipment includes pool, table-tennis and table-football tables, TV, video and stereo, and soft-drink and coffee dispensers.⁶ For peer-led peer education purposes, videotape production and resource facilities should also be available,14 and in this modern era, high levels of multi-media computer facilities and other information technology resources are an essential part of adolescent recreation and social learning.

The recreation facilities should be located slightly separately from clinical areas, so that young people may feel that they can get away from medical sights and smells, and so that sick adolescents do not have to socialise in times of extreme illness. However, the recreation room should not be too far from patient beds or used by too many adolescents, as this may give young people little motivation for them to leave their bedside.

b. Kitchen facilities

Access for young people to self-catering kitchen facilities is important in fostering independence and allowing adolescents to feel they retain control over their lives in hospital. 1.5.13.21.23 As adolescents can be very fussy and restrictive eaters, a wider variety of choice must be available than usual on children's wards. Many AU find it is useful to provide an area for adolescents to eat together if they are able. This contributes to social feeling within the unit and to the normalisation of the young person's life in hospital. 21

In addition to kitchen facilities, space for other home facilities such as a washer, dryer and ironing board should be provided on all wards looking after adolescents.

c. Interview facilities

Provision must be made for an interview and counselling room on wards looking after young people. ^{19,24} This room or rooms will be used by social workers, psychologists, doctors and nurses and must be sound - proof and visually confidential.

d. Quiet room

While most adolescent recreation is undertaken as part of a peer group, a Quiet Room should be provided for when young people need space to be alone.⁶



EDUCATIONAL FACILITIES

A school room is a mandatory part of an AU. 6.13.20.24-27 Aside from maintaining academic achievement in young people who require hospitalization, a teaching presence on the ward promotes employment opportunities and the independent living skills that are essential for those with disability and chronic illness who often have difficulty getting jobs. An educational program also promotes social interaction on the ward for withdrawn patients and may provide a way to engage adolescents who have difficulty relating to their illness and to clinical staff. 20

Where possible, school accommodation should not be shared with other parts of the ward or unit as this may lead to conflict over function and access. Providers should note that wherever classroom space is available, it will readily outfitted without cost by the Local Education Authority.

STAFF FACILITIES

The literature contains no guidance on the provision of facilities for staff on AU. It should be noted that, in addition to the usual ward staff facilities, staff will require a room for meetings of members of the multi-disciplinary team to discuss patients.

CLINICAL ENVIRONMENT ISSUES

The provision of clinical space aside from bed spaces is given little attention in the literature. The focus of planners has appropriately been on the needs of young people rather than clinical needs. However, the usual issues of bacteriological control and nursing supervision must be addressed as on any other ward.¹⁵

PARENT FACILITIES

As with children's wards, sufficient parent accommodation should be available for adolescent patients.7,12,13,18,28 However, the greater adolescent need for independence suggests that the need for parent accommodation will be less than for children's wards.13 In 1990 figures from one representative children's hospital showed that around 40% of parents stayed overnight with children, a percentage that is likely to be higher in the late 1990s.23 We conclude that the number of parent beds needed for an AU is around one third of the total bed number (although exceptions may be made for teenage cancer units where the majority of parents may wish to stay).

DISABLED FACILITIES

All facilities provided in an AU must take note of requirements for disabled access.

PRIVACY

It is worthwhile reiterating the importance of privacy in the planning of bed spaces, bathroom and toilet facilities and for clinical spaces such as treatment and counselling rooms. Privacy is also of particular concern to the adolescent who is nursed in the children's or adult ward, both environments which are not conductive to meeting their requirements for privacy both in terms of personal hygiene, history giving, and physical examinations.⁴



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OPERATIONAL POLICY

The day-to-day rules, philosophy and operational policies of the AU are of paramount importance in determining whether or not the AU becomes a place which meets the health needs of adolescents. There is considerable guidance from the literature on the way AU should be run although the great majority of the available data is anecdotal.

PHILOSOPHY OF CARE

A philosophy of care which acknowledges the unique needs of adolescents should be formulated within the adolescent unit. This document should be developed in consultation with adolescent patients and in language accessible to young people. ¹⁻³ Areas which need to be addressed include communication with young people, issues of informed consent and confidentiality, independence and self-care while in hospital, and the recognition of the rights and social needs of the young person. ⁴

Adolescent patients should be encouraged to be active participants in planning, implementing and evaluating their own care and the operation of the AU. 5.6 Young people themselves welcome involvement in their care; 100% of a survey of 120 hospitalised adolescents wished to have a strong voice in decisions about their treatment.7 The American literature emphases the importance of involving young people in the dayto-day running of the AU through regular group meetings of ward patients with staff.8-10 These act to foster communication, improve the ward social environment, and act as mechanisms for peer support and social skills training.11 It is not clear that such group meetings would be welcomed by British young people.

ADMISSION POLICIES

Flexibility in the setting of age limits is extremely important.⁶ Chronologically defined admission policies can only be a general guide,⁵ however most suggest that appropriate admissions range from the mature 12 year old to the immature 20 year old.^{2,12,13} In a recent survey of 25 AU, Fisher found that on all units the lower age range for admission was 10-13 yrs. Upper age limits showed more variation, with seven units using 17 to 19 yrs and the remaining seventeen setting the bounds at 21 to 24 yrs.¹⁴ An older survey by Rigg et al reported that 22 of 24 AU had a lower age limit of 12 to 13 yrs and an upper age limit of 17 to 21 yrs.¹⁵

It is important that admission policies for an AU do not merely reflect hospital policies on admissions to paediatric services. In the UK, the majority of hospitals use 14 years as the cutoff for new patient admissions to the paediatric service. In the USA in contrast, paediatrics are frequently happy to see new patients up to 18 to 20 years of age. ¹⁶

PATIENTS WITH LEARNING DISABILITIES

An AU cannot be expected to take adults with intellectual disabilities on the grounds that they have a childish or adolescent "mental age." Such patients will not integrate well with young people and should be managed on adult wards or in special facilities.

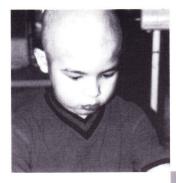
HOUSE RULES

A set of clear "house rules" for the behaviour of young people on the AU are necessary and beneficial to patient and staff welfare. Such rules help to control potentially disruptive situations by setting the bounds of acceptable behaviour, as adolescents can often feel unsure as to what constitutes appropriate behaviour in an unusual environment. Feeting is required, particularly in respect of a possibly wide age range (different rules may be appropriate for 13 and 19 year olds), and in recognition of possible cultural diversity of young people attending the unit.

Rules should address matters as smoking, wearing of own clothes, lights out times and visiting hours. ^{2.18} Rules must be couched in language accessible to young people, and preferably available in other languages. ¹

MEALS

Meal-times play an important role in the daily life of the teenager and none more so than when in hospital and away from the luxury of choosing the vast and varied traditions of modern cuisine. Meal-times should conform as far as possible to normal family meal times; young people must be able to chose their own menus, and available food choices should reflect adolescent preference. The majority of adolescents (60%) report disliking hospital foods, and would prefer more "commercial foods" such as hamburgers, pizzas, Chinese meals etc. plus the inclusion of more salads and vegetable choices. "









RECREATION

Recreation requires incorporation into operational policy as a means of ensuring that young people on the unit are frequently engaged in a productive form of activity. While education and clinical needs often dominate the day-time hours, recreational programs should be developed to keep adolescents occupied during evenings and weekends.¹⁹ For adolescents with chronic illness, recreational activities also serve to improve social competence, self esteem and independent functioning.^{20,21} It is important that no medical procedures are carried out in the recreation area so that it can become a zone of relative safety for vulnerable young people.²⁰

Existing AU have described recreational programs running most evenings of the week, often supervised by voluntary youth workers or play specialists. Ward newspapers have been described as useful in some units. Young people must be highly involved in planning recreational activities, and attempts should be made to focus group activities on relevant clinical issues such as healthy eating etc.

No information exists on the use of the immense potential of computers and other information technology in facilitating recreation and education with young people. This will be a fruitful area for future research.

CLOTHING

Allowing young people to wear their own clothes on the ward helps to normalize the hospital experience, reduces their feelings of powerlessness and reduces sick-role behaviour. Self-laundering facilities must therefore be provided.^{2,20,22}

PARENTS AND VISITORS

Adolescents view visiting as an important part of their overall care and treatment, and surveys suggest that visiting is one of the most important elements of making hospitalisation bearable for young people.²³ Policy regarding visiting hours requires careful consideration, especially since any adolescent unit will have a mix of different age groups on the ward at any one time, and particularly since adolescents will push boundaries on issues such as "lights out time" and visiting for friends.^{2,23}

Visiting hours for parents should be largely unrestricted, although, particularly for older adolescents, parents should be encouraged not to remain with the patient constantly unless they are very sick. Visiting by friends as well as family must be encouraged, to maintain peer relations and continuity in the young person's outside environment. Visiting hours for friends should be liberal although taking cognisance of ward rules and clinical needs. 24

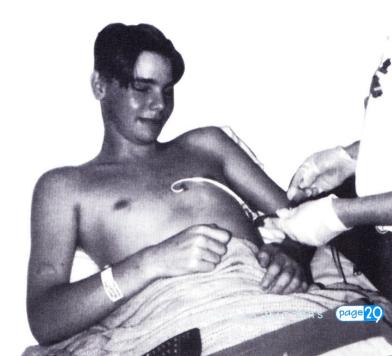
CLINICAL AND STAFF OPERATIONAL ISSUES

The optimum ways for staff to work with young people on the AU will be discussed in the following section.

In terms of ward operational policies, key issues for staff include:

- the need to regard the young person as a partner in their care, with the right to be informed and involved in all aspects of their care. ^{1,9} (See Consent and Confidentiality) Young people over 16 years of age should also be given the choice of whether to involve parents in decisions about care or not. ⁵ Adolescents should be routinely interviewed by themselves as well as with their parents.
- the ability to maintain a balance between flexible interpretation of ward rules and setting and maintaining professional boundaries with young people. Working as a team with a united front is important in supporting staff to maintain boundaries and enforce ward rules⁴
- having flexibility is being able to set aside common paediatric concerns such as unsupervised adolescent access to areas such as kitchens and supervised time away from the ward.¹⁷ Allowing adolescents the right to control their medications in hospital may also be difficult for some staff
- the need for continual evaluation of standards and patient satisfaction to understand the extent at which the level of care provided meets adolescent's need¹³
- considering health promotion issues during all clinical encounters





PRIVACY

Issues of privacy and personal space pervade all areas of functioning of the AU. The majority of adolescents see lack of privacy as a major deficit of hospital admission, particularly when dressing examinations and when using toilet facilities. 2,3,7,19,25 In his survey of 120 hospitalised Irish adolescents, Farrelly found that 95% believed that hospital afforded them much less privacy than they desired. Privacy is important in treatment rooms during procedures,9 and a Quiet Room should be provided for young people to have space to be alone when needed.19

GENDER ISSUES

Issues relating to gender within the context of the adolescent unit have received little or no attention other than suggestions that the genders should be separated into male and female bays in the AU. 1,26 Others suggest that this separation is unnecessary and contrary to the usual increased sexual integration of normal adolescence.27 Surveys of adolescent opinion suggest that the great majority (78%) of young people welcome mixed bed areas.19









Adolescents retain many of the fears and misconceptions about hospitals held by young children, and preparation for admission and for procedures can be as important as on paediatric wards. The young person who enters hospital fully and honestly informed of the reasons for admission and their likely regimen, and having consented to this regimen, is better able to cope effectively with the stresses of hospitalization and more likely to avoid the negative psychological impacts of chronic illness and hospitalization.3,27

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PERSONNEL AND TRAINING

There is a large although almost entirely anecdotal literature concerning the disciplines and staff required to operate the AU.

All members on an adolescent unit should have a core set of skills, which transcend and are in addition to their specialist training. From the housekeeper to the psychotherapist, the following characteristics are important.14

- an interest in and commitment to the adolescent age-group
- special skills in communicating and in empathizing with adolescents. Health professionals are the preferred communicators of health information by the majority of young people in hospital.4.5
- Familiarity with the psycho-dynamics or tasks of adolescents; the development of independence, of sexuality etc.
- Awareness of personal-professional boundaries with young people
- A commitment to working as part of a multidisciplinary team
- A commitment to ongoing development and
- All staff must undergo standard police checks for care of children under16 years
- Must be aware of child protection issues relating to adolescents

Authorities are agreed that the most effective way to work with young people is as part of a coordinated multi-disciplinary team (MDT).6-8 While young people will (appropriately) often develop very strong links with one person, working as part of an MDT allows a sharing of skills and experience and gives support and supervision to individual team members in working with difficult or vulnerable young people.8

Age of staff and boundary issues

The age of staff in an AU can be problematic. Young staff may be little older than many of their patients, and often feel that their youth enables them to engage more easily with young people.9 Adolescents may seek out young staff and find them less threatening and more easy to relate to than more mature staff members.10

However, young staff can experience problems with personal-professional boundaries, and may inappropriately befriend ill young people and act divisely against other staff members.9 On the other hand, older staff may also have boundary problems, in that they may respond (inappropriately) to adolescent patients as if they were their own children.9

We conclude that all staff may experience boundary problems with young people particularly if their own experience of growing up was problematic. Trainee staff and student nurses should be allocated to the AU only towards the end of their training because of similarity of ages.11 The staff of an AU require:

- a wide spread of ages, as different young people will respond best to staff of differing
- a good balance of male and female staff, as adolescents require role models of both sexes12
- an awareness of boundary problems.
- Good team communication and support are essential to a well-functioning AU staff. 12,13

MEDICAL STAFFING

Medical staff require increased training in dealing with young people, 14-16 particularly in hospital situations. American studies suggest that only around a third of physicians and paediatricians actually like working with adolescents. 17 And that around another third have very little interest in adolescent care.18 For three-quarters of American paediatricians, adolescents are their least preferred group in comparison to infants and children. 18 No information exists on the skills and training of British paediatricians and other hospital doctors with young people. However, there is good evidence that adolescents themselves find existing health services difficult to access and frequently insensitive to their needs. 19,20

As adolescent units generally cater for more than one speciality (one UK teenage ward has 44 admitting consultants),21 medical staffing issues center on communication and relationships between the various specialities. Authorities recommend the following for the medical staffing of AU:

one designated consultant must have overall responsibility for the welfare of the AU^{3,7,11,22,23}

This consultant should be named as Director of Adolescent Medicine, and should have responsibility for the administration and budget of the AU and its staff. Some recommend that this should be a paediatrician,11 however, the role could equally well be undertaken by an adult physician with a particular commitment to and expertise in adolescent medicine.3,7,23

Although adolescent medicine is well developed as a separate speciality in North America, it is extremely unlikely that it will develop as separate speciality in Britain. Instead, adolescent medicine physicians will come from disparate backgrounds in paediatrics and adult medicine, united by a common interest in the special health needs of young people.

- each young person admitted to the AU should be under the general supervision of the paediatrician or physician responsible for the AU11.24 while remaining under the direct care of their original consultant.11 This is advised in DoH guidelines for the care of children under 16 years,24 but should apply to all young people in the AU.
- the responsible paediatrician or physician should undertake at least weekly multidisciplinary rounds of all patients on the AU, involving nursing staff, mental health staff and other members of the MDT^{2,7}
- while the junior medical staff providing dayto-day care for each patient should normally be those of the primary consultant in charge of the patient,22 the junior staff of the director of the AU should equally have a supervisory responsibility for all patients of the AU
- medical policies for the running of the AU should be developed in consultation with all specialist services who use the AU3
- the director of the AU has a responsibility for continued medical education in adolescent health for all staff working on the AU. The concentration of young people in the AU provides significant advantages for medical teaching and research in Adolescent Medicine.1

In larger AU with a dedicated Adolescent Medicine consultant and training program, a training Fellow in Adolescent Medicine would be expected to provide supervision to junior medical staff and act as a liaison agent among the specialities using the AU.³

NURSING STAFF

The nursing literature on the care of adolescents in hospital is large, making up the greatest proportion of the studies in this review.

However, the literature is unsophisticated, consisting largely of small surveys of client satisfaction, advices on adolescent developmental needs, and of reviews rehearsing arguments from a small number of key papers. No evaluation of nursing practice with young people has been undertaken, and little application of theory to practice has occurred the exception being an article on using Orem's self-care model with young people.²⁵

Nursing skill-mix

As an AU will typically cater for patients from 12 to 18-19 years of age, the nursing skill-mix must take account of Department of Health guidance on the nursing of children; wards which regularly nurse children under 16 years must provide at least 2 registered children's nurses (or Project 2000 Child Branch nurses) on duty at all times. 24 It should be noted that many providers have been unable to fulfil this guidance even in paediatric wards due to shortfalls in the numbers of paediatric nurses. 26

Some authorities suggest that paediatric nurses are preferred in staffing AU as they are more focused on the changing needs of growing children and on concepts of family - centered care. However, both children and adult nurses in the UK receive little training in adolescent development or the specific health problems of young people, and it is unlikely that mental health nurses have the superior training in dealing with young people. In the UK, a number of specific post-graduate courses relating to adolescent health care are available for both physical and mental health.

Nurses on a multi-speciality AU must be prepared to nurse a wide variety of medical conditions and the nursing body should hold a wide portfolio of skills. Patients with complex medical and surgical problems can be nursed on a multi-speciality ward providing there is good communication with clinical nurse specialists from subspecialities and a continuing commitment to life long learning within the AU.

Nursing practice

Elements of good nursing practice with young people:

- nursing staff must be trained in adolescent development and communication with young people, and the AU must run on continual "in-service" education programs.^{28,29}
- care plans should be negotiated with young people themselves. This will involve young people in making decisions about their care and build trust and independence.^{28,30}
- Orem's self-care model is useful in planning the involvement of young people in their own care.²⁵
- nurses are an important part of the multidisciplinary team and the named nurse will frequently function as a key worker for young people, being seen as an accessible and trusted source of medical knowledge and advice³⁰
- support for nursing staff must be available from mental health professionals attached to the AU.
- an appropriate mix of male and female nurses is required to provide appropriate role models for young people.

Conclusions

We conclude that a mix of children's and adult nurses is most appropriate to staff as an AU, as both the paediatric and adult approach have much to give in terms of looking after adolescents. Wards should aim for 2 children's nurse per shift if possible. Nurses with combined children's nurse or RGN and registered mental health nurse (RMN) training are desirable, particularly when nursing self-harming or acting out young people.

A wide portfolio of skills is important among the nursing body on a multi-speciality ward. Good communication with specialist nurses is essential for multi-speciality operation. A mix of ages and genders is important among the nursing staff to provide appropriate role models for young people.

EDUCATION STAFF

Teachers and educational youth workers are an essential part of the ward team. 37.21.31.32 See the Education section for details of education needs on the ALI.

MENTAL HEALTH PROFESSIONALS

Authorities are united in prescribing that good mental support is essential for the stable running of the AU, both in terms of liaison services that patient's psychological needs are being met, and also for the support of staff. 3.7.9.11.33.34 However, little information is available on the skill-mix of disciplines required or on the AU.

The major psychological issues met on the AU include problems of adjustment to chronic illness and non-adherence, somatising or conversion ("psychosomatic") illness, body image disturbance, conflict between young person and parents, major behaviourial problems and self-harming behaviour.9 Useful disciplines include psychology, child psychotherapy, social work and child and adolescent psychiatry. Child psychology and psychiatry are the most usual specialities that provide services to AU, 7,33,35 however other units have found analytically trained psychotherapists of great use in containing the anxiety of young people in hospital and their parents (Alan Cooklin, personal communication).

Social workers are also key, particularly in liaison with community social services, and in recognising that admission to hospital for the adolescent is a disturbance to the whole family system.^{37,9,11,31} The social worker may also take a major role as the coordinator of the unit MDT.³ Social workers were the key mental health professionals in many AU in the study of AU undertaken by Rigg in 1970.³⁵

Mental health services are usually involved through a consultation liaison process in which the psychologist or psychiatrist is called when a young person is noted to be in need of intervention.3.11 A potentially more useful model is for routine involvement of mental health professionals with most patients on the AU where psychologist, psychotherapist or psychiatrist become a familiar figure on the unit able to prevent problems occurring rather than the merely responding to crises (Alan Cooklin, personal communication).34

A further major role for mental health staff is in the support of other staff and or parents through regular support groups, staff education and counseling for individual staff members.34

THERAPY STAFF

Identified physiotherapy and occupational therapy staff are important members of the MDT on the AU. Aside from important roles in the rehabilitation of post-operative, disabled and somatising patients, these therapists have an important role in helping staff organize activities on the unit and in providing emotional support to adolescent patients.37

PLAY SPECIALISTS AND YOUTH WORKERS

Specialist play and recreational staff are essential to the good functioning of the AU. Workers trained as hospital play specialists, although often trained largely to deal with younger children, still have an important role in helping young people to settle into hospital, in drawing out socially isolated and withdrawn young people through activities, and in specific work on preparation for theatre and procedures and in treating needle phobias etc. 11,36,37

Trained youth workers have a role that is complementary to those from a play background.338 As well as organising recreational activities on the ward, youth workers have roles in counselling young people, advising young people of their welfare and health rights, and in providing vocational counselling and access to community work programs (See section on Education).

DIETICIAN

A dietician with an interest in the particular eating problems of young people is an important part of the adolescent MDT.7,35

STAFF TRAINING

Continuing professional educational is important for all staff on the AU. This should concentrate on specific problems of adolescence and methods of dealing with young people, within a framework, that recognised the developmental imperatives of adolescence.2,9,18

The AU should also been seen as an opportunity for training other health professionals in dealing with adolescents.29 A recent American survey of 3066 health professionals working in a wide range of areas showed that more than half of each profession had some contact with young people; 51% of doctors, 60% of nurses, 64% of psychologists, 72% of dieticians and 58% of social workers reported significant adolescent contact as part of their workload.18 Many of these perceive themselves to be insufficiently trained in managing adolescent health issues, and wish for further training.18 AU staff should consider developing training programs for the disciplines working on the unit- nursing, medical and others.

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EDUCATION

Hospitalisation and illness should provide as little barrier as possible to the young person's attainment of academic and vocational goals.

Authorities are agreed on the importance of educational facilities being available to all hospitalized adolescents.¹⁻⁵ In addition, Britain's Local Education Authorities have a statutory duty to provide education outside school (i.e. in hospitals) if it is necessary to meet pupil's needs (education Act, 1993, Section 298(I).6 Hospital providers are also under good practice obligations to provide which treat patients of school-age.7

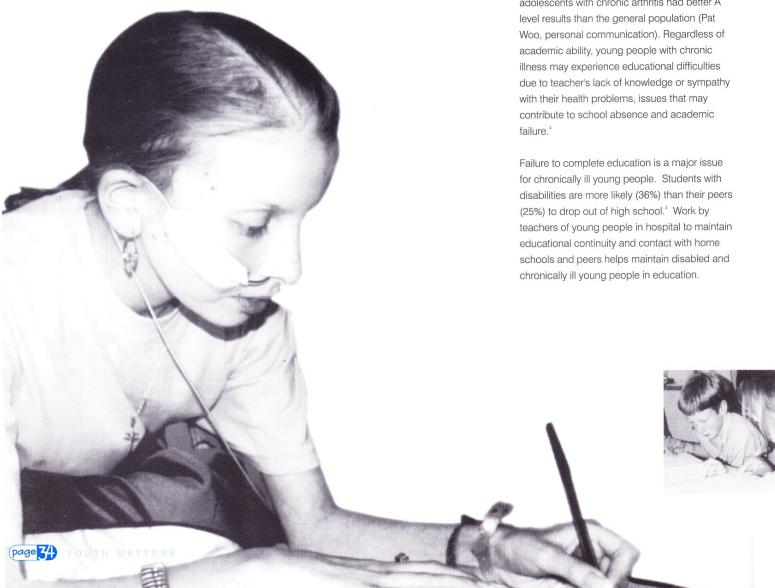
THE ROLE OF TEACHING IN HOSPITAL

Education within hospital fulfils a number of essential roles.

- maintaining academic levels of achievement6
- facilitating the socialisation of the young person through contact with peers and by exposure to non-curriculum subjects
- normalisation of the hospital experience by continuing normal schooling activities while in hospital
- teachers may play an important role as a key confidante or role model for vulnerable young people
- increasing vocational readiness and potential employability - this is a particularly important for those with disabilities or chronic illness

The majority of young people with chronic illness (64%) attend regular schools,4 however they miss more school days than their healthy peers, particularly if they have psychological problems as well as chronic illness.8 The average amount of time lost by hospitalised adolescents in one recent study ranged from 13% for orthopaedic patients to 35% for cancer patients, but many young people missed more school than could be accounted for by the severity of their condition suggesting that social and psychological factors contribute strongly to missed schooling.4

Academically, young people with chronic illness receive poorer grades and are less likely to complete education than normal adolescents,4 although some groups with chronic illness perform as well as or even better than the general population. One study showed that adolescents with chronic arthritis had better A



PRINCIPLES FOR TEACHERS OF YOUNG PEOPLE IN HOSPITAL

- individualised programs are essential, ranging from brief work with those hospitalized for only a short period, to the planning of full curriculae for those in hospital term^{2-4,9}
- aim to deal with pupils in a holistic manner, appreciating the physical, psychological, emotional and social needs of young
- timetables within the hospital will need to be simple and flexible to deal with the demands of clinical procedures and patient illness
- liaison with home schools is essential to maintain academic achievement and normal peer socialization
- liaison with outside social agencies as well as schools is important. Individual educational planning for those with chronic illness requires the same level of coordination between health, education and social services as for those with special educational needs4
- hospital teaching services should be able to offer teaching in all subjects in the National Curriculum through the use of outside teachers and work from the adolescent's home school⁶

SPECIAL NEEDS

Hositalised adolescents may have a broad range of physical and learning difficulties which impinge upon their educational abilities.4 Teachers within the hospital environment should have qualifications to diploma standard in the teaching of special educational needs2.5

AU must therefore provide other services linked to education and health:

- speech and language therapy
- physical and occupational therapies
- counselling
- special tutoring
- interpreter services
- mobility training







VOCATIONAL ISSUES

Young people with chronic illness or disability have poor levels of entrance to higher education and later employment.4 This is regardless of academic achievement; Woo et al showed that despite higher than average A level results, only 17% of young people with chronic arthritis were employed. Other authorities estimate that employment among young adults with chronic illness or disability is only 20 to 35%.10

Young adults with chronic illness view independent living and economic participation as the cornerstone of social integration and quality of life.10 Hospital education services need to transmit and create opportunities for chronically ill adolescents to have a role in economic participation.3,10 Teachers and youth workers in AU must offer access to vocational guidance and training for hospitalised young people to ensure employment for hospitalized adolescents. These services may be available from local authority youth and employment services. Vocational training programs can improve employment rates for chronically ill and disabled young people from 20-35% to 70%.10

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OTHER ISSUES

RELATED TO HOSPITALISATION

PSYCHOLOGICAL ISSUES CONCERNING HOSPITALISATION

Hospitalisation has effects on the psychological and social development of young people in addition to the psychological problems engendered by chronic illness. Adolescents with chronic illness are no more likely than normal young people to develop major psychopathology, but health professionals working within the AU must ensure that the psychological needs of their patients are met and intervene early to prevent the development of psychological disturbance.

The main issues that become problematic for young people in hospital include:³⁴

- separation from parents, peers and home life
- loss of independence and privacy
- · restriction of physical activities
- confrontation with illness and diagnosis i.e the recognition of a threat to their future life or lifestyle
- threat of a change of body image at the time when body image is becoming increasingly important

Young people may cope with such problems by non-compliant behaviour, separation anxiety, and increased somatic complaints. Others may cope through a denial of the severity of their illness. Ward staff must learn to recognise and deal with these coping strategies.⁵

Memories of hospitalisation

Studies of young people's memories of hospitalisation show how important the hospitalization experience is to later development. Follow-up of hospitalised young people shows that around one-sixth continue to replay hospital experiences regularly up to four years afterwards, and that these recollections remained very constant over a four year period. Importantly, the great majority of both positive and negative recollections involved interactions with nursing staff, emphasising the importance of communication skills for nurse training in the

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CONFIDENTIALITY AND CONSENT

Issues of confidentiality and consent underpin all the interactions of young people, their parents and staff on the AU.

The behaviour of professionals concerning consent and confidentiality must respond to the changing developmental status of young people as individuals who are increasingly capable of exercising rational choice and giving informed consent, whilst still requiring some support and guidance from parents as well as other adults.1-5

Consent to treatment

In the UK, young people over the age of 16 years have the right to consent to procedures and treatments if they are sufficiently informed of the risks and benefits. Young people under 16 years have the same right if they are judged to be Gillick-competent i.e. if they show sufficient maturity that they are believed by health professionals to be mature enough to be able to give informed consent. In both situations, these rights are unequivocally legally superior to the rights of their parents or caregivers.5

The legal situation with respect to refusal to consent to treatment is unclear. Professionals are advised to seek legal opinion if parents consent to a procedure where an adolescent does not.5

Confidentiality

Confidentiality is a legal duty of care for health professionals (particularly doctors) towards young people. Unlike consent, confidentiality is a right of all patients and does not rely on tests of competence. Confidentiality between young people and their carers should be maintained at all times particularly with respect to parents unless one of the three following exceptions apply

- 1. disclosed risk of suicide
- 2. disclosed risk of harm to other people
- disclosed or suspected sexual abuse In these three cases, health professionals are required to break confidentiality and inform parents and other authorities (medical or social services or police) of their concerns.

The majority of young people believe that doctors and other health professionals are confidential, particularly those not associated with their school.6 Young people must have free and easy access to confidential health services necessary for the protection of their health particularly contraceptive services. Leaflets about access to contraceptive services should be available on the AU possibly in private places such as toilets and also recreation areas.

While confidentiality is central to adolescent care, young people must be encouraged to confide in and seek help from their parents wherever possible.

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TAKING

YOUNG PEOPLE'S VIEW INTO ACCOUNT

"Operations; nurses; bedpans; a place where people are taken as a result of an accident; the smell of meths and disinfectants; big, ugly places; good looking doctors; injections, and, death."

Adolescent opinions of hospitals, Leicester 1968¹

"Bloody awful", "Oh, hell, what a waste of precious time", "Very frustrating and claustrophobic", Scared stiff at the prospect of lying in bed having horrible things stuck in me," "Glad of the rest but miss the social life "Don't fancy it because I'm going to a party on Friday"; "Wouldn't mind it if I was ill, as long as the nurses were good-looking and smashing".

Adolescent responses to the prospect of hospitalisation: Leicester, 1968¹

Taking note of young people's opinion on hospitalization is an important part of best practice with adolescents in hospital.²⁴ Methods of seeking young people's views must:

- cover the range of ages of target young people
- ensure the confidentiality of gathered opinion
- inform participants of the use gathered opinion - and ensure as much as possible that young people's opinions are actually listened to
- include disabled adolescents
- provide feedback for those who participate^{2.5}

Data on how young people would like hospital services to be organized is limited. A number of small scale studies have been undertaken. The only large scale study comes from an unpublished nursing dissertation undertaken in Ireland. Information from these studies is presented in the appropriate sections throughout this report. However, it is worth noting here how poorly young people feel that hospital services cater for their specific need. In general, 70% of 120 young people aged 12 to 17 years felt the hospital catered poorly for their needs as adolescents, and 96% felt that the ward environment was not suitable for young people.

Gathering young people's views on the appropriate delivery of adolescent services is an important area for future research, and was one of the core recommendations for research directions in child health made by the 1995 NHS Advisory Group on mother and child health.³

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GUIDANCE

ON THE CARE OF YOUNG PEOPLE OUTSIDE THE AU

If there is no AU in a hospital, young people 14 years and younger will be admitted to children's wards, and those over 16 will almost certainly be sent to an adult ward unless they are long term paediatric patients. For those of 14 to 16 years, it is imperative to give them a choice of whether they prefer admission to a children's or an adult ward. The same imperatives apply in a hospital with an AU when the ward if full.

Adolescent on adult wards

Despite guidelines on best practice, adolescents will continue to be admitted onto adult wards in hospitals without an AU. It is important to remember that some young people settle without difficult on adult wards, and that general nursing and medical staff may enjoy having young people on their wards.

The following are guidelines for the management of young people on adult wards:

- liaison nurse-providers should appoint a clinical nurse specialist with training in dealing with young people to visit and support young people on adult wards and provide a resource for general nursing staff in the management of difficult young people. Such positions have been developed in general hospitals such as Queens Medical Centre in Nottingham.
- multi-disciplinary team-this nurse should be the center of a multi-disciplinary team including nursing, social work and mental health professionals whose members have a specific remit for the care of adolescents in the hospital.²
- adolescent room-providers should set aside space for an adolescent room for young people within the hospital to socalise together. The need for and uses of this room are set out in the section on recreation facilities.
- youth worker-provision should be made for paid or volunteer workers to work with young people in the adolescent room, to provide links into the community and to vocational/employment services
- education -teachers must be available for young people still at school

If large numbers of young people are to be managed on an adult ward (e.g. for day attendance for ENT or other procedures), as for children there should be separate sessions for young people staffed by nurses and others skilled in the care of young people.¹

Adolescents on children's wards

Many believe that in the absence of an AU, adolescents are best nursed on children's wards. 1.3.4 This may be particularly true for vulnerable young people such as those admitted for self-harming behaviour. However, a recent study of adolescents with self-harming behaviour admitted to children's or adult wards found that there was no difference in the management of family or psycho-social issues between the two wards with the important exception that children's wards were better at liaison with general practitioners and community services. 4

The issues for nursing young people on children's wards are similar to those outlined above for adult wards.

In children's services where there are large numbers of adolescents (such as children's hospitals), the development of a dedicated multi-disciplinary adolescent liaison service should be considered. The roles of this adolescent "unit without walls" are:

- to develop policies to enable the hospital to meet the developmental and psychosocial needs of young people within the children's service
- to provide an adolescent general medicine service
- to provide a consultative service for adolescents from different specialities in dealing with adolescent illness
- advocacy for adolescents in areas of hospital activity
- to develop specific adolescent facilities such as an adolescent center with recreation facilities for adolescents throughout the hospital^{2,5}

The role of the adolescent liaison nurse:

By Anna Gregorowski, Adolescent Specialist Nurse, Great Ormond Street Hospital working as a liaison nurse with adolescents encompasses a number of roles:

- being an advocate for adolescents' rights and preferences in all areas of hospital service
- developing adolescent services and facilities in a hospital that is heavily geared to young children or adults
- providing counseling and support to young people with chronic illness and their families
- providing a consultation and advisory service to health professionals (particularly nurses) who work with adolescents in all areas of the hospital

It is increasingly recognised that chronic illness has a unique impact on adolescence. Ensuring that the individual needs of a young person with chronic illness are met necessitates taking "normal" adolescent developmental characteristics into account while recognising the way in which this process has been disrupted by chronic disease. Much of the work of a liaison/specialist nurse for adolescents in about enabling the adolescent and family to recognise how chronic disease has effected usual lifestyle, and working together to find ways of reclaiming health and normality while keeping the adolescent developmental process in mind.

Estes and Hart (1993) have developed a model for developing the specialist nurse role in Adolescent health promotion. This role has four components:

- 1. expert practitioner
- educator
- 3. consultant
- 4. researcher



The other major component of their model uses Orem's general theory of nursing to discover the young person's ability to engage in self-care, where deficits exist in self-care, and explore nursing interventions to help the adolescent deal with these deficits. Much of the work of the liaison nurse lies in enabling nurses to meet the unique needs of adolescents within the hospital environment. The role of the specialist nurse is to increase nurses awareness of adolescent needs and rights while providing education about the reciprocal impacts of adolescent developmental and chronic disease.

Clinical services must be planned to take into account the sense of separateness and struggle between dependency and independence that adolescents experience. The liaison nurse must address the increased dependency engendered by chronic illness, particularly elements of overprotection forced onto young people by parents who anxieties are heightened by serious illness in their adolescent. Much of the skill of the liaison nurse lies in helping to separate natural concerns about the illness from more general conflicts arising from the tasks of adolescence.

The particular difficulties which children with chronic illness experience as they enter adolescence are compounded by the need to transfer from paediatric to adult services. The adolescent liaison nurse has a major role in helping adolescents, their parents and their health carers to manage the transition process as smoothly as possible - so that it does indeed become the "the purposeful, planned movement of adolescents and young adults with chronic physical and medical conditions from childcentered to adult-oriented health care systems".

Adolescents in intensive care

The management of young people on intensive care units requires attention. Recent attention has focused on the particular needs of children in paediatric intensive care services. While many of the issues about paediatric intensive care apply less to adolescents than to young children, the psychosocial needs of young people require focused attention.

Acutely ill young people are presently managed on both paediatric and adult ICUs, and in either situation need access to the same psychosocial support and educational services noted in previous sections.

Adolescents in Accident and Emergency

Adolescents are a small but very important percentage of the total number of patients seen in accident and emergency (A&E) departments. Existing guidelines focus on smaller children and provide little guidance on the care of adolescents.

11.12 However, young people are often seen as a disruptive, dangerous and unwelcome group in A&E departments as they may present with traumatic injuries, self-harming behaviour or under the influence of drugs and alcohol. Developmentally appropriate adolescent behaviours precipitated by fear and uncertainty are easily perceived by staff to be intentionally disruptive.

12

Best practice with young people in A&E requires the following:¹²

- younger adolescents under 16 years should be seen within the paediatric system if available. Those 16 and older should be seen within the adult A&E system.¹³
- the education of all staff, particularly nurses and junior medical staff in communication with young people. This will improve outcomes for patients and reduce the risk of confrontation or resentment
- problematic adolescent behaviour should be approached within a non-judgemental framework
- privacy and confidentiality must be ensured in all dealings with young people
- clear lines of referral of self harming and difficult patients to social work and other mental health staff
- clear policies for admission of young people to inpatient services. This should preferentially be the AU if present, otherwise to paediatric or adult services.
- all opportunities for health promotion must be taken as many young people use A&E services as their only form of medical care^{14,15}
- clear policy on provision of emergency contraception

Adolescents in Outpatients

Little information is available on the care of young people in outpatient departments.

Adolescents are seen in either paediatric or adult clinics depending on age and local practice. The only survey of adolescent opinion on outpatient services reported that young people found children's outpatient clinics to be unsuitable for young people, to lack age - appropriate reading and educational material, and to hinder their education by requiring attendance in school time. ¹⁶

We conclude that where large numbers of young people attend particular speciality clinics consideration should be given to running specific adolescent clinics after school hours. Providers should also consider developing self-referral or "drop-in" services for young people with general health problems and for those with chronic illness.¹³

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TRANSITION

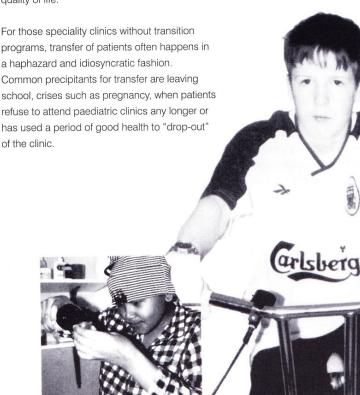
Arranging efficient and caring transfer for adolescents from paediatric to adult care may well be one of the great challenges facing the health service in the coming century. Many illnesses once considered confined to childhood, such as cystic fibrosis and metabolic conditions, must now be thought of as diseases that begin in childhood but continue into adult life.1 What was in the past a simple matter of transferring care to adult physicians has been challenged in the last decade by the notion of "Transition", emphasising the need for the change to adult care to be a guided educational and therapeutic process rather than an administrative event.2 To achieve effective transition, it must be recognised that transition in health care is but one part of the wider transition from dependent child to independent adult, and that in moving from child-centred to adult services, young people undergo a change that is systemic and cultural as well as clinical.1

The most useful definition of transition comes from the American Society for Adolescent Medicine (SAM), who call for "the purposeful, planned movement of adolescents and young adults with chronic physical and medical conditions from child-centred to adult-oriented health care systems.3 Interest in transition has been driven by the rise of Adolescent Medicine as a discipline in America and Australia, where the majority of work on the area has been undertaken.²⁻⁴ Little attention has been paid to the concept in Britain and Europe, despite the clear advantages nationalised health systems promise for transition planning. While some paediatric services outside North America have established good links with adult centres,5 there is a general lack of awareness of the need for transition planning and lack of guidelines on establishing services. Tellingly, none of the medical Royal Colleges in Britain or Australia have developed policies on transition.

It is important to note that the change from paediatric to adult health care systems is difficult for normal young people as well as those with chronic illness. Young adults often do not register with a GP® and frequently drop out of the system after they leave home and leave behind childhood surveillance for immunisations and growth and development. These young people often only make contact again with the medical profession in times of emergencies crises that regular contact and health promotion may have avoided.

These dangers are greater for those with chronic illness who require regular medical supervision. These particular problems are well illustrated by reports of disasters resulting from the treatment of grown-up congenital heart patients by adult cardiologists. However, there is evidence (if largely anecdotal) that transition programs in areas such as cystic fibrosis, 10,111 diabetes 4,122 and arthritis 133 improve health outcomes and patient quality of life.

As well as unplanned abrupt transfer, problematic transition may arise from the inability of paediatric professionals to "let go" and trust to the independence of the adolescent or the skills of the adult services. The effects on paediatric staff on the life event of the loss of a frequently life-long relationship with a young person is underestimated, particularly when paediatricians have little confidence in the knowledge, skills or flexibility of the accepting adult physician.8 Other factors which can undermine the commitment of the paediatric care givers to transition include the negative research consequences of a reduction in patient numbers and a loss in long-term follow-up.8 These problems may result in paediatrics continuing to see patients well into adult life, particularly in rare congenital and metabolic disorders, in which the paediatrics see themselves as the best care giver regardless of the age of the patient.8











Barriers to successful transition may also arise from adolescents themselves, their parents, and from receiving adult services. For young people, transition can be a life event, losing respected and loved carers and being forced to trust new and unknown carers. There is often little incentive for adolescents to abandon a service that has served them very well for a long period. The self-image of chronic illness patients is often infantilised and dependent8,14 (a self-image frequently encouraged by paediatric services), and the transfer to adult services may represent or require a change in self-perception that the young person is ill-prepared to make. The individual rather than family approach of adult physicians can be threatening to young people and their families, and young people frequently take some time to develop confidence in new services, particularly if their style of practice is different to their previous service.

Adult services themselves frequently present many barriers to successful transition. Adult physicians may have little interest in "paediatric" diseases in adult life and additional patients with chronic illness may be a financial liability in some health care systems. Busy clinics full of elderly sick patients are often alienating for young patients, and particularly in diseases such as diabetes, young people with few complications may seem to warrant little time from the adult physician with many older patients with complications. ¹⁴

Structural hospital problems may be equally important barriers to transition. Few hospitals even within the NHS have well established and reliable communication channels for transfer of medical records and imaging results. Additionally, during the transition period, neither the paediatric nor adult services may feel fully responsible for patient care, resulting in miscommunications, contradictory advice and potential conflict. If a period of limbo occurs, the young person may take the opportunity to opt out of both systems.

The barriers against transition are many, however the development of a clear transition program for each clinic can overcome many of the problems inherent in moving between two different systems.

RECOMMENDATIONS FOR BEST PRACTICE

- transition is one component of high quality health care in adolescence. The priority we have given to transition is a reflection of how strongly we believe that chronic disease need not be a handicap.⁴
- every paediatric general and speciality clinic should have a specific transition policy. More formal transition programs are necessary where large numbers of young people are being transferred to adult care
- large children's services should develop a "transition map" detailing where and how transfer occurs speciality by speciality
- an identified person within the paediatric and adult teams must be responsible for transition arrangements. The most suitable persons are clinical nurse specialists.
- management links must be developed between the two hospitals.⁸ Within the new NHS, contracting and financing issues must be worked out in detail. Local commissioners must be consulted when patients are transferred from one tertiary center to another.
- evaluation of transition arrangement must be made. After 10 years of interest in transition, little data exists on the best models and later health outcomes.³





KEY ELEMENTS OF AN EFFECTIVE TRANSITION PROGRAM

- 1. A policy on timing of transfer. There is no "right" time for transition. Timing must depend on the developmental readiness and health status of the individual adolescent, but a target transfer age is useful for both staff and young people in anticipating transition. Some clinics use a chronological cut-off (varying from 15 to 20 years in different clinics), others use social transitions such as school leaving.
- 2. A preparation period and educational program. Transition should not occur before the young person has the necessary skills and education to manage their illness largely independent of parents and staff. Preparation must begin well before the anticipated transfer time preferably in early adolescence when a series of educational interventions should discuss understandings of disease, the rationale of therapy, source of symptoms, recognising deterioration and taking appropriate responses, and most importantly, how to seek help from health professionals and how to operate within the medical system.¹⁵
 - As part of this program, young people should be helped to take responsibility for medications from as early an age as possible, and should be seen by themselves in clinic visits from age 13 years (with parents invited to joint the session later). ^{15,16} A schedule of timings and expectations should be given to young people in early adolescence.
- 3. A coordinated transfer process. Around a year before the anticipated transfer date, adolescents should receive a detailed outline of the adult program, and should undertake at least one visit to the adult clinic with parents and a trusted paediatric carer. At least one return visit to the paediatric clinic to discuss any concerns should occur before transfer. A joint paediatric-adult clinic is very useful to introduce adolescents to adult physicians and to hand-over clinical issues, however a single joint clinic must not replace a coordinated transition program.¹⁷
- 4. Administrative support. A detailed medical summary must be prepared by the referring clincians. Administrative and secretarial support must be available to ensure the efficient organizations of appointments and the transfer of medical records. 16
- **5.** *Primary care involvement.* Transition must include plans for continued primary care involvement.







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CONCLUSIONS

- The job of an Adolescent Unit is to facilitate normal adolescent development to occur in a highly abnormal environment. Young people requiring admission to hospital frequently have delayed or disrupted development through adolescence due to chronic or life threatening illness.
- 2. Seven years after the introduction of the purchaser-provider split within the NHS, it is clear that purchasers and commissioners do not have the necessary commitment or expertise in purchasing services to the specific health needs of adolescents requiring hospital treatment. Purchasers lack awareness of the specific needs of adolescents in hospital, and only 10% of health authorities in the UK have specifications for adolescent physical health and - more worryingly given recent attention to mental health - only 40% have specifications for young people's mental health. Furthermore, the great majority of existing specifications are woefully inadequate, being non-evidenced based and over general.
- 3. The lack of action on adolescent health has resulted from: the lack of recognition of young people as a specific group with different health needs a lack of evidenced based guidelines on the establishment of adolescent services a lack of evaluation of existing adolescent services and a lack of specific outcomes for adolescent health
- 4. There is a overwhelming support from the literature that dedicated AU are needed, and some evidence that such units improve health outcomes for young people.

- 5. Our data suggests that the typical British DGH should establish an AU of around 12-15 beds to meet standards of best practice with adolescents. Presently, adolescents in DGHs are spread throughout the various specilality wards for the convenience of medical and nursing staff and because of misplaced notions of the needs for specialist nursing in different specialities. While the specific nursing needs of a few highly intensive subspecialities will outweigh the needs of the adolescent patient, for the majority as with paediatrics the developmental needs of the age-grouping predominate.
- 6. Existing facilities for young people in British hospitals are very poor, as only 8% of HA reported having any dedicated adolescent facilities within their region and a further 14% providing facilities within children's wards in their provider trusts. This is unacceptably poor given our calculation that each moderate sized DGH should contain an AU of 15 beds. The observation that only 18% of HA contained an adolescent mental health similarly reflects the parlous state of adolescent mental health provision in the UK.
- 7. The literature on caring for young people in hospital is woefully inadequate, with no published evaluations of AU or of methods of working within such units. The lack of research activity in the field of adolescent health was noted by the 1995 NHS Advisory Group on Mother and Child Care, which called for the development of the field in terms of adolescent health both health service investment.¹

Suitable areas for research activity include:

- evaluation for the effect of adolescent units on health outcomes - both economic, clinical and qualitative
- models of nursing care for young people in hospital
- mapping present adolescent facilities hospitals in the UK against local need
- the effectiveness of psychosocial interventions with young people with chronic illness in hospital
- identifying the needs and views of young people on the appropriate delivery of adolescent services
- the relationships of primary and hospital care for young people
- the development of specific health outcome measures focused on adolescent health
- 8. This report provides evidence-based guidelines for the establishment of adolescent inpatient services in UK hospitals. Within the new climate of the NHS with its emphasis on clinical governance and evidence based practice, we believe that the development of evidence based best practice guidelines will achieve significant improvements in adolescent inpatient service provision and commissioning.

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APPENDICES

APPENDIX A

Bed days occupied by adolescents 12 to 19 years by sex for 5 HA in England, 1997-1998

	12 years 13 years		14 years 15		15 yea	5 years		16 years		17 years		18 years		19 years							
	m f unknown tot	ıl m	f	total	m f unknown	total	m	f	total	m	f	total	m	f	total	m	f	total	m	f	total
Buckinghamshire 660000	512 399 923	539	390	942	345 540	899	469	729	1213	637	552	1175	483	650	1150	907	734	1659	482	631	1132
East London & City 608235	551 450 25 102	6 130	3 889	2192	1398 785 2	2185	1816	1123	2939	861	977	1838	714	2755	3469	2336	1700	4036	1407	1015	2422
North Yorkshire 726000	603 285 888	429	277	706	328 403	731	336	584	920	429	543	972	519	829	1348	478	1311	1789	405	1606	2011
Avon 970000	689 650 133	9 832	677	1509	837 911	1748	832	853	1685	799	1044	1843	702	1230	1932	1100	820	1920	1008	994	2002
Birmingham HA 1008000	1026 1041 206	7 129	5 916	2211	1368 1503	2871	1278	1603	2881	1195	1440	2635	1364	1272	2636	1381	1468	2849	1209	1570	2779
Averages	676.2 565 25 1248	6 879	6 629.8	1512	855.2 824.4 2	1686.8	946.2	978.4	1927.6	784.2	905.2	1692.6	756.4	1347.2	2107	1240.4	1206.6	2450.6	902.2	1163.2	2069.2

APPENDIX B METHODS OF THE LITERATURE REVIEW

Between April 1998 and October 1998 a search of the literature was undertaken using a number of computerised databases, (see Appendix D) utilising an extensive range of keywords (see Appendix C).

The objectives of the review were as follows:

OBJECTIVES

- A. to review published and unpublished research on the specific needs of hospitalised adolescents- in both the mental health and physical health areas This included review and synthesis of all information on:
- 1. the need for specific inpatient facilities for adolescent
- the physical environment of adolescent units i.e. planning and design of the physical space of the unit
- **3.** the social environment of the unit i.e. activities and peer group work
- 4. the therapeutic environment and function of the unit; i.e. the disciplines required in a multi-disciplinary adolescent team and the models of care appropriate to the adolescent setting
- data available on adolescent expectations and desires regarding inpatient facilities
- data available on the economic requirements and consequences of adolescent inpatient facilities
- B. development of guidance for purchasers/commissioners and providers on the provision of adolescent inpatient facilities. The objectives listed above were met through a review of the published literature and unpublished sources, drawing upon the standard methodology for the performance of Systematic Reviews.

CRITERIA FOR CONSIDERING STUDIES FOR THIS REVIEW

Studies of the provision, planning, implementation, and performance of adolescent (11-20yrs) inpatient units in all areas of medicine. All studies were considered regardless of methodology

IDENTIFYING THE RELEVANT LITERATURE

The review included:

- Analysis of databases listed in Appendix D.
- 2. Hand-searching .of reference lists of all articles for additional articles not found in computerised search
- Articles from the personal collections of authors and personal contact with content area experts

- 4. Personal contact with all current adolescent units within the United Kingdom (using a database maintained by the Royal College of Nursing) to ascertain and document unpublished research associated with the planning and performance of
- Central professional bodies in each profession allied to medicine were contacted to identify unpublished or on-going research on hospitalised adolescents

The review also drew upon networks of contacts in the area developed by each member of Caring for Children in the Health Services, including the Adolescent Working Group of the Royal College of Nursing, the Adolescent interest group of the Royal College of Paediatrics and Child Health, and pervious work in the field by Action for Sick Children (formerly NAWCH).

METHODS OF THE REVIEW

Each relevant study was assessed for inclusion independently by two reviewers - the researcher and the investigator. Relevant data on the quality and results of studies were collated and summarised.

CATEGORISATION OF STUDIES: INCLUSION AND EXCLUSION CRITERIA

Inclusion and exclusion criteria

To be included in the review, reports of research had to satisfy criteria of relevance, outcome and design

- i) Relevance Studies which reported evaluations of care for hospitalised adolescents' which were designed to meet adolescents' specific needs, improving aspects of the health of a disadvantaged population relevant to this review.
- ii) Outcome Studies reporting outcomes which were either (a) adolescents' health outcomes or (b) intermediate outcomes for which either the reviewers were aware of evidence of an Impact on adolescents' well-being (e.g. physical ward environment) or it was plausible that there was an impact on health, although the reviewers were not aware of supporting evidence.
- ii) Focus Studies which addressed specific diseases (biological, psychological or social elements), and the practice of adolescent medicine were excluded for the purposes of this review.
- iv) Design Research which used any form of research design. Observational studies such as cohort and case control studies were excluded because they are more susceptible to bias which makes it more

difficult to attribute cause and effect. Reports and internal (either published or unpublished) documents and (or) guidelines which related to the care and treatment of adolescents' in hospital.

The reviewers were inclusive in their approach and the review examined a wide range of outcomes.

STATISTICAL ANALYSIS OF STUDIES

Studies categorised by the criteria set out below:(details presented in Appendix E)

Type of Study

- 1. Health Service Data
- 2. Descriptive Study
- 3. Survey Descriptive
- 4. Review of the Literature
- 5. Other

Article Type

- 1. monograph peer-reviewed
- 2. monograph non-peer-reviewed
- 3. peer-reviewed study
- 4. non-peer-reviewed study

Data Collection

- 1. Questionnaire
- 2. Semi-structured interview
- 3. Health Service Data
- 4. Interview
- 5. Observation

Data Type

- 1. Quantitative
- 2. Qualitative
- 3. Both Quantitative and Qualitative

Focus

- 1. Public Health
- 2. Physical Health
- Mental Health
- 4. Both Mental and Physical Health

Outcomes

- 1. Quantitative
- 2. Qualitative
- 3. Both Quantitative and Qualitative

Sample size

- 1. Under 50
- 2. Over 50
- 3. More than 100



APPENDIX B CONT...

THE SEARCH STRATEGY

Search terms were identified for use in obtaining preliminary information from databases (Appendix D) and a preliminary search of eighteen databases was undertaken to ensure correct usage of search terms in respect of obtaining relevant studies for investigation. One reviewer assessed titles and abstracts for relevance, outcome and target population using the criteria set out above and a second reviewer checked the assessments.

Papers that were selected were them examined using the criteria above. Those to be excluded were checked by the second reviewer.

Data from each study were extracted by one reviewer using a standard form and checked by the second reviewer. Studies which had been published in more than one place were included only once. Where feasible, attempts were made to check related papers and/or to contact authors to obtain information not included in published reports.

ANALYSIS

The diversity of the investigations, settings, populations and outcomes presented in reviewed studies did not permit a fully analytic synthesis of all results. A narrative review of the individual study results was carried out in an attempt to identify possible patterns in the data or characteristics of successful interventions.

APPENDIX C SEARCH ITEMS

The following terms were utilised in the electronic database searches.

Search terms may be used either singly, for example

'adolescent(s)', or in combination for example 'Health

planning guidelines or Policy or Priorities or Services'.

Search terms are given with the frequency found in all

databases.

Adolescent 12 204

NB: Adolescence in the context of all databases searched normally encapsulated ages 13-18 only.

- Adolescent Institutionalised 150
- Adolescent Medicine 1267
- Adult 13 103
- Aged 3600
- Age Groups 7453
- Bed Usage 942
- Child 13 814
- Delivery of Health Care 2007
- Effectiveness 5121
- Gender 7633
- Health Planning Guidelines 8206
- Health Priorities 1820
- Health Policy 3400
- Health Services 6729
- · Health Services/Utilisation 642

- Length of Stay 519
- Mental Health Services 2603
- Organisation and Administration
- Persons 7909
- Pediatric 12106
- Pediatrics 18200
- Pediatric Hospital 6857
- Pediatric Nursing 1609
- Pediatric Psychology 2030
- Program-Effectiveness 2127
- Program-Evaluation 879
- Quality of Healthcare 406
- Retrospective Studies 185
- Statistics and numerical data 7808
- Utilisation Hospital units 362

APPENDIX D DATABASES

 $Computerised\ databases\ searched\ for\ Stage\ II\ are\ shown\ with\ chronology\ and\ location.$

Computerised Databases	Chronology	Location
ASSIA Plus	1992 to 1998	Charing Cross Medical School
Boston Spa Books	1992 to 1998	British Library/ Aldwych
Boston Spa Serials	1989 to 1998	British Library/ Aldwych
CAREDATA	1994 to 1998	St. Bartholomew's Hospital
CHILD DATA	1992 to 1998	Institute of Child Health, London
CINAHL	1993 to 1998	Institute of Child Health
Dissertation Abstracts	1861 to 1998	University College London Library
EMBASE (Pediatrics)	1994 to 1998	Charing Cross Medical School
ERIC	1987 to 1998	Institute of Education, London
Health Admin & Plan Fil	1992 to 1998	Bloomsbury Health Care Library, UCLH
HEALTHSTAR	1975 to 1998	London School of Hygiene & Tropical Medicine
Index to Theses	1991 to 1998	University College London Library
MEDLINE	1986 to 1998	Institute of Child Health
NIDS	1985 to 1998	British Library/ British Museum
Psych LIT	1986 to 1998	Institute of Child Health
RCN Rom	1988 to 1998	Institute of Child Health
Social Science Index	1975 to 1998	London School of Economics
Sociofile	1974 to 1998	University of London Library

APPENDIX E DESCRIPTIVE SUMMARY OF REVIEWED STUDIES

123 articles were reviewed according to the criterion set out in the Methods section (Appendix B).

No clinical trials were identified. All studies were descriptive, surveys, reports of health service data or reviews of the literature.

Frequency Distribution for Type of Study

 COUNT

 Descriptive
 22

 Survey
 32

 Review of Literature
 43

 Other
 25

 Health service data
 1

 Total
 123

Frequency Distribution for Data Collection

 COUNT

 Observation
 2

 Questionnaire
 23

 Interview
 5

 Semistructured interview
 4

 Health service data
 4

 Total
 38

Frequency Distribution for Focus

Mental health
Physical health
Both mental and physical
Public health & health service
Total

COLINT

APPENDIX E CONT...

Frequency Distribution for Sample Size

COUNT Under 50 over 50 6 more than 50 15 Total 39

Frequency Distribution for Article Type

	COUNT
peer reviewed article	72
non-peer review article	41
monograph	10
Total	123

Frequency Distribution for Data Type

	COUNT
quantitative	24
qualititive	10
both, quant. and qual.	4
Total	38
_	

Frequency Distribution for for Outcomes

	COUNT
quantitative	13
qualititive	19
both, quant. and qual.	7
Total	39
_	

APPENDIX F DATABASE OF STUDIES REVIEWED

AUTHOR/TITLE	TYPE OF STUDY	ARTICLE TYPE	DATA COLLECTION	DATA TYPE	FOCUS	OUTCOMES	SAMPLE SIZE
	Descriptive	peer reviewed article	Questionnaire	quantitative	Public health & health services	Quantitative	more than 100
	Descriptive	peer reviewed article	Questionnaire	quantitative	Public health & health services	Quantitative	under 50
	Descriptive	peer reviewed article	Questionnaire	quantitative	Both mental and physical health	Quantitative	over 50
	Descriptive	peer reviewed article	Questionnaire	qualitative	Physical health	Qualitative	under 50
Denshire 1985	Review of Literature	peer reviewed article			Physical health		
SAM 1973	Review of Literature	peer reviewed article			Physical health		1 50
Rigg 1970	Descriptive	peer reviewed article	Questionnaire	quantitative	Physical health	Quantitative	under 50
Rigg, 1971	Survey - Descriptive	peer reviewed article	Questionnaire	quantitative	Physical health	Both quant & qual	under 50
Neumark-Sztainer, 1997	Survey - Descriptive	peer reviewed article	Questionnaire	quantitative	Public health & health services	Both quant & qual	over 50
Baker, 1996	Descriptive	monograph - PR			Physical health		
Krohn,1974	Descriptive	peer reviewed article			Mental health		
English 1998	Descriptive	peer reviewed article			Physical health		
Suris, 1994	Review of Literature	peer reviewed article			Both mental and physical health		
Mackenzie 1994	Review of Literature	peer reviewed article			Both mental and physical health		
Taylor, 1995	Review of Literature	monograph - PR		1 11 17 17	Both mental and physical health	Doth quant & qual	more than 100
Settertobulte 1997	Survey - Descriptive	peer reviewed article	Questionnaire	both quant/qual	Both mental and physical health	Both quant & qual	under 50
Burr 1993	Survey - Descriptive	peer reviewed article	Semi-structured interview	qualitative	Physical health	Qualitative	over 50
Neville, 1996	Survey - Descriptive	peer reviewed article	Semi-structured interview	both quant/qual	Physical health	Both quant & qual	Over 50
English 1998	Review of Literature	peer reviewed article			Both mental and physical health		
Hogg 1994a	Review of Literature	monograph - PR			Both mental and physical health		
Hogg 1994b	Review of Literature	monograph - PR			Both mental and physical health Both mental and physical health		
	Review of Literature	monograph - PR			Both mental and physical health		
DOH 1990	Review of Literature	monograph - PR	Overtinancia	quantitative	Physical health	Quantitative	more than 100
Resnick 1983	Survey - Descriptive	peer reviewed article	Questionnaire	quantitative	Physical health	Quantitative	more than 100
Okinow 1994	Review of Literature	peer reviewed article	Linellin con dec data	au antitativa	Both mental and physical health	Quantitative	more than 100
McManus 1991	Survey - Descriptive	peer reviewed article	Health service data	quantitative	Physical health	Quantitative	more than 100
Blum 1992	Review of Literature	peer reviewed article			Physical health		
Sinnema 1992	Review of Literature	peer reviewed article			Physical health		
Brookman 1995	Other	peer reviewed article			Both mental and physical health		
Gasquet 1994	Deview of Literature	peer reviewed article			Both mental and physical health		
Suris 1995	Review of Literature Review of Literature	non-peer review article			Physical health		
Jones 1974	Review of Literature	peer reviewed article			Physical health		
Gillies 1992 Shelley 1993	Review of Literature	peer reviewed article			Physical health		
Kelly 1991	Review of Literature	non-peer review article			Physical health		
Burrman 1985	Review of Literature	non-peer review article			Physical health		
Kuykendall 1981	Review of Literature	non-peer review article			Physical health		
Steven 1992	Other	non-peer review article			Physical health		
Muncke 1985	Other	non-peer review article			Physical health		
Kverndal 1985	Other	non-peer review article			Physical health		
Zeitlin 1985	Other	non-peer review article			Physical health		
NAWCH 1985	Other	non-peer review article			Both mental and physical health		
Malus 1992	Review of Literature	peer reviewed article			Physical health		
Oppong-Odiseng 1997	Survey - Descriptive	peer reviewed article	Questionnaire	qualitative	Physical health	Qualitative	more than 100
Reddihough 1979	Survey - Descriptive	peer reviewed article	Questionnaire	quantitative	Physical health	Qualitative	over 50
Ginsburg 1996	Review of Literature	peer reviewed article			Physical health		
Gillies 1992	Review of Literature	peer reviewed article			Physical health		
Schowalter 1964	Survey - Descriptive	peer reviewed article	Semi-structured interview	quantitative	Mental health	Qualitative	more than 100
McLean 1984	Survey - Descriptive	peer reviewed article	Observation	qualitative	Both mental and physical health	Qualitative	under 50
Blum 1990	Survey - Descriptive	peer reviewed article	Questionnaire	quantitative	Physical health	Quantitative	more than 100
Cappelli 1989	Survey - Descriptive	peer reviewed article	Semi-structured interview	quantitative	Physical health	Quantitative	under 50
BPA 1985	Review of Literature	non-peer review article			Both mental and physical health		
Audit Commission 1993	Other	non-peer review article			Physical health		
Nicholson 1979	Descriptive	non-peer review article			Physical health		
Wheeler 1981	Review of Literature	non-peer review article			Physical health		
Wiles 1981	Descriptive	non-peer review article			Physical health		
Kuykendall 1981	Descriptive	non-peer review article			Physical health Physical health		
Gordon 1981	Descriptive	non-peer review article			Physical health		
Oswin 1981	Descriptive	non-peer review article			Physical health		
Shelley 1993	Review of Literature	non-peer review article	Ougationnaira	both quant/qual	Physical health	Qualitative	under 50
Hiley 1988	Survey - Descriptive	non-peer review article	Questionnaire	both quant/qual quantitative	Both mental and physical health	Qualitative	under 50
Denholm 1990	Survey - Descriptive	peer reviewed article peer reviewed article	Questionnaire Interview	qualitative	Physical health	Qualitative	under 50
Vanstraelen 1994	Survey - Descriptive		II itel view	quantative	Physical health		
Commons 1997	Other	non-peer review article peer reviewed article			Both mental and physical health		
Fisher 1996	Other Other	non-peer review article			Mental health		
Advisory 1995	Other	non-peer review article			Mental health		
Young Minds 1994a Young Minds 1995	Other	non-peer review article			Mental health		
Young Minds 1995 Young Minds 1994b	Survey - Descriptive	non-peer review article	Questionnaire	both quant/qual		Qualitative	over 50
Blunden 1989	Review of Literature	non-peer review article		1	Physical health		
Makenzie 1988	Review of Literature	peer reviewed article			Both mental and physical health		
Hoffman 1976	Review of Literature	monograph - PR					
respectively. Village 1		and A					

APPENDIX F CONT...

AUTHOR/TITLE	TYPE OF STUDY	ARTICLE TYPE	DATA COLLECTION	DATA TYPE	FOCUS	OUTCOMES	SAMPLE SIZE
White 1972 Weinberg 1968	Other	non-peer review article			Physical health Physical health		
Shelly 1993	Other Review of Literature	non-peer review article non-peer review article			Physical health		
Bayer-Leyn 1980	Review of Literature	peer reviewed article			Physical health		
Altshuler 1980	Review of Literature	peer reviewed article			Physical health		
Baldwin 1980	Review of Literature	peer reviewed article			Mental health		
Tonkin 1981	Survey - Descriptive	peer reviewed article			Physical health		under 50
Oleberg 1981	Survey - Descriptive	peer reviewed article	Health service data	quantitative	Physical health	Quantitative	more than 100
Hofman 1980	Review of Literature	peer reviewed article	riodilir ooi rioo dala	quantitativo	Both mental and Physical	G. G. G. H. H. G.	
Anon 1967	Other	non-peer review article			health		
Byers 1967	Other	non-peer review article			Physical health		
Carr 1995	Other	non-peer review article			Physical health		
Altshuler 1977	Descriptive	peer reviewed article			Physical health		
Fry 1994	Health service data	monograph - PR	Health service data	quantitative	Both mental and Both	Quantitative	more than 100
Schowalter 1970	Descriptive	peer reviewed article			mental and Physical health		
Hayes 1980	Descriptive	peer reviewed article			Physical health		
Earhart 1974	Descriptive	non-peer review article			Physical health		
Schowalter 1974	Descriptive	non-peer review article			Physical health		
Chambers 1968	Survey - Descriptive	non-peer review article	Interview	qualitative	Both mental and Physical	Qualitative	under 50
Erickson 1978	Other	peer reviewed article			health		
Craft 1981	Survey - Descriptive	peer reviewed article	Questionnaire	quantitative	Physical health	Both quant & qual	under 50
Lussier-Gauthier 1967	Other	non-peer review article			Physical health		
Anon 1969	Other	peer reviewed article			Physical health		
Klinzing 1980	Survey - Descriptive	peer reviewed article	Observation	quantitative	Physical health	Both quant & qual	under 50
Shearin 1981	Descriptive	non-peer review article			Physical health		
Green 1968	Descriptive	non-peer review article			Physical health		
Stuart-Clark 1953	Survey - Descriptive	peer reviewed article	Health service data	quantitative	Physical health	Quantitative	more than 100
Bach 1970	Other	peer reviewed article	Physical health		Physical health		
Kieffer 1981	Descriptive	peer reviewed article			Physical health		
Jackson 1973	Review of Literature	peer reviewed article			Physical health		
Kenny1975	Review of Literature	peer reviewed article			Physical health		
Hammar 1973	Review of Literature	peer reviewed article			Physical health		
Fuszard 1969	Survey - Descriptive	peer reviewed article	Questionnaire	quantitative	Physical health	Both quant & qual	under 50
Lindheim 1979	Review of Literature	monograph - PR	NAME OF THE PARTY		Physical health		No. Company Co. Co. Co.
Buchta 1978	Survey - Descriptive	peer reviewed article	Questionnaire	quantitative	Physical health	Qualitative	under 50
Lee 1994	Other	non-peer review article			Physical health		
McAnarney 1992	Review of Literature	monograph - PR			Physical health		
Peck 1972	Other	non-peer review article			Physical health		
Jacobson 1970	Other	non-peer review article	1.1	Pr - 17	Physical health	0 11 1	-150
Miller 1995	Survey - Descriptive	peer reviewed article	Interview	qualitative	Physical health	Qualitative	under 50
Farrelly 1996	Survey - Descriptive	non-peer review article	Interview	qualitative	Physical health	Qualitative	more than 100
Alvin 1997	Survey - Descriptive	peer reviewed article	Questionnaire	quantitative	Both mental and Both	Qualitative	more than 100
Farrelly 1994	Review of Literature	peer reviewed article	Overtinancia		mental and Both mental	Qualitative	more than 100
Kramer 1969 Lore 1973	Survey - Descriptive Review of Literature	peer reviewed article	Questionnaire	quantitative	and Both mental and	Qualitative	more than 100
Meyer 1969	Other	peer reviewed article	Physical health		Physical health Physical health		
Conway 1971	Review of Literature	peer reviewed article peer reviewed article			Mental health		
Hirst 1994	Survey - Descriptive	peer reviewed article	Questionnaire	qualitative	Physical health	Quantitative	more than 100
Holt 1993	Review of Literature	peer reviewed article	Questionialle	quantative	i nysicai neaitil	Quantitative	more triall 100
Traugolt 1997	Survey - Descriptive	peer reviewed article	Interview	qualitative		Qualitative	under 50
Gutterman 1993	Survey - Descriptive	peer reviewed article	Questionnaire	quantitative		Quantitative	more than 100
Jones 1996	Descriptive	peer reviewed article	Questionnaire	quantitative		Qualitative	over 50
001100 1000	Descriptive	poor reviewed article	Questionnane	quantitative		Qualitative	5751 50

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