

## Adolescent inpatient units

Adolescent inpatient units were initially developed in the 1960s to provide age appropriate medical and psychosocial care for teenagers requiring hospitalisation. After an initial flurry of interest in these units, there has been little recent discussion of the role they have in adolescent health care. Recognition of the unique health care needs of adolescents continues to grow but most efforts are now concentrated on ensuring that teenagers receive necessary access to care with appropriate screening and preventive services.<sup>1</sup> The current focus is on outpatient needs, with health planners tending to de-emphasise inpatient care. Yet in the United States alone there are nearly five million admissions per year of adolescents and young adults, ages 10-24, to short stay hospitals.<sup>2</sup> As the allocation of health care resources undergoes widespread review, a fresh look at the advantages and disadvantages of adolescent medicine inpatient units, and their role in adolescent health care, is warranted.

### Background

When divisions of adolescent medicine were first established in the United States during the 1950s and 1960s, specialists in adolescent medicine began to develop both outpatient clinics and inpatient units. A 1968 survey of 53 hospitals in the United States and Canada 'known to have an interest in adolescent medicine' yielded information on 24 'non-psychiatric adolescent inpatient facilities', each of which were set up between 1959 and 1967.<sup>3</sup> The units contained 7-38 beds (with a mean of 20.3 beds); 15 units were located in general hospitals and nine in paediatric hospitals; most used ages 12-13 as the lower limit for admission and 17-21 as the upper limit. The authors of the survey acknowledged that the 488 beds they included was an incomplete listing. They were unable to separate out the total number of adolescent units or beds in North America because adolescent beds are included along with paediatric and medical beds by all regulatory agencies who certify inpatient care. It remains impossible to determine a complete listing of all adolescent units in existence even at this time. Estimates indicate that there are 40-60 units in North America at present, with several additional units in Europe, South America, and Australia.

Several of the adolescent medicine specialists who established and operated inpatient units have documented their experiences.<sup>4-13</sup> These authors presented the rationale for providing specialised units for teenagers, described the necessary facilities and staffing, recounted their positive and negative experiences, and summarised utilisation data. In addition, several organisations, including the Society for Adolescent Medicine, American Academy of Pediatrics, and Association for the Care of Children's Health, developed guidelines for the establishment of adolescent units.<sup>14-16</sup> These early reports acknowledged that the segregation of adolescent patients is called for on psychosocial, rather than medical, grounds; that the required facilities and staffing necessitate an initial, and occasionally on-going, increase in funding; that the clustering of teenagers in a separate area provides unique clinical, behavioural, and educational opportunities and challenges; and that the patient mix in such units allow for variability based on each hospital's needs. What follows is an updated analysis of the value of adolescent inpatient

units and the results of a survey recently completed by the directors of 25 such units.

### Advantages

Not having to share a room with either a small child or an older adult is only one of the advantages available to adolescents hospitalised on an adolescent inpatient unit compared with their counterparts admitted to general paediatric, medical, or surgical wards. Placing a number of teenagers together with a staff trained to recognise their developmental needs, in a setting designed to meet those needs, results in improved psychosocial care for the adolescents, as well as an improved training programme for residents and students and an enhanced reputation for the institution.

Recent articles delineate the developmental needs of hospitalised adolescents.<sup>17-18</sup> These include requirements for privacy, peer contact, mobility, independence, and educational continuity. Adolescent units, by virtue of their staffing and facilities, are designed to meet those requirements. Nursing, medical, and ancillary staff are trained to respect the unique privacy needs of teenagers in very sensitive situations, and are experienced in providing these patients with as much autonomy as possible despite their dependent state. Adolescent units generally include specified areas for a dayroom, classroom, and/or conference room which allow for mobility, recreation, socialising, and continued schooling.<sup>6 11-16 19</sup> Child life specialists and teachers are present on most adolescent units to help supervise these activities. In contrast, most general units have neither the staffing, facilities, nor numbers of adolescents to optimally provide for the developmental needs of teenagers, much less the ambience in which adolescent tastes in music and entertainment can be expressed without disturbing older or younger patients.

Adolescent units are also particularly geared to meet the adolescent's psychological needs. Social workers, psychologists, and psychiatric consultants are available to help adolescents manage the stress of hospitalisation, acute or chronic illness, surgery, fear, and pain.<sup>20-24</sup> Staff conferences and teen meetings can be utilised on an adolescent medicine unit, along with behavioural protocols, to help with psychosocial care.<sup>25-27</sup> Availability of the appropriate staff and protocols also make it possible for adolescents with psychiatric difficulties to be treated on these specialised units. Adolescent patients often considered too difficult for general paediatric or medical settings, and inappropriate for most adult psychiatric wards, can be appropriately managed on adolescent units. They include patients with diagnoses such as eating disorders, suicide attempts, or substance abuse.<sup>28-31</sup> Patients with sexually transmitted diseases and other gynaecological problems can also be treated on adolescent units, although pregnant teenagers are usually assigned to obstetric floors. As mental health and gynaecological concerns represent a substantial percentage of adolescent and young adult hospitalisations,<sup>2</sup> it is to the advantage of both the adolescent and the institution to have a unit on which these problems can be effectively managed.

Along with the patients, the medical personnel at a hospital with an adolescent unit benefit as well. Residency training programmes, especially in paediatrics, are

enhanced by the educational opportunities presented by a concentration of adolescent patients and specialists in one location.<sup>11 32</sup> Nursing staff receive necessary backing in handling a difficult age group, leading to a more satisfying work experience.<sup>5 33</sup> Attending physicians and fellows interested in studying the health needs of adolescents find new academic possibilities open to them.<sup>11</sup> Voluntary staff are more likely to admit their adolescent patients to the hospital with an adolescent unit in those communities where hospitals compete for market share. Ultimately, each of these advantages accrues to the benefit of the institution.

### Disadvantages

The difficulties faced by the institution with an adolescent unit fall into financial, clinical, and behavioural categories. Hospital administrators may be concerned about the additional expenses required for the construction of appropriate facilities and for providing extra staff, expenses which might otherwise be avoided if adolescents are assigned to other hospital areas.<sup>5 6 11</sup> Yet these expenses are minimal within the scope of a hospital's capital and personnel budgets. Occupancy rates can be a problem, especially for those units which maintain a strict upper and lower age limit, as it is impossible for the number of available beds to exactly match the number of adolescents who require admission at all times. Although the capacity of most units is based on the mean number of adolescents requiring hospitalisation, it is accepted in many institutions that adolescents will be admitted elsewhere within the hospital on high census days and that younger or older patients will be admitted to the adolescent unit at times of low census. Units may be expanded or constricted over time as the need requires.

On clinical grounds, some specialists and subspecialists complain that separating adolescent patients onto a separate ward interferes with their medical care. They argue that the attending physicians and house staff must leave their accustomed units to provide care to a small number of patients in another location, where specialised nursing services and equipment may not be available. Initially, these arguments were put forth most forcefully by internists, surgeons, and gynaecologists. More recently, with the growth of paediatric cardiology, oncology, and metabolic units, it is paediatric subspecialists who are most vehemently making the case for including adolescent patients on subspecialty services rather than on a more general adolescent unit. Whether the psychosocial advantages of the adolescent setting outweigh the medical advantages of the subspecialty setting must be judged on an individual basis.

The behavioural problems inherent to hospitalising a group of teenagers in one location must also be considered. As Schonberg and Cohen indicated in reviewing the first 10 years' experience on one large adolescent unit, inevitably there will be acting out of several types.<sup>11</sup> Crowd control and noise abatement will be necessary, especially when visiting friends swell the ranks of teenagers on the unit, or at night when some patients do not go to sleep as early as others. Sexual acting out by the adolescent patients, with each other or with staff, can be a problem on a unit that includes younger and older adolescents of both sexes. Cigarette smoking and alcohol or drug use are a concern as well, as some adolescents ignore the dangers of these activities, even in a hospital setting. An experienced staff capable of establishing firm limits is required to manage these issues. Despite the expected difficulties, anecdotal experience indicates that staff turnover on adolescent inpatient units is relatively small. For those who

enjoy it, the challenge of working with adolescents seems to prevent rather than promote burn out.

### Current status

To update the status of current adolescent units, an informal survey was sent in December 1993 to the 41 programme directors in the Society for Adolescent Medicine 1994 Fellowship listing.<sup>34</sup> Among 36 respondents, 25 indicated their programme included an adolescent unit; 16 of these units stand alone, with the remaining nine part of a paediatric floor. Of the 25 units, one opened in the 1950s, four in the 1960s, and 11 in the 1970s. Nine of the 25 units were established in the 1980s and 90s, indicating continued interest in these units as a viable option in adolescent health care. The 25 units in this survey closely correspond to the number in a similar survey conducted in 1968 and cited earlier.<sup>3</sup> The 10 units included in both surveys 25 years apart attest to the longevity of the programmes. As was the case in 1968, the current survey was not designed to provide a complete listing of all adolescent inpatient units but is intended to determine how these units are functioning, what advantages and problems the programme directors recognise, and whether there have been any recent changes in size and occupancy rates.

Current units range in size from six to 35 beds, with a mean of 19.2; there was only one unit with fewer than 10 beds, 14 units with 11–20 beds, and 10 units with over 20 beds. The youngest patients admitted to all units are 10–13 years. Seven units have upper age limits that range from 17–19 years, while 17 units use upper limits of 21–24 years. A mean of 60% of admissions are for medical conditions, 28% for surgery, and 6% each for gynaecological and psychiatric care. Occupancy rates range from 70–100%, with a mean of 85%; private admissions range from 0–100%, with a mean of 50%. Attending rounds are performed by specialists in adolescent medicine on all 25 units, by other subspecialists on 15 units, and by voluntary attending physicians on seven units. A mean of 3.5 house staff (2.2 interns, 1.3 residents) are assigned to the adolescent units at any one time.

Programme directors responding to the survey were asked to list the conferences, meetings, and rounds regularly held on their units; identify the advantages

Table 1 Conferences, advantages, and difficulties reported by 25 programme directors of adolescent inpatient units

Conferences	Advantages	Difficulties
Admission rounds	Adolescents 'can act like teens'	Acceptance of medical/surgical attending physicians
Adolescent medicine meeting	Age focused care	Adequate support staff
Attending rounds	Better able to meet the needs of adolescents	Age and maturity diversity
Bedside rounds	Comfort of adolescent patients	Beds filled by younger patients
Behaviour rounds	Combined medical-surgical-psychological approach	Difficult to obtain consultations
Case conference	Committed and skilled nurses	Drops in census
Core staff meeting	Developmentally appropriate care	Funding issues
Didactic lectures	Integration into paediatric teaching	Getting good teachers
Discharge rounds	More compliance and less depression	Inappropriate families
Eating disorder rounds	Non-psychiatric milieu	Keeping it teen only
Ethics conference	Patient education	Lack of support from hospital administration
Journal club meeting	Patient interaction	Managing suicidal adolescents
Multidisciplinary conference	Peer support for patients	Need more beds and better space
Patient conferences	Skilled team members	Nurses uncomfortable with older teens
Psychiatry conference	Support to adolescents	Problems with hospital administration
Radiology conference	Support to adolescent fellowship	Subspecialists with disease oriented units
Social service rounds	Therapeutic milieu	Too many subspecialists
Subspecialty rounds	Training and teaching	'Turf issues' with other specialists
Team meeting		
Weekend rounds		
Work rounds		

Table 2 Recent changes in adolescent units (n=25 units)

	Size of unit	Occupancy rate	Length of stay	No of admissions
No change	16	17	5	12
Increased	2	1	2	9
Decreased	7	7	18	4

these units offer; and cite their greatest difficulties. Note that the broad range of responses, listed alphabetically in table 1, fit into the clinical, teaching, and administrative categories discussed throughout this report. The programme directors were also questioned about recent changes on their units. As noted in table 2, most directors reported no recent changes in the size or occupancy rates of their units. In keeping with recent health care trends, many reported a decreased length of stay, and some indicated a corresponding increase in number of admissions. A few directors pointed out that their units were caring for more indigent and sicker patients in recent years. Several said that patients with particular diseases had been removed from adolescent medicine to be cared for on other subspecialty units. This was most often the case for oncology, as reported in four of the hospitals.

### Conclusions

The rationale for establishing adolescent inpatient units first articulated 30–35 years ago, that hospitalised teenagers would benefit from receiving adolescent specific services in a setting designed to meet their needs, has been confirmed in the subsequent literature and this most recent summary. No studies have specifically measured these benefits, and although difficult to design, such studies should be considered. The collective experience of those in charge of adolescent units indicates that the benefits can be substantial, both in meeting the developmental and psychosocial needs of the adolescents and in enhancing training, staffing, and marketing for the institution. Administrative difficulties, including financial concerns and competing clinical needs, have been readily managed in those institutions with longstanding units. Although there is no official listing of all units, it seems apparent that they remain confined to a limited number of tertiary care teaching hospitals, mostly in North America. Clearly, such units are feasible only in those institutions with sufficient adolescent hospitalisations to maintain an adequate census, and in which adolescent medicine expertise is available to provide administrative and clinical leadership. As the delivery of health care undergoes widespread reorganisation, continued development of adolescent units in appropriate institutions can be recommended as a method of providing improved care to an age group with well documented needs who otherwise may 'fall through the cracks' on more general hospital units. The concepts and data presented in this report can serve as guidelines

for those interested in evaluating established units or in developing new units to meet adolescent health care needs.

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