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Teenagers in intensive care: Adult or paediatric ICU?

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Summary Standards have been published for the provision of health care for teenagers and standards have been published for the management of children in intensive care. Unfortunately, there are no standards that delineate the model of care that should be provided specifically for teenagers in intensive care. Teenagers have specific health care needs that should be addressed whether they are in an adult or a paediatric environment. In either setting health care providers need to be familiar with issues such as confidentiality and consent. Most critically ill teenagers are cared for in paediatric rather than adult intensive care units (10% versus 3% of ICU admissions, respectively). At the upper age limit of the teenage spectrum, it would seem appropriate to manage patients in adult ICUs, especially in the context of trauma and other disease processes that adult intensivists will be familiar with. At 16 years or below, teenagers should be cared for in a paediatric ICU and only in an adult ICU within an agreed regional protocol. Critically ill teenagers with complex chronic conditions arising during childhood, that commonly require multidisciplinary input, are best managed in a children's hospital with paediatric ICU back up.

Teenagers in intensive care units: adult or paediatric ICU?

The underlying premise of this article is that teenagers are different from both adults and pre-adolescent children and, as such, require special attention in the manner in which health care services are provided. This has been recognised in the recently published National Service Framework (NSF) for Children. Teenagers make up a significant proportion of the population; in the UK, along with most developed countries, young people between the ages of 10 and 20 account for 13–15% of the total population.[1] Mortality among adolescents, in contrast to almost all other age groups, did not fall during the second half of the 20th century. The main causes of mortality in this age group are accidents and self-harm and for morbidity the main causes are chronic illness and mental health problems. Although public health measures and social reforms are more likely to pay dividends in

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impacting upon these health issues, it is pertinent to consider where critically ill teenagers should be managed when they present to hospital.

National standards relating to the care of teenagers

Article 12 of the UN Convention on the Rights of the Child declares that: 'State parties shall assure to the child who is capable of forming his or her own views, the right to express those views freely in all matters affecting the child, the views of the child being given due weight in accordance with the age and maturity of the child'.[2] Essentially, this translates to meaning that health provision in young people should be appropriate for their stage of cognitive and social development.

In the UK, there are two key documents that have laid down national standards relating to the care of teenagers. The first is the report entitled '*Bridging the gaps: health care for adolescents*' by the Intercollegiate Working Party of the Royal College of Paediatrics and Child Health.[1] In this report, adolescence is not defined by age but by developmental stage. It highlights the fact that the differences of adolescent health care do not necessarily relate to a particular set of diseases, but instead to issues of access, confidentiality, consent and privacy. Whilst in hospital, it is not appropriate that teenagers should be surrounded either by the paraphernalia of pre-school children, or be in an environment where the average age is over 60. Inpatient services need to be developed in an age-appropriate fashion. Adolescents should have the opportunity to be looked after in a dedicated unit by a specialist physician, unless medical/nursing needs require a different clinical environment. *The need for intensive or high dependency care is cited as an example of such an exception.* The considerations of parents should also be taken into account, especially within the context of chronic long-term conditions that have been present throughout childhood. For most adolescents, their parents remain the key providers of their health care and require support in this task.

This report also places responsibility on healthcare organisations to have policies and an identified lead professional for young people. It emphasises that there is a need for wider-scale planning regarding healthcare transition from children's to adult services.[1] The most important factor in determining the timing of referral to an adult service is not age, but that the patient concerned has the necessary emotional/sociological skills and has finished growth and puberty. Joint transitional clinics involving both adult or paediatric physicians are best suited to make this assessment.

In September 2004, many of these recommendations were included in the NSF for Children, Young People and Maternity Services. In the NSF, the definition of children includes young adults up to the age of 19 years. Standard four of the NSF, entitled '*Growing up into adulthood*', recognises confidentiality issues and demands that services for young people are age appropriate. It is suggested that, when requested, professionals enable young people to attend part of a consultation without their parents present and that information is provided in a format that is accessible to young adults. In the NSF for children, road traffic accidents are highlighted as the most common forms of accidental death in this age group. Accordingly, local authority initiatives to reduce injuries through traffic calming measures might have a significant impact on the numbers of teenagers requiring intensive care unit (ICU) treatment.[3]

Standards relating to the care of critically ill children

Although there are no specific national standards relating to the care of teenagers in intensive care, guidance is to be found both in the aforementioned NSF and the Paediatric Intensive Care Society's '*Framework for the future*' document.[4]

The NSF states that regional paediatric intensive care centres provide a retrieval service supporting a network of hospitals, each of which should be able to ensure provision of high dependency care and be able to initiate level two intensive care whilst awaiting retrieval of the child to the lead centre. In 2001, the UK Paediatric Intensive Care Society agreed consensus Standards for the care of critically ill patients up to 16 years of age.[5] These Standards dictate that designated Lead Centres for paediatric intensive care should ventilate at least 500 children per year, have consultants with approved training in paediatric intensive care, provide a 24 h retrieval service and have access to other paediatric sub-specialities. The Standards go on to stipulate that institutions with a paediatric or general ICU that are not designated lead centres for paediatric intensive care should refer patients to the lead centre if:

(a) Intensive care is likely to be required for more than 24 h.