Royal College of Nursing

Day Surgery for Children and Young People

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Hospitalisation is a major stressor for children. Fear of separation from their parents, unfamiliar routines of anaesthesia, surgical intervention and unrealistic expectations of co-operation by healthcare professionals which lead to experiences governed by pain and the fear of needles are all sources of children's negative reactions. The European Charter for Children's Rights (1996) states that "children should only be admitted to hospital if the care they require cannot be equally well provided at home or on a day case basis".

Children make ideal candidates for day case pathways as they are usually healthy and predominantly require minor or intermediate surgery of short duration (Brennan and Prabhu, 2003). Thus, this patient group offers the opportunity for the development of a comprehensive day care service which includes a child and family friendly environment, approachable staff where the families are left feeling well cared for and parents leave the department having the skills and confidence to manage their child's recovery in their own home environment.

The momentum for increasing day surgery provision is supported through advances in surgical and anaesthetic techniques, increases in patient and public expectations and the costefficient benefits (Bowen and Thomas, 2016). The cost effectiveness of day surgery has put this mode of care delivery at the top of political agenda's in many industrialised countries.

With the UK government setting targets in The NHS Plan 2000 for 75% of planned surgical events to be day cases, the money spent within the health service has to demonstrate considerable monetary saving but also deliver a far more efficient service (King's Fund, 2015).

The foundations of modern day-case services are based upon the original ideas put forward by Glaswegian Paediatric Surgeon James Nicoll in 1909. His work was motivated by financial benefits, concerns around hospital acquired infection rates and lack of hospital beds. Through his work he highlighted the importance of infants and young children being cared for by their mothers after surgery and provided hospital accommodation in a small house to facilitate this practice.

Today, day surgery represents the opportunity for high-quality patient care with excellent patient satisfaction because of shorter hospital stays, early mobilisation, reduced infection rates and preference of their own surroundings in which to convalesce (Quemby and Stocker, 2013).

Day surgery should be patient-centred and can be protocol driven but should not be impersonal or generate a production-line culture (Upadhyaya and Lander, 2013). When asked about their experiences of day surgery, families continue to report a reduction in the psychological consequences of hospitalisation, such as sleep disturbances and emotional regression when hospital admissions are kept to the minimum (BADS, 2018).

The needs of children and young people undergoing day surgery are very different to those of adults, and the clinical safety margins of care are very small. Children are a vulnerable client group as they differ emotionally, psychologically, and physiologically from adults (RCN, 2013a). Successful day surgery outcomes require good preparation and planning within dedicated departments with a clinical collaboration between surgeons, anaesthetics, children's nurses and theatre teams. The preparation includes optimisation, medicines rationalisation, giving of essential information with shared decision making

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and the child and family being engaged in choosing their pathway of care (RCS, 2013; RCoA, 2019a).

All nurses involved in the care of children undergoing surgery should be familiar with the recommendations in government and professional documents listed in the reference section.

All hospitals operating on children and young people should have clear operational policies and procedures in place, specific to the needs of children (RCN, 2013a).

In order to provide an effective efficient service, the following points should be adapted into local policy to ensure that care is optimised, and the psychological impact of a hospital stay is kept to a minimum.

- Developing a quality service
- Staff education and training
- Environment and equipment
- Patient selection criteria
- Peri-operative assessment
- Peri-operative preparation
- Post-operative care and monitoring
- Discharge criteria

A genuine partnership between service users and providers must exist to design and del6 (s)sign and

The Francis Inquiry (2013) highlighted the need for staffing levels to be appropriate and for all staff to be properly educated, trained and regulated to meet the needs of patients and to take seriously the impact of potential changes to service provision which will affect nurse staffing or the delivery of facilities which will ultimately impact on the quality of patient care.

Skill mix of staff should reflect the staffing model implemented (for example, whether the service is nurse-led, or physician led). Staffing levels and skill mix will depend upon case mix, acuity and workload and whether other children's services are provided through the organisation (RCN, 2013). Shorter lengths of stay, increasing throughput of patients and bed occupancy place greater pressure on nursing resources rather than a reduction.

In order to maintain a credible workforce strategy, staff development must be supported by the implementation of education and training models that provide and maintain appropriately educated, skilled, competent children's nurses to provide the necessary skill mix. Access to a dedicated nurse bank also ensures that units can offer appropriate care to children but allows redeployment on a more ad-hoc basis. Nurses caring for children should receive training to keep up-to date with consent issues, calculation of children's drug dosages and resuscitation skills (RCN, 2013; RCN, 2017). Movement of staff into day care services without such development will lead to a dilution of such skills and will affect the team's ability to deliver high quality care.

All staff deployed to care for children must possess the required skills in order to recognise a sick child and quickly commence emergency treatment, which includes basic life support. If the individual that is relocated in times of staffing crisis feels that they are neither safe nor competent to carry out the appropriate assessments +/- interventions for children post-anaesthesia they should raise their concerns immediately with the person in charge if they are being asked to practice beyond their usual role, experience and training (NMC, 2015).

The delegation of the task to less experienced staff should reflect the NMC (2015) statement that individuals are accountable for the decision to delegate tasks and duties to other people:

11.1 Immediate access to paediatric medical support should be available (NCEPOD, 2013).

All clinical staff with direct access to children and young people must have a Disclosure and Barring for adults and children check, pre-employment checks and receive training in child protection and should have up to date knowledge, skills and competence as outlined in the Intercollegiate Safeguarding children and young people (RCN, 2019).

Staff skills

By the very nature of day case surgery, there is minimum time to build and develop a trusting relationship with either the child or their parents before surgery. The information delivered must be pitched at the correct level for the parent and the child or young person to ensure they feel able to make an informed choice about an intervention and feel in control of their situation.

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Patient selection criteria

The advantages of day surgery outweigh the disadvantages for most children and their families. Health care providers see avoiding overnight admission as efficient, cost-effective, it reduces the number of hospital beds required and reduces waiting times (RCS, 2013). Parents prefer this model of care as it has a reduction in financial impact requiring less time off work, minimal cost of alternative sibling/child care arrangements and minimises the disruption to family routine.

In order to achieve a successful outcome for the child, or young person and their family, parents and carers should be involved in the decision making about treatment options and consulted on the expected pathway of care and be encouraged to be active participants. Children's interests are often best served by being in hospital for the briefest time possible in order to provide safe and effective care (RCN, 2011; RCS, 2013).

The British Association of Day Surgery has produced a directory of procedures that provides targets for day and shorter stay surgeries (BADS, 5th Edition, 2016) its recommendation state that 50% of surgical procedures should be on a day case basis. Ultimately the decision for the length of stay in hospital will be made on the day of surgery by the attending anaesthetists and surgeon according to the specific needs and safety of the child (RCoA, 2019c). Parents should be informed of that unexpected events may influence length of stay and recovery time after surgery and advised to come equipped for a night in hospital.

Who should select?

It is recommended that a multidisciplinary approach, with agreed protocols for patient assessment including inclusion and exclusion criteria for day surgery should be agreed locally with the anaesthetic department. The lower age limit for day surgery will depend upon the facilities and experience of the staff and the medical condition of the infant (RCoA, 2019a).

The approach to patient counselling for surgical intervention has begun to change with the emphasis moving away from a paternalistic approach with an increasing importance being given to autonomy and self-determination in medical decision making. It is important that when families have the options for care outlined all the implications for their decision making are outlined as public expectation of doctors supporting their decision-making by providing information tailored to their needs is now increasingly reflected in law (Orr and Baruah, 2018). Engaging age appropriate young people in this conversation will ensure that they remain at the centre of decision making about their health care.

BADS (2018) guidelines outlines that there are few absolute exclusions to day case surgery, but children with the following problems may not be suitable for surgery in a DGH or may require overnight admission in a tertiary centre:

- ex-premature babies < 60 weeks post conceptual age
- difficult airway
- extreme obesity

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- previous anaesthetic problems leading to delayed recovery
- metabolic disorder that cannot tolerate starvation
- haemoglobinopathy
- obstructive sleep apnoea
- poorly controlled chronic disease
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- Important information should be provided in writing or via hospital web pages.
- The identification of any medical risk factors, promotion of health and the optimisation of the child's condition. One-stop clinics which are based near or within the day-case unit offers families the opportunity to meet staff and get a feel for what to expect during their stay, (BADS, 2011). No person expects surgery to be enjoyable, but what is most appreciated is information delivered by a respected, highly trained professional, who is empathetic and regards the patient as a patient rather than a statistic (AAGBI, 2010).
- Distance from the hospital may govern the practical aspects of a family's decision but access to a phone and transportation are essential should an unexpected event or concern arise once at home. Families should have clear lines of communication with the operating hospital, so they do not feel isolated after discharge, with access to 24 hour operated telephone numbers that will be able to direct the most appropriate course of action.
- Families should be informed of their responsibilities to inform the hospital team should

with structured input from anaesthetic departments where the more complex patient can be in addition assessed by a consultant anaesthetist (RCoA, 2019b; RCoA, 2019c).

Previously the assessment of patients was determined by data collection relating to their ASA grade, BMI or prematurity. With ongoing advances in surgical and anaesthetrmenl anitd a0.6 (

Day case surgery is suitable for most healthy children and increasingly so for a large number of children with stable chronic health concerns (RCoA, 2019c).

Appropriate patient selection is based on effective peri-operative assessment and appropriate lines of communication with the child's named paediatrician and/or GP in order to maximise their health before the intervention. Therefore, pre-operative preparation is the responsibility of a multidisciplinary team of professionals engaged in the child's care both before, during and after their discharge home. It is important that those involved in the care of children with complex health care needs are notified and available for consultation during the child's admission to ensure that all eventualities or unexpected events are able to be managed. It is imperative that this available support is documented in the child's medical records for use by the doctor and nursing staff on the day unit.

Day surgery encompasses a spectrum of surgical procedures that allows the patient to go home on the same day as surgery, usually after a few hours. Improvements in the provision of anaesthesia and analgesia and the introduction of minimal-access surgical techniques allows a range of procedure to be undertaken previously requiring in-patient admission (RCoA, 2019c).

Peri-operative assessment is an essential component of the surgical pathway and should be afforded suitable time and resource (RCoA, 2019a). Consulting rooms should have appropriate equipment such as an examination couch, scales for measuring height and weight, blood pressure, pulse oximetry and a computer for reviewing test results.

Information gained from the patient's peri-operative assessment should be readily available ideally as an electronic patient record so that information is easily transferred between locations and to enable data collection for later analysis (RCoA, 2019a).

Organisation of peri-operative preparation is essential for enhancing the quality of care in a number of ways:

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Children, with special needs, which covers a huge spectrum of individuals and diagnoses, require additional preparation and support in the preoperative assessment process. Additional time will be required for assessment and greater care in the co-ordination of their hospital admission with staff being made aware in advance of their additional needs. Parents of these children and young people are frustrated by the lack of understanding of their child's needs. Completion of a hospital passport will allow families to come prepared with the necessary information for staff and also ensure that they don't have to repeat the information with every new contact that they make in the hospital.

Cardiff & Vale University Hospital – Children's Hospital Boarding Pass. www.cardiffandvaleuhb.wales.nhs.uk/sitesplus/documents/1143/Noah%27s%20Ark%20Boarding%20Pass.pdf

My hospital passport www.autism.org.uk/about/health/hospitalpassport.aspx

While many parents/carers will have sought advice and prepared well, others will be extremely anxious. Adult fears may be transferred to the child or young person.

Nurses need to have the skill to quickly asses the family and adapt their practice to their individual needs. Addressing the families physical, psychological and social needs early in their preparation enables the process of care to be carried through until discharge, thereby providing an episode of care that is smooth, timely and appropriate (RCN, 2013).

Involvement of play or child life specialists allows the child to work through their understanding of their expected admission to hospital through the medium of play. Children and young people can be directed to age appropriate web-based learning tools to increase their understanding of anaesthetics and being in hospital (BADCS, 2018).

Opportunity should be provided for the child and family to meet the team that will be caring for them prior to their admission date. Many units offer a pre-admission programme that incorporates many elements of the day surgery process. This contact allows the child and parents or carer a chance to express any fears and learn how to prepare for admission and what to do on the day.

Pre-operative assessment and preparation should be undertaken as early as possible in the patients care pathway so that all essential resources and obstacles can be anticipated before the day of the operation to avoid un-necessary on the day cancellation or overnight admission after surgery.

Assessment should be standardised and consist of establishing a rapport with the family, followed by information gathering to establish the child's medical, nursing and social needs for an effective hospital admission. The preparation of the child includes optimisation, medication rationalisation, giving of essential information about their procedure and admission with shared decision-making and patients choice (RCoA, 2019c).

Careful pre-operative investigation is essential to minimise the risk of anaesthesia and surgical intervention. It is important to strike a balance between wasteful over investigation and omitting essential tests. Guidelines, with input from all professional groups involved in patient care will help standardise and streamline the process and should optimise the resources and outcomes.

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NICE (2016) acknowledges that there continues to be unnecessary pre-operative tests carried out in the period leading up to the admission which cause significant anxiety, delays in treatment and are unnecessary and costly.

Upper respiratory tract infections continue to be the most frequent medical problem within children and young people undergoing surgery that results in the decision to defer surgery. Respiratory syncytial virus, parainfluenza and adeno virus are the common causes of upper respiratory symptoms in the infant and preschool child. Usually the infection is self-limiting however it sometimes produces hyper-reactive airway that can persist for six weeks. A blanket approach to cancel all children with symptoms has begun to change with current clinical evidence suggesting that with peri-operative assessment and optimisation of the child's chest before anaesthesia and the development of local policy governing the management of such children those with mild to moderate URTIs may be safe to undergo surgery with the early recognition of complications (Lema et al., 2018).

Timing of vaccination with respect to anaest4(a)es)-1Tt(2)(v)13 (t(4)

Evidence from the USA is that females under the age of 16 are not always able to respond accurately to questioning about their sexual activity or possible pregnancy status for a

www.apagbi.org.uk/sites/default/files/inlinefiles/APA%20Thromboprophylaxis%20guidelines%20final.pdf

Children who are assessed as requiring antiembolism stockings should have their legs measured and be provided with the correct size. Anti-embolism stockings should be fitted and the patient trained on how to use them only by staff trained in their use – NICE guidelines NG89 (2018).

For those children identified as having additional needs or risk factors, the provision of good quality care is reliant on pre-operative communication and planning to ensure the information about the child is up to date and relevant to their post-operative management and recovery. When units are operating on children with additional health needs there must be a robust assessment process in place and transfer to another facility should complications arise (RCS, 2013). Providing day surgery in units that do not have on-site paediatricians requires a working agreement with local health facilities to provide support and safe patient transfer should then need arise (Bowen and Thomas, 2016). Children with complex medical problems should be managed at tertiary centres to ensure the required support and expertise is available should the need arise (RCS, 2013; RCoA, 2019c).

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On the day of admission, the child or young person and family should be welcomed to the unit and introduced to the members of staff involved in their care. Ideally, if they have attended the pre-admission visit the same staff will be available in their preparation for surgery. The provision and organisation of play and organised activities helps to reduce anxiety and reduce boredom while they wait.

A World Health Organization checklist should be completed before and during all procedures and investigation which are undertaken either under anaesthesia or sedation. This ensures that effective lines of communication with particular reference to patient safety and their care needs before, during and after surgery are identified and completed.

WHO guidelines for Safe Surgery (2009) https://apps.who.int/iris/bitstream/

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Day surgery theatre lists have a rapid turnover of patients, children who are adequately hydrated are generally more co-operative and comfortable. Nursing staff should alert anaesthetists about prolonged starvations times and have “drink stations” where the child can be offeretithe

Parents and carers must be reunited with their child as soon as it is safe, and the child is able to maintain their own airway. In ideal circumstances children should be recovered from anaesthesia and surgery in a dedicated childfriendly environment separate from facilities provided for adults (BADS, 2018). Recovery areas should be child and family friendly with the provision of seats to allow the parents/carers to remain at the side of their child until it is safe to transfer them back to the ward (RCN, 2013). In the immediate period after anaesthesia, the child should be managed in a recovery area, staffed on a one-to-one basis at least until the child can manage their own airway. Staff within this unit should have paediatric experience and current paediatric competencies including resuscitation (RCoA, 2019b).

Parents and carers need to be supported in their role whilst the child is in the recovery phase. They should be encouraged and supported to help observe the child's condition, offering comfort and reassurance, this is especially relevant when the child has only non-

Nurse-led discharge from day surgery is now a common occurrence but requires experience and an understanding what the criteria for each intervention is. This requires the implementation of protocols that provide staff with the necessary guidance to ensure timely discharge of children and young people which is fundamental to achieving high-levels of satisfaction and the delivery of an efficient service.

Discharge planning must embrace the physical, psychological and social aspects of the individual child and their family. In order to develop and maintain a high-quality service, discharge planning in day surgery should begin before the child is admitted to the unit.

The following framework can be used to develop guidelines for discharge following day surgery (RCN, 2013).

Physical criteria

- The child's consciousness level should be consistent with pre-operative state.
- Stable vital signs should be consistent with pre-operative baseline records.
- The phenomenon known as emergence delirium defined as "a disturbance in a child's awareness of attention to his or her environment with disorientation and perceptual alterations including hyperactive motor behaviour" has been noted to occur in up to 40% of pre-school children who receive sevoflurane anaesthesia. The experience lasts for 10-15 minutes and can be frightening to family and staff unfamiliar with the situation. The child must be safely contained during the episode and parents supported during this point in recovery (BADS, 2018).
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- With the possible exception of a surgical finding or new diagnosis, none of the information given during the discharge process should be new. The continuous delivery of information during the families contact with the pre-assessment team and the day surgery staff will ensure that they remain fully informed and feel able to take on their child care after discharge. Written and verbal information should be given and the level of understanding of it should be checked and when necessary reinforced by the nursing staff caring for the family (RCN, 2013).

Social criteria

- All families discharged following day surgery should have access to a telephone and a member of the family that can communicate their concerns in English should unforeseen circumstances a rise and help is required. If neither of these are in place this is not a safe discharge.
- Families should have in place suitable transportation home prior to admission. This should not include public transport (BADS, 2016; RCN, 2013).
- Assessment of the home environment including access to bathroom and toilet facilities should have been made during the per-operative assessment period. Many siblings share their bedrooms and alternative arrangements may have to be thought through to ensure that disturbances to others routine are kept to the minimum.
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Quality control in day case surgery

Effective audit is an essential component of assessing, monitoring and maintaining the efficiency and quality of patient care in day surgery units. Audit of day surgery relates primarily to quality of care and efficiency and can include the following criteria:

- cancellation on day of surgery
- unanticipated admission and hospital reattendance
- post-operative morbidity (pain and PONV)
- episodes of contact with primary health care providers.

Quality assurance and improvement programmes are essential components in all aspects of day surgery (Bailey et al., 2019).

Summary

Health services are struggling to meet the demands of service users, who wish to spend as little time in hospital as possible. Day-case surgery for children therefore requires comprehensive patient pathways to cover all aspects of needs of patients including selection, assessment, preparation and discharge criteria.

Appropriate patient selection must include the acknowledgement of the role of parents and /or carer in the aftercare and recovery of the child following discharge from hospital. Parents should be provided with their need for information and participation through engagement in order that they can support their child in the best possible way during the surgical process.

Dedicated day-surgery units for children should be at the forefront of service development with appropriate champions in terms of leadership and service development.

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