

Study to Evaluate Paediatric Accident and Emergency Services within England and Wales

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Summary

This Study aimed to describe paediatric Accident and Emergency (A&E) care within England and Wales, identify barriers to providing a service which complies with guidelines and to recommend action to improve child centred A&E care within the West Midland's A&E departments

A questionnaire built upon interview data and previous studies was posted to senior nurses and consultants in the 247 A&E departments in England and Wales. Replies were received from 232 of these departments.

A survey of training was incorporated in the main questionnaire and was also sent to every registered nurse working in A&E departments in the West Midlands, 98% of those nurses replied.

Face to Face interviews took place with **88%** A&E consultants and **70%** senior nurses in **A&E** departments in a West Midlands interview sample.

Follow up telephone interviews with every department interviewed were used to check conclusions, confirm earlier data and identify developments in the West Midlands departments.

The results describe a comprehensive picture of A&E paediatric services in England and Wales. 72% departments state children are 29% of their attendees, 47% do not have a Registered Sick Children's Nurse (RSCN) on their staff, and 45% departments are not visited by a paediatric consultant. There is no common system of assessment and prioritisation for children, 52% departments use triage systems for assessment which do not incorporate psycho-social and developmental needs, 41% departments do not keep separate records for paediatric attendees and 24% are unable to identify repeated attendees.

A comparison of consultant replies with an earlier study by BPAS in 1985 shows encouraging improvements over ten years, a three fold increase in paediatric waiting room provision, threefold increase in paediatric treatment room provision and a 35%

increase in RSCNs in A&E departments, yet there is a significant decrease in the number of departments able to retrieve previous attendance data.

Training questionnaire comparison of A&E nurses in the West Midlands with those in the rest of England and Wales shows the West Midlands has significantly lower training in all aspects of paediatric A&E care, for example, Child Protection training is 52% greater outside the West Midlands and 26% A&E nurses in the West Midlands have received Advanced Life Support training as opposed to 68% in the rest of England and Wales.

Barriers and Constraints to service provision are identified as: staff recruitment, loss of on-site paediatric support, difficulty in assessment of priority for children in a mixed adult/child workload and the availability of training.

West Midlands developments identify an increase in RSCNs in A&E to 42% departments and a decrease of on-site paediatric units.

Common issues for all A&E departments were identified as, availability of appropriately trained staff, availability of training for existing staff, no common form of audit and monitoring system and inconsistent communication networks

Recommendations are focused on improving service provision in West Midland A&E departments.

**To my sons David and James,
May they, and all children, be protected from
needing the services examined in this study.**

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Introduction

Children under 16 years represent 28% of the population and are high users of the National Health Service (Royal College of Nursing 1994). In 1987 it was reported that approximately 3 million children attend A&E departments every year (NAWCH 1987). Over 90% of children admitted to paediatric wards are emergency admissions (Court 1976). Butler (1980) found that one in five children were admitted to hospital before the age of five years and Court (1976) found one quarter of child attendees to A&E departments were under 5 years old and one third of this group were under 3 years.

Trauma is the leading cause of death in children over the age of 1 year in the developed world. In England and Wales each year over 700 children die and about 10,000 are permanently disabled as a result of accident (Phillips and Robson 1992). In 1990/91 hospital and community health services for children accounted for 10% (£1,414,000,000) of the total expenditure on health (Audit Commission 1993).

In the United States of America, traumatic injuries are the primary cause of death and disability in children (Saines 1992). The Health of the Nation (DOH 1991) has set a target of reducing paediatric deaths due to accidents by 33% of the current level before the year 2005.

There are established guidelines, for example from the Department of Health, for the provision of child centred A&E services, however, there does not appear to be a credible research base to support the wealth of opinion offered by the literature and the existing guidelines. The focus of current publications is to discuss the need for services for children in A&E, rather than dispute this need, thereby indicating a gap in the knowledge base and an absence of a proven evaluation of the need for services. No previous investigators have systematically examined the full picture of service provision within the last decade. This cross sectional study aims to establish a picture of services provided for children in A&E departments in England and Wales, as perceived by the staff providing the service and to identify the level of service provided within departments in the West Midlands. Thereby contributing to the research base as the first systematic research study into the area of A&E care for children.

In order to achieve a comprehensive picture of services, all 247 of the A&E departments in England and Wales were approached in the four investigative phases of the study. Interviews were conducted with Senior Clinical Nurses and Consultants in the West Midlands A&E departments and a semi-structured questionnaire was posted to Senior Clinical Nurses and Consultants in the remaining A&E departments in England and Wales. A questionnaire using only the questions related to training was posted to all of the Registered Nurses working within the West Midlands A&E departments and a follow up telephone interview was conducted with one interviewee in each of the departments interviewed in order to check the accuracy of conclusions and ascertain the level of agreement.

This report of the study is organised to present the results and issues related to the research in the following main sections:

- Literature Review
- Methodology
- Results
- Discussion
- Conclusions and Recommendations
- Implications to be considered

There are also sections regarding further study as indicated by the results of this investigation and references detailing the thorough search which has been made for an evidence base.

The results chapter is divided into several sections: a general description of reported services from the departments in England and Wales: a comparison of some aspects of the reported service for children in A&E with a previous survey conducted over ten years ago (BPA/ BPAS 1985) which allows identification of developments and trends in relation to paediatric A&E services over a ten year period: a training review comparing the responses from nurses, all of whom hold the Registered Nurse qualification: and a report of the interview data leading to a detailed description of A&E services for children

from the West Midland **A&E** departments. The conclusion section reports the common issues for all departments in the study and those which have arisen from the investigation **as** particularly relevant to the West Midland **A&E** departments, whereas recommendations focus upon practical measures to improve the level of service for children from the West Midlands **A&E** departments.

Review of Literature

Introduction

The search for relevant literature has yielded no evidence based research relating to the need for child centred A&E services. Published literature is, for the most part anecdotal, focusing on opinion and the general belief that child centred care is important. The counter arguments to these beliefs are not present in the published literature, however they have emerged through this study and are presented as an un-referenced section of the literature review. Further discussion of the arguments of opposition are presented in the report as they have arisen in the investigation.

This lack of research based evidence highlights the importance of this study as the first systematically approached investigation in this decade. All of the literature was read and critically appraised by the author of this thesis, none of the reports were omitted from the literature review. Opinion papers in this review of literature are unsupported by research unless stated. All Department of Health documents related to paediatric A&E care have been consulted, referenced and used as a base for the development of the questionnaire used in this study.

A broad range of databases and libraries were consulted during the study,

- BIDS.
- Medline.
- CINHAL.
- Royal College of Nursing Library.
- English National Board Library.
- Action for Sick Children Library.
- Royal Society for the Prevention of Accidents(ROSPA) Library.
- Birmingham Medical School Library.
- Birmingham University Library.
- University of Central England Library.

Key words used when searching databases for relevant literature included those as listed **below**. This is not an exhaustive list and key words were combined and used in various permutations. To retain the focus of the search for relevant literature the Child and A&E aspect of key words were always used in connection with other words.

- A&E.
- Children.
- Paediatric.
- Accident.
- Prevention.
- Department of Health
- Child Abuse
- Nurse Practitioner
- Records
- Child Protection
- Clinical Supervision
- Head injury
- Ethics
- Law
- Staffing
- Systems
- Training
- Audit
- Trauma
- Communication
- Triage
- Adolescence
- Pain Control
- Stress

Literature

Children differ from adults in more aspects than size alone; childhood encapsulates the period of maximum change, during which children develop physically, emotionally, socially and spiritually (Court 1990, RCN 1990). A child's immaturity makes him more vulnerable in every way, his developing co-ordination makes him susceptible to accidents and undeveloped immunity puts him at greater risk of disease. Therefore, children require different skills from their carers at differing ages and stage of development (RCN 1990).

Development in childhood moves from a state of total dependency on carers, as in a new-born baby, to independence in terms of the ability to move independently, feed, clothes and moderate own behaviour. During the time between dependence and independence a process of learning, skill development and building of experiences occurs.

Service Definition Guidelines

In **1959** the Platt Report (Ministry of Health 1959) recommended that children should be cared for by specially trained staff. A high priority review of child health services undertaken in 1976 by Professor Court identified that children attend A&E departments with a wide range of conditions. The report recommended A&E services for children and stated: *Every department dealing with children should have the right facilities*". These facilities include: separate waiting and examination rooms; acceptable furnishings and play materials; social work liaison; monitoring of children at risk; A&E Consultant/Consultant Paediatrician shared responsibility for the A&E department's paediatric policies; and the availability of an RSCN for the **A&E** department 24 hours a day.

The Audit Commission (1993) has more recently defined these skills as the ability to provide care and support for the whole family and deal with the highly specific problems of childhood. They advised hospitals to consider the availability at all times of medical and nursing staff trained and experienced in the care of children. It was not specified in this report how considerations should be financed or what structure should be applied in service provision.

A survey by the British Association of Paediatric Surgeons and the British Paediatric Association (1985) found that children make up to a quarter of all patients attending A&E departments and that few departments had facilities to meet the needs of children and their families. Their survey addressed issues of attendance monitoring, staffing of the A&E department and facilities for children. The views expressed were those of paediatricians mainly, and not the views of the A&E staff. Paediatricians were questioned regarding the A&E service for children within the hospital in which they work.

As a result the following recommendations, amongst others, were made regarding the service for children in **A&E** departments:

- Every A & E department should have at least one RSCN on its staff

- A & E departments where children are seen should be on the same hospital site as children's departments.
- A & E departments with child patients should have a Consultant Paediatrician with responsibility for liaison with a Consultant in A&E medicine concerning general arrangement for children.
- The development of computerised A&E records is of great value in monitoring children's accidents and developing preventative strategies.

The Royal College of Nursing (1990) published the results of a two year project investigating care provision for children in A&E departments. This study examined areas of care comprising of the philosophy of care for children, the psychological effects of hospitalisation; documentation; environment; facilities; manpower and legal aspects of care. This report built on those before it, providing a description of desired services for children in A&E and advised on how to achieve this service. Main recommendations are underpinned by the following statements:

- The communication skills of the departmental staff will influence the rapport, trust and treatment that are received by the child and his family.
- The environment into which the child is received will influence his reaction and response to both the staff and the treatment that he is given.
- The staffing of the A & E department is directly linked to the standard of care that it is able to provide.

The RCN Children in A&E Special Interest Group surveyed all A&E departments in England, Wales, Scotland and Northern Ireland and asked them about their facilities for children (RCN 1995 Nov Fact Sheet No 1a). They found that 18.9% A&E departments had no specific facilities for children and that children comprise of between 30% - 45% of total A&E attendees. It was reported that 54% departments employed a RSCN and

that there was no correlation between the number of RSCNs employed within a mixed adult/child **A&E** department and the number of children attending. In 60.3% departments there was a play room and 50% had separate waiting rooms for children. 42.3% departments have changing and breast feeding facilities but only 29.2% have a specific resuscitation area for children.

This survey offers valuable information regarding facilities for children and staffing with **A&E** departments. However, it does not address issues of policy and communications within paediatric A&E services.

The Audit Commission (1996) addressed the needs of children in **A&E**. None of the departments in this survey complied with the Department of Health standard for at least one RSCN on duty 24 hours a day to advise the **A&E** department. The report suggests trusts should look for ways to increase the numbers of RSCNs and employ at least one RSCN with sufficient seniority to raise awareness of children's issues. It also identifies that many departments do not have paediatricians on-site and compensatory arrangements are not always adequate.

The Allitt Inquiry (DOH 1991) which was undertaken following a case of malpractice by a nurse in a paediatric ward, resulted in a review of the guidelines relating to Paediatric A&E care. This document states:

“medical and nursing staff trained and experienced in the care of sick children should be available at all times. --

Recommendations for Care

The recommendations made by all respective surveys and reports into Paediatric **A&E** care, Court (1976), BPA/BPAS (1985), RCN (1990), Phillips and Robson (1992) and the Audit Commission (1993) are summarised as the following:

Facilities

The **A&E** department should be on the same site as the paediatric services so that experienced paediatric help will be readily available. It should have separate play and waiting areas for children of sufficient size, not forgetting many children are accompanied by siblings. Therefore, toys and books for different age groups should be

provided. The family unit should be maintained and consulting rooms should be big enough to accommodate child, parents and siblings. There should be a suitably decorated and equipped child treatment room. children's play, waiting and treatment areas should be recognisably child appealing and form a sub-unit in the main department. There should be child sized toilet facilities and a private area for breast feeding mothers. Children's resuscitation areas should be identified and supplied with paediatric equipment and drug usage protocols.

Nursing

There should be one RSCN on each shift in the A&E department. All nursing staff should have training in paediatric basic life support, child protection and communication with child and family. There should be a liaison health visitor and social worker for the under five's and availability of a paediatric nurse for follow up in the community.

Medical

Newly appointed Senior House Officers (SHOs) should have in post training which includes cardio-pulmonary resuscitation in children, management of the critically ill or injured child, venous access and short term ventilation. There should be a consultant paediatrician liaison with the consultant in **A&E** medicine on policies regarding children within A&E.

Rights of the Child

In recent years there has been growing interest in the development of child care. The United Nations Convention on the Rights of the Child (1959) sought to establish the child as a developing individual with rights in order to protect their fundamental interests.

The Children Act (DOH 1989) established children's rights as individuals in law. The main principles of the act state that a child's welfare is paramount in all dealings and that children should be brought up and cared for within their own family wherever possible. It aims to ensure that children are safe and protected, kept informed about what happens to them and have an advocate in law to represent their views. This act had far reaching

implications for child service providers but was unsupported by financial incentives and a firm structure to guide service providers through necessary changes.

The National Association for the Welfare of Children in Hospital (NAWCH), now “Action for Sick Children”, produced a charter in 1995. It states rights for children in hospital incorporating admission to hospital only when it is unavoidable, parental access to children in hospital at all times, and the child’s right to information and informed participation in all aspects of care. It addresses again the psychological care of the child stating that:

*“Children will be treated with tact **and** understanding at all times and their privacy shall be respected --*

It also addresses staffing:

“Children shall enjoy the care of appropriately trained staff, fully aware of the physical and emotional needs of each group --

Environmental issues such as play facilities, child orientated safe furnishings and children to be cared for with other children of the same age group are also addressed within the charter.

The RCN Society of Paediatric Nursing (1993) document entitled, Philosophy of Care in Paediatric Nursing reaffirms the principles in both the United Nations Declaration of the Rights of the Child (Geneva 1959) and NAWCH Charter for Children in Hospital (1995). Its statements regard the child as a unique, developing individual and incorporate the paediatric nurse’s role and accountability, the planning of child health care to maintain the family unit and address physical, mental, emotional, spiritual and social needs of the child and family.

Mason (1982) reported children’s attendance’s to A&E as 25-30% total attendance’s. The challenge for the A&E service is to provide a child and family centred culture, providing appropriately skilled staff, child centred environment, equipment and support services in terms of community and social care, for children and their families.

Staff and Training within A&E

In 1995 Bentley reported the results of a questionnaire based survey concerning children's experiences of A&E. It was found that while 55.6% departments who responded employed RSCNs most of them did not deploy RSCNs to work exclusively with children. Many respondents also identified difficulty in the recruitment of RSCNs within A&E departments. It was identified in the study that there is a dilemma regarding the employment of RSCNs in A&E, due to the broad base of skills required to nurse both adults and children within the A&E department. Several managers questioned the capability of RSCNs to work with adults and many departments have RSCNs with no special responsibility for the child service, resulting in their skills and specialist training often being wasted.

Webb and Cleaver (1991) identified difficulty in combining the disciplines of A&E nursing and paediatric nursing. They recognised that children in A&E required the skills and philosophies of both A&E and paediatric disciplines. However, **A&E** nurses function in an environment that is dominated by the needs of patients requiring urgent medical attention (Yodder and Jones 1981). Conversely, paediatric nurses function in an environment that addresses the needs of the family as a whole (RCN 1993).

Nethercott (1994) stated that it should never be regarded as satisfactory that sick children be cared for by anyone without the appropriate training. However, it was identified that employing nurses with dual qualifications of adult and paediatric nursing can be expensive. She states: *"It is short-sighted to think Of Registered Sick Children's Nurses in terms of financial cost rather than nursing value"*.

A recent survey by the Consumers Association (Which 1994) found that only 6% A&E departments had a RSCN in A&E at all times. This indicated that the majority of children were being cared for by nurses who are trained primarily in the care of adults. Since 1984, the normal course of extended training for **A&E** has been the English National Board (ENB) 199 course in A&E nursing (Stammers and Chippendale 1995). This

course focuses on provision of emergency nursing care, prioritising and meeting immediate physical and psychological needs. However, these courses do not provide in-depth knowledge of the varied psycho-social and developmental needs of the child and family.

Ward (1992) in a study of staffing levels and skill mix in A&E departments identified training levels of A&E nurses in one region. 186 replies were received of which the largest number of nurses held an orthopaedic certificate, next largest group held midwifery registration. Only two nurses in the region were RSCNs. This re-affirms the view that children in A&E are often cared for by adult trained nurses. Stammers and Chippendale (1995) commented further on the issues of children's nurses in A&E. They highlighted the ENB requirements for student supervision in A&E, which states all students working in A&E with children must be supervised by a RSCN.

It could be argued that unless more RSCNs are providing care for children in **A&E** departments and therefore clinical supervision for students, no student nurse will be able to work with children in A&E departments.

Scullion (1992) researched into the area of stress and the student nurse in A&E. Death of children ranked first as the most stressful by the whole sample within the study, and each of the groups within the study separately.

It has been suggested that nursing education develops to provide at degree level, specialist modules on spheres of practice including "Paediatric Care in A&E" (RCN 1993, Bradshaw, Burton and Murray 1994). However, the insufficient numbers of appropriately qualified clinical supervisors in paediatric A&E care have again been identified. The problems of skill development, future recruitment and service provision are likely to become major issues.

In the USA developments in paediatric A&E care have taken the form of paediatric clinical nurse specialists in A&E (Read and George 1994), or paediatric liaison nurses (Fredrickson 1988). It is widely recognised that paediatric patients often require specialised skills not regularly practised in general emergency departments. The growth of the paediatric nurse specialist role aimed to provide general A&E departments with a clinical expert in paediatric care, educator, researcher, and manager of the Paediatric

service (Pomerantz Gross 1991). The paediatric liaison nurse role (Fredrickson 1988) is similar in function and both roles bridge the gap of care created when children are nursed in general A&E settings in the USA

The roles of the specialist nurse in the USA are echoed by literature in the UK. Kobryn and Pearce (1991) described how the introduction of the nurse practitioner role in their **A&E** department has improved quality of care for children. They defined the nurse practitioner as a nurse specialist RSCN who has sound nursing practice knowledge in all aspects of A&E nursing with additional preparation in the skills of physical diagnosis, psycho-social assessment and prescribing of care.

The Royal College of Nursing guidelines recommend that each A&E department recruits a RSCN to its staff who would act as an advocate for the children and a facilitator and resource for the department.

Bentley (1995) and Ward (1992) state that the lack of nursing staff in A&E with specialist qualifications in children's nursing is an issue which needs to be addressed by both managers and educationalists. More recently a growing number of hospitals in England have been establishing the nurse practitioner role in A&E departments (Kobryn and Pearce 1991), primarily to enhance the nursing role in the clinical management of patients with minor injuries (Read and George 1994). It has been identified that many children attend A&E departments with the effects of minor injuries (Ringwall 1983) and many attendances are associated with the need for reassurance and advice (Farquahar 1990).

It is not yet clear what proportion of the workload of emergency nurse practitioners within A&E is paediatric care. Further study needs to be undertaken to identify what qualifications and preparation the emergency nurse practitioner has with respect to the care of children. Jones (1996) studied the feasibility of experienced RSCNs becoming emergency nurse practitioners (ENP) for children by examining the skills held and used by RSCNs and those which were required in the role of an ENP. He concluded that with some specific training RSCNs do have the necessary skills and knowledge to undertake this role.

Environment and Communication

The importance of having the right environment and appropriately trained staff to care for children and their families in the **A&E** department has been discussed by Lancaster (1993) and it was emphasised that the philosophy of family centred care is a necessity rather than a luxury. The presence of the RSCN in **A&E** was again discussed, concerned primarily with the immediate reception and assessment of children attending (Webb and Cleaver 1991). Powell (1991) called for extra training for all non-paediatric nursing staff dealing with children in **A&E** in three basic topics: common childhood illnesses, sudden death and child protection. Sympathetic handling of children and their families is seen as a priority in the philosophy of care (Ringwall 1983, Powell 1991). Williams (1995) states that medical and nursing staff are not good at estimating a child's understanding of elements in that they tend to underestimate the understanding of older children (11-15 years) and overestimate that of younger children (5-11 years)

The communication skills needed are to provide the carers with the ability to provide information, reassurance and allay anxiety in child and family, using suitable language depending upon the stage of development and level of understanding. Parents and children visiting **A&E** are often under great stress and nursing staff need to establish relationships built on good communication and trust, enable parents to re-establish parenting skills and comfort the child (Department of Health 1989a). This serves to maintain the family unit and normal support systems within it. Further training in communicating with children is called for in the Department of Health guidance for working together under the children act. (1991)

Evans (1988) and Gay (1991) advised humanising the **A&E** environment, separating children's waiting and treatment areas. They should be decorated, furnished and equipped to reduce the clinical nature of the environment, making them child appealing. Appropriate care and treatment given in a friendly and relaxed environment may alleviate permanent psychological damage and a fear of hospitals in later life (Hams and Cummings 1992).

Record Keeping

The monitoring of attendance records is seen as an essential part of the paediatric A&E service (Ringwall 1983, Lancaster 1995, Powell 1991). Separate computerised records facilitate the identification of trends in accidents and attendance patterns (Baillie 1994). They also “flag up” regular attendees and assist in the identification of children in need (DOH 1989). They provide valuable indications for the identification of hazards in the community and a baseline for child accident prevention strategies. The Child Accident Prevention Trust (1986) provides literature which aims to include decision makers in society with regard to policies to reduce society’s hazards and child accidents.

Head Injury Management and Trauma Care

Young people are characterised by impulsive behaviour, curiosity, bravado and high levels of physical activity, all of which makes them vulnerable to accidents. Children are at risk at all ages from accidents, however, boys are injured twice as often as girls (Couchman 1990, Cox 1994). Paediatric trauma, including head injury, are part of the A&E workload. A study in 1974 identified that four to five times as many head injury patients attended A&E as were admitted (Strang, MacMillan and Jerrett 1978). Couchman (1990) argues that every child with a head injury should be assessed by and under the care of a consultant paediatrician. In the UK and USA there has been discussion regarding the care of traumatised children within regional centres (Strang MacMillan and Jerrett 1978). A study in the USA (Williams and Wilkins 1992) of the recovery of traumatised children recommends *“Improvements in Paediatric Trauma care will likely come from addressing the special needs of children in general centres.”* Their conclusions were reached by examining treatment records and recovery rates of children injured in a variety of settings. Cox (1994) recommended that priorities for paediatric trauma patients as special patients with special needs. Injury rates related to falls, bicycle crashes and road traffic accidents and are significantly higher in males (Cox

1994). A study in the UK which aimed to assess the contribution of advances in trauma care to the reduction of death rates in children (Roberts et al 1996) found, that while there was a substantial decline in the rates of death from trauma amongst children for the period 1989-1995, 16%, half of the deaths recorded could have been averted by improved hospital care Sharples et al (1990), identified avoidable factors in hospital care which contributed to the death of children with traumatic head injuries as delayed diagnosis of head injury, inadequate airway management and poor management of transfers between hospitals

Assessment and Prioritisation

Children are vulnerable due to lack of experience and understanding of the events which precipitated their A&E visit (RCN 1990) They are also at differing stages of development in terms of feeding and toileting and sleep patterns. The Patients Charter booklet "Services for Children and Young People" set the standard for children's time in A&E to be not in excess of two hours (DOH 1996). Crouch (1996) comments that many departments will find the Charter standards hard to achieve. Shortage of RSCNs in A&E and lack of understanding of child needs by A&E staff were cited as major problems.

Children are sensitive to parental anxiety levels whilst waiting for treatment in A&E (Davies 1984) The practice of triage has been widely adopted within A&E departments (Laing 1988) However, studies concerning triage in this country make no reference to prioritising children (Webb and Cleaver 1991) Laing (1992) argues that giving children priority, improves the care they receive

When caring for children in A&E consideration must also be given to the family. Maintaining the family unit can often mean parents, grandparents, siblings and occasionally the family pet The stress parents experience in the A&E department can easily be perceived by their child, and parents require support and reassurance to enable them to comfort their child (Powell 1991) Burton (1989) explores parent's perceptions of a paediatric A&E Service It was identified that parents linked their dissatisfaction with lack of communication and facilities with the length of time to wait

Davis (1995) surveyed parents of children in **A&E** and found that the need for staff to **t**alk to the child and involve them in treatment was perceived by parents **as** important. Again, it was found that the length of wait was seen as an unsatisfactory element of the service (Davis 1995). Other comments made by parents in the survey expressed a difficulty in keeping children occupied during consultations and investigations and the parental desire to separate children from injured adults (Davis1995). Hase and Douglas (1986) stated that the achievement of a therapeutic relationship is dependent upon effective communication

Parental and Informed Consent

Chalk (1995) addressed the controversial issue of parents and relatives being present in the resuscitation room by interviewing staff and relatives .**A** template of responses which asked for agree or disagree replies was used to measure the attitudes and opinions of the two groups of people. Negative responses were identified from staff due to the fear of relative interference with the resuscitation, medico-legal concerns due to observation and heightened emotional responses from staff exacerbated by parental grief Conversely, relatives expressed the need to be present with the dying person and to know what is happening Kelly (1992) expresses the belief that relatives have a right to Se present. Chalk (1995) concluded the study by issuing a set of criteria tu considci- **when** making the decision to allow relatives in the resuscitation room and states it is **ri**ot necessary to close the door on relatives

Caring for adolescents in **A&E** presents a particular challenge as part of the paediatric service provision The unique problems they present warrant a close understanding of “what makes them tick” (Holt 1995) Special characteristics of adolescent behaviour include risk-taking leading to accidents, violent acts, substance abuse and deliberate self harm Williams and Pottle (1989)report a predominance of young male attendees in the 15-24 years age group Kelly (1991)states adolescents cannot be treated wholly as adults as they lack the emotional maturity to cope with independence and still need the

emotional support of parents and other carers. Consistency in policies for patient management by staff is essential (Giles 1992) and boundaries for acceptable behaviour should be made clear to patients (Kuy, Kendall 1989).

Adolescents are often unaccompanied by their parents, Dimond (1994) states that minors of 16 and 17 years have a statutory right to give consent under the Family Law Reform Act (1969). However, minors under 16 years are considered able to give valid consent if they are mature enough to understand the situation. The criteria for assessment of this maturity have not been laid down and this creates a dilemma for **A&E** staff. The Children Act (DOH 1989b) states that the welfare of the child is paramount and that his feelings and wishes should be taken into account. Therefore, the child may refuse or agree to treatment.

Dimond (1994) suggests that A&E nurses should ensure record keeping is of the highest standard and written consent is obtained where possible. All conversations with regard to consent should also be recorded. Castledine (1994) states it is important to make every effort to contact parents, even if it means a delay in treatment.

Pain Control

When discussing children's experiences of pain, Atherton (1994) states that as a natural consequence to developmental immaturity and poorly developed language skills, children in the A&E department may not be able to articulate the pain they are feeling. The effectiveness of pain control can be directly linked with the child's understanding of the experience and pain management for children is a complex challenge. Gay (1992) states that a child is more likely to experience psychological distress as a result of pain if he views the pain as a punishment rather than cure. Gay identifies a link between parental anxiety and their child's pain and urges nurses to keep parents well informed and reduce their anxiety. Five causes of hospital related anxiety in children have been identified (Wolfer and Uistinainer 1975): physical harm, injury or mutilation; separation from parents; fear of the unknown; uncertainty of behaviour and loss of control.

Gay (1992) argues that anxiety must be minimised in order to control pain. In a study of child and parent stress, Libertin (1993) found that perceived environmental stresses were the same for parents and child.

Child Protection

Child Abuse is a label used to describe destructive behaviour that negatively effects the lives of children and can be categorised into physical, emotional, sexual or negligent abusive treatment of a person who is under 18 years of age (Children Act 1989). The recognition of the abused child in A&E is reliant upon the A&E nurse's knowledge of indications and procedures. A&E nurses are often the first to see the family and often the first to begin taking a history. They may be the members of staff who set the tone for hospital involvement and are often the ones who forge links with the social work department (Bedford 1985).

Dimond (1993) states the training of all professional staff in A&E departments in the recognition, policies and procedures of child protection is essential. A&E nurses play a vital role in the early recognition of child abuse (Saines 1992). Children with a history of at least one previous accidental injury would appear to be at higher risk of injury (Ohn, Gilmour and Stone 1995). Laurent (1991) discusses the need for proper guidelines and training for A&E staff, highlighting the problem of children with non accidental injuries attending a different A&E unit within a city with each injury. The need for inter-hospital communication and systems of attendance monitoring is an important issue in inner cities, because of the need to protect such children (King 1985). In addition, King states that the systems used for dealing with suspicions of child abuse vary from hospital to hospital. The inquiry into allegations of child sex abuse in Cleveland in 1987 emphasises the need for agencies to work together and communicate in order to protect children (Riches 1989). Abused children may attend A&E departments as a consequence of the injuries inflicted on them (DOH 1995). The difficulties of assessing the risk of harm to a child should not be underestimated (DOH 1991). It is imperative that anyone who deals

with allegations and suspicions of child abuse maintains an open and inquiring mind (Dimond 1993)

Computerised **A&E** record systems can do much to facilitate the detection of children who regularly attend **A&E** with seemingly trivial injuries. Isolated visits can be treated as a normal attendance but if they are considered together may arouse suspicion (Dove and Kobryn 1991)

Arguments of Opposition

This section is unsupported by published literature, but is expressed by a body of professional opinion, and in some cases emerged from the interviews conducted in this study, as counter arguments to the provision of **A&E** services for children as different to those provided for adult patients

- Why are children different? Each patient has needs which are specifically his, care has to focus on addressing the needs of all patients without favouring any particular group
- Patient assessment is guided by the evaluation of clinical need only. It is argued that in **A&E** this is the only safe system of assessment. The differing environmental and psychological needs of patient groups are seen as secondary to the clinical evaluation of injury
- **As** professional staff many of us are also parents. Are the skills needed to care for the child in **A&E** so different from those skills gained through parenting?
- The poor availability of training in paediatric **A&E** issues makes the definition of the skills needed to care for children difficult
- When addressing the allocation of resources, why should paediatric patients receive a dedicated of the budget, when adult patient groups may not?
- It is claimed that RSCNs are unable to function adequately within a mixed adult and child patient workload
- It is seen as impractical to separate children from adults within A&E, building design and current staffing levels cannot support the implementation of the guidelines for paediatric **A&E** care

Aims of the Study

The aim of the study is to establish the picture of services provided within **A&E** departments for children in England and Wales, as perceived by the staff providing the service

Objectives of this study are:

- To investigate **A&E** paediatric services by examining the structure and process of care provision
- To describe paediatric A&E care within England and Wales.
- To identify barriers to providing a comprehensive child centred service.
- To recommend the actions required to promote child-centred emergency care and an integrated approach within the West Midlands.
- To compare results with other studies within the last ten years in order to identify developments in services.

Method

Study Design

The study was a cross sectional survey to ascertain the provision of paediatric A&E services within England and Wales. There were four investigative phases of the study. Firstly, interviews were conducted with senior nurses and consultants in all A&E departments within the West Midlands. Secondly, a semi structured questionnaire was distributed by post to all A&E consultants in England and Wales and thirdly a questionnaire containing only those questions which pertained to training was sent to all registered nurses working within A&E departments in the West Midlands. Fourthly telephone interviews were undertaken with one interviewee from each of the West Midland departments interviewed.

Phase One

Prior to the interview phase a letter of introduction was sent to all senior nurses and consultants by name. Interviews were arranged by telephone at a mutually convenient date (Appendix A). **An** interview schedule was developed using the Royal College of Nursing (RCN) guidelines for the care of children in the A&E department (RCN 1990) as a baseline and to address the study objectives. The interview schedule guided the interviewer to cover concepts for discussion and for prompting interviewees when necessary. **An** interview report was sent to all interviewees following transcription and their comments were invited.

Phase Two

A semi-structured questionnaire was distributed to both the senior nurse and a consultant in all A&E departments in England and Wales. The questionnaire was designed to complement the qualitative nature of the interviews, exploring concepts identified during interviews and using some questions from a previous study conducted 10 years ago (BPAS/BPA 1985), in order to identify developments in service provision.

Phase Three

As a result of issues identified during the interview phase a second questionnaire was designed using the questions from the main questionnaire which examined those issues of nurse training for paediatric A&E issues. This was distributed by name to all qualified nurses working within A&E departments in the West Midlands.

Phase Four

Telephone interviews took place with one of the interviewees in all the departments, interviewed in order to discover changes in service thereby ensuring accuracy, verify information previously given and check the level of agreement to conclusions drawn from the interview data.

Two departments selected randomly were asked to evaluate the Interview Schedule, the questionnaires of service provision and training and the telephone interview schedule, prior to their general distribution. Comments from this pilot study were used to amend and refine the investigative methods used in the study. The pilot study results were not included in analysis, however the final questionnaire was repeated in the pilot areas.

Study Populations

All A&E departments within England and Wales are listed in the Directory of Emergency and Special Care Units (1994). There are 247 general A&E departments in England and Wales. All 247 departments were approached in the study, each phase of investigation had a differing study population. Twenty four A&E departments are listed within the West Midlands. In phase two, the senior nurse and a consultant working within each A&E department in the West Midlands were approached to participate in the interview phase, which was conducted using face to face interviews. Phase three population comprised of senior nurses and consultants within all A&E departments in England and Wales and all registered nurses working within A&E departments in the West Midlands. In phase four, one interviewee from the interview phase one was approached and asked to participate in a telephone interview.

Interviews

A letter of introduction was sent to all senior nurses and consultants by name. Considerable attention was paid to the tone of this letter. It was important to convey the essence of the study, the opportunity for interviewees to express their views and the aspects of anonymity and confidentiality. This letter was the first introduction to the study for departments and set the scene for further contact with A&E staff (Appendix A). The departments elected the interviewees, and in cases of more than one consultant and senior nurse, the interviewee was the senior nurse and consultant with responsibility for, or expertise within, the field of paediatric care within their A&E department.

The interview schedule was designed to encompass all facets of the study (Appendix B). The Royal College of Nursing Report (1990), which addressed issues of paediatric **A&E** service provision was combined with the researcher's own questions and used as a template for the design. This formed a basis for guiding the interview but allowed interviewees to express their opinions and raise issues. It provided an opportunity to prompt interviewees to express their opinions at varying points in the interview but needed to be flexible in order to accommodate changing circumstances and emerging themes.

Interview Pilot Study

In order to test the interview schedule, focused interviews took place in the two randomly selected West Midlands A&E departments who were selected as pilot study sites. Comments were invited from interviewees on its structure and content.

It was found that the interview did not flow well (Appendix B). Asking about care philosophy at the beginning of the interview, did not encourage free dialogue and lead interviewees into the subject matter. No comments were made which required altering of the wording of questions. An amended schedule was developed to take topics in an order that flowed more freely. (Appendix C)

Efforts were made in the design of the study to minimise bias. Interview technique focused on prompting of interviewees only. To ensure minimum intervention before the

rest of the interviews proceeded, tapes of the pilot interviews were examined by the candidates academic supervisor.

Key words linked to service provision were used to identify the occurrence of the issues in the interview and ensure interviewer prompting where issues required expansion. Before the interview began, an explanation of the study was offered to interviewees and their permission to tape the interview was sought. A request was made for the names of all registered nurses working within each department to enable questionnaire postage.

Interview Schedule II

Broad Concepts -

What do you think are the most important aspects of an emergency service for children?

The key words linked to this question were: attitudes to parents in resuscitation, psychological aspects of care, morale and level of knowledge.

Please tell me about the departmental philosophy of care and service for paediatric patients.

This question was guided by issues of facilities for play and treatment, staff with designated responsibility, appropriately trained staff, audit of service, referral networks, patient numbers and waiting times.

What difficulties do you encounter in providing this service?

Key words linked to this question were staff recruitment, ICU facilities training, time and other resource constraints

In what order would you put these difficulties?

This question aims to ascertain information regarding the prioritisation of difficulties to enable study objectives of recommending improvements to be made.

What is your departmental philosophy?

Departments were asked if they had a separate philosophy for children within their **A&E** department and also to provide documentary evidence. (Appendix C)

Interviewees were reassured regarding the anonymity of the interviews, given confidence in the rigour of the academic approach and professional integrity of the study. It was, initially, very difficult to obtain interviews with **A&E** consultants. The study was in its infancy and had not engaged the interest of the consultants at this point. It had, however, been easier to gain appointments with senior nurses. **As** the study proceeded and its objectives became known, consultants were more willing to be interviewed. In striving to achieve the target of seeing all senior nurses and consultants in the West Midlands hospitals, it was often necessary to re-visit sites and see individuals at their convenience. It was considered a more thorough approach to see both a senior nurse and consultant together. However, this was not always possible. Interviewees were seen within their departments and therefore were available to be called in an emergency. If an interviewee was called out, the interview was suspended and reconvened at a later time and/or date. This need for a flexible approach is realistic in expectation and maximises what was offered in obtaining as much information as possible within the constraints of personality, interest, skills and workload.

All interviews were taped and verbatim transcripts were compiled by an independent person providing clerical support. **As** the interviews proceeded and themes emerged, the opportunity arose to prompt interviewees on emerging themes. Issues were delved into by repeating questions at different points in the interview, with requests for clarification of previous comments and moving on to other points within the interview by summarising what had been said. This served to focus the interviewee on outstanding issues.

An interview report was sent to all interviewees and their comments invited (Appendix D). No department identified any anomalies, erroneous assumptions or identifiable quotes from the interview report. However, two letters were received following these interviews. One from a consultant about developments in his service and another from a senior nurse who was able to use the report to influence budget allocation for services to children within his **A&E** Department.

Development of Questionnaire

A semi-structured questionnaire was developed, using concepts identified within the interviews and relevant literature. All aspects of paediatric emergency care needed to be addressed which included:

Service Provision.	Facilities
	Environment
	Communication Networks
	Training
	Staffing
Demands on the Service	Attendance Figures
	Audit and Referral
	Barriers and Constraints

The questionnaire, therefore, needed to cover broad areas yet be specific in nature. The different approach, quantitative in nature, was intended to complement the qualitative information gained during the interview phase.

The literature search identified several firm guidelines for paediatric A&E care. The Royal College of Nursing document 'Nursing Children in the A & E department' (RCN 1990) highlights specific areas of service provision. It contributed a baseline for the development of the questionnaire.

A previous study undertaken by the British Paediatric Association and British Association of Paediatric Surgeons(1985) developed a questionnaire relating to children's attendance at A&E departments. The BPA/BAPS questionnaire (Appendix H) was sent to paediatricians across the UK. Despite differences in the design of the respective studies, there were obvious advantages to facilitating comparison of replies between the two studies. Progress and changes in terms of development, **skill** mix and attendance could be collated. They could provide a benchmark for describing developments in the last decade and identifying future requirements

To achieve this comparison, some questions were taken from the BPA/BAPS questionnaire (Appendix H) as indicated. In some instances the wording of those questions have been added to, in order to clarify and to address comments made in the pilot study of the questionnaire.

Thought was given to the phrasing of questions in order to achieve a mix of open and closed ended questions, depending on the information required. Space was left for free text comments at the end of the questionnaire.

A questionnaire (Appendix I) was prepared using the documents stated and interview results as a framework for its design. The Royal College of Nursing document (1990) provided a framework relating directly to Questions 2, 3 and 5 in the questionnaire which addressed issues of facilities, communications and attendance figures.

The BPA/BAPS Study questions used were Questions 4, 5, 6, 7, 10, 11, 12, and 15. A comparison of replies is detailed in the results section. These questions attempted to ascertain information regarding record keeping systems, retrieval of previous attendance data and staff support and involvement for the A&E paediatric service. This facilitated a comparison of studies over ten years.

Interview analysis of trends and issues informed the wording of Questions 8, 9, 16, 17, 18, 19, 20 and 21 which ascertain information regarding attendance patterns, assessment of children, distances between A&E and inpatient facilities for medical and intensive care, barriers and constraints to providing a paediatric A&E service and training.

The table below demonstrates the direct link between each question and the section of results to which it relates.

Results Section	Related Questions
General Description of Services in England & Wales	Questions 1 - 19
Comparison of Consultant Replies 1995 - 1985	Question 2; 7 ; 10; 11; 14 ; 16;
Comparison of Level of Training between Nurses in The West Midlands and those in the rest of England & Wales.	Questions 19 - 22 plus qualitative data from comments on returned questionnaires.
West Midlands Service Developments	Questions 2, 3, 10, 17, 18, plus interview data.

Table 1 The relationship between questions and results section

Questionnaire Pilot Study

Postal questionnaires were distributed to each qualified member of staff by name in the nursing establishment and consultant in the **A&E** of the two pilot study departments (Appendix E). A stamped return envelope was included. A questionnaire feedback sheet was attached which asked respondents to comment on style, content and flow of the questionnaire (Appendix F).

A letter of introduction and explanation was included reassuring staff of confidentiality and the purpose of the study. During the interview phase, senior nurses and consultants agreed to inform staff of the imminent arrival of the questionnaire and its purpose.

Department 1 received questionnaires printed on white paper, Department 2 on green.

The results of the pilot study informed the questionnaire revision and a summary can be seen as appendix **G**. The departments used as pilot sites were also part if the main study,

they were therefore sent repeat questionnaires. The results of the pilot study were not included in the final analysis.

One comment from the pilot study served to alter the original design for distribution of the questionnaire. It was envisaged that a full questionnaire would be sent to :

1. All A&E consultants in England and Wales.
2. All registered nurses working within A&E departments within the West Midlands.

The pilot study comment suggested it more appropriate, in terms of time and accuracy of information, that each department received one questionnaire only.

When considering this comment, the following issues needed to be addressed:

1. Senior nurses and A&E consultants may hold different views and the study needed to gain information and provide a vehicle for all views to be expressed.
2. One of the study objectives is to recommend an integrated approach to child centred A&E care within the West Midlands. Therefore, a wider range of opinions needed to be gained from these departments.
3. It was obviously not effective, in terms of time and accuracy, for every member of staff in West Midlands A&E departments to be replying to the same questionnaire.
4. Interview content had identified training as the first ranked problem for staff.

The decision was made to alter the postal questionnaire distribution plan from the original distribution design of sending the full questionnaire to all registered nurses working in the West Midlands A&E departments.

The questions which addressed training needs were transcribed verbatim from the main questionnaire to compile as a short questionnaire, addressing those issues of training only (Appendix J). This short questionnaire was distributed by name to all registered nurses who were working within West Midlands departments. A stamped return envelope was enclosed.

At the same time the main questionnaire was distributed to all senior A&E nurses and consultants in England and Wales (Appendix I). A stamped envelope was enclosed for their reply.

All questionnaires were marked with a computer identification number, to facilitate return analysis and staff identification number i.e. Consultant 1, Senior Nurse 2.

The questionnaire was redrafted and the final copy can be examined as Appendix I. The questionnaire was photocopied onto four sides of A3 paper in order to present a neat, easily handled document.

In an attempt to improve the initial questionnaire response from 66%, it was decided to introduce a second mailing phase into the questionnaire distribution. As it was possible to identify those departments from whom a reply had not been received, a second questionnaire was posted to those individuals.

The covering letter (Appendix K) differed slightly from the first mailing. It needed to introduce some urgency into replies and re-affirm the importance of representing all views within the study.

The questionnaire phase of the study took place from September 1995 to March 1996. Second mailing questionnaires were distributed in January 1996, five weeks after the return date for first mailing questionnaire. The envelopes used for both first and second mailings were brightly cross marked in order to distinguish them. They were marked "private and confidential". A return address was included on both the questionnaire and envelope.

Telephone Interviews

The final investigative process of telephone interviews was designed to address the issues of accuracy of information, current service provision, verify information gained previously and to ensure comments and conclusions from Interview Phase II were still truly representative, therefore increasing the trustworthiness of the data.

There was also a need to provide the opportunity for interviewees to discuss changes in service and developments, therefore ensuring that the report is truly representative. The

main conclusions drawn from the interview phase provided a base for the development of six conclusions used within the telephone interview schedule (Appendix L). One interviewee from each department was asked, by telephone, to participate in the telephone interviews process.

Telephone Interview Schedule Pilot Study

As a result of a Pilot Study of the schedule in the two randomly selected pilot departments the following changes were made:

1. Small words such as “not” and “to” were replaced with alternatives whenever possible, as they were easily misheard.
2. A fuller explanation of the agree/disagree responses to the conclusions was offered as respondents felt it more difficult to formulate an opinion and respond during a telephone interview.
3. A separate schedule for each department replaced the original tick box tabulated form.
4. Comments were asked for to further substantiate views and, after recording, were read back to the respondent to ensure correct understanding.

The schedule wording was concise and clear, to try and compensate for the inadequacies of telephone conversation, i.e. poor lines, interference, background noise, distractions, lack of privacy. *All* of which could result in a question or conclusion being misheard.

Conclusions were presented in a mixed form of negative/positive. This served to minimise interviewer influence to responses and engage the interviewee in thought processes which led to further comments, enriching the information gained from this process.

Confidentiality

All departments were assigned a computer code number to facilitate analysis and protect anonymity. For the purpose of this study, departments were identified using that unique number.

Analysis of Information

This refers to information received from the face to face and telephone interviews and both the service provision and training questionnaires. Mason suggests that using quantitative and qualitative methods in one study broadens the concepts of the research. (Mason 1992).

Analysis of Interview Content

The mass of interview data does not lend itself to any conventional analysis tools and is particularly difficult to do, as there are no systematic rules for analysing and presenting qualitative data (Polit & Hungler). The analysis of data was considered during the development of the investigative tools for the study (Lofland 1971). In order to facilitate organised presentation and interpretation of qualitative data a coding schema was developed based upon the interview schedule and emerging data. This coding schema allowed grouping of the data, the search for themes and the frequency of occurrence within the interview. This system of analysis is recognised as accepted practice and guided by many established qualitative researchers (Polit & Hungler, Bulmer 1984, Spadley 1979.) The interview schedule was used as a template to identify key areas. A coding scheme using colours to link transcript notes to the key area interview template was developed.

Colour	Area	Key Words
Green	Important Aspects of Service	Training Staff Environment Assessment support
Pink	Philosophy of Care of Service	Facilities Equipment Waiting Area Audit Staff
Yellow	Order of Difficulties and Constraints	Staff Resource Planning/Policy

		Training
Blue	Emerging Themes and Illustrative Quotes	

Table 2 The template used for analysis of interview content.

This schema enabled easy identification of areas for analysis, highlighted emerging trends and simplified data retrieval and identification.

Analysis of both the face to face and telephone interview transcripts took the following form:-

1. Template Analysis

Each main question on the interview schedule was taken in turn and key words searched for. Accompanying relevant text was then highlighted in the colour coding scheme. Each group of colour text was then grouped and collated.

2. Thematic Analysis

Broad themes which emerged during the interview process were identified by :

- i. Using the colour coding scheme as described above - cross referencing between template questions for common referencing.
- ii. Monitoring the frequency of their occurrences as the interview process progressed. During the interview process it was possible to collate data on the basis of frequency of the occurrence. This grew as the information base broadened and emerging trends strengthened. Notes were kept of comment frequency relating to emerging issues. Illustrative quotes were transcribed verbatim during the writing of the interview report.
- iii. This analysis was undertaken manually as no computer based system of data handling and sorting was available at the time.

Telephone Interview

Descriptive text was linked back directly to the original interview transcript for that department. This process identified changes and developments, quantifying areas

where respondents disagreed with the telephone interviews conclusion. A summary of results from telephone interviews can be seen as Appendix N.

Analysis of Questionnaire

Replies were entered on to a spreadsheet (Appendix M) and analysed on a frequency distribution basis of responses leading to an average percentage calculation of responses to each question. Questions used in comparisons were subject to *chi* squared test. The questions addressing ranking were subject to *t* testing. All calculations are based on total population figures, not a sample. Departments within children's hospitals were included as part of the total population and included in the analysis of the main report, but not as a separate group for the purposes of this thesis.

Results

Results are organised to present replies showing an overview of paediatric A&E services within England and Wales, identifying developments over 10 years by comparing with a 1985 study (BPA/BPAS) and showing differences in training between West Midlands A&E nurses and their colleagues in England and Wales. The qualitative interview content is reported leading to an identification of level of services in West Midlands departments. Each table and graph is headed by the question which elicited the information and a written interpretation of the results is included in all cases.

1. General Description of Services and Activity Level - England and Wales
2. Comparison of Consultant replies 1995 with BPAS Survey 1985,
3. Comparison of Levels of Training of Nurses within the West Midlands A&E departments, and Nurses in A&E departments the rest of England and Wales.
4. Interview and Telephone Interviews Data West Midlands, Telephone Interviews Data Summary.
5. West Midlands Service Developments

General Description of Services

This section presents the analysed replies from all the returned questionnaires. Each question is presented separately, as indicated by inclusion of the question and its number on the questionnaire at the head of each element of results.

Question 1

Question one asked what their qualifications and job title of the respondent was. This information is presented below in Table 3.

Reply Analysis	Number Replying	%	*N
Total number of departments replying	232	94%	247
Total number of questionnaires returned	394	80%	492
Total number of Senior Nurses replying	207	84%	247
Total number of Consultants replying	187	76%	247
Total number of West Midlands depts replying	24	100%	24

N.B. %age figures are based on total issued

Table 3 The analysed level of replies in the groups which are used in order to present the results of the study.

Information about 232 of 247 (94%) departments was obtained from the questionnaires completed and returned. (*N in this context will mean total number i.e. the denominator)

Question 2

Which of the following are present in your department.

Facilities for children were present in some form in 96% of departments surveyed.

- 96% provided toys and play materials.
- 86% had children's play and waiting room.
- 79% had a Paediatric Treatment Room.

- 61% had a Paediatric Resuscitation Area.
- 55% have toilet and feeding facilities.
- 79% of departments said their facilities were acceptably safe.
 - 62% of departments said their facilities were suitably equipped
 - 68% said they were suitably decorated.

Question 3

Which other agencies are involved with the paediatric service?

The table below shows the agencies reported as being involved with the paediatric service

	Number of Departments.	% of replying Departments.
Health Visitor	215	88%
Social Services	169	69%
Community Paediatric Nurse	81	32%
School Nurse	54	24%
Voluntary agencies	25	10%
Others	28	11%

n.b. Total exceeds 100% because departments may involve more than one other agency.

Table 4 Agencies involved with the paediatric service

When asked which other agencies are involved in the Paediatric Service there was agreement across England and Wales on the two main agencies being Health Visitor **88%**, and Social Services 69%, as shown in the chart below

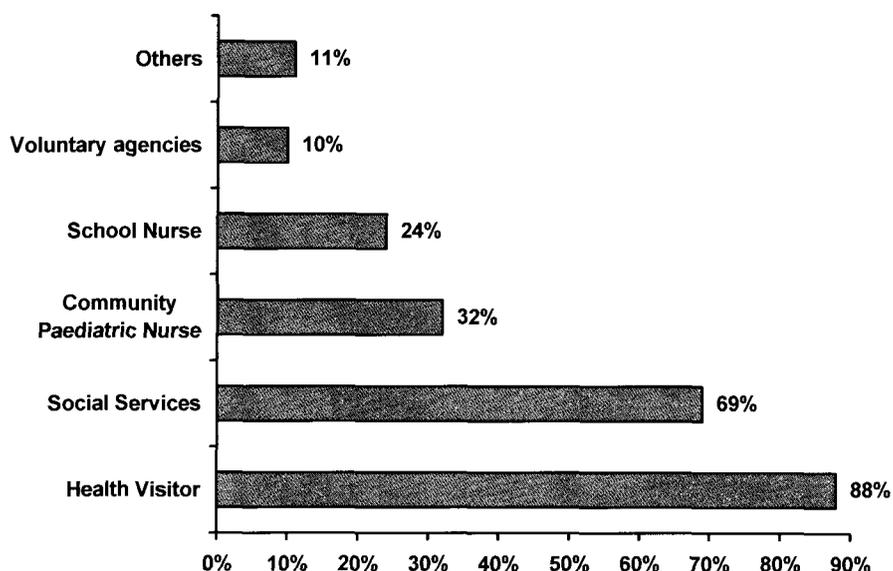


Figure 1 Agencies involved with the paediatric service (Question 3)

Question 4

Does the Record Keeping System separate children from adults?

41% of departments (95 of 232) said they do not keep separate records for paediatric attendees, as shown in the pie chart below.

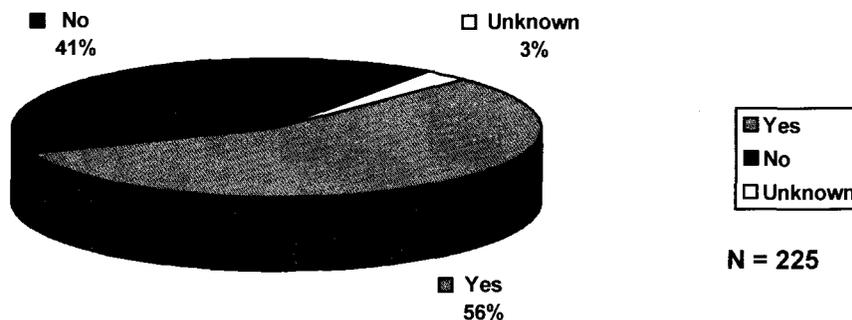


Figure 2 Record keeping systems that separate children from adults (Question 4)

Question 6

What proportion of new attendance's to your department are children?

72% of Departments replied and said children are 29% of their attendees (Mean= 5, Std. Dev.= 17.39). Departments reporting 100% child attendees were in Children's Hospitals.

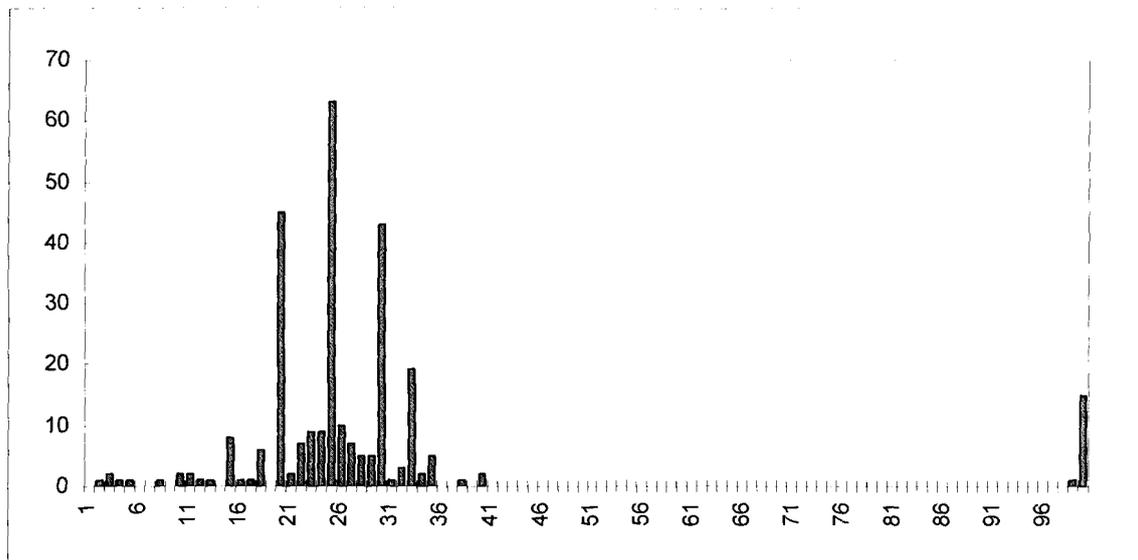


Figure 3. Children as a percentage of total attendees.

Question 7

Does the record keeping system enable repeated attendance's by young children to be separately identified from total attendance's?

68% of departments have systems in place that enable repeated attendance's by young children to be separately identified from total attendance's. The pie chart below show that **24%** of departments have no system and **8%** were unable to answer.

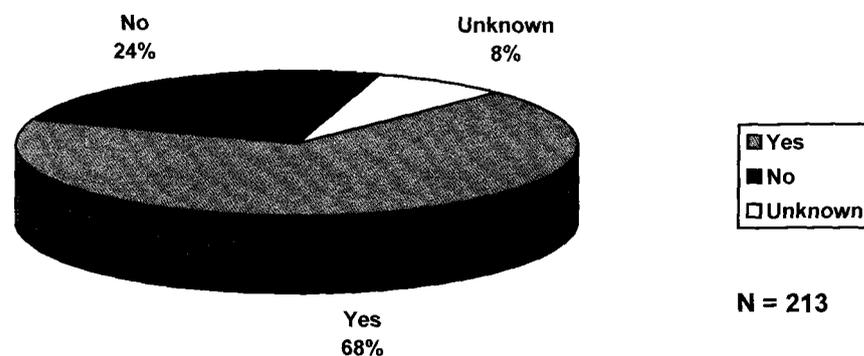


Figure 4 Record keeping systems that enable repeated attendance's by young children to be separately identified from total attendance's (Question 7)

Question 8

What times of day do children attend your department? Please state % attendance's between the hours shown

Time of Day	% paediatric attendance's	Std. Dev.
07:00 - 12:00	21%	13.00
12:01 - 22:00	62%	16.22
22:01 - 02:00	9%	7.24
02:01 - 06:59	3%	4.03

Table 5 Times of day children attend Accident & Emergency

87% departments did not calculate this information, however amongst those that did 62%, report the peak attendance time for children as being between 12 noon and 10 p.m., as shown in the chart below.

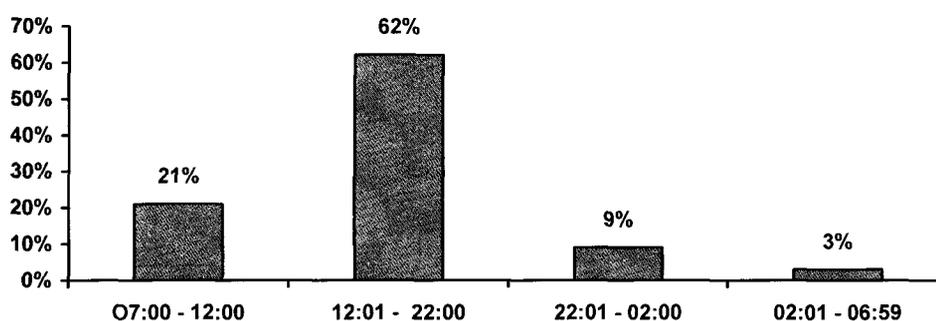


Figure 5 Times of day children attend Accident & Emergency (Question 8)

Question 9

Are there any special arrangements to reduce the waiting times for children?

81% departments had special arrangements to reduce waiting times for children. The Table below shows the collated and analysed replies to this question.



If Yes Specify	Number	%
Triage Assessment	181	52%
Children given priority	91	26%
Seen within 1 hour	41	12%
Colour code	12	3%
Seen a.s.a.p.	5	1%
Seen within 2 hours	4	1%
Separate room	2	1%

n. b. Some departments who replied yes gave more than one answer hence the total % will exceed 100%

Table 6 Special arrangements made to reduce the waiting times for children.

There is no universal assessment criteria. Triage is the most used at 52% of replies, as shown in the chart below.

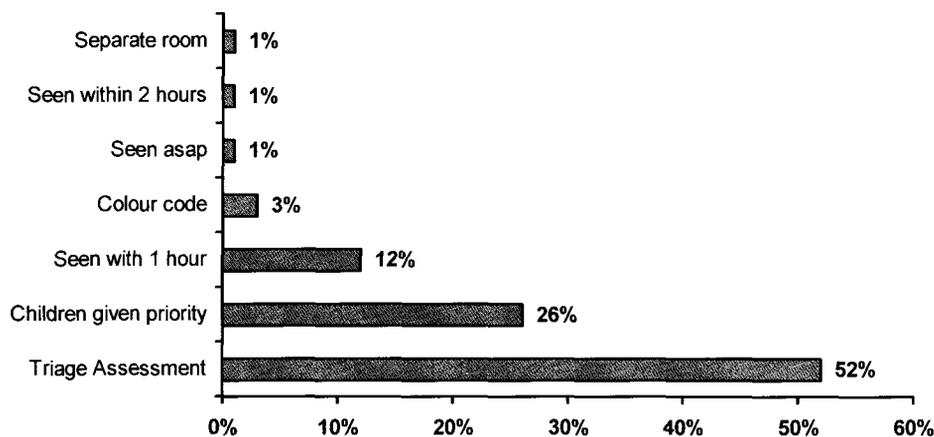


Figure 6 Special arrangements made to reduce the waiting times for children. (Question 9)

Question 10

Is there a resident Sick Children’s Nurse on the permanent staff of your Accident & Emergency Department?

123 departments (53% of 232) reported that there was a Registered Sick Children’s Nurse on their staff, the pie chart below shows that 47% of departments do not have a Sick Children’s Nurse.

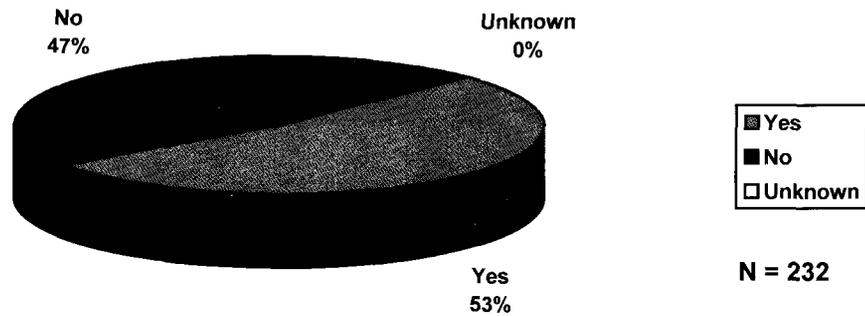


Figure 7 Departments having a resident Sick Children's Nurse on the permanent staff. (Question 10)

Question 11

Does the Consultant Paediatrician or member of his/her staff visit your department on a regular basis?

45% of departments (104 of 232) are visited on a regular basis by the Consultant Paediatrician or a member of staff, however the pie chart below shows that 55% of departments do not receive regular visits.

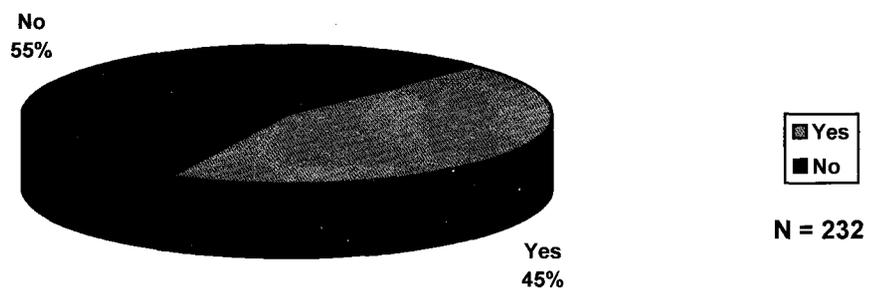


Figure 8 Departments visited by the Consultant Paediatrician or member of his/her staff on a regular basis. (Question 11)

Question 12

Are the Consultant Paediatrician or member of his/her staff involved in policy decisions regarding paediatric care within your department?

In 72% of departments (167 of 232) the Consultant Paediatrician or member of his/her staff is involved in policy decisions regarding paediatric care within the department, see the pie chart below.

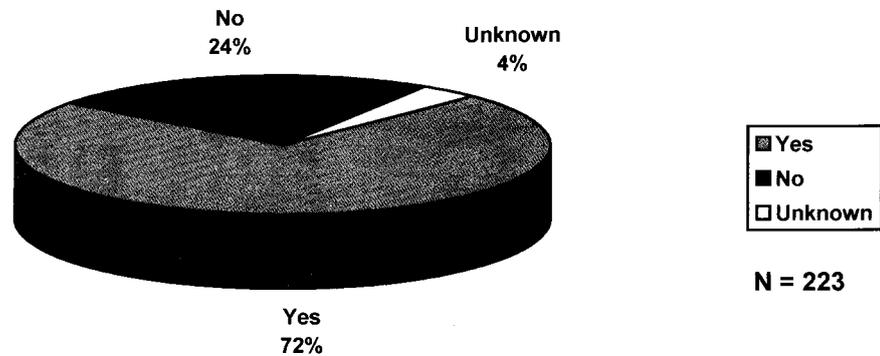


Figure 9 Departments where the Consultant Paediatrician or member of his/her staff is involved in policy decisions regarding paediatric care. (Question 12)

Question 14

Are the main in patient facilities for your districts in your hospital?

169 (73% of 232) Departments have the district's main in patient facilities within the hospital.

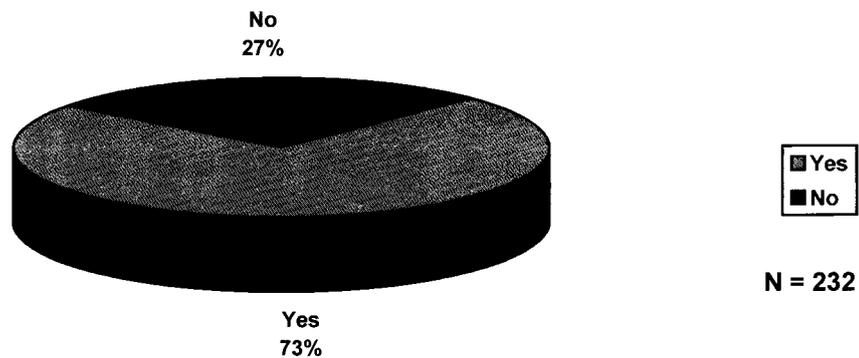


Figure 10 Departments where the main in patient facilities for the district is within the hospital. (Question 14)

Question 15

The coverage of main paediatric facilities for the district.

The table below shows the coverage of paediatric facilities.

	Number	% age
General Paediatric Medicine	190	82%
Trauma	176	76%
Paediatric General Surgery	169	73%
Day Surgery	162	70%
ENT	141	61%
Intensive care	118	51%

Plastic Surgery	12	5%
Ophthalmic	9	4%
Orthopaedic	9	4%
Neurosurgical	8	4%
Burns	8	4%
Others	32	14%

N.B.. Some departments who replied gave more than one answer hence the total % will exceed 100%

Table 7 The coverage of paediatric facilities.

The chart below shows the coverage of paediatric facilities within the hospitals.

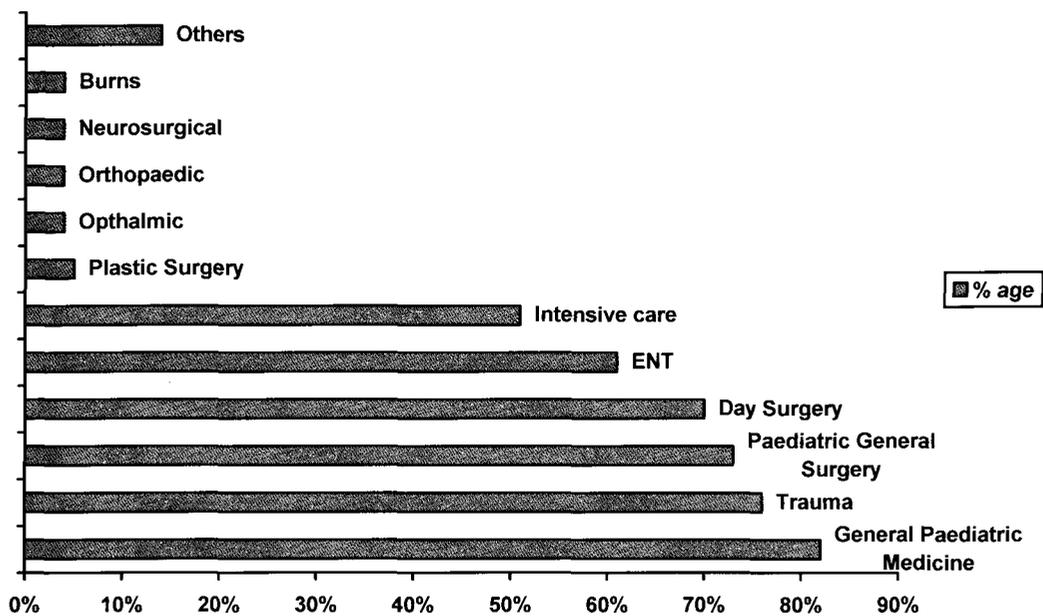


Figure 11 The coverage of paediatric facilities. (Question 15)

Question 16

What is the distance between the A & E department and the main Paediatric Inpatient facilities?

The Chart below shows the reported distances between the A & E department and the main Paediatric Inpatient facilities.

	Number	% age of 232 Depts.
On-Site (within two miles)	172	74%
2 - 4 miles	28	12%

5 - 9 miles	12	5%
10+ miles	16	9 %

Table 8 The distance between **A & E** departments and main Paediatric Inpatient facilities.

The chart below shows the reported distances between the **A & E** department and the main Paediatric Inpatient facilities.

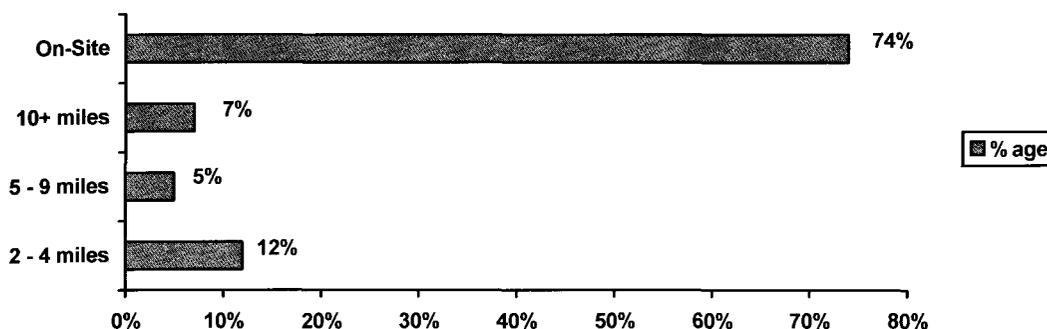


Figure 12 The distance between the **A & E** departments and the main Paediatric Inpatient facilities. (Question 16)

Question 17

What is the distance between the A & E Department and main paediatric intensive care facilities?

The table below shows the reported distances between the **A & E** Department and main paediatric intensive care facilities?. These were not specified as within a paediatric centre.

	Number	% of 232 Depts.
On-site - within 2miles	100	43
2 - 4 miles	28	12
5 - 9 miles	28	12
10 plus miles	76	33

Table 9 Distance between **A & E** departments and main Paediatric ICU facilities

The chart below shows the reported distances between the A & E Department and main paediatric intensive care facilities?

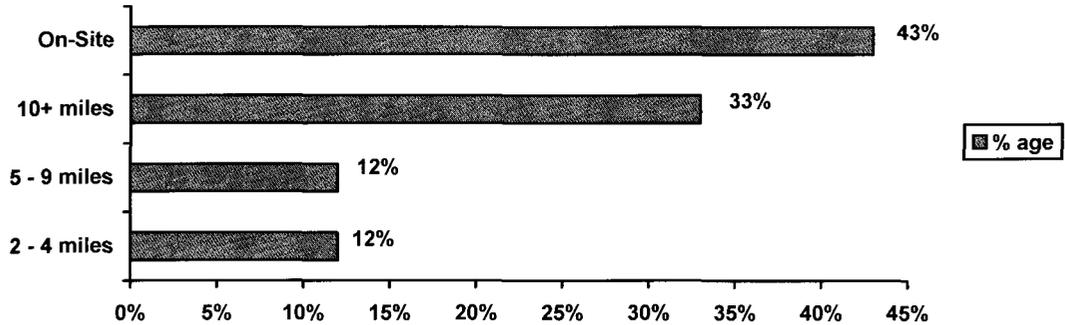


Figure 13 Distance between A & E departments and main paediatric ICU facilities (Question 17)

Question 18

How are children usually transferred to more specialised facilities?

The table below shows the reported methods used to transfer children to more specialised facilities

	number	% of 232 Depts
by road ambulance	206	89
nurse escort	169	73
doctor escort	165	71
paramedic crew	132	57
by air ambulance	42	18

n. b. Some departments who replied yes gave more than one answer hence the total % will exceed 100%

Table i0 Methods by which children are transferred to specialised facilities

The chart below shows methods used to transfer children to more specialised facilities

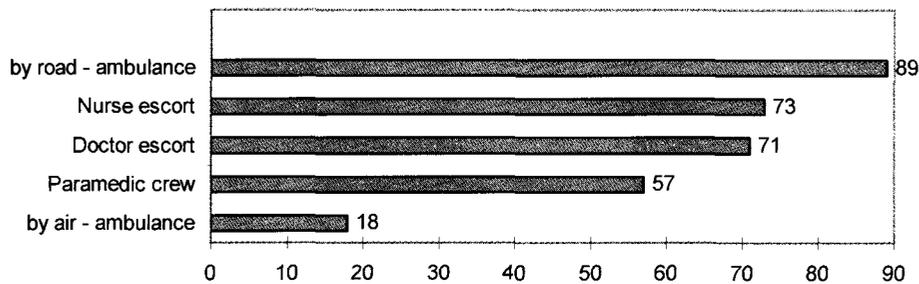


Figure 14 Methods by which children are transferred to specialised facilities (question 18)

Question 22

Barriers and Constraints to providing Child Centred Emergency Care

The chart below shows the reported Barriers and Constraints to providing Child Centred Emergency Care, ranked according to perceived importance. The lack of trained staff, and the absence of dedicated resources were seen as the two greatest barriers to providing child centred emergency care, others are shown in the chart.

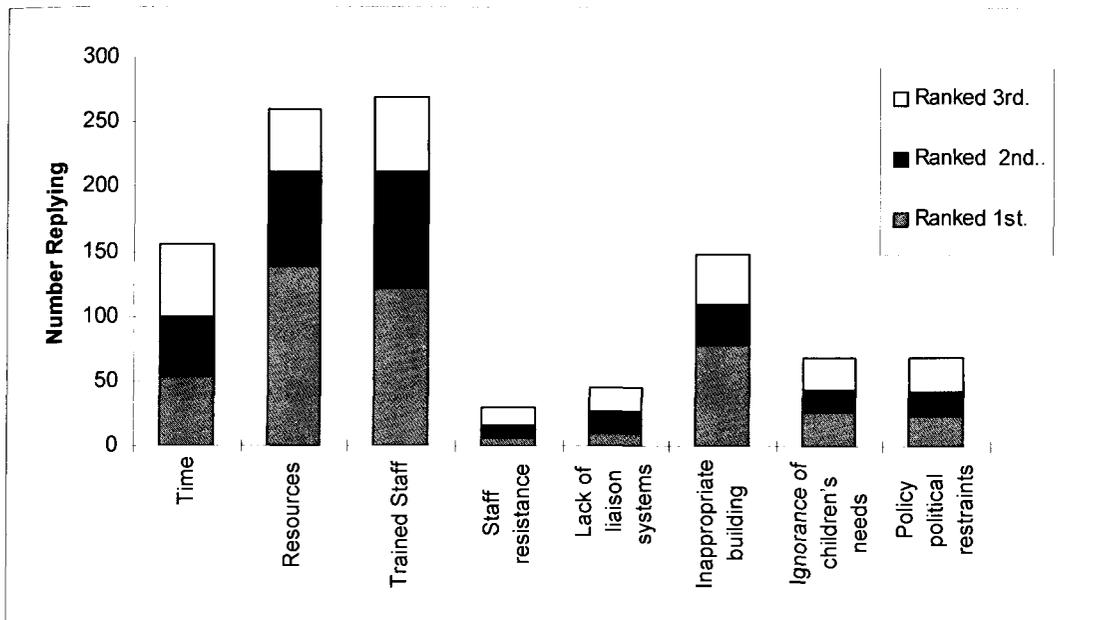


Figure 15 The reported Barriers & Constraints to providing child centred emergency care (Question 22)

Consultant replies (1995) and Consultant survey BPASBPA 1985

Consultant replies 67% (167 replies) in 1985 and 76% (189 replies) in 1995.

For each element of this section of the results the number of replies was constant to all questions therefore N=167 for 1985, and 189 for 1995.

Comparisons between the Consultant 1995 replies and the Consultant survey by the **BPAS/BPA** 1985 indicate the following:-

Question 2 (Question 9 in BPAS/BPA Survey 1985)

Is there a waiting room for children?

The chart below shows there has been an increase of more than 3 fold in departments providing a waiting room for children over the 10 year period.

Comparison of % Yes replies in 1985 and 1995 gives χ^2 value of 128.85 and $p < 0.01$

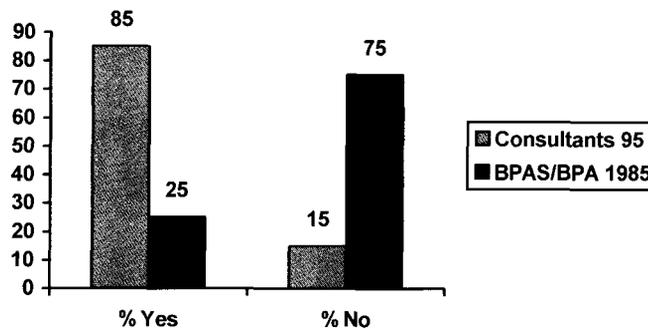


Figure 16 Waiting Room facilities comparison 1985 - 1995 (Question2)

Question 2 (Question 10 in BPAS/BPA Survey 1985)

Is there a children's treatment room?

Comparison of % Yes replies in 1985 and 1995 gives χ^2 value of 95.87 and $p < 0.01$

A threefold increase in departments providing a children's treatment room over the 10 year period, is shown in the chart below

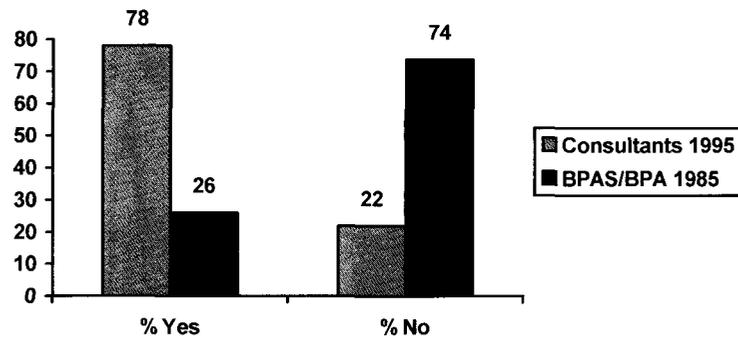


Figure 17 Children's treatment room facilities comparison 1985 - 1995 (Question 2)

Question 7 (Question 14 in BPAS/BPA Survey 1985)

Does the Record Keeping System enable repeated attendance's by young children to be separately identified?

Significantly fewer departments identify repeated attendance's in the 1995 group as shown in the chart below. Comparison of % Yes in 1985 and 1995 gives a χ^2 value of 8.54 and a probability of 0.003.

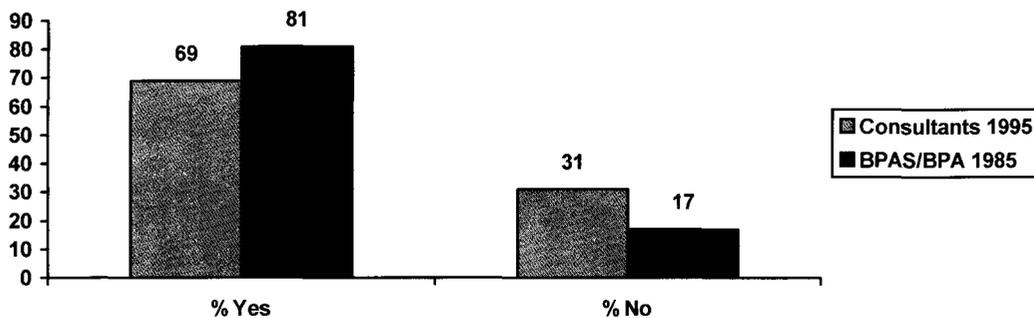


Figure 18 Comparison of record keeping systems for repeated attendance's by young children, 1985 - 1995. (Question 7)

Question 10 (Question 11 in BPAS/BPA Survey 1985)

Is there a Resident Sick Children's Nurse on the permanent establishment of your A & E department?

The chart below shows a 333 % increase in Sick Children's Nurses over the ten year

period. Comparison of % Yes in 1985 and 1995 gives a χ^2 value of 51.77, and a probability of < 0.01

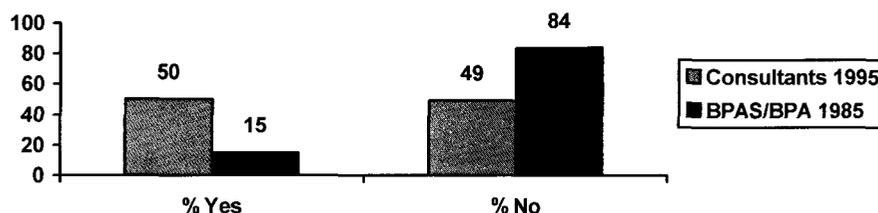


Figure 19 Consultants reporting a Registered Sick Children's Nurse on the permanent establishment of the department 1985-1995. (Question 10)

Question 11 (Question 6 in BPAS/BPA Survey 1985)

Does the Consultant Paediatrician or member of his/her staff visit your department on a regular basis?

The chart below demonstrates that there has been an estimated increase in consultant visits of 571% during the 10 year period. Comparison of % Yes in 1985 and 1995 gives a χ^2 value of 57.77, and a probability of < 0.01

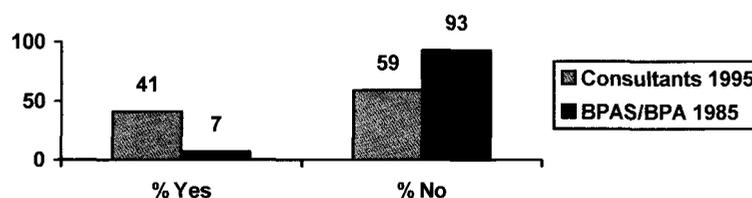


Figure 20 Consultants reporting visits by Consultant Paediatrician or member of his/ her staff to (Question 11)

Question 14 (Question 3 in BPAS/BPA Survey 1985)

Are the main paediatric inpatient facilities in your hospital?

The chart below show no significant change within the provision of on-site facilities over the ten year period. Comparison of % Yes in 1985 and 1995 gives a χ^2 value of 0.65, and a probability of 0.42

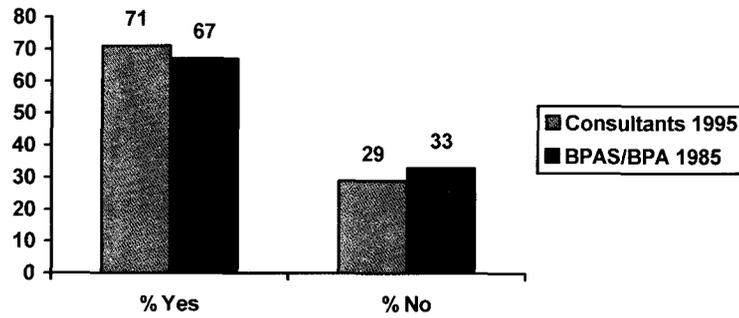


Figure 21 Consultants reporting main paediatric facilities on site 1985 - 1995 (Question 14)

Question 16 (Question 4 in BPAS/BPA Survey 1985)

What is the distance between the A & E department and the main Paediatric inpatient facilities?

The chart below demonstrates the number of departments transferring over 10 miles has doubled to 10%. Comparison of % Yes in 1985 and 1995 gives a χ^2 value of 0.03, and a probability of 0.86

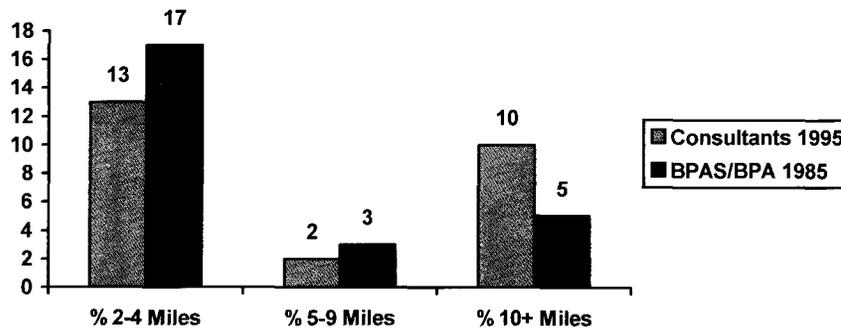


Figure 22 Distances between A & E departments, and the main Paediatric inpatient facilities comparison 1985 - 1995 (Question 16)

Level of service in the West Midlands compared with that in the rest of England and Wales.

The total replies received from the two groups under analysis were 100% from West Midland departments and 94 % of departments in the rest of England and Wales.

West Midlands 39 (24 Departments)

Rest of England & Wales 355 (232 Departments)

This section of the results presents specific differences which have been identified by comparisons in the reported aspects of the Paediatric A&E services in West Midlands departments and those in the Rest of England and Wales.

Question 3

Which other services are involved with the paediatric service?

Community Paediatric Nurse comparison

The chart below shows a greater provision in the rest of England and Wales group than in the West Midlands. Comparison of % Yes between the West Midlands and the rest of England gives a χ^2 value of 4.04, and a probability of <0.05

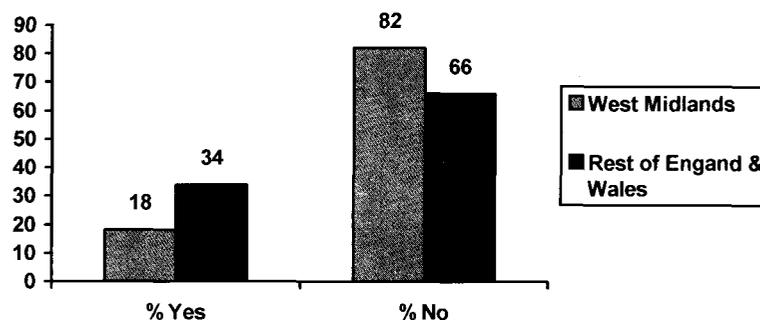


Figure 23 Community Paediatric Nurse comparison West Midlands and the rest of England & Wales

Question 10

RSCNs in A & E departments West Midlands, rest of England and Wales comparison

The chart below demonstrates significantly fewer RSCNs in the West Midlands, less than half the provision in the rest of England and Wales. Comparison of % Yes between the West Midlands and the rest of England gives a χ^2 value of 51.09, and a probability of <0.01 .

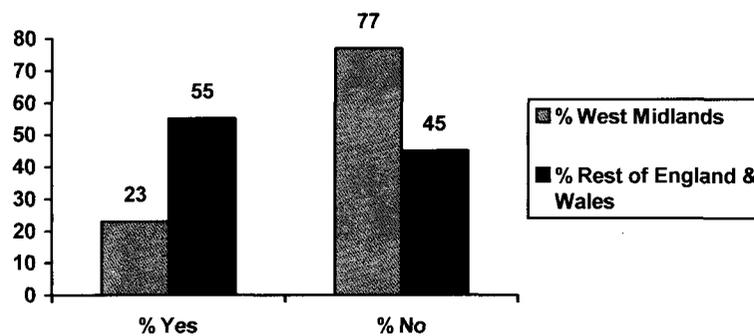


Figure 24 RSCNs in A & E departments, West Midlands rest of England and Wales comparison

Question 2

Which of the Following are present in your department?

Feeding and Toilet Facilities, West Midlands rest of England & Wales comparison

The chart below shows significantly poorer provision the West Midlands, less than half the provision in rest of England and Wales. Comparison of % Yes between the West Midlands and the rest of England gives a χ^2 value of 12.89, and a probability of <0.01

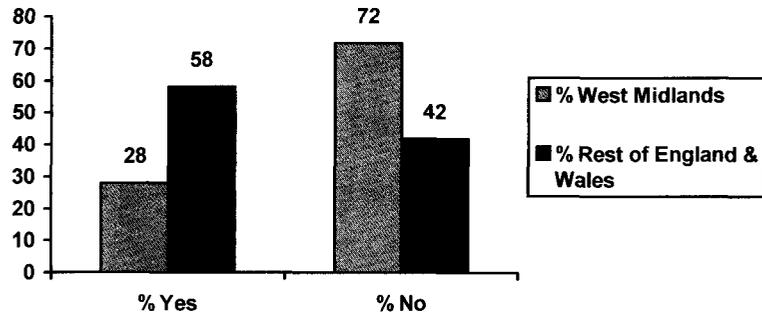


Figure 25 Feeding and toilet facilities, West Midlands rest of England and Wales comparison

Question 2b

Suitably Decorated Areas for Children’s Treatment and waiting, West Midlands, rest of England & Wales comparison.

The chart below shows significantly poorer provision of suitably decorated areas for children’s treatment and waiting in West Midlands replies. Comparison of % Yes between the West Midlands and the rest of England gives a χ^2 value of 7.41, and a probability of <0.01

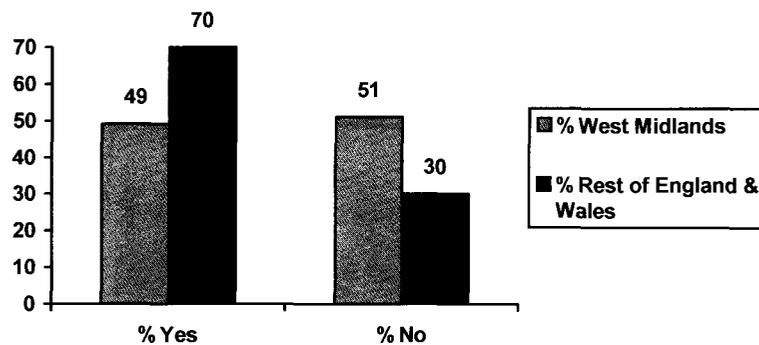


Figure 26 Suitably decorated areas for children’s treatment and waiting, West Midlands rest of England and Wales comparison.

Question 17

Departments reporting ICU facilities on site, West Midlands rest of England & Wales comparison.

As shown in the chart below children are less often treated within On-Site ICU facilities within the West Midlands, it should be noted that this question does not refer to specifically to specialised ICU facilities. Comparison of % Yes between the West Midlands and the rest of England gives a χ^2 value of 9.04, and a probability of <0.01

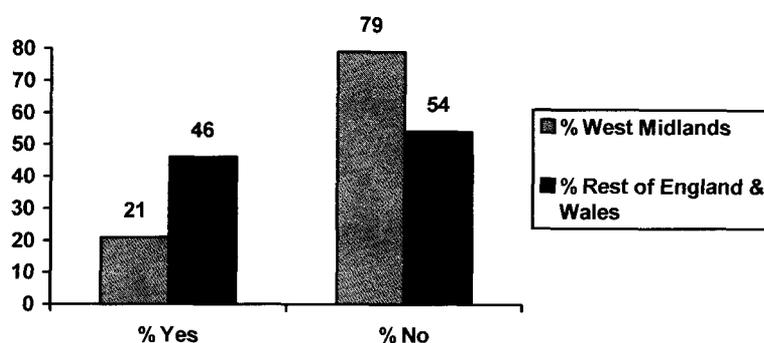


Figure 27 ICU on site, West Midlands rest of England & Wales comparison.

Question 18

Air Ambulance use for patient Transfer, West Midlands England and Wales comparison.

Comparison of % Yes between the West Midlands and the rest of England gives a χ^2 value of 54.13, and a probability of <0.01

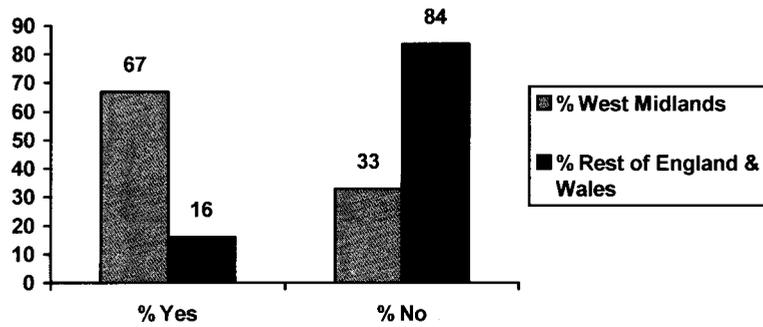


Figure 28 Air Ambulance use for patient Transfer, West Midlands rest of England and Wales comparison

Comments

Differences indicate that the West Midlands **A&E** departments provide fewer facilities **than** their England and Wales counterparts in reference to feeding and toileting facilities, and suitable decoration for child areas in **A&E** departments.

There are fewer RSCNs in **A&E** departments in the West Midlands (**23%**), although reference to the interview and telephone interviews report will show a growth in that area since questionnaire distribution.

Children are less often cared for in on-site ICU facilities in the West Midlands (**21%**) but more often (**67%**) transferred to off site Intensive Care facilities by air ambulance.

Training Comparison, registered nurses West Midlands, registered nurses rest of England & Wales.

This section of the results demonstrates levels of training received by registered general nurses on specified issues related to Paediatric A&E care, as identified within the RCN document specifying training requirements (RCN 1990). A comparison of training received by nurses in the West Midlands A&E departments and those nurses working within A&E departments in the Rest of England and Wales is made. Nurses were asked to report on any training received over the previous year and on the five years previous in order to elicit any growth or changes over time.

Reply Analysis	No	%
West Midlands		
Questionnaires distributed to registered nurses in A&E	145	
Replies:-		
RGNs	97	68%
RGNs in a senior post	26	18%
RMN	2	1%
Role unspecified	19	13%
Total replies received.	142	98%
Rest of England and Wales		
Questionnaires distributed to registered nurses in A&E	247	
Replies received RGNs	188	76%

N B. % figures are based on total issued except where otherwise stated.

Table 11 Training Comparison, registered nurses West Midlands, registered nurses rest of England & Wales

Training Evaluation

Question 2

Respondents were asked to indicate, for each element, which of the following have you had study days etc. in the last year and in the 5 years before, please tick.

Child protection training

31 nurses in the West Midlands have received some training regarding Child Protection. 111 have received no training. Outside the West Midlands 140 nurses have received training regarding child protection, 40 have not. Values shown represent significant difference in proportion receiving training between the two groups within one year. Figures show a growth in this element of training outside the West Midlands departments in respect of child protection.

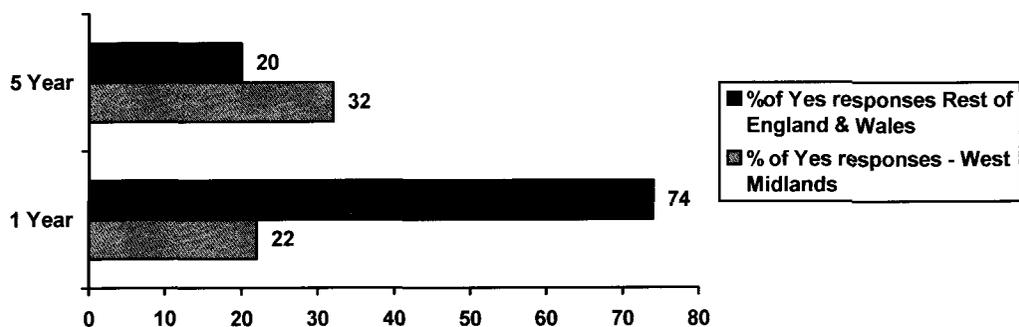


Figure 29 Child protection training, West Midlands England and Wales comparison.

Comparison of Y_0 responding Yes between West Midlands and the rest of England and Wales. Values given by analysis were χ^2 89.77 $P= 0.01$ in the replies concerning training within the last year and χ^2 5.66, $p = 0.0173$ on replies from training in the five years before.

Advanced Paediatric Life Support training, West Midlands rest of England and Wales comparison

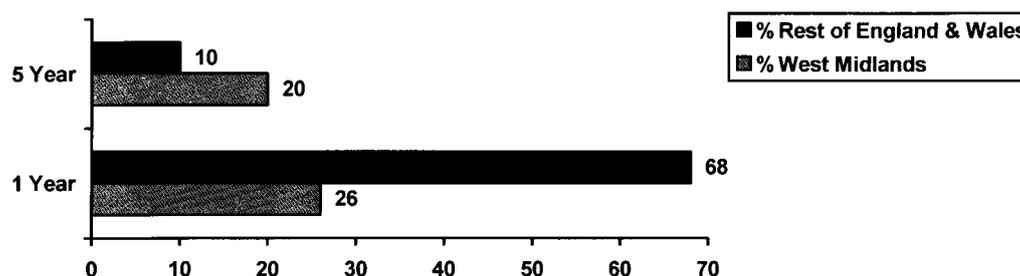


Figure 30 Advanced paediatric life support training, West Midlands rest of England and Wales comparison

On the analysis of training within the last five years West Midlands replies show significance in a two fold increase of this form of training compared to the rest of England and Wales, χ^2 6.93 $p=$ 0.01. However the figures for training within the last year show a growth in this form of training outside the West Midlands χ^2 55.72 $p=$ <0.01.

Head Injury in Children training

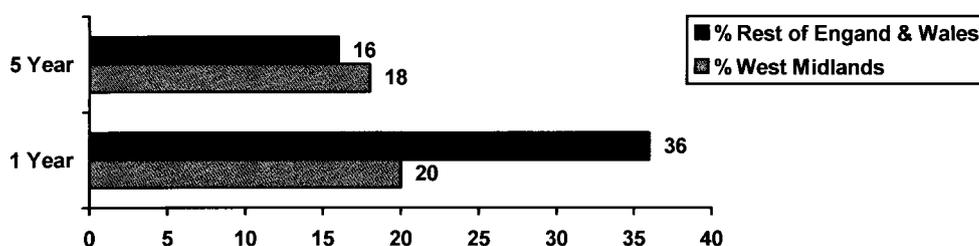


Figure 31 Head injury in children training, West Midlands rest of England and Wales comparison.

A significantly greater number of nurses in the West Midlands have had no training on the Management of Children with Head Injuries. Within 1 year in the West Midlands 80%, 54% in of England and Wales, Chi square value of 10.61 and probability of < 0.01. In the last 5 years 82% West Midlands, 84% England and Wales giving Chi square value of 0.19 and probability of <0.67. There has been no growth of training in this area in any group over 5 years.

Spinal Injuries in Children training

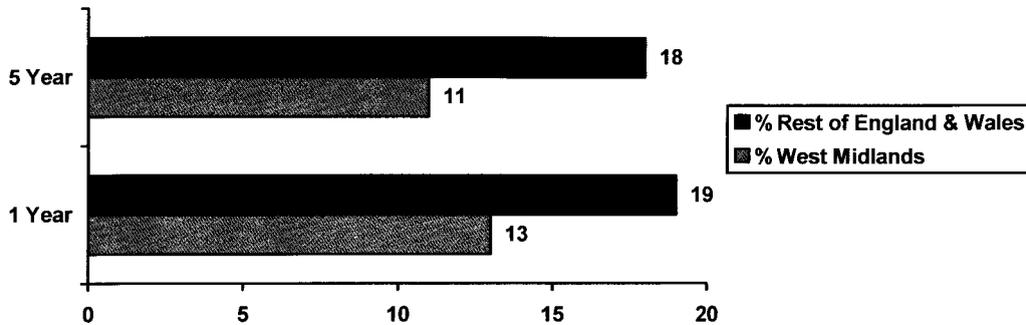


Figure 32 Spinal injuries in children training, West Midlands rest of England and Wales comparison

Values represent low levels of training within the groups on the 1 year analysis, Chi square value of 1.94 and probability of 0.16. The figures within five years show a similarly low level of training on the Management of spinal injuries in Children across the country, Chi square value of 3.62 and probability of 0.06. There has been no significant growth of training in this area in any group over 5 years.

Informed Consent training

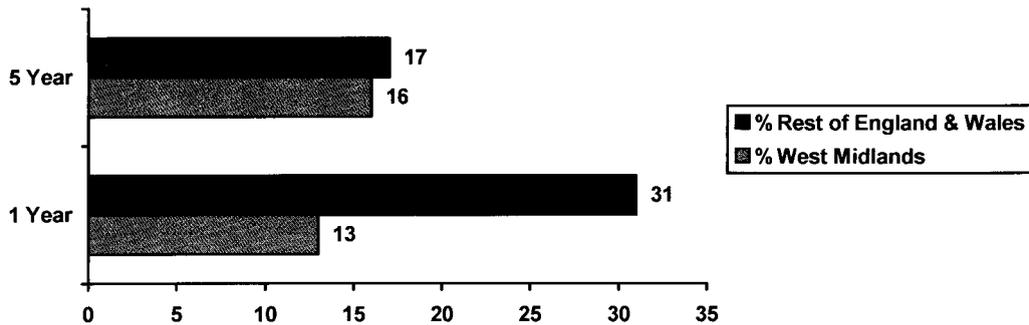


Figure 33 Training in eliciting informed consent, West Midlands rest of England and Wales comparison

Training in rest of England and Wales Departments in the last year was significantly greater than in the West Midlands However, Chi square value of 14.53 and probability of < 0.01. In the last five years 84% of West Midlands A&E nurses and 83% of rest of England and Wales A&E nurses have not received any training on the issues related to informed consent, Chi square value of 0.04 and probability of 0.84 Similarity is shown between the two groups on the five year calculation.

Sudden Infant Death training

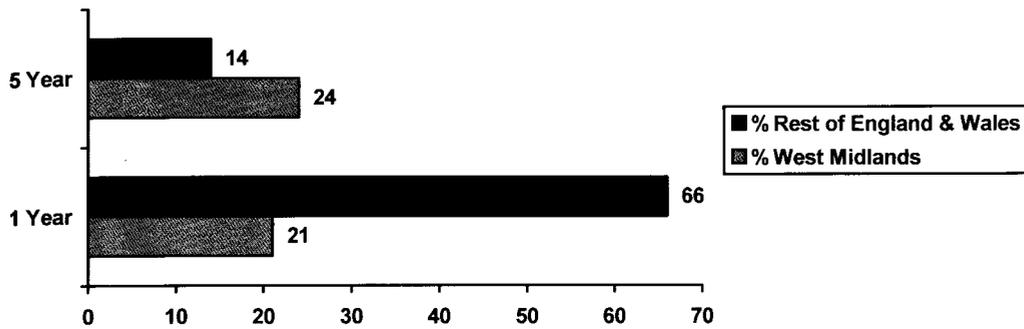


Figure 34 Sudden Infant Death training, West Midlands rest of England and Wales comparison

Figures show greater levels of training regarding Sudden Infant Death in the England and Wales departments Chi square value of 65.32 and probability of <0.04 , which contrasts with a greater provision in the West Midlands over the five years, Chi square 5.56 and probability of 0.02.

Management of Minor Injuries training

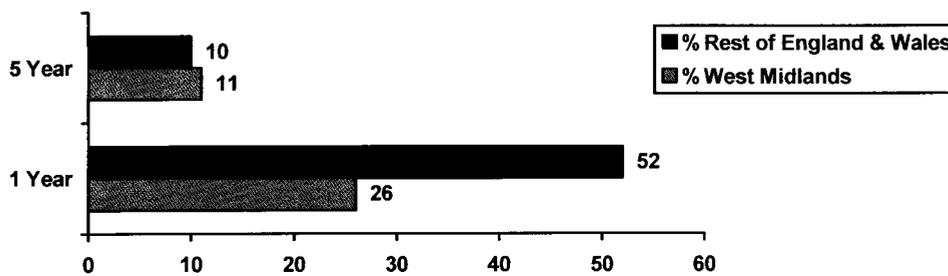


Figure 35 Management of minor injuries training, West Midlands rest of England and Wales comparison

The most significant statistic in this calculation is the indicator of the proportion of West Midlands nurses who have not had any training in Paediatric Minor Injury Management (64%), Chi square value of 21.88 and probability <0.01 . There is no significant difference in the level of training between the two groups within five years, Chi square value of 0.12 and probability of 0.73.

Legal Aspects of Care training

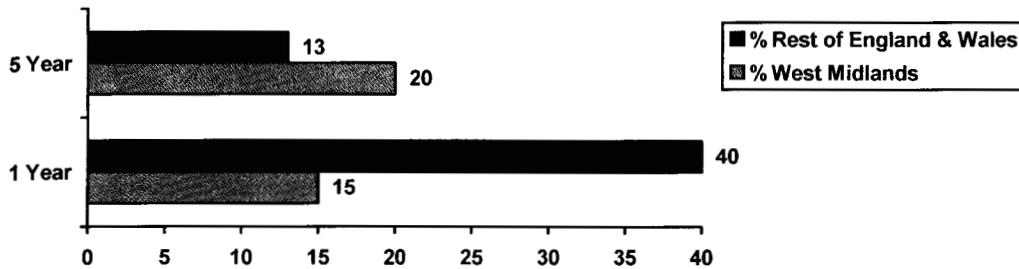


Figure 36 Legal aspects of care training, West Midlands rest of England and Wales comparison

There is a greater proportion of staff trained (266%) in departments in the rest of England and Wales within 1 year, Chi square value of 26.70 and probability of <0.01 . There is no significant difference between the two groups over five years, Chi square value of 2.47 and probability of 0.12.

Asthma in Children training

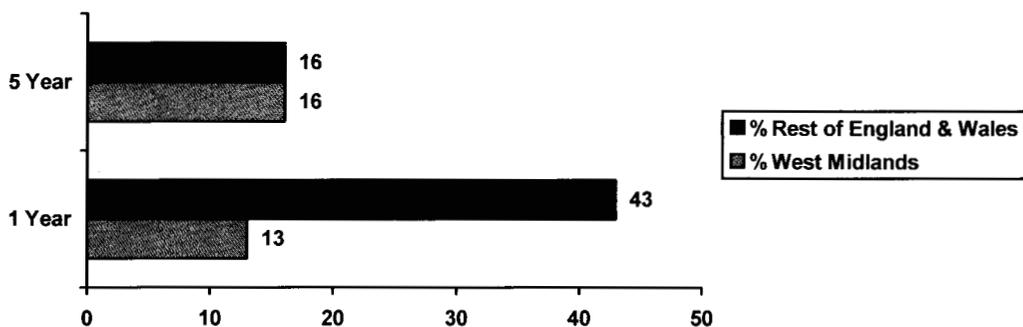


Figure 37 Asthma in children training, West Midlands rest of England and Wales comparison

Only 18 nurses from 142 within the West Midlands group have had an update in the management of childhood asthma.

There is a greater amount of training delivered in England and Wales departments within one year (330%), Chi square value of 35.62 and probability of <0.01. There is no significant difference in the amount of training over five years, giving Chi square value of 0.01 and probability of 0.94

RCN Guidelines for Children's Services in Accident and Emergency training.

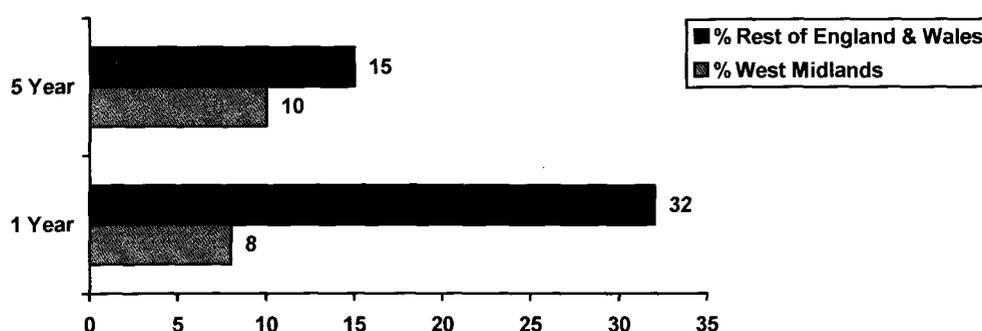


Figure 38 RCN Guidelines for children's services in Accident and Emergency training, West Midlands rest of England and Wales comparison.

Significantly higher amount of training outside West Midlands departments, Chi square 28.93 and probability of <0.01 for 1 year, for 5 years Chi square value of 2.21 and probability of 0.14. 131 nurses out of 142 who replied within the West Midlands have had no training regarding the RCN Guidelines for A&E Children's Services.

The Children Act training

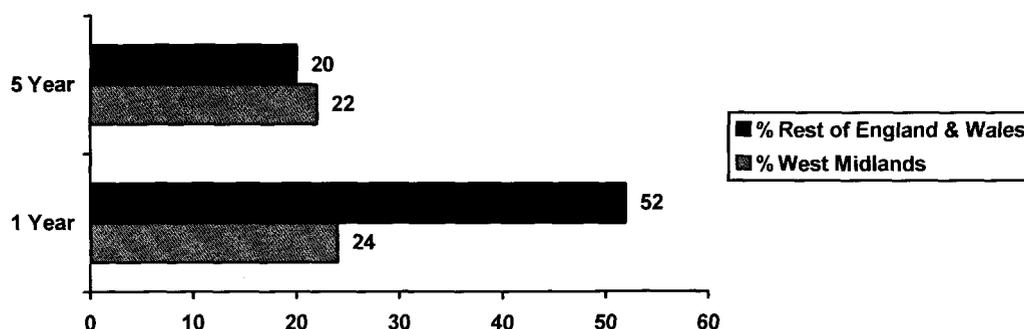


Figure 39 The Children Act training, West Midlands rest of England and Wales comparison

The amount of training is greater in England and Wales departments, in comparison to West Midland departments over 1 year, Chi square 25.84 and probability of <0.01. There is no significant difference over 5 years, Chi square value of 0.23 and probability of 0.63. 69% of West Midlands A&E nurses consider the level of training received inadequate for their present needs. 52% of England and Wales A&E nurses consider the level of training received inadequate for their present needs.

Interview and Telephone Interviews Qualitative Data West Midlands Departments

012	Birmingham Children's Hospital	Senior Nurse	Consultant
013	Heartlands	Senior Nurse	Consultant
053	City Hospital		Consultant
068	Good Hope	Senior Nurse	Consultant
096	Kidderminster	Senior Nurse	Consultant
116	Walsall	Senior Nurse	Consultant
174	Wolverhampton		Consultant
185	Shrewsbury	Senior Nurse	
231	Telford	Senior Nurse	Senior Registrar.
190	Russell's Hall	Senior Nurse	Consultant
207	Selly Oak		Consultant
211	Solihull	Senior Nurse	
212	General Hospital	Senior Nurse	Consultant works at two sites - seen at Selly Oak
251	Worcester	Senior Nurse	Consultant
003	Redditch	Senior Nurse	Consultant
214	South Warwickshire District and General	Senior Nurse	

Table 12 Analysis of hospitals visited in the West Midlands

16 Departments seen in total; as one consultant represents two hospitals and was seen at one site; **22** Departments in interview Sample; **77%** of interviews achieved.

Consultants seen in **14** of **17** interviews (82%); Senior Nurses seen in **12** of **17** interviews (70%).

This section of results reports qualitative data obtained from face to face interviews and telephone interviews. The interview schedule template was used as a structure for face to face interviews and is also used as a structure for reporting. The telephone interview schedule is shown and results are linked to its format.

1. What do you think are the most important aspects of an emergency service for children?

All interviewees agreed on key elements of the service:

- Prompt assessment by suitable skilled and trained staff,
- Safe environment which protects the child;
- Equipment for resuscitation;
Play and toileting facilities
- A system which assesses, prioritises and addresses waiting time in children;
Maintaining the family unit
Swift access to paediatric nursing and medical support when needed.

Telephone interview comments confirm these results, finding complete agreement between departments regarding the importance of skilled staff and prompt assessment. Other items mentioned were child protection training, a referral and liaison system between hospital and community staff and availability of training for A&E staff in other areas of paediatric care, i.e. communication, play, assessment of the sick child.

2. Please tell me about the departmental philosophy of care and service for paediatric patients.

No department had a separate philosophy of care for its paediatric patients. The service for children varied greatly between departments. Staff operated within the constraints of available paediatric expertise, resources, attitudes of individuals who influenced the service, demands of the service and support provided by the hospital paediatric department

In all departments interviewed, children comprised between 25% and 38% of the total patient input to Accident and Emergency.

- No department had a separate budget for the paediatric element of the service.
- Two departments had a member of staff with a designated responsibility for the paediatric client group. Others did not differentiate between children and adult patients within the department as far as staffing was concerned.
- All departments had child resuscitation equipment.
- Most departments had attempted to supply play equipment and a suitable area for children to wait for treatment.

The variation in these facilities ranged from one department with no play or child orientated waiting area at all to the bulk of the departments providing some play equipment and an area within the main waiting area which was designated for child waiting to one department which had a separate waiting area with treatment rooms attached.

Referral networks and audit of the service also varied greatly between departments.

Two departments had no referral system or health visitor/community contact at all within the nursing structure.

Other departments have a liaison health visitor whose role varies from taking specific referrals, to overall monitoring and passing on communications concerning children attending the departments.

- Some, but not all departments generated a letter to the patient's general practitioner. This was common practice where possible, but was limited by the quality of data entry on computer systems and reliant upon the full function of such systems, which was not always the case.

Other interagency contacts between A&E and social workers, school nurses, voluntary support agencies and Child Protection Officers largely occurred on an ad-hoc basis which was driven by demands of the individual patients. Few departments had specific guidelines for interagency communication with the exception of child protection policies which are required by law.

- Patient and service audit was not operated in all departments. Those departments that did use audit did so without a common form. One department audited specifically on clinical protocols, another department collected information on attendance times and patterns and so on.
- No department felt they had easy access to previous attendance details when a paediatric patient returned. This was largely due to previous note/A&E card storage and the limitation of data reproduction in the various computer systems used.

3. What difficulties do you encounter in providing this service?

1. **Staff Recruitment.** All departments said the major difficulty in providing the service for children was the recruitment of staff with suitable training and experience. One department had just appointed an RSCN and two other departments had seconded nurses to complete the RSCN course and return to A&E.
2. **Assessment and Prioritisation.** All departments were aware of the issue of waiting time problems for children. Many departments voiced a difficulty in the assessment of priority of children and adults. Systems were largely based upon a clinical injury assessment with some departments minimising waiting time for children by raising their assessment of priority category whenever workload allowed.

Telephone interviews identified developments in assessment and prioritisation for children in A&E in one West Midlands department. One department is using a fast tracking approach to children under 16, hinging on an urgent nurse assessment and referral to appropriate medical colleagues

1. **Expert support available.** Some departments said that support from other professionals was missing i.e. community nurses, social services, training department. Where there was an on-site paediatric unit, departments said their access to advice and support was swift and helpful. Since the interviews took place three departments have experienced or will experience the loss of the on-site paediatric unit on a 24 hours comprehensive basis due to plans for relocation or partial service provision.
2. **Intensive Care.** When asked about paediatric intensive care bed availability there was a mixed response. The hospitals within the radius of inner Birmingham tended not to provide on-site paediatric ICU/facilities and transferred children to the regional centre or elsewhere depending upon bed availability. Some departments had experienced difficulties in obtaining paediatric ICU beds.

Hospitals beyond the radius of inner Birmingham did have access to on-site ICU facilities for children, usually accommodated within an adult intensive care unit servicing the hospital.

1. **Admission for hospital care.** Bed availability and the age of children admitted to adult wards was seen as a difficulty. Due to the absence of adolescent/teenage admission units, departments reported a dilemma about which children are suitable for admission to child or adult wards. Decisions were made on the condition, appearance, age, size and lifestyle of the patients, largely. **No common assessment or age rule for children's ward admissions applied.**
2. **Philosophy of care.** All departments had a general philosophy of care or mission statement. **No department specified this to the paediatric group of patients.** Most departments had a system of documentary rewards i.e. bravery certificates and badges for children undergoing treatment.

Summary of Telephone Interview results.

14 Interviews

1 Department declined to comment.

1 Department closed since interviews.

Senior Nurse spoken to in 8 out of 14 interviews.

Consultant spoken to in 6 out of 14 interviews.

Has the centralisation of services at the regional paediatric centre changed the paediatric attendance patterns in your department? If so how?	12 no 2 yes (both sites have no on site paediatric wards - 1 hospital closing) 1 adults only but still has 18,000 children per year.
Have there been any service changes since our interview i.e. staffing, teaching programmes etc., loss or gain of on-site in patient facilities for children	2 A&E nurses seconded on RSCN courses. 1 Department have funding to recruit E grade RSCN. 3 Departments have RSCN presence. 2 nurses at City, 1 elsewhere.
Rapid assessment by suitably trained and skilled staff is the most important element of providing an emergency service for children	All agree
There is not a major difficulty in the recruitment and training of such staff.	All disagree
Children and their families attend their local A & E departments due to habit, geography and accessibility	All agree
Centralisation of paediatric accident services on 1 site, leaves other sites without paediatric medical and nursing support for their A&E patients.	1 disagree. All others agree
Current assessment criteria allows us to assess the psycho- social and environmental needs of the child and family.	10 disagree 1 unsure 2 agree (See comments)
Prioritisation in terms of waiting times for children, within an A&E department is difficult to formalise.	11 agree 3 disagree (see comments)

Table 13 Summary of telephone interview results. (Appendix N)

Comments

All departments in the West Midlands agreed that Rapid Assessment by suitably trained and skilled staff is the most important element of providing an emergency service for children.

All department in the West Midlands agreed that the recruitment of suitably trained and skilled staff is major difficulty.

All departments in the West Midlands agreed that children and their families attend their *local A&E* department due to habit, geography and accessibility

On site paediatric support for **A&E** was seen as important by 13 out of 14 departments interviewed.

10 departments out of 14 felt that current assessment criteria do not allow for assessment of the psycho-social and environmental needs of the child and family. The other departments have, or are attempting to refine initial assessment protocol to address the psycho-social and environmental needs of the child and family.

West Midlands Service Developments, identified between interview and telephone interview phases of the study

R.S.C.N. Staffing in the West Midlands

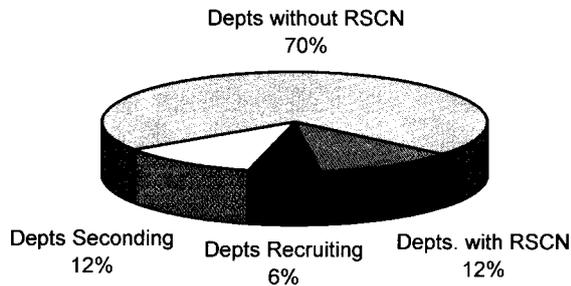


Figure 40 R.S.C.N. Staffing in the West Midlands At Interview Phase

2 departments had 1 or more RSCNs, 2 departments were seconding staff for training, 1 department was attempting to recruit RSCNs, leaving 12 departments with no RSCN staff.

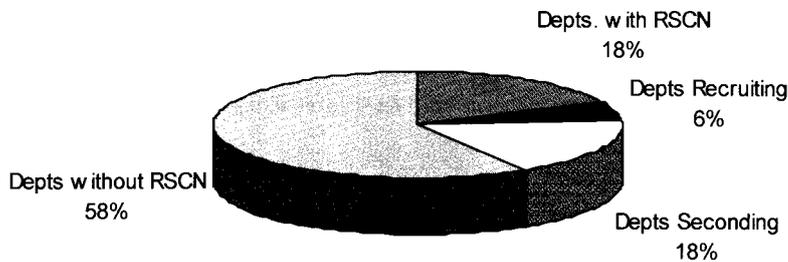


Figure 41 R.S.C.N. Staffing in the West Midlands After Interview Phase

3 departments had 1 or more RSCNs, 3 departments were seconding staff for training, 1 department was attempting to recruit RSCNs, leaving 10 departments with no RSCN staff.

There was an increase of 1 RSCN in **A&E** departments over the study period, three departments have RSCNs, there is a high concentration of RSCN staff at the regional centre, 2 RSCNs in 1 department, 1 elsewhere.

The Telephone Interview process shows a needs driven development in **A&E** nurses obtaining places on RSCN training courses in the West Midlands. An RSCN course director stated there has been a large increase in course applicants from **A&E** departments, and that **A&E** managers are pushing for RSCN training for **A&E** nurses to meet the skills dilemma

Paediatric Units on Site

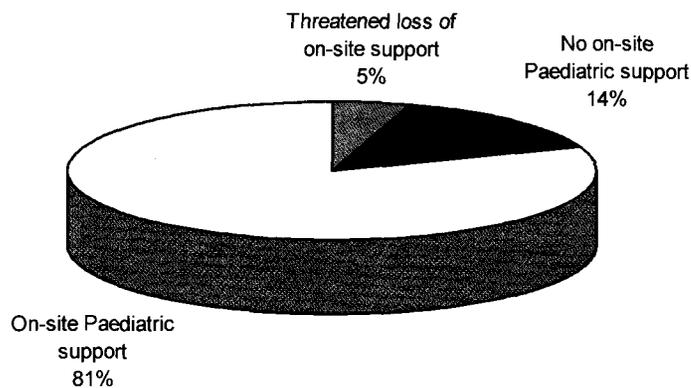


Figure 42 On-site Paediatric units post interview phase

Two of the departments that have no on site paediatric support were able to release paediatric attendance figures for their departments, they were for the year 1994 - 1995, 18,000 and 10,000, a third department declined to release their figures.

The **A&E** department facing the loss of its paediatric support saw 12,000 children in 1994 - 1995

Comments Presentation- General Questionnaire

Returned questionnaires carried many free text comments conveying a wealth of feeling and opinion regarding the provision of **A&E** services for children. Comments were related to questions as reported by verbatim transcripts of key issues.

Question 9: Is there any special arrangement(s) to reduce the waiting time for children?

Triage, category related to the age of the child varies considerably. Children in some departments are given a higher priority on assessment with an age cut-off which varies from 1 year *to* **13** years.

21 comments stated that children under 5 years are given higher triage category than adults.

Other comments measure waiting time priority on clinical need only.

Question 10: Is there a resident Sick Children's Nurse on the permanent staff of your A & E department?

7 comments stating department was unable to recruit an RSCN.

Question 21: Any other comments on training?

The majority of free text comments referred to this question.

Examples are;

“Training of all doctors and nurses on paediatric care has been emphasised in the department due to the disastrous effect of split site services -- (Consultant)

“Two RSCN posts advertised but not filled” (Senior Nurse)

“Training courses always oversubscribed otherwise we would send staff more frequently” (Senior Nurse)

“More time, money and resources required” (3 comments by Senior Nurses)

The comments convey a picture of A&E nurses self funding courses which are difficult to obtain, and costly to self fund.

Question 22: Please expand and enlarge on these or any other constraints you have encountered.

Comments are illustrated by the following quotes:

“Although the RSCN in our A&E is now at Sister level, RSCNs are appointed as staff nurses in A&E posts and have little power in the nursing hierarchy. The bulk of A&E nurses in our department feel that lack of time and resources prevent adequate preparation for procedure, i.e.: play, role play etc. Until there are RSCNs on duty in A&E 24 hours a day even small improvements to the care of children are taking a long time” (RSCN in A&E).

“Interest and focus of paediatrics has reduced since the closure of paediatric services in this hospital. Emphasis on paediatric training has reduced since on-site paediatrics closed” (Senior Nurse).

Many comments identify a large difficulty in recruiting nurses with an RSCN qualification and the knock-on effects of this in terms of lack of training for A&E staff and providing RSCN staff for care of children in a specified child orientated area of the A & E department.

To finish on a positive note:

“We are looking into our next available post being for a RSCN, it’s getting better” (Senior Nurse).

Comments presentation- Training Questionnaire

All comments have the same themes, funding, training, course availability, study leave and personal commitment.

- Lack of funding for nurses training in paediatric care.
- Not enough emphasis on training.
- Not enough places on courses.
- Study leave difficult to obtain.
- Nurses self funding any training and attending courses on days off.

Three nurses report having paediatric A&E care training in the last year. All self funded and self directed study. They were nurses taking some responsibility for children's A&E Services.

"The training that I have received in the past 5 years has been undertaken in my own time and financed by myself, otherwise not provided".

"Immediate assessment of sick children should be included in training for all A&E nurses to identify a sick child from a healthy child".

"I have found that there are limited availability of paediatric study days and that these are oversubscribed".

"There is no training for unqualified nurses in Accident and Emergency" (Senior Nurse)

"Study leave? Non existent in this trust at present" (Senior Nurse)

Strengths and Limitations of the Study

The strengths of this study lie in the response rates which have been 94% from the A&E departments in England and Wales ,98% and 76% respectively from the two groups of nurses regarding their training and 100% replies from the West Midland A&E departments .This has been rewardingly broad and enabled almost total representation of the study population. The multi method approach gained information from different people with different perspectives of the paediatric A&E service and the agreements between those involved have enhanced and substantiated the reliability of the information gained. The ability to identify developments in paediatric A&E services over ten years has enabled this study to provide a measure of progress and assist in the development of recommendations for further improvements The strong representation of the regional A&E staff in the interview phase enabled a thorough description of services and development needs within the West Midlands. The interview data was strengthened by member checking, i.e., confirming conclusions with the interview population. The timing of the study has found departments in the West Midlands in a climate of change. This has brought to the fore the issues relating to paediatric A&E patients in the minds of professionals. It could be suggested that interviews provide a platform for people to air their grievances and in doing so present an unduly negative view It could also be viewed that the interviewing of both senior nurse and consultant together in some cases was restricting individual opinion and obtaining a consensus view. However, in practical terms it is more important to remedy deficiencies in the system than just to hail its successes and the interview circumstances often provided the combined view and validation of factual information, guided by the interview schedule in all cases. Although there is no capacity to validate replies objectively, the firm agreements between Doctors and Nurses throughout the country suggest the conclusions are likely to be valid. Interviews were conducted within one region only, whereas the questionnaire was distributed to all regions in England and Wales. It is possible that specific issues in other regions are not adequately represented, but it was not feasible to interview staff outside the West Midlands Region.

It is apparent that the questionnaire design would benefit from revision in terms of wording and aiding of clarification. This could be attributed to the learning process of the investigator and this has not hampered the level of usefulness of responses. The questionnaire limits what people can say, more scope for rich qualitative data was provided by the interviews which informed questionnaire design.

The questionnaires returned, also contained large amounts of qualitative comments broadening the description of services and of the training perceived by Registered General Nurses(RGN). When examining the comparisons in training between the sample of RGN,s within the West Midlands and those in the rest of England and Wales, minor differences are shown in the composition of each group. The sample of RGN,s in the West Midlands was drawn from names of staff lists given by departmental heads of the registered nurses within their department. Whereas the sample in England and Wales were identified in Directory of Emergency and Special Care Units (1994). The analysis of these groups was made between the RGN,s reporting on their training which establishes comparability between the groups.

The literature review which was an exhaustive search for relevant information over the two years of the study did not reveal any published literature which presented the counter arguments and enabled the investigator to produce the referenced comparative analysis with in the report. This has reduced the level of critical analysis which the investigator was able to include in the report. However efforts have been made to include the counter arguments and they have been clearly reported as they arose during the interview phase of the study.

Discussion

The discussion section aims to examine every area of the results of this study, whilst establishing the natural links within the issues which have arisen from the multi method approach of the investigation and supporting this with the identified literature. Each section is sub-headed in order to guide the reader to the flow of the discussion and the tables and figures referred to are sited within the text. The conclusions which have been made from the investigation, recommendations and a consideration of the implications of the recommendations are also included.

Facilities for children were present in some form in 96% departments, although not all of these departments had the full range of specified facilities. For instance, 39% departments in England and Wales did not have a specific area for the resuscitation of children, and 21% do not have a children's treatment room. An earlier study by RCN (1995), found that 18.9% A&E departments in their sample had no specific facilities for children and 40% departments did not have a children's play room. This study has found 14% departments have no play or waiting areas for children, 4% have no play materials and 45% do not provide toilet, baby changing and feeding facilities. Staff within 79% of these departments reported that they considered the areas for children acceptably safe and 62% departments were suitably equipped for the care of children. However, 67% departments reported that their facilities could be better. The ambiguity of the above responses are worthy of note. When combined with the qualitative interview data, an enriched picture of **A&E** departments emerges, attempting to define a service for children despite constraints of expertise, inadequate resources and inappropriate buildings. The implications of this disparate picture of facilities for children in A&E departments are that many children are seen in an adult environment and therefore exposed to sight, sounds and behaviour which may not be conducive to their psychological or physical well-being. The recommendations for children in a mixed adult and child work load are prescriptive regarding the environment in which a child should be cared for. The RCN (1990) and the Audit Commission (1993) emphasise the importance of separate play and waiting areas for children which are suitably decorated and recognisably child appealing.

The lack of comprehensive child facilities in A&E departments can be linked to the findings of this study which indicate that half of the A&E departments in England and Wales do not have staff who are trained to represent and provide a specific service for paediatric A&E patients, the increase of RSCNs within A&E departments would improve this situation by providing the expertise to promote and represent the interests of the child in A&E.

Communication and Record keeping

The main agencies involved with the Paediatric A&E Services are Health Visitor and Social Services. Health Visitors have a statutory responsibility concerning the welfare of children up to 5 years of age but they have little involvement after the age of 5 years. **24%** of departments report School Nurse involvement. **32%** of departments identify Community Paediatric Nurse involvement while 7% of departments report having a Paediatric Liaison Nurse. **36%** of departments have no communication networks concerning the child of 5 years and over. Court (1976) reports three quarters of children attending **A&E** departments are over 5 years old, and communication and monitoring networks regarding A&E attendance's of these paediatric patient are largely absent. It is accepted that Social Services are involved with identified children 'at risk'. The importance of the A&E in identification of '*at risk*' children and the maintenance of records for communication is highlighted by Bedford (1985) Dove and Kobryn (1991) and Ohn, Gilmor and Stone (1995). 41% of departments reported that they do not keep separate records for paediatric attendance's and 24% of departments report that their record keeping system does not enable repeated attendance's of children to be identified. Repeated attendance's for injury can indicate an 'at risk' child. Laurent (1991) highlights the problem of children with non-accidental injury attending different A&E units with each injury and no communication occurs between departments. By not identifying children who attend A&E departments regularly with trivial injuries, the detection of a child 'at risk could be missed.

By not identifying repeat attendance and examining a holistic picture of injuries it is possible, even probable, that A&E staff will overlook a picture of injuries which may arouse suspicion. The results of this study suggest that departments are not able to operate a system of child protection monitoring if separate records or repeated attendance's by children are not identified. Minimum Data set requirements for computerised A&E departments do not require repeated attendance details to be retrieved with each subsequent visit (Audit Commission 1996). The identification of attendance trends, workload identification and skill mix planning all rely upon the quality of information gained from attendance records.

When asked what time of day children attend the department, 87% of departments did not collate this information. Of those departments which did collate the information it was found that on average 62% paediatric patients attend between 1201 and 2200 hours. Bentley (1995) stated that although 55% of departments employed RSCNs, most did not deploy RSCNs to work exclusively with children. In order to appropriately allocate staff with specialised skills to nurse children, departments need to be aware of the time children attend. As 87% of departments within this study do not collate this information, agreement with Bentley's results is demonstrated. This study has found that 53% departments in England and Wales report having an RSCN on their staff Considering the apparent lack of attention being paid to attendance trends, it is possible that these RSCNs may not be available to nurse children at the peak attendance times and therefore their skills and specialist training is wasted.

No common standard of documentation or audit with regard to paediatric A&E attendance's was found to apply. Communication networks are ad-hoc, driven by the demands of individual instances. There is no evidence to suggest that any planning regarding paediatric A&E service requirements is taking place in departments as the audit, communication and monitoring of the service are the tools with which to plan for demand. Child protection monitoring, identified in the literature review as an important role in A&E by Bedford (1985), DOH (1995), is not taking place in all departments. The implications of this are highlighted by studies namely, King (1985), Laurent (1991),

who present the problem of children with non accidental injuries attending A&E within inner cities and no form of inter hospital communication or identification of injuries being recognised. The result of this communication failure could certainly be the cause of unnecessary and prolonged suffering of an abused child

Staff

The results of this study show that all **A&E** departments have children attending, even those without on site paediatric units. With regard to the staffing of **A&E** Departments, it can be seen that 47% of departments reported no RSCN presence. The recruitment of **RSCNs** has been identified within this study as a major problem for **A&E** departments. Half of the paediatric A&E population of England and Wales are attending departments where they are cared for by nurses who are trained to nurse adults, not children. It could be argued that the presence of RSCNs in A&E departments are an expensive luxury. This argument would be strengthened by the difficulty in recruiting such staff and the dilemma of skill differences between RSCNs and General Nurses in A&E as highlighted by Yodder and Jones (1981) and The Royal College of Nursing (1993). There is a wealth of opinion supporting the importance of children being nursed by appropriately trained staff and its intuitive good sense (RCN1990). The firm base for the development of this opinion was laid in 1959 by The United Nations Convention on the rights of the child which sought to establish the child as a developing individual and offer some protection. The impact of the 1989 Children Act (DOH 1989) establishing a child's rights in British Law is gaining momentum. However, the rate of momentum is slow as there does not appear to be any scientific proof that RSCNs do actually improve the care of children in **A&E** departments. Further study is required to provide evidence based proof, the significance of any such finding would effect the argument for resource allocation in this area. The English National Board for Nurses, Midwives and Health Visitors (EM) states that the qualification of the RSCN is the minimum required to nurse children and that in all areas where there are children the supervision of their care by an RSCN is required on a continuous basis. The Nightingale Institute in conjunction with Kings College have a programme of training for nursing care and management of the child in

A&E. Entry qualifications to this programme are restricted to nurses who hold the RSCN qualification, thereby reinforcing this view.

55% of departments reported that the Paediatric Consultant did not visit on a regular basis. Furthermore, 24% of departments state that they did not have a Consultant Paediatrician or a member of staff involved in policy decisions regarding Paediatric Care and where there is not regular Paediatric Consultant influence in A&E. However, the comparison over 10 years between this study and the BPAS / BPA 1985 study show encouraging developments in both RSCNs and Consultant Paediatrician involvement, a **35%** and **34%** increase respectively. Despite these increases, it appears that A&E departments require further developments in terms of paediatric services and advice if they are to meet the required standards as defined by the Court Report (Court 1976), the RCN(1990)and the Audit Commission (1993).

Assessment

The most common arrangement for assessment of children in A&E was reported as Triage Assessment (**52%** respondents). Other respondents identify varying systems of child assessment and prioritisation (Fig. 6). The Patient Charter initial assessment criteria do not address the paediatric client group in particular. No reference is made to the psycho-social needs of the child as being different to those of the adult. No evidence that formal priority weighting is afforded to children within a mixed adult/child department exists. Staff report varied systems of trying to address this issue which have been developed in line with the strongest view within individual departments. These views are not always of those who are fully informed regarding the needs of the child. Interview data reveals the request by A&E Consultants for formal guidelines to assist A&E Staff when applying patient charter initial assessment criteria to the paediatric client group.

Inpatient Facilities

The emphasis on these results placed by this study is that of a recording in time, describing the picture of services as they were in 1995 This is in recognition of the trend to centralise services and concentrate skills on one site within a region This study

highlights some of the problems resulting from the loss of on site paediatric units in district general hospitals.

Main inpatient facilities reported are general Paediatric Medicine (82%), Trauma Care (76%), General Surgery (73%) and Day Care Surgery (70%). Main paediatric inpatient facilities were present on the same site in 73% replies (fig. 9). On site Intensive Care for children was reported in 43% replies, though, it was not specified whether the ICU care was delivered within a specialised paediatric ICU or if children were accommodated within an adult facility. When travelling from A&E to the main paediatric inpatient facilities, 85% inpatient departments were recorded as being within 9 miles of the A&E department.

When examining the comparison of consultant replies, there is little difference in the levels of provision of on-site paediatric inpatient facilities over the ten year period, 1985 - 1995. However, of those departments represented in the 1995 group who transfer to off-site paediatric inpatient facilities, more respondents report a distance greater than of ten miles plus (5%). This may indicate the beginning of a trend in response to the current programme of service rationalisation and concentration of skills and services in regional paediatric centres. The risks which need to be appreciated when transferring children to off site facilities are those of maintaining the medical condition of the patient during transfer and having the ability to deal with any deterioration of the patient while travelling. The trend of transferring children to services which are further than previous studies indicate, accentuates these potential problems.

Patient Transfer to Intensive Care

When transferring children requiring intensive care, 74% respondents stated that ICU facilities were within 10 miles, (fig 12), 33% respondents transferred children requiring intensive care treatment further than 10 miles. 89% replies identified ambulance as the mode of transfer used to transport these patients. The use of a Paramedic ambulance crew (63%) and Doctor or Nurse (76%) escort is also highlighted.

Staff within the West Midlands reported the transfer of sick children to off-site Paediatric beds as a difficulty. Children are less often accommodated in on- site Intensive Care

Units within the West Midlands (21% replies) Replies indicate a much greater use of Air Ambulance (67%) than the rest of England and Wales (21%). There are many controversial issues regarding responsibility for and funding of the Air Ambulance Service within the West Midlands. However, results indicate that **A&E** staff believe they need this mode of transport for critically ill patients The higher uptake of Air Ambulance transfer could be linked to the transfer of children requiring off site intensive care. Lower uptake of this mode of transport in other areas may be explained by the restricted availability of Air Ambulance and the higher provision of on-site intensive care beds for children (79% replies, fig.27).

On-site paediatric support with rapid access to help and advice was seen as important by all respondents within the West Midlands. 14% West Midlands departments have no on-site Paediatric Units. Staff reported that no compensatory arrangements for rapid access to paediatric support and advice were in place at these sites

This study was undertaken during a time of service relocation within Birmingham. There are strong feelings from different professional groups concerning the complex change. The study aims to represent the debate and report the opinions of the A&E staff directly providing the service. The broader issues of child centred emergency care provision in England and Wales is included in this investigation since it is hoped that it will assist a pathway towards improvement in child centred emergency care within the West Midlands. Several Consultants expressed concern about the centralising of children's services in Birmingham.

A Consultant said.

*“The current thrust **is** that all children should go **to** the Children's Hospital **but** what actually happens **on the ground** is, parents **do** what **works** best **fOR** them on a particular occasion”.*

Their main issues of concern were confirmed in member checking interviews and are:

1. Children and their families still attend their local Accident & Emergency Department due to habit, geography and accessibility All departments agreed with this statement.

2. The concentration of paediatric services on one site leaves other sites without paediatric medical and nursing support for **A&E** paediatric patients.
3. Maintenance of the family unit is endangered in some instances, e.g. a family road traffic accident when the victims are taken to an **A&E** department with no on-site paediatric beds.

One Consultant commented

“of course kids don’t drive, so if we get an RTA the plan is to ship the kids down to the Regional Paediatric Centre which of course splits up the family ”.

4. Concentration of skills in one unit leads to de-skilling of other areas and limited access to paediatric support.
5. Children’s attendance’s to general **A&E** departments remain a significant percentage (25-38%) of the total and is not related to the presence or absence of on site paediatric provision.

The view was also expressed that children are best cared for within a general unit which has on-site specialist children’s services. **An A&E** consultant said.

“My own view is that it is the best arrangement if you take the children to off-site specialist units you separate them from the rest of the family A big District General Hospital serves a large community with a heavy demand for child care services in the A&E department”.

Other comments made contributing to the debate regarding centralising of Paediatric Services at the Regional Centre include: ;

In abstract planning it may seem sensible to concentrate children’s services. However, in reality it results in children attending other A&Es with:

- No service definition
- No contract moneys
- No skilled staff or expertise within this client group
- No formal networks of audit and communication, and
- No child protection monitoring

The centralising of services in Birmingham involves relatively short travel distances for visitors to paediatric patients. However, in other areas distances are much greater and this affects the family unit and accessibility for the immediate and extended family. The cost implications for a family travelling to another town to see a child in hospital must not be underestimated, especially when literature shows that 90% of admissions are emergency admissions (Court 1976) and finances cannot be planned to cover travel and subsistence costs.

Comparison of Consultant Replies with Consultant BPAS Survey 1985

Encouraging improvements were recorded for most areas relative to what was reported in the earlier survey. Replies indicate a threefold increase (25% - 85%) in paediatric waiting room provision (fig 15), and a threefold increase (26% - 78%) in paediatric treatment room provision (fig 16). An increase of RSCNs in A&E departments (fig 18) by 35%, with a corresponding increase (34%) in Paediatric Consultant/A&E involvement (fig 19). The focus of attention on facilities for children in A&E departments has grown in the last decade due to being the subject of important reviews as highlighted within the literature. Since 1985 the Royal College of Nursing (1990), The Department of Health (1991a), The Audit Commission (1993), and Bentley (1995) amongst others have issued reports addressing the needs of the child in A&E. More recently the Action for Sick Children group have lobbied parliament to introduce purchasing requirements for A&E paediatric services. However a search of the literature and comments from the qualitative interviews of this study have demonstrated that few positive incentives have been offered to departments in terms of financial assistance, in order to meet the requirements of the reports.

Within the West Midlands departments staff reported the beginning of a trend of providing training for A&E nurses to train as RSCNs. In some cases the departments were given financial assistance in order to achieve this, which was positively received and is certainly facilitating the increase of RSCNs in A&E within the West Midlands. Although these increases are encouraging, the responses of the Consultants in the 1995 group reinforce the fact that 47% (Fig 6) of the A&E departments in England and Wales do not have an RSCN on their staff.

Fewer respondents in the 1995 sample report the availability to identify repeated attendance's in children (fig 15), which has far reaching and previously discussed child protection implications. This could be attributed to the development of computerised A&E records and the limitations various systems put upon data retrieval. As previously mentioned, there are no requirements for departments to retrieve previous attendance data and minimum data set requirements do not address this issue.

Barriers and constraints

Four important issues were identified by respondents which caused barriers and constraints to providing a child centred emergency service (fig. 14), namely:

- availability of trained staff
- inadequate resources
- inappropriate buildings.
- lack of time

Interview data identified the availability of trained staff as the main problem for departments within the West Midlands. When asked to prioritise difficulties, all departments in the West Midlands ranked first the recruitment of RSCNs to A&E. Respondents from the rest of England and Wales agreed with their West Midland counterparts and stated that lack of availability of trained staff was a major barrier to providing a child centred emergency service. Other major difficulties include:

- Assessment of priorities between children and adults for waiting times.
- Training in paediatric A&E issues for nurses and doctors.
- Lack of input from other professional groups for referral and continuing care purposes.
- Loss of on-site Paediatric Units.

Staff Recruitment

All departments had difficulty recruiting RSCNs to work within A&E. One senior nurse voiced the problem as:

“We’ve no nursing staff currently that are RSCN trained, it’s a national problem. As a manager, I am aware that there is a difficulty in getting RSCN nurses recruited to A&E because generally the training directs them to working in a paediatric environment”.

All departments stated this was their major difficulty, member checking confirmed this view. The current training arrangements for nurses requires a choice between an adult or child branch education programme. Only nurses taking the adult branch programme are

exposed to **A&E** allocation. The nurses taking the child branch programme do not have an **A&E** module built into training, (Stammers and Chippendale 1995). Some development is occurring as sick children's nurse students on an undergraduate BSc. programme are beginning to have **A&E** placements, however this is only one course within the wide spectrum of nurse training. In order for this practice to grow and result in an eventual increase in sick children's nurses who have interests and **skills** in **A&E** paediatric care, there must be adequate clinical supervision in the form of RSCNs within the **A&E** departments. This study has demonstrated that 70% of the departments in the interview population of the West Midlands, do not have an RSCN on their staff to provide clinical supervision for students. Some departments had considered seconding nurses to complete RSCN courses. This was hampered by the entry requirements for RSCN courses which **A&E** nurses often do not meet due to their different career development path. For instance, some colleges of nursing require a minimum period in excess of one year of experience on a paediatric ward before qualifying for course entry. Nurses working within **A&E** do not have specific paediatric experience and the element of their **A&E** workload which is paediatric care has not previously been recognised.

The telephone interview process shows a needs driven development in **A&E** nurses obtaining places on RSCN training courses in the West Midlands. **An** RSCN course director stated that there has been a large increase in course applications from **A&E** departments and managers are urging RSCN training of their nurses in order to meet the skills dilemma. Debate between managers and the colleges of nursing has in some cases assisted in the recognition of **A&E** paediatric experience as contributing towards the entry requirements. Identified constraints to this development were funding and the loss of that member of staff for the duration of the course. **As** previously stated, external financial assistance has been provided in some cases which has reduced the constraints .

The following view was expressed by some consultants when discussing medical staff:

“Medical Staff only come here with paediatric expertise by chance. It's a requirement for higher training for A&E doctors to be exposed to paediatric emergencies but at the moment there aren't enough of higher trained Doctors around to provide support for the juniors”

This medical view echoes the issue of the lack of clinical supervision for nurse training and this has therefore been identified as problem for skills development within both medical and nursing disciplines.

West Midlands Departments

There were 22 A&E departments within the West Midlands interview population, although there are 24 A&E departments in the West Midlands, one of which is the Regional Paediatric Centre. Interviews took place with staff from 17 departments including the Regional Centre. Questionnaires were received from all 24 West Midlands departments and member checking of conclusions occurred in 14 of the 17 departments interviewed. During the time between interview and member checking, two departments were merged into one. The issues emerging from the interviews are therefore strongly representative of the departments in the West Midlands. Telephone interviews were undertaken in order to update and validate information received during interviews and checking of conclusions with members of the interview population ensured accurate interpretation of results.

Service Priorities

The agreements between consultants and nurses in West Midlands departments have been confirmed by member checking interviews,

- prompt assessment,
.suitably skilled and trained staff
- safe, suitable child centred environment
- paediatric equipment
- rapid access to paediatric nursing and medical support when required

In reality, departments work with far less than their agreed requirements for providing child centred emergency service. Despite the encouraging development of 3 departments

seconding nurses to undertake RSCN courses and 3 departments, including the Regional Centre, having RSCNs on their A&E staff, there are still 11 departments in the sample interviewed who do not have RSCNs on their staff, one of which is attempting to recruit.

This study has shown that the main differences in the level of service provision between West Midlands Departments and their England and Wales counterparts are.

Facilities for children in Accident and Emergency

There is 30% less provision of feeding and toileting areas for children in West Midlands departments compared to the rest of England and Wales (58%) There are 21% fewer areas for children's treatment and waiting/play in the West Midlands departments compared with the England and Wales sample There is little explanation offered by respondents for these services receiving less attention than other areas of the **A&E** service for children. Comments from interviewees describe staff struggling to provide the best service possible, without a specific budget for the paediatric element of A&E care and with unsuitable buildings The promotion of child centred care is driven by staff with training and knowledge of the needs of the child and family in A&E The lack of RSCNs within the West Midland departments could offer some explanation, as there is often no consistent advocate for paediatric patients to generally raise awareness to their needs.

Community Paediatric Nurses

In both the England and Wales and West Midlands there are small numbers of Community Paediatric Nurses linking with A&E reported However, there is greater provision in the rest of England and Wales by 14% In order to establish the value of resource allocation to this role, there are urgent needs for studies to measure the effectiveness of Community Paediatric Nurses liaison with A&E departments. The link with a Community Nurse provides A&E patients with seamless communication networks to the GP and school health service which are not restricted by the age of the patient as in the health visitors role This study has highlighted the lack of communication networks for the child of five years and over, thereby indicating the need for community paediatric liaison nurses.

Audit and communication

There was no common form of audit used within the West Midlands departments though this is also the case for departments in the rest of England and Wales. Communication networks differed greatly, as did the ability to retrieve previous attendance details from record keeping systems. The only common form of inter-hospital communication within departments from both the West Midlands and the rest of England and Wales was the collation of records of children under 5 years by liaison with health visitors. This communication role is a statutory responsibility for health visitors and links with their child protection responsibilities in the under five years age group. All other systems of communication operate irrespective of the age of the patient. This study has found that a child could attend every A&E Department in the West Midlands with injuries with no planned cross identification occurring between departments. The child protection implications of this are serious. Most departments do send a letter to the patient's General Practitioner (GP) but there is no planned feedback from the GP to the A&E department and the time-scale of letters being sent from the hospital and processed in patients records is unclear. In two departments within the West Midlands, there is no form of liaison and communication with community professional staff at all.

This contravenes the recommendations of The Interagency Guidelines (DOH 1995, Audit Commission 1996) which discusses the importance of clear communications in the interests of the child.

Training of West Midland Nurses compared to Training of Nurses in the rest of England and Wales

The results show comparisons of training of Registered General Nurses and the growth of the training in paediatric A&E issues in the rest of England and Wales. Five years ago levels of training across England and Wales, including West Midlands departments were similar. Comments from questionnaires convey a wealth of dissatisfaction for levels of training from the West Midlands A&E nurses. Plans need to be made to address the provision of training within the West Midlands. This and other studies (R.C.N 1990, Bentley 1995) highlights the demand and the importance of child centred **A&E** care. Within the West Midlands departments, children comprise of **25-38%** of total attendees.

The paediatric population (under 15 years) of West Midlands in 1993 was 1,005,800 children (Eurostat 1992), representing a quarter of the total adult and child population at that time. A&E attendance's in children are reflected in that level, representing one quarter to one third of total attendees to A&E. The response of the two groups of registered general nurses was 98% and 76% respectively and nurses replied to the training received on the following issues which are recognised as the main reasons for child attendance in A&E departments (RCN 1990) These are namely, child protection, advanced paediatric life support, head injuries, sudden infant death, minor injuries, asthma and legal and professional recommendations for care.

A summary of training responses shows a similarity in low levels of training between the two groups in the five year time-scale. However, in all questions to nurses asking them to report training received in the last year, nurses in the rest of England and Wales report more training on each issue than their West Midland colleagues. West Midland nurses' free text comments identify lack of study time, limited availability of courses and no commitment from employers in terms of funding and time given for nurses education in this area of care. However, a growth in nurses being seconded for RSCN courses in the West Midlands was noted within the interview sample, and confirmed by member checking. **An** increase of RSCNs in A&E departments on one hospital site was recorded together with three departments having seconded nurses for RSCN training. This shows a needs driven development in West Midlands departments which should be encouraged as there are still ten departments from the sample of 17 in the study without an **RSCN** present in **A&E**.

The nurses in the rest of England and Wales have had 50% more training in child protection issues in the one year time-scale compared to West Midlands Nurses. **28%** (31 out of 111) nurses in the West Midlands report having had some training. Outside the West Midlands, from a total of 188 nurses, 140 have reported receiving child protection training, 40 have not. The role of the A&E nurse in detection of children at risk as stated by Bedford (1985) is reliant upon the level of knowledge regarding the presentation and alerting signs shown in a child who may be at risk. As so little training

in child protection has been received by **A&E** staff in the West Midlands, questions need to be asked about the amount of vigilance shown towards children with inflicted injuries.

No training in the detection of Child Sexual Abuse was reported by either group in this study. The difficulties of assessing this distressing occurrence should not be underestimated (DOH 1991). The awareness of staff to the policies and guidelines for the management and recognition is vital to the protection of children (Riches 1989).

26% West Midlands **A&E** nurses have undergone Advanced Paediatric Life Support (APLS) courses and a large proportion of those nurses were from two centres. The central role of **A&E** medicine is to assess, resuscitate and stabilise patients, then refer onto other professionals for on-going care. The skills to assess, resuscitate and stabilise the multiple injured child are taught in APLS courses, 74% of nursing staff in the West Midlands A&E departments have not been formally trained in those skills. Ambulance crews are obligated to attend the nearest A&E with any critically ill patients. Parents are not selective where they take their child who is not breathing, fitting or choking, or has fallen from an upstairs window. All A&E staff are familiar with the scenario of a mother running into the department with a moribund child in her arms. Assessment skills are absolutely essential in order to resuscitate and stabilise the patient. This investigation has shown that there is a serious deficiency of West Midlands A&E nurses who are trained in these skills for the paediatric group with 74% being untrained.

Head injuries in children are identified as a major part of the **A&E** paediatric workload and a recognised cause of death in children. There are low levels of training in this area of care reported by both groups of nurses. 80% West Midlands nurses have had no training in the management of children with head injuries in the last year compared with 64% in rest of England and Wales. Over the five year period nurses who have not had training in each group are at similar low levels, 82% in the West Midlands, 84% for the rest of England and Wales.

Sharples et al (1990) examined the prevalence of avoidable complications in the death of children with head injuries and discovered that there was a high prevalence of avoidable factors, such as delayed diagnosis of the complications of head injury and poor management of children during transfer between hospitals. Sharples also stated that

improvements in survival may result from better assessment of children with head injuries.

Spinal Injuries receive a similar lack of attention, educationally, in both 1 year and 5 year analysis, no growth in training has occurred over 5 years for either group. 13% West Midlands nurses and 19% nurses from the rest of England and Wales have had training in spinal injuries on the one year analysis.

As with head injuries the early diagnosis of a spinal injury is crucial to prevent further irreparable injury to the patient. While advances in pre hospital care do contribute to better management of a potential spinal injury (Roberts et al 1996) the lack of training reported in this study by nurses within the receiving A&E departments, does not indicate that this improvement is continued after arriving at A&E.

Greater provision for managing the event of sudden infant death is reported in departments in England and Wales for the 1 year time-scale, 66% nurses in England and Wales sample compared to 21% West Midlands nurses.

Despite an encouraging reduction in child mortality over the last decade, Roberts (1996) suggests a class divide in death rates between children in Social Class V and Class 1. Roberts suggests that the demand for child resuscitation has not diminished equally across the social classes. This emphasises the need for staff to maintain their skills, again the level of training in this issue is lower within the West Midlands.

74% West Midlands A&E nurses have not received training in the management of children with minor injuries, compared to 48% nurses in the rest of England and Wales. Children with minor injuries are identified as frequent attendees within a general A&E department (Mason, 1982).

The development of nurse practitioners within A&E departments is recent within the UK. It is possible that the majority of patients attending A&E with minor injuries will be seen by the nurse practitioner. As many of these patients will be children further study is needed to identify the preparation and education of the nurses with regard to paediatric care.

Training about asthma in children follows the same pattern - only 13% (18 of **142**) nurses in the West Midlands have received training in the one year period to deal with the management of childhood asthma. There is a greater level of training in the sample from the rest of England and Wales, 43% nurses received training within the last year.

Training on The Children Act (DOH 1989), and Nursing Children in A&E, (RCN 1990) show similar low levels of training. No increase was found in the number of nurses informed about the Children Act in the last five years in the West Midlands departments. In the rest of England and Wales there has been an two-fold increase of nurses exposed to training in the Children Act.

The nursing 'prescription' for A&E services to children are defined in The Royal College of Nursing Guidelines for Nursing Children in the A&E Department (1990).As this was first published in 1990, it is understandable that five years ago neither group reports training in these requirements.

This study has found no reported growth in training within West Midlands departments since that time with a two-fold (32%) increase in training in England and Wales.

The legal issue of informed consent training has grown in England and Wales to 31% **A&E** nurses as opposed to 13% West Midlands A&E nurses. Both groups report low levels of training in this area. The five year analysis reveals that in other legal aspects of care there is also low levels of training. There has been a growth in the level of training to 40% for departments in England and Wales in the last year, compared to 15% West Midlands departments. There has been no increase in training levels in West Midlands departments over 5 years.

Conclusions

Some issues are common to all England and Wales departments regarding child centred Accident and Emergency care provision:

- There is inadequate availability of trained staff and the availability of training for existing staff in general paediatric issues has been identified as grossly inadequate to meet developmental needs.
- Audit forms vary, communication networks are inconsistent and information generated is not compatible with others, therefore child protection monitoring systems vary inhibiting communication.
- Assessment and prioritisation of the child in **A&E** is not clearly defined and staff operate widely varying systems of trying to address this problem.
- There is insufficient recognition of the need for child centred services due to all of the above issues.
- The West Midlands departments share all of the above issues with their counterparts in the rest of England and Wales.

There are specific issues in the West Midlands departments for staff recruitment and training, which is reflected in the training analysis and the startling deficiencies which have emerged in the West Midlands, Provision of paediatric A&E facilities from all departments who receive paediatric patients, Common integrated communication, Audit and Information Networks both inter-departmental and between agencies.

General paediatric Accident and Emergency training needs to be developed and made accessible to all A&E staff and the provision of expert advice for those departments without on-site paediatric support should be made urgently available.

The advertisement and patient education regarding the move of the Paediatric Regional Centre would assist managing patient demand but issues of accessibility and car parking facilities at the new site need to be addressed.

Recommendations for the Promotion of Child Centred Emergency Care within the West Midlands

All A&Es in the West Midlands have children attending. Thus, each child deserves a service that addresses his or her needs. The following recommendations are made :

Training - Every A & E department should be provided with the skills and facilities to perform its key role of assessment, resuscitation and stabilisation of the sick child. A review of available training should be undertaken. The developments demonstrated in terms of seconding staff for training as RSCNs should be encouraged and resources allocated.

Staff Recruitment – Recognition that every department should have an RSCN leading the service for sick children within the department should be reinforced.

Advice and Support- Clarification of the availability of advice and support for **A&E** departments without on site paediatric units must happen immediately.

Tighter control of Communication Networks - Every department should be required and equipped to use a common form of audit and information collection. Referral networks should be common to all departments with a central collation of information. Minimum Data Set Requirements should ensure the ability of departments to retrieve previous attendance data for each child on subsequent visits.

Assessment of Demand - Monitoring of paediatric attendees in all **A&Es** will provide a true picture of attendance patterns from which to plan services. This could take place over a two year period in order to incorporate changes, observe patient attendance habits and provide the opportunity for patient education and the appropriate use of paediatric services.

Patient Transfers - The monitoring of paediatric transfers needs to take place with regard to their frequency and the care dependency of the patient during transfer to off-site services.

Standards - Specification must ensure that all departments have facilities for children which meet their needs along the lines suggested by the RCN (1990) and **BPA/BPAS** (1985).

Patient Assessment - Further work needs to be commissioned in order to develop assessment criteria which address the psycho-social needs of the child and family in **A&E**.

Central Leadership for Paediatric A&E Services in the West Midlands

to incorporate:

*Training

*Service integration and standard setting

•Staff support and education

*Communication and information exchange

Implications of the Study Recommendations

The recommendations of this study have been made following a thorough research based investigation which has fairly, honestly and reliably reported the issues as found. However it is imperative that all aspects of the recommendations are considered in order to ensure adequate representation of this investigation and their applicability from a service perspective. Therefore the following section shows a consideration of the recommendations made, and suggestions for the pathway to addressing the recommendations, thereby assisting in their application.

The first question to examine is, What happens if no action is taken?.

This study seeks to answer that question by reporting the problems as perceived by service providers, discussed and specified for the West Midlands departments as;

- RSCN Staff Recruitment
- Communication and Audit.
- Availability of advice for departments without on site paediatric expertise.
- Training in paediatric issues for A&E staff.
- Assessment and prioritisation of the child in A&E.
- Assessment of demand from paediatric patients and their families to all departments.

This study has reported that audit and communications systems vary to such an extent that there is little compatibility or communications between departments and no formal system of child protection monitoring exists for children over five years.

A&E staff have expressed their dissatisfaction regarding training opportunities and also the difficulty in recruiting RSCNs to work A&E thereby emphasising the deficiency of skills directly relating to the provision of child centred services. We can presume that if no action is taken the picture of services may remain the same, however there is also the possibility of a further deterioration.

For these reasons and others as cited by the A&E staff in this study, 100% of whom responded, improvements must be made.

Proposal

The first step to take in addressing the recommendations is the identification of a facilitator at senior level who recognises the need for measures to improve and co-ordinate services for children in **A&E** and is able to facilitate the measures required. From then the action taken can incorporate all of the recommendations as they link together in practice. **An** improvement in any area will have positive effects towards meeting the recommendations in other areas. Leadership which is seen to have a positive accent on services for children and a realistic attitude to the demands of the service will also be able to elicit support from service providers and identify staff with expertise.

There is a need to move away from disparate services and to link **A&E** services for children through common systems of communications and the building of formal and informal communication networks between staff

The setting and monitoring of standards for staff skill level and the service for paediatric patients will enable a strategy for training to be developed and this needs to be based upon the accurate measure of paediatric patients attending each **A&E** department.

Training can be addressed in three stages ;

1. The definition and agreement of the skills needed to meet service demands. **A** two pronged approach will enhance services by establishing informal links between departments, empowering and stimulating staff to take an active part.
2. The identification of training establishments which provide RSCN courses, their entry requirements and programmes. This would facilitate keen financial negotiation and enable planning for course applicants on a strategic, regional basis.
3. By viewing the **A&E** departments in the West Midlands as linking units, it would be possible to rotate staff between the regional centre and other departments. Developing skills along an agreed programme for both adult and paediatric nurses would raise the level of skill and encourage the building of communication networks, both informally and formally. Such individuals would become central to the transfer of "Best Practice" across departments within the region. One of the objectives of such programme would be to address communications and compatibility of information between departments.

The adjustment of minimum data set requirements to incorporate identification of repeat attendance's would also assist in solving this problem.

Gaining the support of departmental managers for the exchange of staff, which may cause their departments temporary loss of an established team member and increase the workload, may cause difficulty. Deciding upon the content of the programme of training will also cause problems. However the identification of key people with expertise to deliver the training will assist the programme, participation could be encouraged through the provision of additional resources to compensate participating departments.

The issue of access to advice could be addressed by co-operation between medical and nursing staff in the regional centre and other departments. This provision could be enhanced by improved informal communication, which would be an important by-product of the training program. A system of telephone advice developed along the lines of the current "On Call" system, by identifying a source of advice on a rostered plan, needs to be developed. Building upon the already established methods for giving advice this would assist **A&E** departments without on-site expertise in emergency situations. Any plans generated by staff would need to be supported and formally funded.

A system for the monitoring of patient transfers between departments may be more difficult to implement and will require multidisciplinary co-operation between **A&E** staff, the Ambulance service and Senior Managers. However this element of the service is an key indicator of patient demand and of the management of risk. The forum to establish such a system should be a multidisciplinary group, examining, monitoring and auditing the occurrence of patient transfers across the region, building upon experiences. This group could also address the problems of assessment and prioritisation of children in the combined workload of child and adult patients.

Suggested Further Research

Several questions were raised during the progress of this Study and are worthy of further investigation:

1. Training

- Definition of skills required for paediatric A&E care.
- Availability of training.
- Uptake of training.

2. Initial Assessment

Development of formal guidance for initial assessment of the child in A&E, encompassing psycho-social needs and enabling A&E staff to prioritise children, in terms of waiting times within a mixed workload of adult and child patients.

3. Reasons for attendance to A&E of children and their families.

4. Advanced Nurse Practitioner Role in A&E:

- What % of the workload is generated by children?
- What qualifications do the individuals hold in order to nurse children?
- What are the training needs to meet the paediatric demand?

5. Patient Charter Initial Assessment:

What effect has the Charter requirement made on the quality of information gained through nurse/patient interviews? Is there a better way of ensuring prompt and thorough assessments of patients in A&E? What are the implications for service provision?

Appendices

- Appendix A Letter of introduction to Consultant and Clinical Nurse manager in each *A E* department.
- Appendix B Pilot interview schedule 1
- Appendix C Interview schedule
- Appendix D Interview report letter
- Appendix E Pilot study questionnaire
- Appendix F Questionnaire feedback sheet
- Appendix G Questionnaire, pilot study results
- Appendix H BPA/BAPS questionnaire
- Appendix I Service provision questionnaire
- Appendix J Training questionnaire
- Appendix K Second mailing covering letter
- Appendix L Telephone interview schedule
- Appendix M Replies spreadsheet
- Appendix N Member checking results summary

Appendix A

Covering letter to Consultant and Clinical Nurse Manager in
each A/E Department.

FIELD(Contact 1)
FIELD(Title 2)
FIELD(A & E Dept)
FIELD(Hospital)
FIELD(Street)
FIELD(Town)
FIELD(Post Code)

Date as postmark

Dear FIELD(Salutation)

I am a nurse researching for an M Sc and my study aims to identify the barriers to better pediatric emergency care

I would like to come and talk to you about some of the issues in the delivery of emergency services for children, and will be telephoning you in the next few weeks to arrange an interview

I can assure you that the contents of our conversation, all transcripts and notes of our interviews will be kept absolutely confidential, and care will be taken to avoid persons or departments being identified

It is important that all departments take this opportunity to express their views and ensure that the report is fully representative

You will have sight of the final report prior to its submission to the Regional Health Authority and will be invited to make comments

It is hoped that this study will stimulate interest in the provision of emergency services for children and will serve to increase resources in this vital area.

I look forward to meeting you

Many thanks,

Kim Waldron

Appendix B

Pilot Interview Schedule 1

PILOT INTERVIEW SCHEDULE 1
Paediatric Emergency Study

Paediatric Emergency Study

Explain Study

Request permission to tape interview

Ask for names of nursing staff for postal questionnaires.

-Broad Concepts-

- 1 Please tell me about the departmental philosophy of care and service for Paediatric patients
 - ◆ Facilities for play and treatment
 - ◆ Staff with designated responsibility
 - ◆ Appropriately trained
 - ◆ Audit of service
 - ◆ Referral networks
 - ◆ Patient numbers
 - ◆ Waiting times
- 2 What do you think are the most important aspects of an emergency service for children"
 - ◆ Attitudes - parents in resuscitation
 - ◆ Psychological aspects of care
 - ◆ Morale
 - ◆ Level of knowledge
- 3 What difficulties do you encounter in providing this service?
 - ◆ Staff recruitment
 - ◆ ITU facilities
 - ◆ Training
 - ◆ Time
 - ◆ Other resource constraints
- 4 In what order would you put these difficulties?
- 5 What is your departmental philosophy')
 - ◆ Clarify
 - ◆ Obtain evidence

Appendix C

Interview Schedule

INTERVIEW SCHEDULE Paediatric Emergency Study

Paediatric Emergency Study

Explain Study

Request permission to tape interview.

Ask for names of nursing staff for postal questionnaires.

-Broad Concepts-

- 1 What do you think are the most important aspects of **an** emergency service for children?
 - ◆ Attitudes - parents in resuscitation
 - ◆ Psychological aspects of care
 - ◆ Morale
 - ◆ Level of knowledge
- 2 Please tell me about the departmental philosophy of care and service for Paediatric patients.
 - ◆ Facilities for play **and** treatment
 - ◆ Staff with designated responsibility
 - ◆ Appropriately trained
 - ◆ Audit of service
 - ◆ Referral networks
 - ◆ Patient numbers
 - ◆ Waiting times
- 3 What difficulties do you encounter in providing this service?
 - ◆ Staff recruitment
 - ◆ ITU facilities
 - ◆ Training
 - ◆ Time
 - ◆ Other resource constraints
- 4 In what order would you put these difficulties?
- 5 What is your departmental philosophy?
 - ◆ Clarify
 - ◆ Obtain evidence

Appendix D

Interview report letter

Address for correspondence:
[removed]

Dear

I am pleased to enclose the first draft of the report based on the interviews which took place in Phase II of the **“Study to Evaluate Paediatric Accident and Emergency Services in England and Wales.”**

I would like to take this opportunity to thank you for your contribution,

I have endeavored to represent all the views expressed and to avoid presenting the information in any way which would allow respondents to be identified.

I would be happy to receive any comments or further contributions by 15th August 1995, at which time the study will be moving into Phase III and I will be distributing questionnaires as discussed

With regards,

Yours sincerely,

Kim Waldron

Appendix E

Pilot Study Questionnaire

K Waldron [address removed]

Date as postmark

Dear Sir/Madam,

**STUDY TO EVALUATE PAEDIATRIC ACCIDENT & EMERGENCY SERVICES
IN ENGLAND AND WALES**

De

I am a nurse researching for an M.Sc. and my study aims to identify the barriers to better paediatric emergency care and provide a baseline description of services generally within England and Wales.

The enclosed brief questionnaire represents Phase **III** of the study and has been distributed to all consultants and senior nurses within general **A & E** Departments in England and Wales, with the exception of those in the West Midlands who were interviewed during Phase **II** of the study. The questionnaire is based upon issues raised during those interviews. All questionnaire returns will be completely confidential and I can assure you that anonymity will be protected.

I look forward to receiving your completed questionnaire and would ask that it be returned using the enclosed s.a.e. by 12th October, 1995.

Thank you in advance for your co-operation.

Yours sincerely,

K Waldron

CONFIDENTIAL QUESTIONNAIRE

1. Please tick which of these groups you belong to:

- | | | | |
|---------------------------|----------------------------|-------------------------|----------------------------|
| A/E Consultant | a <input type="checkbox"/> | Paediatric Consultant | d <input type="checkbox"/> |
| Department's Senior Nurse | b <input type="checkbox"/> | Registered Senior Nurse | e <input type="checkbox"/> |
| Registered General Nurse | c <input type="checkbox"/> | Registered Mental Nurse | f <input type="checkbox"/> |
| Other | g <input type="checkbox"/> | | |

2. Which of the following are present in your department?

- | | | | |
|-------------------------------|----------------------------|--------------------------------|----------------------------|
| Children's play/waiting area | a <input type="checkbox"/> | Feeding & toileting facilities | e <input type="checkbox"/> |
| Toys & play materials | b <input type="checkbox"/> | | |
| Paediatric resuscitation area | c <input type="checkbox"/> | Paediatric treatment room | f <input type="checkbox"/> |
| Could be better | d <input type="checkbox"/> | | |

Are these facilities:

- | | | |
|--------------------|----------------------------|----------------------------|
| | Yes | No |
| Acceptably safe | g <input type="checkbox"/> | j <input type="checkbox"/> |
| Suitably equipped | h <input type="checkbox"/> | k <input type="checkbox"/> |
| Suitably decorated | i <input type="checkbox"/> | l <input type="checkbox"/> |

3. Which other agencies are involved with the paediatric service?

- | | | | |
|--------------------|----------------------------|----------------------------|----------------------------|
| Health visitor | a <input type="checkbox"/> | School nurse | d <input type="checkbox"/> |
| Social Services | b <input type="checkbox"/> | Community Paediatric Nurse | e <input type="checkbox"/> |
| Voluntary agencies | c <input type="checkbox"/> | (Please specify) | |
| | | | |
| | | | |
| | | | |

4. Does the record keeping system enable repeated attendances by young children to be separately identified from total (adult + child) attendances?

- Yes a No b c Unknown

5. Does the record keeping system separate children from adults?

- Yes a No b c Unknown

6. How many new attendances (adult + children) to your department per year?

7. What proportion of these are children (under 16 yrs)
Not collated a

8. What times of day do children attend your department?

- | | | | | | |
|----------------|---|----------------------------|-----------------|---|---|
| 7 am - 12 noon | % | a <input type="checkbox"/> | 12 noon - 10 pm | % | c <input type="checkbox"/> |
| 10 pm - 2 am | % | b <input type="checkbox"/> | 2 am - 7 am | % | d <input type="checkbox"/> Not calculated e <input type="checkbox"/> |

9. Is there any special arrangement(s) to reduce the waiting time for children?

Yes a No b

If Yes please describe the system which allows the prioritization of children

.....
.....
.....
.....
.....
.....
.....
.....

10. Is there a resident Sick Children's Nurse on the permanent establishment of the Accident & Emergency Dept?

Yes a No b Unknown c

11. Does the Consultant Paediatrician, or member of his/her staff visit the department on a regular basis?

Yes a No b

12. Are they involved in policy decisions regarding paediatric care within the department?

Yes a No b Unknown c

13. Is your hospital a regional centre for:

Paediatrics a Trauma b

14. Are the main paediatric in-patient facilities in the hospital?

Yes a No b

15. Do these facilities cover the following: (Tick all that apply)

General Paediatric Medicine	a <input type="checkbox"/>	Paediatric General Surgery	b <input type="checkbox"/>
ENT	c <input type="checkbox"/>	Intensive Care	d <input type="checkbox"/>
Day Surgery	e <input type="checkbox"/>	Trauma	f <input type="checkbox"/>

Others (please list)

.....
.....
.....

Appendix F

Questionnaire Feedback Sheet

QUESTIONNAIRE FEEDBACK SHEET

PILOT STUDY

Question No:	STYLE	CONTENT	FLOW	COMMENTS
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				

Appendix G

Questionnaire, pilot study results

Analysis of Comments from Feedback Sheet Pilot Study Questionnaire

Question	
1	Need to allow respondents to tick more than one option - re-word question to read: please tick below which group applies to you.
2	<p>Insert an intermediate response section - Yes/No response too final. Maybe a "could be better" section.</p> <p>Two comments asked for the standard of the words safe/suitable - maybe use other words to reduce ambiguity.</p>
3	Leave more space for free text.
4	<p>One comment says "ambiguous" without any further explanation.</p> <p>No other comments.</p>
5	No comments other than "fine".
6	<p>No comments. One respondent questioned if total meant adults and children.</p> <p>I feel question is quite clear.</p>
7	No comments.
8	<p>Need a "not collated" response box or "unknown", as respondents did not know this information.</p> <p>Leave question in though, as it refers directly to interview questions regarding Audit of Service and trends analysis.</p>
9	<p>Re-word. Needs clarification. Respondents disliked use of word "weighting"- Stated that confusion could occur with the word "waiting".</p> <p>Leave more writing space.</p>
10	No comments other than "fair".
11	No comments other than "fair".
12	Some staff did not know. Needs a "don't know" box.
13	No comments
14	Unclear question due to typing error. Re-type.
15	Needs to clarify term "full range". One comment felt this was open to different interpretations.

16, 17, 18	Re-structure to improve the flow of questions and enhance understanding, i.e. link 15 and 17 and link 16 and 18.
19	Needs further clarification. Add "to intensive care". Ask respondents to tick as many as apply. Leave space for explanation of travel circumstances.
20	Re-word "training". One respondent asked for clarification - does training include study days?
21	One respondent felt this an ambiguous question. Need more writing space.

General Comments

No reference to presentation of questionnaire
3 comments that boxes are too small
One comment that the questionnaire is generally ambiguous and needs simplification

Appendix H

BPA/BAPS questionnaire

DRAFT

(DOCUMENT 36)
(Council 18.2.64.)

Analysis of BPA/BAPS questionnaire relating to children's attendances at
Accident and Emergency Departments

Introduction The members of the BPA/BAPS Joint Standing Committee on Childhood Accidents Committee are very grateful to BPA members for taking so much time and trouble to fill in the questionnaire. We regret the time taken to carry out the analysis and send you this report, but replies came in slowly and steadily through the spring and summer right up to the last month (September).

Replies were received from 189 hospitals, and the analysis is based on this number. 16 hospitals sent in duplicate returns which mainly gave the same answers, though one hospital's forms gave different answers as to whether there was a consultant in Accident and Emergency Medicine or not. In addition two hospitals returned forms giving no details because there was no A & E Department.

The returns by regions are given below, but it will be appreciated that to some extent we have had to use our common sense in assessing whether a given hospital had an A & E Department or not, and that the numbers of hospitals who failed to complete a questionnaire may therefore include some without an A & E Department - and from which no return was expected. However we are aware of quite a number of hospitals - including some well-known ones! - with A & E Departments from which we have not received a return. The main gap in reporting from major hospitals would seem to be in the South West Region.

Replies were received from the following:-

Region No. 1	Northern	14	out of 16	hospitals
"	2 Yorkshire	14	"	18 "
"	3 Trent	11	"	14 "
"	4 East Anglia	6	"	8 "
"	5 North West Thames	16	"	18 "
"	6 North East Thames	13	"	20 "
"	7 South East Thames	14	"	19 "
"	8 South West Thames	11	"	17 "
"	9 Wessex	9	"	13 "
"	10 Oxford	7	"	12 "
"	11 South Western	5	"	13 "
"	12 West Midlands	14	"	17 "
"	13 Mersey	9	"	10 "
"	14 North West	12	"	15 "
"	15 South Wales	5	"	8 "
"	16 North Wales	3	"	5 "
"	17 Scotland:Western	8	"	12 " (?)
"	18 " Eastern	7	"	8 "
"	19 " Northern	7	"	7 "
"	20 Northern Ireland	4	"	13 " (?)

Analysis of Replies

Question 1: Is this the main A & E Department in the district, in which children are seen?

yes: 177 no: 12

Question 2: Are there any paediatric in-patient facilities in the hospital?

yes: 166 no: 23

Question 3: Are the main (paediatric) in-patient facilities in the hospital?

yes: 126 no: 63

Question 4: Distance between A & E Department and main paediatric inpatient facilities:

1 mile or less 17.

2 - 4 miles 31

5 - 9 miles 5

10 + 9

The Hebrides, Orkney and Shetlands not included here

Question 5: Is there a Consultant in A & E Medicine in the main A & E Department

yes: 105

no: 82

Part time 1

Query 1

Question 6: Does a consultant paediatrician or member of his or her staff visit the A & E Department on a regular basis?

yes: 13

no: 176

Of these thirteen, 6 were separate children's hospitals (Sheffield, Sydenham, Carshalton, Alder Hey and Royal Children's at Liverpool, and Booth Hall, Manchester)

3 were in children's A & E Departments alongside adult departments (Sunderland, Nottingham and Guys, London) and 4 had paediatric services in adult A & E Departments: (Leeds, Hillingdon, Gillingham and Cardiff).

Questions 7 & 8: How many new and old attendances?

No separate record kept of children 66

Only new attendances recorded 45

Only total attendances recorded 23

ie no division into new and old

Question 9: Is there a waiting room for children?

yes: 47

no: 142

Question 10: Is there a children's treatment room?

yes: 50

+ 1 not recorded

no: 138

Question 11: Is there a Registered Sick Children's Nurse on the permanent establishment of the A & E Department?

yes: 28 - 2 not recorded

no: 158 + 1 unknown

Question 12: Who normally deals with non-trauma emergencies that come to the A & E Department?

Paediatric Staff 59

Accident & Emergency Staff 105

Both available 24

Not recorded 1

Question 13: Is there a liaison Health Visitor to the A & E Department?

yes: 89

+ 3 not recorded

no: 97

Question 14: Does the record keeping system enable repeated attendances by young children to be identified?

yes: 153

+ 4 not recorded

no: 32

Question 15: Do you think that you or your staff are asked to see children in the A & E Department:

Too frequently: 1

Appropriately: 140 + 7 not recorded

Not frequently enough: 41

Question 16: General Comments (by paediatricians completing the form).

These have been analysed into comments on (a) administration and staffing

(b) professional relationships

(c) other

(d) comments on new buildings and future changes

(a), (b) and (c) have been divided into strongly favourable, moderately favourable, neutral, mildly unfavourable and strongly unfavourable, and (d) as to whether the new building is imminently taking place or in the future, and whether any comments were made as to whether the changes would solve the current problems or not.

136 paediatricians made comments as follows:-

	1*	2*	3*	4*	5*
(a) Administration & Staffing	7	14	19	27	12
(b) Professional	14	13	6	11	7
(c) Other	1	1	8	4	0

- 1* Strongly favourable
- 2* Mostly favourable
- 3* Neutral
- 4* Mildly unfavourable
- 5* Strongly unfavourable

	1*	2*	3*	4*
(d) New buildings etc	13	10	2	2

- 1* In next year
- 2* In Future
- 3* Will solve difficulties
- 4* Will not solve difficulties

These figures are not mutually exclusive, as comments were made in more than one area in many cases. It will be noted that more unfavourable comments (39) were made than favourable (21) about administration and staffing (mainly lack of staff to cover the department), whereas more favourable comments (27) than unfavourable (18) were made about interprofessional relationships.

Comment: Overall, the questionnaire enables a picture to be built up of the current situation in A & E departments, with the possible exception of the south-west area.

There is clearly room for a great deal of improvement. In exactly one third of cases (63/189), the main children's in-patient unit is in a different hospital from the A & E Department, and in 1 in 8 there are no children's in-patient beds at all (23/189). In those hospitals which have some children's beds, but not the main unit, the beds are

specialized orthopaedic or surgical with no paediatric presence. In some instances the distances an injured or sick child has to travel from the A & E Department to the paediatric unit is quite considerable.

A paediatric presence in the A & E Department is clearly the exception rather than the rule. There are only four hospitals in which there is a regular paediatric presence in a general A & E department and 3 hospitals with separately-staffed children's A & E departments alongside the adult departments. Considering the large number of children attending, with a large variety of complaints including medical and surgical and social problems as well as trauma, this is a very unsatisfactory situation. Obviously there may be many reasons for this: lack of staff at all levels, geographical separation etc, but there is no doubt that there is room for improvement in the interest taken by paediatricians in the children who attend the A & E Department. This is acknowledged in some of the comments such as "filling in this form has made me realize how little I know about what happens to the children in the A & E Department". Ideally, paediatric staffing should enable sessions to be spent in the A & E Departments, but the pressure for those must come from paediatricians.

With respect to professional relationships, the relatively new specialty of A & E medicine seems to come out well "we have been very fortunate in this hospital of having extremely good cooperation with our A & E consultant. It is very rare that we have a specific complaint about action taken within the

department and this has usually been when new staff, either medical or surgical, have arrived, and we feel that this has been because of the consultant in charge". The fairly large numbers of mildly unfavourable comments on staffing and inter-professional relationships relate to the fact that the consultant feels that that the junior staff (and distinct from the senior staff) does not call for paediatric help often enough. Several replies point out that the large numbers of junior staff, the variability of their quality, the rapid turnover and the employment of locums in the A & E Departments make it very difficult to get agreed policy established and continued.

One of the most striking deficiencies highlighted by this survey is the lack of figures on children's attendances. In addition to the 66 hospitals (over one-third of the total) in which there was no record kept of child attendances at all, there were an additional 45 who kept records only of new attendances and 23 of total attendances. This means that only 55 hospitals kept anything like satisfactory records, and this is an over-statement because quite frequently the figures were based on an analysis of 1 month's attendances or were prefaced by the qualification "approximately". Clearly the efforts to improve the records in A & E Departments, for example by the development of the Computerized A & E Record System (CAER) are very necessary.

There is also a long way to go in improving the physical facilities: only 47 hospitals had a children's waiting room and 50 a special treatment room. Staffing problems affecting nurses are also present: the number (28) of nurses with their RSCN training is pitifully small: there is no doubt that the presence of such a nurse would be of great value to the children and their parents attending an A & E Department, though the general shortage of RSCN's is only too well known to the BPA. The number of liaison Health Visitors is rather higher at 89 than might have been expected.

It is difficult to comment on the proportion of non-trauma cases seen by A & E staff or paediatric staff, and this obviously depends upon the availability of paediatric staff. In 59 hospitals the paediatric staff saw the cases first, and in another 24 they shared the responsibility with the A & E staff.

Two further points that need to be made: firstly that the views expressed are mainly but not entirely those of paediatricians: one A & E consultant who filled in a form expressed the very firm opinion that "separate facilities for children are extremely wasteful of resources and accommodation.... Provided children are given priority where indicated, and appropriate paediatric support is available a mixed/integrated department is best for patients and staff. The greatest deficit in paediatric A & E care is the lack of back-up/contact with paediatricians who for many reasons do not or cannot give support to A & E as do other specialties".

The second point is that there are still areas of the country eg the Western region of Scotland where there are A & E departments which are not associated with any paediatric departments at all and in which children with trauma or surgical conditions are admitted to adult surgical wards.

To sum up, it is fair to say that there are many deficiencies in the geographical and administrative arrangements in the staffing and in the facilities for children attending A & E departments. Paediatricians must be prepared to struggle for the necessary improvements, but they themselves need to be much more concerned with the problem of children's accidents and their attendances at A & E Department than they are at present. We hope that some improvement will take place with the current level of re-building (13 reorganizations taking place and 10 more being planned).

af 15.11.83

BPA2.55/56

Appendix I

Service provision questionnaire

Date as postmark

Return address:

[removed]

Dear Sir. Madam.

**STUDY TO EVALUATE PAEDIATRIC ACCIDENT AND EMERGENCY SERVICES IN ENGLAND
AND WALES**

I am currently engaged on a study to identify the barriers to better paediatric emergency care and provide a baseline description of services generally **within** England and Wales.

Interviews have already taken place with **all** consultants and senior nurses within general Accident and Emergency departments in the West Midlands and this questionnaire is based upon issues raised during those interviews. There is a need to obtain a wider range of opinions and facts about this matter. Your contribution is vital as I **am** optimistic **that** the study will stimulate more debate and action on the provision of emergency services for children.

All questionnaire returns **will** be treated confidentially and anonymity will be protected. I realize **that** you are very busy and therefore the questionnaire has been kept as brief *as* possible.

I hope you can help and look forward to receiving your reply in the enclosed stamped addressed envelope by:

7th December 1995

Thank you in advance for your co-operation.

Yours faithfully

Kim Waldron

Identifier				/	
------------	--	--	--	---	--

1	Please tick which of these groups you belong to: (please tick all that apply)	A/E Consultant [] 1a Department's Senior Nurse [] 1b Registered General Nurse [] 1c Paediatric Consultant [] 1d Registered Senior Nurse [] 1e Registered Mental Nurse [] 1f Other [] 1g															
2	Which of the following are present in your department? Are these facilities:	Children's play/waiting room [] 2a Toys & play materials [] 2b Paediatric resuscitation area [] 2c Feeding & toilet facilities [] 2d Paediatric treatment room [] 2e <table border="0" style="width: 100%;"> <tr> <td style="width: 60%;"></td> <td style="text-align: center;">Yes</td> <td style="text-align: center;">No</td> </tr> <tr> <td>Acceptably safe</td> <td>[] 2f</td> <td>[] 2j</td> </tr> <tr> <td>Could be better</td> <td>[] 2g</td> <td>[] 2k</td> </tr> <tr> <td>Suitably equipped</td> <td>[] 2h</td> <td>[] 2l</td> </tr> <tr> <td>Suitably decorated</td> <td>[] 2i</td> <td>[] 2m</td> </tr> </table>		Yes	No	Acceptably safe	[] 2f	[] 2j	Could be better	[] 2g	[] 2k	Suitably equipped	[] 2h	[] 2l	Suitably decorated	[] 2i	[] 2m
	Yes	No															
Acceptably safe	[] 2f	[] 2j															
Could be better	[] 2g	[] 2k															
Suitably equipped	[] 2h	[] 2l															
Suitably decorated	[] 2i	[] 2m															
3	Which other agencies are involved with the paediatric service?	Health Visitor [] 3a Social Services [] 3b Voluntary Agencies [] 3c School Nurse [] 3d Community Paediatric Nurse [] 3e Other (Please specify) [] 3f ----- -----															
4	Does the record keeping system separate children from adults?	Yes [] 4a No [] 4b Unknown [] 4c															
5	How many new attendances (adult + children) to your department per year?	-----															
6	What proportion of these are children (under 16 yrs)	Please enter percentage. % [] 6a Not Collated (Please tick) [] 6b															
7	Does the record keeping system enable repeated attendances by young children to be separately identified from total (adult + child) attendances?	Yes [] 7a No [] 7b Unknown [] 7c															
8	What times of day do children attend your department?	Please enter percentage. % 07:00 - 12:00 [] 8a 12:01 - 22:00 [] 8b 22:01 - 02:00 [] 8c 02:01 - 06:59 [] 8d Not calculated (Please tick) [] 8e															

<p>9 Is there any special arrangement(s) to reduce the waiting time for children?</p> <p>If YES please describe the system which allows prioritisation of children</p>	<p>Yes <input type="checkbox"/> 9a No <input type="checkbox"/> 9b</p> <p>-----</p> <p>-----</p>
<p>10 Is there a resident Sick Children's Nurse on the permanent establishment of your Accident & Emergency Dept?</p>	<p>Yes <input type="checkbox"/> 10a No <input type="checkbox"/> 10b Unknown <input type="checkbox"/> 10c</p>
<p>11 Does the Consultant Paediatrician, or member of his/her staff visit your department on a regular basis?</p>	<p>Yes <input type="checkbox"/> 11a No <input type="checkbox"/> 11b</p>
<p>12 Are they involved in policy decisions regarding paediatric care within your department?</p>	<p>Yes <input type="checkbox"/> 12a No <input type="checkbox"/> 12b Unknown <input type="checkbox"/> 12c</p>
<p>13 Is your hospital a regional centre for:</p>	<p>Paediatrics <input type="checkbox"/> 13a Trauma <input type="checkbox"/> 13b</p>
<p>14 Are the main paediatric in-patient facilities for your district in your hospital?</p>	<p>Yes <input type="checkbox"/> 14a No <input type="checkbox"/> 14b</p>
<p>15 Do these facilities cover the following :</p>	<p>(Tick all that apply)</p> <p>General Paediatric Medicine <input type="checkbox"/> 15a Paediatric General Surgery <input type="checkbox"/> 15b ENT <input type="checkbox"/> 15c Intensive Care <input type="checkbox"/> 15d Day Surgery <input type="checkbox"/> 15e Trauma <input type="checkbox"/> 15f Others (please list) <input type="checkbox"/> 15g</p> <p>-----</p> <p>-----</p>
<p>16 What is the distance between the A & E department and main paediatric in-patient facilities?</p>	<p>On-site <input type="checkbox"/> 16a 2 - 4 miles <input type="checkbox"/> 16b 5 - 9 miles <input type="checkbox"/> 16c 10 plus miles <input type="checkbox"/> 16d</p>
<p>17 What is the distance between the A & E department and main paediatric intensive care facilities?</p>	<p>On-site <input type="checkbox"/> 17a 2 - 4 miles <input type="checkbox"/> 17b 5 - 9 miles <input type="checkbox"/> 17c 10 plus miles <input type="checkbox"/> 17d</p>
<p>18 How are children usually transferred to more specialised facilities?</p>	<p>By road - ambulance <input type="checkbox"/> 18a By air-ambulance <input type="checkbox"/> 18b Paramedic crew <input type="checkbox"/> 18c Nurse escort <input type="checkbox"/> 18d Doctor escort <input type="checkbox"/> 18e</p>

<p>19 For each of the following please tick those on which you have had training/updates/study day etc.:</p>	<p>Child Protection Advanced Paediatric Life Support Head injury in child care Spinal injuries in children Informed Consent Sudden Infant Death Management of Minor Injuries Legal aspects of care Asthma in Children RCN Guidelines for Children The Children Act Other (please specify)</p>	<p><u>Within</u> <u>1 year</u></p> <p>[] 19a [] 19b [] 19c [] 19d [] 19e [] 19f [] 19g [] 19h [] 19i [] 19j [] 19l</p>	<p><u>Within</u> <u>5 years</u></p> <p>[] 19o [] 19p [] 19q [] 19r [] 19s [] 19t [] 19u [] 19v [] 19w [] 19x [] 19z</p>
<p>20 Do you consider this adequate training for your needs?</p>	<p>At present Yes [] 20a No [] 20b In the future Yes [] 20c No [] 20d</p>		
<p>21 Any other comments on training?</p>	<p>-----</p> <p>-----</p>		
<p>22 These are barriers or constraints to providing child centred emergency care.</p> <p>Please expand and enlarge on these or any other constraints you have encountered (on a separate sheet if necessary).</p>	<p>Please rank in order of importance (Highest =1)</p> <p>Lack of time [] 22a Inadequate resources [] 22b Availability of trained staff [] 22c Staff resistance [] 22d Lack of liaison systems [] 22e Inappropriate building [] 22f Ignorance of children's needs [] 22g Policy/political restraints [] 22h</p>		<p>-----</p> <p>-----</p> <p>-----</p> <p>-----</p>

Through this questionnaire I have attempted to address all the issues relating to paediatric accident and emergency care. However, I am aware of the shortcomings of such an approach, and I would value any comments, observations or issues you would like to raise.

Thank you
KIM WALDRON

Return address:
K. Waldron
148 St Denis Road
Selly Oak Birmingham
B29 4LY

Appendix J

Training questionnaire

Appendix K

Second mailing covering letter

Date as postmark

Return address:

[removed]

Dear Sir. Madam.

**STUDY TO EVALUATE PAEDIATRIC ACCIDENT AND EMERGENCY SERVICES IN ENGLAND
AND WALES**

This is the second **mailing** in this study. If you have received the first mailing and have recently returned it, ignore this **letter**. If you **have** not returned the first questionnaire or have not received **the** first mailing I apologise for having to bother you. but I do need your views to ensure that my report is representative of the **views** of people working in A & E.

Interviews have already **taken** place **with** all consultants and senior nurses within general Accident and Emergency departments **in** the West Midlands and this questionnaire is based upon issues raised during those interviews. There is a need to obtain a wider range of opinions and facts about this matter. Your contribution is vital as I **am** optimistic **that the** study will stimulate more debate and action on the provision of emergency services for children

All questionnaire returns will be treated confidentially and anonymity will be protected. I realise that you are very **busy** and therefore **the** questionnaire has been kept *as* brief as possible.

I hope you can help and look forward to receiving you reply in **the** enclosed stamped addressed envelope by:

11th FEBRUARY 1996

Thank you in advance for your co-operation.

Yours faithfully

Kim Waldron

Appendix L

Telephone interview schedule

Telephone Interview Schedule

Questions

- What are your A/E total attendance figures for the last full year?
- What % of those were children?
- Has the centralisation of services at the regional paediatric centre changed the paediatric attendance patterns in your department? If so how?
- Have there been any service changes since our interview i.e. staffing teaching programs etc., **loss** or gain of on-site in patient facilities for children?

Comments (Agree Disagree replies)

- Rapid assessment by suitably trained and skilled staff is the most important element of providing an emergency service for children
- There is not a major difficulty in the recruitment and training of such staff.
- Children and their families attend their local **A/E** Departments due to habit, geography & accessibility
- Centralisation of paediatric accident services on 1 site, leaves other sites without paediatric medical and nursing support for their A/E patients.
- Current assessment criteria allows us to assess the psycho- social and environmental needs of the child and family.
- Prioritisation in terms of waiting times for children, within **an** A/E department is difficult to formalise.

Appendix M

Replies spreadsheet

Accident Emergency Survey Results

No	Question	Answers	No of forms in survey		All Replies		West Midlands		Non West Midlands		Consultants Non West Midlands		Nurses Non West Midlands	
			394	No	%	No	%	No	%	No	%	No	%	No
1	Please tick which of these groups you belong to: (please tick all that apply)	A/E Consultant	1a	162	41%	18	46%	144	41%	140	84%	4	2%	
		Department's Senior Nurse	1b	155	39%	16	41%	139	39%	15	9%	124	66%	
		Registered General Nurse	1c	48	12%	3	8%	45	13%	5	3%	40	21%	
		Paediatric Consultant	1d	1	0%	0	0%	1	0%	1	1%	0	0%	
		Registered Senior Nurse	1e	29	7%	1	3%	28	8%	3	2%	25	13%	
		Registered Mental Nurse	1f	4	1%	0	0%	4	1%	2	1%	2	1%	
		Other	1g	33	8%	3	8%	30	8%	10	6%	20	11%	
2	Which of the following are present in your department?	Children's play/waiting room	2a	338	86%	31	79%	307	86%	142	85%	165	88%	
		Toys & play materials	2b	380	96%	32	82%	348	98%	163	98%	185	98%	
		Paediatric resuscitation area	2c	241	61%	18	46%	223	63%	101	60%	122	65%	
		Feeding & toilet facilities	2d	218	55%	11	28%	207	58%	103	62%	104	55%	
		Paediatric treatment room	2e	313	79%	31	79%	282	79%	131	78%	151	80%	
	Are these facilities:	Acceptably safe	Yes	2f	312	79%	25	64%	287	81%	140	84%	147	78%
			No	2j	14	4%	2	5%	12	3%	9	5%	3	2%
		Could be better	Yes	2g	264	67%	15	38%	249	70%	120	72%	129	69%
			No	2k	32	8%	5	13%	27	8%	13	8%	14	7%
		Suitably equipped	Yes	2h	244	62%	22	56%	222	63%	115	69%	107	57%
			No	2i	61	15%	5	13%	56	16%	23	14%	33	18%
		Suitably decorated	Yes	2l	268	68%	19	49%	249	70%	128	75%	123	65%
			No	2m	46	12%	5	13%	41	12%	13	8%	28	15%
3	Which other agencies are involved with the paediatric service?	Health Visitor	3a	347	88%	34	87%	313	88%	146	87%	167	89%	
		Social Services	3b	273	69%	27	69%	246	69%	118	71%	128	68%	
		Voluntary Agencies	3c	40	10%	4	10%	36	10%	14	8%	22	12%	
		School Nurse	3d	94	24%	9	23%	85	24%	34	20%	51	27%	
		Community Paediatric Nurse	3e	127	32%	7	18%	120	34%	60	36%	60	32%	
		Other (Please specify)												
		Paediatric unit play leader/therapist		9	2%	0	0%	9	3%	3	2%	6	3%	
		Community liaison nurse		4	1%	0	0%	4	1%	3	2%	3	2%	
		Home care team		2	1%	0	0%	2	1%	0	0%	2	1%	
		Family care therapy		1	0%	0	0%	1	0%	0	0%	1	1%	
		Paediatric doctor		1	0%	0	0%	1	0%	1	1%	0	0%	
		Psychiatric nurse		1	0%	0	0%	1	0%	0	0%	1	1%	
		Bereavement counsellor		1	0%	0	0%	1	0%	0	0%	1	1%	
		Community midwife		1	0%	0	0%	1	0%	1	1%	0	0%	
		Paediatric nurse/liaison		26	7%	3	8%	23	6%	7	4%	16	9%	
		Accident prevention nurse		2	1%	1	3%	1	0%	0	0%	1	1%	
		A & E nurse practitioner		4	1%	1	3%	3	1%	2	1%	1	1%	
		NNEB		3	1%	1	3%	2	1%	1	1%	1	1%	
		Child protection officer		6	2%	2	5%	4	1%	0	0%	4	2%	
		GP practise nurse		4	1%	3	8%	1	0%	0	0%	1	1%	
		Community senior nurse		1	0%	0	0%	1	0%	0	0%	1	1%	
		Chaplain		1	0%	0	0%	1	0%	0	0%	1	1%	
		Teachers		1	0%	0	0%	1	0%	0	0%	1	1%	
		Youth worker		1	0%	0	0%	1	0%	0	0%	1	1%	
		Parents		1	0%	0	0%	1	0%	0	0%	1	1%	
		HO allocated		1	0%	0	0%	1	0%	1	1%	0	0%	
		Diabetic liaison nurse		1	0%	0	0%	1	0%	1	1%	0	0%	
		Asthmatic nurse		2	1%	0	0%	2	1%	1	1%	1	1%	
		Sickle cell co-ordinator		1	0%	0	0%	1	0%	0	0%	1	1%	
4	Does the record keeping system separate children from adults?	Yes	4a	222	56%	23	59%	199	56%	94	56%	105	56%	
		No	4b	160	41%	11	28%	149	42%	70	42%	79	42%	
		Unknown	4c	11	3%	4	10%	7	2%	3	2%	4	2%	
5	How many new attendances (adult + children) to your department per year?	Number of answers given to this question	5	361		20		342		166		176		
		Total for all replies		16,743,308		1,089,253		15,654,055		7,794,476		7,859,579		
		Average for those that gave answers to this question		46,380		54,463		45,772		46,955		44,657		
6	What proportion of these are children (under 16 yrs)	Average %age for those collated	Collated	6a	282	72%	31	79%	251	71%	127	76%	124	66%
					29%		30%		29%		26%		32%	

Accident Emergency Survey Results

No	Question	No of forms in survey		All Replies		West Midlands		Non West Midlands		Consultants Non West Midlands		Nurses Non West Midlands		
		394	Answers	No	%	No	%	No	%	No	%	No	%	
7	Does the record keeping system enable repeated attendances by young children to be separately identified from total (adult + child) attendances?	Not Collated	6b	112	28%	8	21%	104	29%	41	25%	63	34%	
		Yes	7a	265	67%	21	54%	244	69%	116	69%	128	68%	
		No	7b	94	24%	7	18%	87	25%	39	23%	48	26%	
		Unknown	7c	30	8%	10	26%	20	6%	10	6%	10	5%	
8	What times of day do children attend your department?	Please enter percentage												
			8a		21%		0%		23%		23%		24%	
			8b		62%		53%		63%		63%		63%	
			8c		9%		23%		8%		7%		9%	
			8d		3%		0%		3%		2%		4%	
			8e	343	87%	35	90%	308	87%	140	84%	168	89%	
	Collators Notes	%ages in time bands are the average for those collated												
9	Are there any special arrangement(s) to reduce the waiting time for children?	Yes	9a	319	81%	22	56%	297	84%	137	82%	160	85%	
	If Yes Specify	No	9b	66	17%	15	38%	51	14%	26	16%	25	13%	
				91	23%	8	21%	83	23%	33	20%	50	27%	
				5	1%	0	0%	5	1%	1	1%	4	2%	
				41	10%	3	8%	38	11%	14	8%	24	13%	
				4	1%	0	0%	4	1%	2	1%	2	1%	
				12	3%	0	0%	12	3%	4	2%	8	4%	
				2	1%	1	3%	1	0%	0	0%	1	1%	
				12	3%	0	0%	12	3%	2	1%	10	5%	
				181	46%	12	31%	169	48%	92	55%	77	41%	
10	Is there a resident Sick Children's Nurse on the permanent establishment of your Accident & Emergency Dept?	Yes	10a	206	52%	9	23%	197	55%	84	50%	113	60%	
		No	10b	186	47%	29	74%	157	44%	82	49%	75	40%	
		Unknown	10c	1	0%	0	0%	1	0%	1	1%	0	0%	
11	Does the Consultant Paediatrician, or member of his/her staff visit your department on a regular basis?	Yes	11a	175	44%	16	41%	159	45%	68	41%	91	48%	
		No	11b	217	55%	23	59%	194	55%	98	59%	96	51%	
12	Are they involved in policy decisions regarding paediatric care within your department?	Yes	12a	285	72%	22	56%	263	74%	122	73%	141	75%	
		No	12b	92	23%	15	38%	77	22%	42	25%	35	19%	
		Unknown	12c	14	4%	2	5%	12	3%	2	1%	10	5%	
13	Is your hospital a regional centre for:	Paediatrics	Yes	13a	60	15%	4	10%	56	16%	21	13%	35	19%
		Trauma	Yes	13b	75	19%	5	13%	70	20%	28	16%	44	23%
14	Are the main paediatric in-patient facilities for your district in your hospital?	Yes	14a	282	72%	27	69%	255	72%	118	71%	137	73%	
		No	14b	105	27%	13	33%	92	26%	45	27%	47	25%	
15	Do these facilities cover the following : (Tick all that apply)													
		General Paediatric Medicine	15a	325	82%	29	74%	296	83%	143	86%	153	81%	
		Paediatric General Surgery	15b	289	73%	27	69%	262	74%	116	69%	146	78%	
		ENT	15c	241	61%	16	41%	225	63%	112	67%	113	60%	
		Intensive Care	15d	202	51%	13	33%	189	53%	93	56%	96	51%	
		Day Surgery	15e	277	70%	18	46%	259	73%	120	72%	139	74%	
		Trauma	15f	299	76%	16	41%	283	80%	138	83%	145	77%	
		Others (please list)	15g	65	16%	4	10%	61	17%	31	19%	30	16%	
		Orthopaedic		15	4%	0	0%	15	4%	7	4%	8	4%	
		Paediatric Assessment Unit		1	0%	0	0%	1	0%	1	1%	0	0%	
		Child psychiatry		2	1%	1	3%	1	0%	1	1%	0	0%	
		Spinal		1	0%	0	0%	1	0%	0	0%	1	1%	
		Cardiac		6	2%	0	0%	6	2%	4	2%	2	1%	
		Neo Natal ICU		3	1%	0	0%	3	1%	3	2%	0	0%	
		Neurosurgical		14	4%	0	0%	14	4%	6	4%	8	4%	
		Burns		14	4%	0	0%	14	4%	6	4%	8	4%	
		Ophthalmic		16	4%	1	3%	15	4%	11	7%	4	2%	
		Plastic Surgery		18	5%	0	0%	18	5%	10	6%	8	4%	
		Head Injuries		1	0%	0	0%	1	0%	0	0%	1	1%	

Appendix N

Member checking results summary

INTRODUCTION - Explanation of this process within the study - to update and clarify prior to report writing

		Questions			Comments (taken from interview report)				
Hospital Code no	What are your A/E total attendance figures for the last full year? What % of those were children	Has the centralisation of services at the regional paediatric centre changed the paediatric attendance patterns in your department? If so how?	Have there been any service changes since our interview i.e. staffing, teaching programs etc, loss or gain of on-site in patient facilities for children	Rapid assessment by suitably trained and skilled staff is the most important element of providing an emergency service for children	There is not a major difficulty in the recruitment and training of such staff.	Children and their families attend their local A/E Departments due to habit, geography & accessibility	Centralisation of paediatric accident services on 1 site, leaves other sites without paediatric medical and nursing support for their A/E patients.	Current assessment criteria allows us to assess the psychosocial and environmental needs of the child and family.	Prioritisation in terms of waiting times for children, within an A/E department is difficult to formalise.
Summary 14 Interviews 1Dept (096)declined to comment. 1 Dept closed since interviews. Senior Nurse spoken to in 8 out of 14 interviews. Consultant spoken to in 6 out of 14 interviews.		12 no's 2 yes's (both sites have no onsite paed wards - 1 hospital closing) 1 adults only but still has 18,000 children per year.	2 a/e nurses seconded on RSCN courses. 1 dept have funding to recruit E grade RSCN. 3 depts have RSCN presence. 2 nurses at City, 1 elsewhere.	All agree	All disagree	All agree	1 disagree. All others agree	10 disagree 1 unsure 2 agree (See notes)	11 agree 3 disagree (see notes)
012 Sen Nurse & Cons.	29,000 100%		Covered in interview - see interview sheet	Agree	Disagree	Agree	Agree	Disagree	Agree
013	70,000, 78,000, 80,000 33%	No	Audit for waiting times for children has secured an extra SHO for peak times to reduce waiting.Nursery Nurse x 2 cover dept. Seconding nurse to do RSCN course.	Agree	Disagree	Agree	Agree	Agree The last 2 conclusions donot apply to this department. They have a refined assessment criteria to incorporate a fast track for under 16's.They do not experience	Disagree dilemmas about priorities between children & adults as they use separate waiting areas & haved gained an extra doctor for peak times to see children & thus reduce waiting times.
053 Cons	86,000 29%	No	2 x RSCN's in A/E. Defining paed service. Looking at new hospital plus separate A/E dept.	Agree	Disagree	Agree	Disagree	Agree	Agree
068 Sen Nurse	56,000 25%	No	B'ham General Hospital trauma unit closure has increased children & adults with trauma	Agree Problem recruiting RSCN's.	Disagree	Agree	Agree Causes increased recruitment problems for A/E depts.	Disagree	Agree

INTRODUCTION - Explanation of this process within the study - to update and clarify prior to report writing

Hospital Code no	Questions			Comments (taken from interview report)					
	What are your A/E total attendance figures for the last full year? What % of those were children	Has the centralisation of services at the regional paediatric centre changed the paediatric attendance patterns in your department? If so how?	Have there been any service changes since our interview i.e. staffing, teaching programs etc, loss or gain of on-site in patient facilities for children	Rapid assessment by suitably trained and skilled staff is the most important element of providing an emergency service for children	There is not a major difficulty in the recruitment and training of such staff.	Children and their families attend their local A/E Departments due to habit, geography & accessibility	Centralisation of paediatric accident services on 1 site, leaves other sites without paediatric medical and nursing support for their A/E patients.	Current assessment criteria allows us to assess the psycho-social and environmental needs of the child and family.	Prioritisation in terms of waiting times for children, within an A/E department is difficult to formalise.
231 Sen Nurse	Approx 42,000 Approx 24-26%	No	RSCN in dept during March. Asking for 2 E grade RSCN. Awaiting funding for special children's waiting area.	Agree	Disagree Project 2000 Nurse training - will make it worse -limited adult experience -No A/E training -RSCN's will want a higher grade	Agree	Agree	Disagree This dept offers a fast track service for children. Awaiting documentation - discuss this service in report. Communication networks are not disseminating information to A/E.	Disagree Quality project in the dept. looking at children's needs.
190 Sen Nurse	79,000 Approx 28% - not collated	No	No	Agree	Disagree	Agree	Agree	Disagree	Agree
207/212 Cons	109,000 16.5%	Yes - No ambulance cases - small reduction	Yes: Move of B'ham General Hospital to Selly Oak site - new A/E dept.	Agree	Disagree - RSN recruitment major difficulty.	Agree	Agree	Unsure	Disagree. Due to local arrangements for prioritising children.
211 Sen Nurse	Not available Not available	Yes. Merging with Heartlands. No paed on site. Children only seen as emergencies when brought by parents.	No paed admissions. No paed ambulances. Children are walking wounded. Hospital merging in April with Heartlands.	Agree	Disagree	Agree	Agree	Disagree	Agree
251 Pilot Cons.	41,000 25%	No	No	Agree	Disagree	Agree	Agree	Disagree	Agree

INTRODUCTION - Explanation of this process within the study - to update and clarify prior to report writing

Hospital Code no	Questions			Comments (taken from interview report)					
	What are your A/E total attendance figures for the last full year? What % of those were children	Has the centralisation of services at the regional paediatric centre changed the paediatric attendance patterns in your department? If so how?	Have there been any service changes since our interview i.e. staffing, teaching programs etc, loss or gain of on-site in patient facilities for children	Rapid assessment by suitably trained and skilled staff is the most important element of providing an emergency service for children	There is not a major difficulty in the recruitment and training of such staff.	Children and their families attend their local A/E Departments due to habit, geography & accessibility	Centralisation of paediatric accident services on 1 site, leaves other sites without paediatric medical and nursing support for their A/E patients.	Current assessment criteria allows us to assess the psychosocial and environmental needs of the child and family.	Prioritisation in terms of waiting times for children, within an A/E department is difficult to formalise.
096 Declined to participate in member checking									
116 Sen Nurse	Approx 56,000 27%	No	Increased facilities planned. Awaiting Kings Fund survey. Upgrade for paed waiting area & treatment room delayed temporarily. Will be completed before Kings Fund Survey visit.	Agree	Disagree	Agree	Agree	Disagree	Agree Protocol for children in A/E assessment -placed at top of category -take priority over adults -beware of sick adults. Implementation of assessment priority sick adult versus child is difficult.
174 Cons.	76,000 29%	No	None	Agree	Disagree	Agree	Centralisation of paed. services on site, if adjacent to A/E Dept improves the service to paed. but otherwise disadvantages the service to children.	Disagree	Agree
185 Sen Nurse	29,000 29%	No	Sent a D grade for training	Agree	Disagree	Agree Patients use primary health care team rather than A/E - patients are true traumas.	Agree	Disagree	Agree

INTRODUCTION - Explanation of this process within the study - to update and clarify prior to report writing

		Questions		Comments (taken from interview report)					
Hospital Code no	What are your A/E total attendance figures for the last full year? What % of those were children	Has the centralisation of services at the regional paediatric centre changed the paediatric attendance patterns in your department? If so how?	Have there been any service changes since our interview i.e. staffing, teaching programs etc, loss or gain of on-site in patient facilities for children	Rapid assessment by suitably trained and skilled staff is the most important element of providing an emergency service for children	There is not a major difficulty in the recruitment and training of such staff.	Children and their families attend their local A/E Departments due to habit, geography & accessibility	Centralisation of paediatric accident services on 1 site, leaves other sites without paediatric medical and nursing support for their A/E patients.	Current assessment criteria allows us to assess the psychosocial and environmental needs of the child and family.	Prioritisation in terms of waiting times for children, within an A/E department is difficult to formalise.
003 Pilot Sen. Nurse	60,000 32%	No	Loss of 1 paediatric ward.50% of beds in hospital -often on red alert for paediatric beds & have to transfer out to other hospitals.Often waits for ambulance transfer. Possibility of onsite Paed. wards -merging Trusts.	Agree	Disagree	Agree	Agree	Disagree	Agree
214 Cons	40,000 28%	No RSCN has now returned from a course as a D grade.	No	Agree	Disagree Training disseminated through team.	Agree	Agree	Disagree	Agree

174 Further comment - It is very easy to think up new standards and guidelines for A/E Departments but unless appropriate resources and staffing are provided they are difficult to achieve without endangering other elements of a hard pressed service.

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