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Provision of Emergency Medical Services for children in the Greater Dublin Area following the development of a single National Tertiary Paediatric Hospital

1. Executive Summary

The IAEM believes that detailed consideration of the optimal configuration of Emergency Medicine services for children in the Dublin area is warranted. In addition, there is a need to consider the interface between those Emergency Departments (EDs) outside the Dublin area in which children are treated and the new Tertiary hospital although this latter issue is outside the scope of the current document.

We believe that the best model for Emergency Medicine services in Dublin would be for paediatric Emergency Medicine to be delivered at two fully functional Paediatric Emergency Departments. One of these EDs would be based at the National Tertiary Paediatric Hospital, with a fully functioning Emergency Department, as envisaged. The second ED should provide secondary Paediatric care. Both Emergency Departments should be linked for academic, training and service development purposes.

Urgent Care Centres (UCCs), which have been proposed as an option in the Children First report ***(1)***, cannot replace the requirement for comprehensive Emergency Department care. The term "Urgent Care Centre" requires further clarification.

Any satellite Emergency services should be closely linked to the Emergency Departments and the Tertiary Paediatric Hospital for reasons of patient safety, service efficiency, quality and equity of care.

The IAEM is also very strongly of the view that those charged with the task of developing an appropriate Paediatric Emergency Medicine infrastructure in parallel to the creation of a single Tertiary Paediatric Hospital must ensure that full and timely consultation occurs with experts in Paediatric Emergency Medicine.

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2. Background

The HSE has proposed a single National Tertiary Paediatric Hospital for Ireland to be based in Dublin. The Mc Kinsey group, which examined the feasibility of such a hospital ***(1)***, proposed that the hospital would also provide all Secondary care, including an Emergency Department. It envisaged that the centre would be "at the nexus of an integrated paediatric service" also comprising "adequate geographic spread of A&E (sic) facilities (including 2-3 in Dublin)." It also stated that treatment at "Urgent Care Centres" is another option. It is important to note that as yet there is no clear vision of exactly how these UCCs will be configured, what services they will provide and how they will be staffed.

Subsequent to the Mc Kinsey report published in February 2006, a joint HSE/Department of Health & Children (DoHC) group decided in May 2006 to select the Mater Misericordiae Hospital site as the location for the proposed National Tertiary Paediatric Hospital. The National Children's Hospital joint HSE/DoHC Transition Group have employed a UK consultancy Rawlinson, Kelly & Whittlestone (RKW) to look at a number of issues including the establishment of satellite Urgent Care Centres. They are expected to report in June 2007.

The McKinsey report did not investigate or make detailed recommendations on the provision of Emergency Medicine services for children and adolescents in Dublin. It did not consider the interface between EDs outside the Dublin area in which children are treated and the new Tertiary hospital.

3. Introduction

This paper is an option appraisal of the models that may be considered for the delivery of Paediatric Emergency Care in the Greater Dublin area. The IAEM believes that it is essential to highlight the minimum standards that will need to apply to each option in order for it to deliver safe and effective emergency services for the children of the Greater Dublin area.

4. Options

4.1 A single Paediatric Emergency Department.

At present approximately 120,000 children attend the three existing Paediatric Emergency Departments each year. Therefore, any Emergency Department obliged to receive **all** children requiring Emergency Department care would have to expect to receive similar numbers. Indeed, this number may rise as the population of the greater Dublin region continues to grow. There has been an increase in paediatric attendances in the UK in recent years, which shows no signs of abating ***(2)***.

A single Dublin paediatric ED would see nearly twice as many patients as any existing ED in the country. It must be designed, built and resourced in line with current best practice and be future-proofed for the inevitable increase in attendances over time.

This option requires the public to accept that the only access to medical care for critically ill and injured children would be via this single ED. Therefore the ease of access from all parts of the greater Dublin area to this site is of the utmost importance.

The provision of effective emergency care is time-critical and timely access to expert resuscitation saves lives. It is the current view of Emergency Medicine specialists that two EDs, placed on either side of the city, would be more likely to ensure timely access to critical care for all children in the greater Dublin area.

Access to Paediatric Emergency Care is also an issue for "Adult" Emergency departments in Dublin, in that parents are likely to bring a critically ill child (particularly babies and infants) to the nearest centre, irrespective of its designation, if they perceive the distance to the paediatric centre to be too great ***(2)***.

A single ED would also have significant implications for the Ambulance Service due to the requirement for patient transport to a single site from such a large geographical area.

A Major Incident response that relied on a single ED could be severely compromised if the incident interfered with access to, or the functioning of, that single department (e.g. flooding of an ED, SARS or other infectious disease outbreak). A network of Urgent Care centres could not provide the level of support that a second fully equipped ED would provide.

Services which are at a greater geographical distance from where people live and from where they see their Primary Care doctors, are less likely to be considered "family friendly" by the key service users, namely patients and their families.

4.2 A Second Paediatric Emergency Department providing Secondary Paediatric Care

This is the preferred option of the IAEM. It involves having a second fully functioning Paediatric Emergency Department on an alternative location in the Greater Dublin area offering a 24-hour service. Such a unit would have to have access to on-site secondary paediatric care. Collaboration between senior doctors and Nurses in the ED and the in-patient children's services would ensure optimal functioning of such units. This unit should have the back up of in-patient and short stay paediatric beds. This flexible approach to providing integrated emergency paediatric care has been explored in the documents *Services for Children in Emergency Departments (2007 Report of UK Intercollegiate Committee)* ***(2)*** and in *Emergency Care Framework for Children and Young People in Scotland (2006 Scottish Executive)* ***(3).***

This ED would be able to admit most children requiring inpatient care to its bed base and would only transfer children to the National Tertiary Paediatric Hospital that had a tertiary or specialist need. Referrals to such a unit would take into account the best interests of children in the population it serves. Primary care referrals, ambulance referrals etc should be clearly defined and the HSE and the providers of emergency care should work together to clarify the roles of the access points, define patients who should be referred to specialist centres and identify staff able to take these decisions. The ED should be designed and staffed to the national standards for EDs as laid down by the IAEM and the Royal College for Paediatrics & Child Health (April 2007) ***(2)***. The ED would be staffed by Consultants with Specialist Registration of sub specialty training in Paediatric Emergency Medicine.

This model would be more familiar to both medical practitioners and the lay public who would easily understand its function. The department would be integral to the local healthcare community and would maintain very close links with the people it serves.

Emergency care in the two Dublin EDs should be co-ordinated to ensure equity of quality of emergency care for all patients, irrespective of which department they attend. There should be shared clinical policies, joint training, research and continuing education structures and facilities, common clinical audit and close collaboration around future development and services in both units. There should be shared liaison with the Ambulance Service and other stakeholders. Major Incident Planning and response should be provided as a coordinated unit. The Dublin Paediatric EDs should develop academic and service links with regional EDs that also provide Paediatric Emergency Care.

4.3 Satellite services

While these facilities can be considered as options to enhance the provision of either a single Emergency Department or a two Emergency Department model, the following issues need due consideration.

4.3.1 Ambulatory/ Urgent Care Units (UCCs).

UCCs have been proposed as an option to be considered in the McKinsey report, which suggests that “these centres are either stand alone or attached to an adult facility with no inpatient children’s beds. They should be staffed by general paediatricians”. They comment that the fact that up to 90% of paediatric visits are discharged home means that tertiary transfers are manageable.

UCCs have not previously featured in Paediatric Emergency Care in Ireland, but are well established in the United States. These units provide episodic unscheduled care to patients with mild to moderate illnesses and minor injuries, which are not anticipated to be life threatening in nature. In general, patients requiring ambulance transport are not suitable for treatment at an

UCC. In essence UCCs target patients who are likely, after expert assessment and treatment, to be discharged rather than admitted.

As yet, there has been little clarity around this model. Such units, were they to be developed, would need to liaise closely with Primary Care and with other ambulatory paediatric services. Given that there will be significant overlap between the services offered in these units and those offered in paediatric outpatients it would be appropriate that they come under the clinical lead of a Consultant Paediatrician. In other countries, such units are sometimes co-located with other paediatric outpatient services such as chemotherapy clinics and/or day surgery units. Were such sites to be established, they would require some bed base that would have restricted hours of operation and access. There would need to be the facility to observe patients for a limited period of, say four to six hours.

While these units would not take ambulance-borne patients, they could potentially receive a lot of children with moderate illness requiring admission that might later develop a requirement for resuscitation type care. There would need to be adequate resuscitation facilities with staff trained in resuscitation. Clearly defined protocols for the transfer of patients to an inpatient paediatric service would be required.

Such units are likely to be operational during daytime and evenings, as the demand for ambulatory care declines after hours. Weekend and Bank Holiday cover should be provided at these centres. Unless these units are staffed on a 24-hour basis, it is inevitable that all Paediatric Emergency Care will inevitably default to EDs after hours. The coordination of emergency care and the re-direction of patients around the time that UCCs close will be critical to patient safety and service user convenience. The EDs will need to be adequately resourced to provide cover when UCC-based services are unavailable.

UCCs cannot provide the level of service available at an Emergency Department. The Committee on Paediatric Emergency Care of the American Academy of Paediatrics identified that the misconception that freestanding urgent care centres provide comprehensive emergency services is a problem restricting access to appropriate paediatric emergency care ***(4)***.

4.3.2 Minor injury units.

The appropriate management of injured children requires specific consideration. Seriously injured children should obviously be taken to fully equipped Emergency Departments ***(5, 6)***. Fortunately, severe trauma is relatively uncommon and most injuries seen in children are less severe and do not require hospital admission. The “Minor Injury” stream of Emergency Departments has traditionally been the site of care for these types of injuries. Consultants in Paediatric Emergency Medicine have the expertise in the initial assessment and management of the range of musculoskeletal

injuries and wounds that children sustain. The ED model also provides ease of access to resuscitative facilities and other hospital and community based services, should the child's injuries be found to be more serious than initially apparent or if Child Protection issues are identified.

With the proposed amalgamation of Dublin's Paediatric Emergency Departments into one or two units, it will be necessary to ensure that there is appropriate access for children with relatively minor injuries to services which are convenient, but also of the highest quality. Minor Injury Units have developed in the UK, primarily to cater for minor traumatic conditions. Notably many such units exclude infants. The advantage of calling these Units "Minor Injury Units" is that the public tend to understand exactly the capabilities of the Units and the kind of patient that they are able to deal with successfully.

If Minor Injury Units are to be developed in Ireland, they should be under the supervision of a Consultant with Specialist Registration of sub-specialty training in Paediatric Emergency Medicine based at a linked ED. While these units should not receive ill children they must be able to provide initial resuscitation to ill children who inappropriately turn up at the unit. Therefore, they must have an adequately equipped resuscitation area and have staff trained in and that have regular updates in resuscitation skills ***(2)***. As there will be no beds for admission or observation there should be formal protocols for the transfer of children to inpatient paediatric services.

The location of these Units is an important issue. If they are placed on current Adult hospital sites the public may feel that they offer the full range of emergency facilities of an ED and possibly even admission. Consideration should therefore be given to placing these units on non-hospital sites so that the public are aware from the title of the units and their geographical location that they are quite separate to any normal ED activity. They may be co-located with other community health care services.

5. Other considerations

Access to Primary Care and the breadth and quality of paediatric care provided by General Practitioners (GPs) will be key factors in driving demand for emergency services. The provision of out-of-hours GP services is crucial in this regard ***(2)***.

The provision of optimal Emergency Care for children will require appropriate service planning, infrastructure and the development of multidisciplinary teams with appropriate clinical skills. The IAEM recommends that all units, be they Emergency Departments, Urgent Care Centres or Ambulatory Clinics should be networked with the Tertiary Paediatric Hospital for the purpose of staff training and continuing professional development.

IT development and the sharing of patient data with Primary Care and the Ambulance Service should occur on a system-wide basis. Regional or network wide audit of care delivery will be necessary.

Future services must also consider the healthcare needs of Adolescents and the Acute Mental Health service needs of children, adolescents and their families ***(7)***.

It is out with the scope of this document to compare alternative models of Paediatric Emergency Care in terms of health economics. It is impossible to compare the scope and quality of services that may be on offer, as the term UCC has not been clarified in an Irish context. It is also unclear what advantages UCCs might bring over alternative models such as the provision of Ambulatory Paediatric clinics to which GPs might refer patients. Whatever model is ultimately developed, international experience determines that fragmentation and potential duplication of emergency services should be avoided in the interests of economy and quality of service.

6. Implications for other units

The IAEM advocates that paediatric and adolescent patients who require emergency care would be best served by accessible, high quality Emergency Department based care, provided as the core service of a well planned and appropriately resourced and coordinated Emergency Care Network ***(8)***.

7. References

(1) McKinsey: *Children's Health First* http://www.hse.ie/en/Publications/HSEPublications/ChildrensHealthFirst/. Accessed 26th May 2007

(2) *Services for Children in Emergency Departments.* April 2007. Report of the Intercollegiate Committee on Services for Children in Emergency Departments. Royal College of Paediatrics and Child Health. www.rcpch.ac.uk. Accessed 26th May 2007.

(3) *Emergency Care Framework for Children and Young People in Scotland.* October 2006. Scottish Executive. www.scotland.gov.uk/Publications/2006/09/19153348/16. Accessed 26th May 2007.

(4) *American Academy of Pediatrics: Access to Optimal Emergency Care for Children.* Pediatrics 2007; 119; 161-164.

(5) *A National Evaluation of the Effect of Trauma-Center Care on Mortality.* N Engl J Med 354;4, January 26, 2006

(6) *Better Care for the Severely Injured*. Royal College of Surgeons of England and British Orthopaedic Association, July 2000.

(7) *IAEM position statement on the implementation of the 2001 Mental Health Act* (December 2006). http://www.iaem.ie/index2.htm. Accessed 26th May 2007.

(8) Edwards N. *Clinical Networks.* BMJ 2002;324:63.