

Appendix 1

1 Introduction

In addition to the comprehensive services currently provided by Our Lady's Hospital for Sick Children, this section presents a vision of the benefits and synergies for a model of care that combines the provision of obstetrical/maternity services, newborn care and Paediatric care into a unified programme. Key elements of such a programme would include:

- Medical Genetics
- Maternal-Fetal Medicine
- Programmes for high risk pregnancy care
- National Centre for Midwifery
- Neonatology
- Infant/neonatal/maternal transport
- Breastfeeding promotion/education
- Outreach support for primary care sector (e.g. continuing medical education)
- Outreach clinics (antenatal and postpartum care)
- Maternal/Newborn Pathology Programmes
- Teaching and Research

2.1 Medical Genetics

The National Centre for Medical Genetics which is currently located at Our Lady's Children Hospital is becoming more crucial to the care of children and adults. The future of medical genetics in Ireland lies in the development and implementation of methods to diagnose, treat and prevent genetic disease. By striving to:

Advance the art and science of medical genetics by maintaining high standards in education, practice and research.

- Increase access to medical genetic services that improve health outcomes.
- Development and promulgation of clinical practice guidelines.
- Develop laboratory services directories, databases, population screening guidelines and position papers
- Establish uniform laboratory standards, quality assurance and proficiency testing.
- Promote effective and fair health policies and provide technical assistance to government agencies, professional organizations and other medical specialties.
- Sponsor educational programs for geneticists, other health care providers and the public, including the Annual Clinical Genetics Meeting

2.2 Maternal Fetal Medicine

- Sub specialty of Ob/Gyn found in leading high-risk tertiary maternity centres
- Works closely with Neonatologists and other Paediatric subspecialties
- Linkage with Medical Genetics and Paediatric Pathology Programmes
- Strong rationale for co-locating with Tertiary Paediatric Services
- "sick babies are more likely to survive and develop normally if cared for at a neonatal unit with on-site specialist paediatric facilities"¹

2.3 Programmes for High Risk Pregnancy Care

High risk pregnancies are increasing due to:

- Increased drug and alcohol abuse
- Changing demographics
- Incidence of older Mothers
- Increasing ethnic diversity. Linkage between pregnancy and health outcomes of newborns/children

- Centre of excellence model that shares knowledge and expertise with other regional centers
- Continuing medical education programmes for health professionals

2.4 National Centre for Midwifery

- Midwifery already bridges maternal and newborn care
- Will provide an effective linkage between a centre of excellence and other regional centers
- No national centre for midwifery currently exists, but is needed

2.5 Neonatology

- A paediatric subspecialty that is most effective when working alongside obstetricians, rather than in isolation from them
- Key role in training paediatricians

2.6 Infant/Neonatal/Maternal Transport

- A focused cross functional (paramedics, nurses, physicians) team of professionals to serve the whole country.

¹ Professor Liam Donaldson,

2.7 Additional Benefits

Additional benefits of a unified programme can be achieved in areas such as breast feeding, outreach to primary care, teaching and research.

3 Benefits of Co-Locating Paediatrics with Maternity Programmes

3.1 Continuity of Care

By combining the specialties of the maternity and paediatric hospital, we are ensuring the continuity of care for both the mother and child is seamless. This standard of care will be supported by a combined administration and ICT system which will ensure that care is administered in both prompt and timely fashion. As a result of this continuity of care the value for money and quality of service to the key stakeholders will be enhanced.

3.2 Specialist Services

The combination of the specialist service such as NICU and PICU will result in a better neonatal outcome, as patient stay and transfers to tertiary sites would be reduced. This will have a positive impact on the National infant mortality and morbidity rates.

3.3 Research

By creating a combined women and children centre of excellence we are increasing the potential of attracting the highest standard of researchers due to the centres high clinical volumes and concentration of academic medicine programmes in field of obstetrics, gynaecology and paediatrics. This will further enhance the quality of care provided to the patient and increase the credibility of our services internationally

3.4 Human Resources

The collocation of these services of care will result in a multi-skilled, highly educated and motivated workforce dedicated to the care of women and children.

3.5 Primary Care Links

This provides an opportunity for the current outreach programme to be expanded to include maternity programmes which allows for early detection and management of high risk cases.

4 Maternal Newborn Care - International Best Practice

This section identifies examples of maternal/newborn models of care found in other countries similar to that envisioned for Ireland. These include:

- Auckland
- Belfast
- Glasgow
- Manchester
- Vancouver

These centers serve similar sized catchment areas to that envisaged for the single Dublin area Paediatric hospital.

4.1 Auckland

The Auckland City Hospital campus accommodates a full adult hospital together with a New Zealand's only tertiary paediatric centre. The buildings are physically connected and the neonatal intensive care unit is located on the same floor as the obstetrics unit.

4.2 Belfast

Plan is to centralise Belfast's maternity services to the Royal Hospitals' site. Catering for up to 6,000 births per annum, the service would include:

- Obstetrical care
- Neonatal care
- A perinatal centre with consultation and treatment facilities
- Gynaecology:
 - Early pregnancy assessment unit
 - Reproductive medicine facility
- Neonatal transfer programme
- Regional Genetics service
- Psychiatry for post natal depression
- Support of local community midwifery and antenatal clinics.

The Royal Belfast Hospital for Sick Children is also located on the site and so offers rapid access to a full range of paediatric specialties

4.3 Glasgow

The Greater Glasgow Health Board identified that the best level of care for mothers babies and children was best achieved by locating a new children's hospital on an adult hospital site that also includes the location of maternity care.

4.4 Manchester

In Manchester, it has been located to consolidate the three paediatric hospitals to just one site in Central Manchester. This will co-locate Paediatrics with an adult hospital and a maternity hospital.

4.5 Vancouver

The British Columbia Children's Hospital is a Paediatric Tertiary Centre serving a catchment population of about 4.5 million. It is adjacent and physically joined to the main maternity hospital for British Columbia, which delivers between 5,500 and 7,000 babies per annum. The neonatal intensive care nursery serves the entire province of British Columbia and supports a infant transport programme for acutely ill infants and neonates. Both hospitals are teaching hospitals affiliated with the University of British Columbia Faculty of Medicine. The Division of Maternal Fetal Medicine at the Women's Hospital manages high risk pregnancies and works closely with the Division of Neonatology at the Children's Hospital and both link with Obstetricians and Paediatricians across the province. Other related programmes located at the site include:

- Provincial Midwifery Programme
- Obstetrical/Paediatric training for Family Practitioners
- Full range of Paediatric subspecialists, including cardiology, cardiac surgery, neurosurgery, orthopaedics, biochemical diseases, cystic fibrosis and paediatric oncology
- Medical Genetics Programmes offering services/counselling to couples
- Paediatric Pathology Programmes

The maternal/newborn programme also liases with community health programmes focused on new mothers and their babies.

Hospital	Co-located ² with Adult Hospital	Co-located ¹ with Maternity Hospital/Unit	Functionally ³ adjacent to adult/Maternity	Co-located facilities
Australasia				
Westmead Children's Hospital	Yes	Yes	Yes	Westmead Hospital
KKH Singapore	No	Yes	No	Specialist Women and Children's Hospital
Starship Children's Hospital, Auckland	Yes	Yes	Yes	Auckland City Hospital, which includes National Maternity Hospital
RCH, Melbourne	Yes	Yes	No ⁴	Royal Melbourne Hospital
Canada				
Hospital for Sick Children, Toronto	Yes	Yes	Yes	Mount Sinai Hospital, Toronto General Hospital
British Columbia Children's Hospital	No	Yes	Yes	British Columbia Women's Hospital
Scandinavia				
HUS	Yes	Yes	Yes	Helsinki University Central Hospital
Queen Silvia's CH, Goteburg	Yes	Yes	Yes	Ostra Sjukhuset Hospital
Rikshospitalet	Yes	Yes	Yes	Rikshospitalet Adult Hospital
Ullevål	Yes	Yes	Yes	Ullevål Adult Hospital
U.K.				
Bristol	Yes	Yes	Yes	Bristol Royal Infirmary
Manchester	Yes	Yes	Yes	Co-location of adult and maternity services
Evelina	Yes	Yes	Yes	Guy's and St. Thomas
Great Ormond Street	No	No	No	
U.S.				
Lucile Packard CH	Yes	Yes	Yes	Stanford Hospital Complex
CHOP	Yes	Yes	No	University of Pennsylvania Hospital
Cincinnati CH	Yes	Yes	No ⁵	University of Cincinnati Medical Centre
Texas CH	Yes	Yes	Yes ⁶	Methodist and St. Lukes Hospital

² Co-located: A hospital that is located in its own building, but that is adjacent to an adult hospital. Budget and governance may be integrated or separate.

³ Functionally adjacent: Neonate or PICU patient can be physically transferred to co-located facility without use of an ambulance

⁴ 300m walk across major road

⁵ High risk maternity unit is 0.5 miles away

Conclusion

Many children's conditions such as cardiac anomalies are now diagnosed on pre natal scanning, safer and more effective care could be provided to women and children if these facilities co-existed on the same site. Such a hospital recognizes that the proper planning and delivery of truly responsive mother & child services implies multi-agency partnerships for the co-ordination of services in the best interest of the child, young person or pregnant woman.

The benefits of having shared services to support Paediatric Surgical and Medical Neonatal services (currently services delivered on multiple sites) are enormous. In addition many chronic conditions, for example, cardiac anomalies, will often be identified before the child is born. Combined care sites allow for continuity of pre and post natal care in combination with neonatal care.

An option here is to set up a partnership between a large Maternity hospital and a tertiary paediatric hospital would bring together all the hospital's expertise to provide an expert, high quality, well-coordinated service. Our Lady's Children's Hospital, Crumlin in recognizing that pre and post natal health have a critical effect on overall child health, has established links with a number of maternity hospitals and would be anxious to continue to pursue close proximity and partnership arrangements with maternity hospitals.

⁶ Tunnel and bridge connect with OB unit