Health Information and Quality Authority

An tÚdarás Um Fhaisnéis agus Cáilíocht Sláinte

Report of the unannounced inspection of maternity services at the Coombe Women & Infants University Hospital

Monitoring programme against the *National Standards for Safer Better Maternity Services* with a focus on obstetric emergencies

Dates of inspection: 22 August 2018 and 23 August 2018

Safer Better Care

About the Health Information and Quality Authority (HIQA)

The Health Information and Quality Authority (HIQA) is an independent statutory authority established to promote safety and quality in the provision of health and social care services for the benefit of the health and welfare of the public.

HIQA's mandate to date extends across a wide range of public, private and voluntary sector services. Reporting to the Minister for Health and engaging with the Minister for Children and Youth Affairs, HIQA has responsibility for the following:

- **Setting standards for health and social care services** — Developing person-centred standards and guidance, based on evidence and international best practice, for health and social care services in Ireland.

- **Regulating social care services** — The Chief Inspector within HIQA is responsible for registering and inspecting residential services for older people and people with a disability, and children's special care units.

- **Regulating health services —** Regulating medical exposure to ionising radiation.

- **Monitoring services** — Monitoring the safety and quality of health services and children's social services, and investigating as necessary serious concerns about the health and welfare of people who use these services.

- **Health technology assessment** — Evaluating the clinical and cost-effectiveness of health programmes, policies, medicines, medical equipment, diagnostic and surgical techniques, health promotion and protection activities, and providing advice to enable the best use of resources and the best outcomes for people who use our health service.

- **Health information** — Advising on the efficient and secure collection and sharing of health information, setting standards, evaluating information resources and publishing information on the delivery and performance of Ireland's health and social care services.

- **National Care Experience Programme** — Carrying out national service-user experience surveys across a range of health services, in conjunction with the Department of Health and the HSE.

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1.0 Information about this monitoring programme

The *National Standards for Safer Better Maternity Services*[1] were published by HIQA in 2016. Under the Health Act 2007,[2] HIQA's role includes setting such standards in relation to the quality and safety of healthcare and monitoring compliance with these standards.

HIQA commenced a programme of monitoring against the *National Standards for Safer Better Maternity Services*, with a focus on obstetric emergencies, in maternity hospitals and in maternity units in acute hospitals in May 2018. The *National Standards for Safer Better Maternity Services* will be referred to as the National Standards in this report.

For the purposes of this monitoring programme, obstetric emergencies are defined as pregnancy-related conditions that can present an immediate threat to the wellbeing of the mother and baby in pregnancy or around birth. HIQA's focus on such emergencies, as we monitor against the National Standards, intends to highlight the arrangements all maternity units have in place to manage the highest risks to pregnant and postnatal women and newborns when receiving care.

Pregnancy, labour and birth are natural physiological states, and the majority of healthy women have a low risk of developing complications. For a minority of women, even those considered to be at low-risk of developing complications, circumstances can change dramatically prior to and during labour and delivery, and this can place both the woman's and the baby's lives at risk. Women may also unexpectedly develop complications following delivery, for example, haemorrhage. Clinical staff caring for women using maternity services need to be able to quickly identify potential problems and respond effectively to evolving clinical situations.

The monitoring programme assessed if specified[3] National Standards in relation to leadership, governance and management had been implemented. In addition, maternity hospitals and maternity units were assessed to determine if they were resourced to detect and respond to obstetric emergencies which occurred, and explored if clinical staff were supported with specialised regular training to care for women and their newborn babies.

This monitoring programme examined if specified[3] National Standards in relation to effective care and support and safe care and support had been implemented. The programme assessed whether or not maternity hospitals and maternity units could effectively identify women at higher risk of complications in the first instance. It also examined how each maternity hospital or maternity unit provided or arranged for the care of women and newborns in the most appropriate clinical setting. The programme looked at how risks in relation to maternity services were managed and how the service was monitored and evaluated.

In monitoring against the *National Standards for Safer Better Maternity Services,* with a focus on obstetric emergencies, HIQA has identified three specific lines of enquiry (LOE). These lines of enquiry represent what is expected of a service providing a consistently safe, high-quality maternity service, particularly in its response to obstetric emergencies. These lines of enquiry have been used by HIQA to identify key relevant National Standards for assessment during this monitoring programme.

All three lines of enquiry reflect a number of themes of the National Standards. For the purposes of writing this report, compliance with the National Standards is reported in line with the themes of the National Standards. The lines of enquiry for this monitoring programme are listed in Figure 1.

Figure 1 – Monitoring programme lines of enquiry

LOE 1:

The maternity unit or maternity hospital has formalised leadership, governance and management arrangements for the delivery of safe and effective maternity care within a maternity network*.

LOE 2:

The maternity service has arrangements in place to identify women at higher risk of complications and to ensure that their care is provided in the most appropriate setting.

The maternity service has arrangements in place to detect and respond to obstetric emergencies and to provide or facilitate ongoing care to ill women and or their newborn babies in the most appropriate setting.

LOE 3:

The maternity service at the hospital is sufficiently resourced with a multidisciplinary workforce that is trained and available to detect and respond to obstetric emergencies at all times.

A further aspect of HIQA's monitoring programme was to examine progress made across the maternity services to develop maternity networks. The National Standards support the development of maternity networks in Ireland.

* Maternity Networks are the systems whereby maternity units and maternity hospital are interconnected within hospital groups to enable sharing of expertise and services under a single governance framework.

Further information can be found in the *Guide to HIQA's monitoring programme against the National Standards for Safer Better Maternity Services, with a focus on obstetric emergencies* [3] which is available on HIQA's website: www.hiqa.ie

1.1 Information about this inspection

The Coombe Women & Infants University Hospital is a stand-alone specialist maternity hospital and is a tertiary referral centre for services including maternal and fetal medicine, neonatology and gynaecology. The hospital is a voluntary hospital governed by a Board of Guardians and Directors who appoint a Master[†] as Chief Executive Officer for a fixed period of seven years.

The hospital has a service level agreement with the Health Service Executive (HSE) to allow for state funding, under Section 38 of the Health Act 2004[4]. The hospital is part of the HSE's Dublin Midlands Hospital Group.[‡] There were 8,166 births at the hospital in 2017.

To prepare for this inspection, inspectors reviewed a completed self-assessment tool[§] and preliminary documentation submitted by the Coombe Women & Infants University Hospital to HIQA in June 2018. Inspectors also reviewed information about this hospital including previous HIQA inspection findings; information received by HIQA and published national reports. Information about the unannounced inspection at the Coombe Women & Infants University Hospital is included in Table 1.

Table 1: Inspection details

Dates	Times of inspection	Inspectors
22 August 2018	13:45hrs to 18.30hrs	Siobhan Bourke Aileen O' Brien Dolores Dempsey Ryan Joan Heffernan
23 August 2018	09:00hrs to 17:00hrs	

† The Mastership system is unique to the three Dublin Maternity Hospitals where the Master is both Chief Executive Officer and Lead Consultant Obstetrician and Gynaecologist.
‡ Dublin Midlands Hospital Group also includes Midland Regional Hospital Portlaoise, St. James's Hospital, Midland Regional Hospital Tullamore, Naas General Hospital, St. Luke's Radiation Oncology Network and Tallaght University Hospital
§ All maternity hospitals and maternity units were asked to complete a self-assessment tool designed by HIQA for this monitoring programme

During this inspection, the inspection team spoke with the following staff at the hospital:

- representatives of the hospital's Senior Management Team and
- the hospital's lead consultants or a delegated deputy in each of the clinical specialties of obstetrics, anaesthesiology and neonatology.

In addition, the inspection team visited a number of clinical areas which included:

- Assessment areas where pregnant and postnatal women who present to the hospital with pregnancy-related concerns were reviewed. These included the Emergency Room in the Outpatients Department and an assessment room adjacent to the Delivery Suite.
- The Delivery Suite where women were cared for during labour and childbirth which included an emergency operating theatre and two high dependency beds.
- An Obstetric Operating Theatre for women undergoing surgery, for example in the case of caesarean section.
- The Neonatal Intensive Care Unit where babies requiring additional monitoring and support were cared for.
- A mixed antenatal and postnatal ward where women were cared for before and after childbirth.

Information was gathered through speaking with midwifery and nursing managers, and staff midwives in these clinical areas and doctors assigned to the maternity service. In addition, inspectors looked at the clinical working environment and reviewed hospital documentation and data pertaining to the maternity service during the inspection.

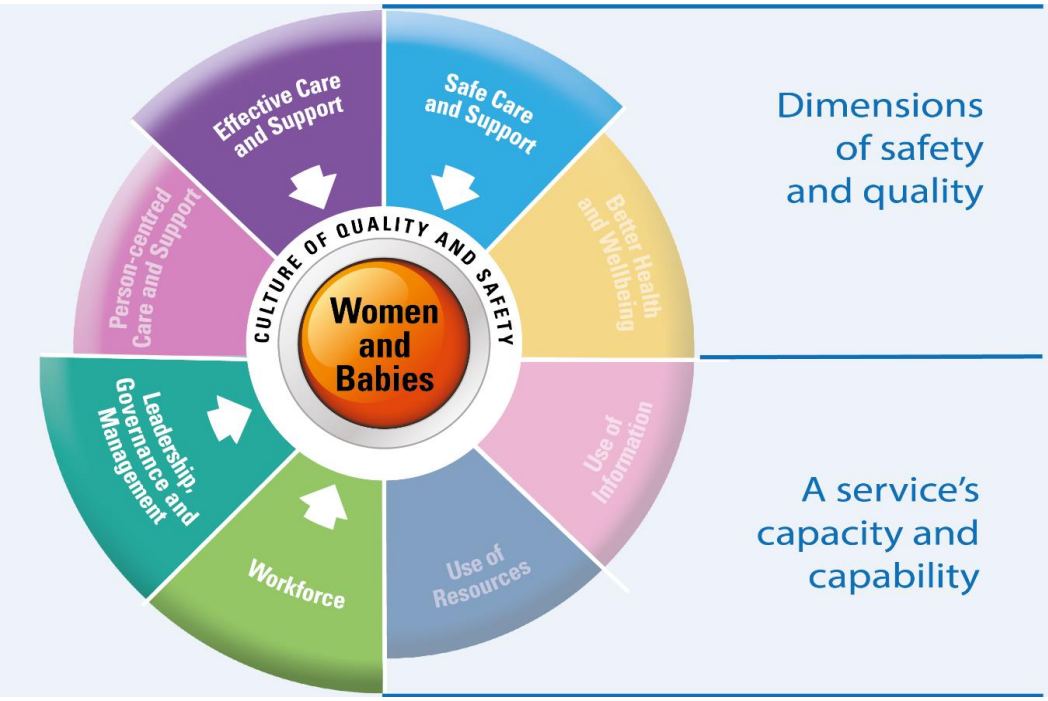
HIQA would like to acknowledge the cooperation of the Hospital Management Team and all staff who facilitated and contributed to this unannounced inspection.

1.2 How inspection findings are presented

This inspection was focused specifically on maternity services and the systems in place to detect and respond to obstetric emergencies, as outlined in the published Guide[3] to this monitoring programme. Therefore as part of this inspection programme, HIQA monitored compliance with some, but not all of the National Standards. Report findings are based on information provided to inspectors during an inspection at a particular point in time.

The National Standards themes which were focused on in this monitoring programme are highlighted in Figure 2. Inspection findings are grouped under the National Standards dimensions of Capacity and Capability and Safety and Quality.

Figure 2: The four National Standard themes which were focused on in this monitoring programme



Based on inspection findings, HIQA used four categories to describe the maternity service's level of compliance with the National Standards monitored.

These categories included the following:

- **Compliant:** A judgment of compliant means that, on the basis of this inspection, the maternity service is in compliance with the relevant National Standard.
- **Substantially compliant:** A judgment of substantially compliant means that the maternity service met most of the requirements of the relevant National Standard, but some action is required to be fully compliant.
- **Partially compliant:** A judgment of partially compliant means that the maternity service met some of the requirements of the relevant National Standard while other requirements were not met. These deficiencies, while not currently presenting significant risks, may present moderate risks which could lead to significant risks for patients over time if not addressed.
- **Non-compliant:** A judgment of non-compliant means that this inspection of the maternity service has identified one or more findings which indicate that the relevant National Standard has not been met, and that this deficiency is such that it represents a significant risk to patients.

Inspection findings will be presented in this report in Sections 2 and 3. Section 2 outlines the inspection findings in relation to capacity and capability and Section 3 outlines the inspection findings in relation to the dimensions of safety and quality. Table 2 shows the main report sections and corresponding National Standards, themes and monitoring programme lines of enquiry.

Table 2: Report sections and corresponding National Standard themes and inspection lines of enquiry

Report section	Themes	Standards	Line of enquiry
Section 2: Capacity and Capability:	Leadership, Governance and Management	5.1, 5.2, 5.3, 5.4, 5.5, 5.8 and 5.11	LOE 1
	Workforce	6.1, 6.3, 6.4	LOE 3
Section 3: Dimensions of Safety and Quality:	Effective Care and Support	2.1, 2.2, 2.3, 2.4, 2.5, 2.7, 2.8.	LOE 2
	Safe Care and Support	3.2, 3.3, 3.4, 3.5	

2.0 Capacity and Capability

Inspection findings in relation to capacity and capability will be presented under the themes of the National Standards for Safer Better Maternity Services of Leadership, Governance and Management and Workforce.

This section describes arrangements for the leadership, governance and management of the maternity service at this hospital, and HIQA's evaluation of how effective these were in ensuring that a high quality safe service was being provided. It will also describe progress made in the establishment of a maternity network from the perspective of this hospital. This section also describes the way the hospital was resourced with a multidisciplinary workforce that was trained and available to deal with obstetric emergencies twenty-four hours a day.

During this inspection, inspectors looked at 10 National Standards in relation to leadership, governance and management and workforce. Of these, the Coombe Women & Infants University Hospital was compliant with nine National Standards and substantially compliant with one National Standard.

Inspection findings leading to these judgments and key findings in relation to the hospital's level of compliance with the National Standards monitored during this inspection are included in Table 3 and Table 4 within this section.

2.1 Leadership, Governance and Management

Leadership, governance and management refers to the arrangements put in place by a service for clear accountability, decision-making and risk management as well as meeting its strategic and statutory obligation.

A well-governed maternity service is clear about what it does, how it does it, and is accountable to the women who use the services and the people who fund and support it. Good governance arrangements acknowledge the interdependencies between organizational arrangements and clinical practice and integrate these to deliver safe, high-quality care.

Inspection findings in relation to leadership, governance and management are described next.

Inspection findings

2.1.1 Maternity service leadership, governance and management

Maternity network

One of the key findings from HIQA's Portlaoise investigation in 2015 was the need to implement in full a maternity network between the Midlands Regional Hospital Portlaoise (Portlaoise Hospital) and the Coombe Women & Infants University Hospital. The aim of this network was to create one single maternity unit over two sites.

Collaborative network arrangements

Inspectors were informed that the Coombe Women & Infants University Hospital and Portlaoise Hospital Maternity Unit had developed a collaborative network arrangement to enable sharing of expertise and clinical services between the sites.

Two consultant obstetricians with joint appointments between the Coombe Women & Infants University Hospital and Portlaoise Hospital provided 1.3 whole time equivalent (WTE) position to Portlaoise Hospital. These consultant obstetricians participated in the consultant on-call rota for the maternity service at Portlaoise Hospital. Women transferred from Portlaoise Hospital to the Coombe Women & Infants University Hospital were admitted where possible under the care of one of the consultant obstetricians with joint appointments between the two hospitals in order to provide continuity of care.

Two consultant neonatologists with joint appointments between the Coombe Women & Infants University Hospital and Portlaoise Hospital each worked a full week every month in Portlaoise Hospital to provide clinical support to paediatricians in the Special Care Baby Unit. These consultant neonatologists provided training to non-consultant hospital doctors, standardisation of policies, procedures and guidelines for neonatal care and support and advice to the paediatric team caring for newborn infants at Portlaoise Hospital.

Transfer of all high-risk pregnant women and newborn infants as required from Portlaoise Hospital was readily facilitated by the Coombe Women & Infants University Hospital.

A senior consultant obstetrician from the Coombe Women & Infants University Hospital was assigned as the Clinical Director for Integration and attended Portlaoise Hospital Maternity Unit for two days each week to provide support and clinical leadership to the maternity service. Perinatal mortality meetings were shared across both sites. Policy procedures and guidelines for maternal and neonatal care were shared across both sites where possible. Midwives from Portlaoise Hospital attended

training in the Coombe Women & Infants University Hospital's Centre for Midwifery Education.

Progress with the implementation of a maternity network

Senior managers at the Coombe Women & Infants University Hospital informed inspectors that they believed that full integration of Portlaoise Hospital Maternity Services with the Coombe Women & Infants University Hospital was hindered by the absence of an agreed plan at Health Service Executive and Department of Health level for the Midlands Regional Hospital Portlaoise. As a result, the Coombe Women & Infants University Hospital was not in a position at the time of inspection to assume responsibility for the governance, management and provision of maternity services at Portlaoise Hospital. Consequently, while current arrangements did facilitate meaningful and welcome co-operation between both the Coombe Women & Infants University Hospital and Portlaoise Hospital, this meant that the Coombe Women & Infants University Hospital's Senior Management Team had no oversight or responsibility for maternity services provided at Portlaoise Hospital.

The Maternity Strategy outlines that the establishment of maternity networks is needed to support safe quality services and to ensure the sustainability and operational resilience of smaller maternity units. Previous HIQA reports identified that development and implementation of maternity clinical networks was an essential step in ensuring the quality and safety of maternity services in smaller maternity units so that each hospital site can deliver care appropriate to the resources, facilities and services available on that site. Maternity networks would also provide support for clinicians as well as centrally agreed protocols and care pathways and quality assurance across hospitals. As recommended in previous HIQA reports in 2015 and 2016, it is imperative that efforts to overcome the current barriers to the creation of a fully functioning network involving both hospitals, is overcome in the short term in the best interest of women and infants.[5,6]

Coombe Women & Infants University Hospital leadership, governance and management

The Master had overall managerial responsibility and accountability for the maternity service at the Hospital. The Master reported to the hospital's Board of Directors and Guardians of the hospital. As the Hospital was funded under Section 38 of the Health Act 2004, the Master also attended performance meetings monthly with the Chief Executive Officer of the Dublin Midlands Hospital Group.

The hospital had Clinical leads known as "Heads of Division" appointed in the specialties of obstetrics, gynaecology, anaesthesiology, neonatology and pathology. These clinicians were appointed on a rotational basis and were responsible for

leading departmental meetings, arranging training for non-consultant hospital doctors and liaising with the Master on service provision.

The Director of Midwifery was responsible for the organisation and management of midwifery and nursing services and was a member of the hospital's senior management team. The Hospital Senior Management Team monitored performance including patient outcomes, service user feedback and patient safety incidents at a weekly meeting.

Senior hospital managers at the hospital conducted monthly leadership quality and safety walk-arounds with managers in the clinical areas. The clinical area manager was provided with a report providing feedback or learning in relation to clinical incidents and complaints and a written report and an action plan if required to address any areas for improvement identified during the walk-around. Safety alerts in relation to medical devices and medicines were communicated to staff in the hospital.

The hospital had a statement of purpose which outlined the services provided at the hospital, clinical partnerships with other hospitals and external reporting arrangements. This statement of purpose should be made publicly available in line with the National Standards.

The hospital had a five year strategic plan from 2016-2021. Objectives of the strategy for 2018 included ensuring appropriate staffing levels, completion of a five year infrastructural plan, and development of the Quality and Patient Safety Directorate at the hospital.

Inspectors found that there was a clearly defined and effective leadership, governance and management structure at the hospital to ensure the quality and safety of the maternity services provided.

Table 3 on the next page lists the National Standards relating to leadership, governance and management focused on during this inspection and key findings in relation to the hospital's level of compliance with the National Standards monitored during this inspection.

Table 3: HIQA's judgments against the National Standards for Safer Better Maternity Services for leadership, governance and management that were monitored during this inspection
Standard 5.1 Maternity service providers have clear accountability arrangements to achieve the delivery of safe, high-quality maternity care. **Judgment:** Compliant
Standard 5.2 Maternity service providers have formalized governance arrangements for assuring the delivery of safe, high-quality maternity care. **Judgment:** Compliant
Standard 5.3 Maternity service providers maintain a publicly available statement of purpose that accurately describes the services provided to women and their babies, including how and where they are provided. **Judgment:** Compliant
Standard 5.4 Maternity service providers set clear objectives and have a clear plan for delivering safe, high-quality maternity services. **Judgment:** Compliant
Standard 5.5 Maternity service providers have effective management arrangements to support and promote the delivery of safe, high-quality maternity services. **Judgment:** Compliant
Standard 5.8 Maternity service providers systematically monitor, identify and act on opportunities to improve the safety and quality of their maternity services.. **Judgment:** Compliant
Standard 5.11 Maternity service providers act on standards and alerts, and take into account recommendations and guidance issued by relevant regulatory bodies. **Judgment:** Compliant

2.2 Workforce

Effective maternity services need to ensure that there are sufficient staff available at the right time, with the right skills to deliver safe, high-quality care. Training specific to maternity care is required to enable staff to acquire the skills and knowledge to detect and respond to obstetric emergencies. This inspection looked at the number of nursing and midwifery staff who provided care to women and infants using the maternity service. This inspection also looked at the number and grade of medical staff who worked in the specialities of obstetrics, neonatology and obstetric anaesthesiology at the Hospital. Inspectors also reviewed the uptake and provision of training and education of staff relevant to obstetric emergencies.

Inspection findings in relation to workforce are described next.

Inspection findings

2.2.1 Midwifery and nursing staffing

The hospital did not meet the HSE's national benchmark for midwifery staffing in line with the HSE's Midwifery Workforce Planning Project.[7] At the time of the on-site inspection, inspectors were informed that there were 24 whole time equivalent (WTE) midwifery positions vacant at the hospital, which equates to approximately six per cent of the midwifery workforce at the hospital. The hospital employed agency midwifery staff to temporarily fill staff vacancies in order to ensure safe care and treatment was delivered. Inspectors were informed that the majority of agency midwives employed were familiar with the workings of the hospital as in general agency midwives employed were current employees of the hospital. The level of agency staff employment was continuously reviewed at the hospital. The hospital was actively working to recruit additional midwives to fill vacant positions. This situation was described as a constant challenge at the hospital. Recruitment of midwives from both Ireland and abroad was on-going.

An experienced midwife shift leader was in place for each shift in the Delivery Suite. The hospital had clinical skills facilitators who worked with midwifery staff in the delivery suite and nursing and medical staff in the neonatal unit to help them develop their required skills and competencies.

Specialist support staff

A sufficient number of trained fetal ultrasonographers were employed to provide a fetal ultrasound service during core working hours. The hospital was staffed and managed so that emergency caesarean sections could be performed rapidly when

required. The hospital audited the timing of Category 1** caesarean sections to provide assurance that emergency caesarean sections were conducted within recommended time frames.

2.2.2 Medical staff

Medical staff availability

On-call consultant obstetricians, anaesthesiologists and neonatologists were accessible to medical and midwifery staff and staff who spoke with inspectors stated they were onsite promptly when called to attend. The hospital was staffed with medical staff at specialist registrar, registrar and senior house officer grade in the specialties of obstetrics, anaesthesiology and neonatology who were available onsite to provide care to women and newborns on a 24-hour basis. Rapid response teams were available on site 24 hours a day, seven days a week to attend to obstetric emergencies, neonatal emergencies and cardiac arrests.

Consultants in the specialties of obstetrics, anaesthesiology and neonatology were employed on permanent contracts and were registered as specialists on the relevant specialist register with the Medical Council in Ireland.

Obstetrics

The hospital had an on-call rota outside of core working hours for consultant obstetricians whereby consultants were on call from home usually one in every seven nights. A second on-call consultant obstetrician was also available every night if required as the hospital had over 8,000 births annually.

A consultant obstetrician was rostered to be in attendance in the Delivery Suite during core working hours from Monday to Friday and was free from other duties during these sessions. On-call consultant obstetricians conducted ward rounds, on Saturdays, Sundays and on public holidays. A rota of two non-consultant hospital doctors in obstetrics at registrar grade and one at senior house officer grade was in place in the Delivery Suite 24 hours a day.

Obstetric anaesthesiology

The hospital had an on-call rota outside of core working hours for consultant anaesthesiologists whereby consultants were on call from home usually one in every four to five nights. The hospital had 4.22 whole time equivalent consultant anaesthesiologists employed at the hospital. An anaesthesiologist was available 24 hours every day onsite for emergency work on the Delivery Suite and this

**National Institute for Clinical Excellence (NICE) recommends four categories when determining the urgency of Caesarean Sections. Category 1 is the most urgent where there is an immediate threat to the life of the woman or foetus that necessitates prompt delivery of the baby by caesarean section.

anaesthesiologist was free from other duties as recommended in national guidelines.[8]

A rota of two non-consultant hospital doctors in anaesthesiology, one at registrar grade and one at senior house officer grade was in place in the Delivery Suite 24 hours a day.

Neonatology

The hospital had an on-call rota outside of core working hours where a consultant neonatologist was on call from home usually one in every five nights. The hospital had 4.8 whole time equivalent consultant neonatologists positions filled at the hospital. This is less than recommended by the National Clinical Programme for Paediatrics and Neonatology who advise that each tertiary neonatal intensive care unit should have seven consultant neonatologists.[16]

A rota of two non-consultant hospital doctors in neonatology, one at registrar grade and one at senior house officer grade was in place to provide emergency neonatal care in the hospital 24 hours a day.

2.2.3 Training and education of multidisciplinary staff

Mandatory training requirements

The hospital had clearly defined mandatory training requirements for clinical staff. Clinical staff were expected to undertake training aligned to their clinical responsibilities for example in relation to basic life support, neonatal resuscitation, sepsis, Irish Maternity Early Warning Systems, obstetric emergencies and fetal monitoring.

Non-consultant hospital doctors working in neonatology, midwives and neonatal nurses were required to undertake training in neonatal resuscitation every two years.

Midwives and nurses were required to undertake training in basic life support, clinical handover and sepsis.

Midwives and obstetric medical staff undertook fetal monitoring training every two years via an interactive online training programme and this training was supported with monthly multidisciplinary cardiotocography[††] review meetings.

Obstetric medical staff and midwifery staff were required to undertake a multi-professional training course in the management of obstetric emergencies. This

†† Cardiotocography is an electronic means of recording the fetal heart beat and the uterine contractions during pregnancy. The machine produces a trace known as a cardiotocograph which illustrates the fetal heart rate and uterine activity.

training included management of maternal collapse and cardiac arrest, team working, maternal sepsis, postpartum haemorrhage and umbilical cord prolapse.

Uptake of mandatory training

All neonatal medical staff had undertaken a neonatal resuscitation training programme at the hospital in the last two years. The hospital provided documented evidence to inspectors that indicated that only 60% of midwives and 54% of nurses had completed this programme in the same time frame.

In addition, documented evidence showed that only 60% of midwives and 45% of nurses had attended training in adult basic life support in the two years prior to the onsite inspection.

Ninety three per cent of obstetric medical staff had completed a fetal monitoring training programme in the previous two years. The remaining obstetric medical staff were progressing with this training since commencing employment at the hospital in July 2018.

Eighty per cent of midwives who required fetal monitoring training had completed it in the previous two years.

Documented evidence provided to inspectors indicated that only 44% of midwives, 32% of nurses and 53% of obstetric medical staff had undertaken multi-professional training in the management of obstetric emergencies in the two years prior to inspection.

Senior management informed inspectors that accurate recording of the uptake of mandatory training was a challenge and the hospital was in a transition period from a paper-based system to an electronic system to improve this. This needs to be addressed so that the Senior Management Team can be assured that clinical staff have undertaken mandatory training requirements at the required frequency.

In light of these findings and considering the hospitals reliance on agency midwifery staff, it is critical that the senior management team ensure that clinical staff attend mandatory and essential training appropriate to their scope of practice in line with the National Standards.

Orientation and training of new staff

A full day of training was provided for new non-consultant hospital doctors in January and July each year. As part of this training programme, medical staff were provided with training on clinical handover, the Irish Maternity Early Warning System and sepsis. Newly appointed medical staff were also provided with a series of specialty specific training sessions in the months following induction.

Midwifery and nursing staff were provided with clinical and corporate training when commencing employment at the hospital.

Other training and education opportunities for staff

Obstetric emergencies were practiced by live skills and drills (simulation training) in the Delivery Suite twice a week for midwives and doctors. Neonatal resuscitation drills were held weekly in the neonatal unit for clinical staff. Medical staff in anaesthesiology undertook training in relation to advanced cardiorespiratory resuscitation for adults. Clinical Staff were provided with training in other areas of practice such as open disclosure and clinical handover.

Midwifery staff were rotated to the Delivery Suite from different clinical areas in the maternity service every 12 months to maintain their skills. A proportion of midwives in the delivery suite had undertaken postgraduate training in high dependency care.

Doctors undertaking higher specialist training in obstetrics and gynaecology and anaesthesiology had competency-based assessments of procedural and technical skills. The hospital had frequent meetings to provide teaching and learning opportunities for non-consultant hospital doctors in obstetrics, anaesthesiology and neonatology. For example, obstetric registrars were provided with onsite education and training on how to prioritise labour ward care. Medical staff said they received very good support from consultants and that they had no hesitation about contacting the consultant on call to discuss a clinical case or to ask for advice or support. Clinical staff did not undertake invasive procedures[‡‡] independently until they had been deemed competent to do so. The hospital provided simulation training on invasive procedures for medical staff in neonatology, anaesthesiology and obstetrics.

The hospital was recognised as a site for undergraduate and postgraduate midwifery training and higher specialist training for doctors in the specialties of obstetrics and gynaecology, anaesthesiology and neonatology.

Table 4 on the next page lists the National Standards relating to workforce focused on during this inspection and key findings in relation to the hospital's level of compliance with the National Standards monitored during this inspection.

[‡‡] All surgical and interventional procedures performed in operating theatres, outpatient treatment areas, labour ward delivery rooms, and other procedural areas. Interventional procedures include making a cut or a hole to gain access to the inside of a patient's body or gaining access to a body cavity without cutting into the body.

Table 4: HIQA's judgments against the National Standards for Safer Better Maternity Services for Workforce that were monitored during this inspection

Standard 6.1 Maternity service providers plan, organize and manage their workforce to achieve the service objectives for safe, high-quality maternity care **Judgment:** Compliant
Standard 6.3 Maternity service providers ensure their workforce has the competencies and training required to deliver safe, high-quality maternity care. **Key findings:** The hospital did not ensure that all midwifery and medical staff had undertaken mandatory training in adult and neonatal resuscitation and practical obstetric emergency management within the required timeframe. **Judgment:** Substantially compliant
Standard 6.4 Maternity service providers support their workforce in delivering safe, high-quality maternity care. **Judgment:** Compliant

3.0 Safety and Quality

Inspection findings in relation to safety and quality will be presented under the themes of the National Standards of Effective Care and Support and Safe Care and Support. The following section outlines the arrangements in place at the hospital for the identification and management of pregnant women at greater risk of developing complications. In addition, this section outlines the arrangements in place for detecting and responding to obstetric emergencies and for facilitating ongoing care to ill women and newborns.

During this inspection, inspectors looked at 11 National Standards in relation to safe and effective care. Of these, the Coombe Women & Infants University Hospital was compliant with 10 National Standards and non-compliant with one National Standard.

Inspection findings leading to these judgments and key findings in relation to the hospital's level of compliance with the National Standards monitored during this inspection are included in Table 5 and Table 6 within this section.

3.1 Effective Care and Support

The fundamental principle of effective care and support is that it consistently delivers the best achievable outcomes for women and their babies using maternity services. This can be achieved by using evidence-based information. It can also be promoted by ongoing evaluation of the outcomes for women and their babies to determine the effectiveness of the design and delivery of maternity care. Women and their babies should have access to safe, high-quality care in a setting that is most appropriate to their needs. How this care is designed and delivered should meet women's identified needs in a timely manner, while working to meet the needs of all women and babies using maternity services.

In relation to obstetric emergencies, this inspection included aspects of assessment and admission of pregnant women; access to specialist care and services; communication; written policies, procedures and guidelines; infrastructure and facilities; and equipment and supplies.

Inspection findings in relation to effective care and support are described next.

Inspection findings

The Coombe Women & Infants University Hospital is a stand-alone specialist maternity hospital and is a tertiary referral centre for services including maternal and fetal medicine, neonatology and gynaecology. In line with the National Standards,

each woman and infant had a named consultant with clinical responsibility for their care.

3.1.1 Assessment, admission and or referral of pregnant and postnatal women

The Coombe Women & Infants University Hospital provided a range of general and specialist maternity services for women with low and high risk pregnancies.

Assessment and referral

The hospital had agreed pathways to identify, assess and ensure that women who were at risk of developing complications during pregnancy or around the time of birth were cared for in an appropriate setting. Assessment services for pregnant and postnatal women included a:

- perinatal day centre
- perinatal medicine service
- perinatal ultrasound service
- maternal fetal medicine clinic
- high risk anaesthetic review clinic
- an emergency room
- an assessment room adjacent to the Delivery Suite.

Fetal ultrasound scans were offered to all pregnant women at intervals recommended in the National Standards. The hospital had an Early Pregnancy Assessment Unit for women with complications in early pregnancy. This unit was open from Monday to Friday.

Women could be referred by a midwife at their booking appointment to a number of specialised clinics such as a maternal medical clinic, a diabetic clinic, a preterm birth prevention clinic or to a multiple birth clinic, depending on their risk factors or underlying medical conditions. These clinics were led by consultants in specialties including obstetrics, endocrinology, haematology and cardiology.

Admission pathways

There were established pathways for the assessment, management and where necessary admission of women who attended the hospital with obstetric problems 24 hours a day, seven days a week. Women less than 24 weeks gestation who presented for non-routine or emergency care were assessed in the Emergency Room located near the Outpatients Department on the ground floor. Women who were greater than 24 weeks gestation were reviewed in the assessment room adjacent to

the Delivery Suite on the second floor. Each women and infant had a named consultant with clinical responsibility for their care.

Midwifery and medical staff carried out risk assessments of women at the time of booking, during pregnancy and during and after birth. The hospital had implemented the Irish Maternity Early Warning System for pregnant and postnatal women.

As a specialist maternity hospital, women who required complex or specialist maternity care were transferred for antenatal care and admitted for management of labour and childbirth from other units within the country, in particular from the Midlands Regional Hospital Portlaoise. Information provided to inspectors indicated that 59 pregnant women were admitted into the hospital from other maternity units between January and June 2018.

3.1.2 Access to specialist care and services for women and newborns

Access to clinical specialists

A number of consultant anaesthesiologists and consultant obstetricians and gynaecologists had joint appointments between the Coombe Women & Infants University Hospital and nearby St James's Hospital. Inspectors were informed that this enabled a close working relationship between the two hospitals to facilitate care planning and management for women with high risk pregnancies.

The hospital had measures in place to access consultant specialists from St. James's Hospital if required in an emergency situation onsite. St. James's Hospital is located in close proximity and is the nearest acute tertiary hospital to the Coombe Women & Infants University Hospital. The Coombe Women & Infants University Hospital and St. James's Hospital are both in the Dublin Midlands Hospital Group. The hospital had arrangements in place to facilitate and support the birth of a baby at St. James's Hospital if this was necessary in specific clinical situations for the wellbeing of the pregnant woman.

Similar to other stand-alone maternity hospitals, the hospital did not have specialist consultant surgeons or specialist medical consultants based onsite at the hospital. However, women were referred to such specialists at outpatients clinics held in the Coombe Women & Infants University Hospital or at St. James's Hospital when referral was required. When women were inpatients at the Coombe Women & Infants University Hospital, specialist consultants from St. James's Hospital could also attend to review them if required.

There was 24-hour access to clinical advice from consultants in the specialties of haematology and microbiology at the hospital. The hospital could access radiology services such as computerised axial tomography and interventional radiology when required for women at St. James's Hospital.

When pregnant women presented to the Coombe Women & Infants University Hospital with concerns or clinical conditions that were not pregnancy related and required review by medical or surgical specialists, they were transferred to an emergency department at an adult tertiary hospital. There were no direct transfer arrangements between the Coombe Women & Infants University Hospital and St. James's Hospital other than through the emergency department, except in the case of the critically-ill women, where they were transferred directly to Intensive Care Unit or the High Dependency Unit depending on their clinical condition

The hospital provided a reflective birth service for women following childbirth. This service provided women with the opportunity to discuss their childbirth experience with a senior midwife manager. Women could also be referred to other clinical specialties at the hospital or to their own general practitioner if required, from this service.

Obstetric anaesthesiology services

Obstetric anaesthesiologists are responsible for the provision of pain relief such as epidurals for women in labour and for the provision of anaesthesia for women who require caesarean section and other surgery during birth. They are also required to assist with the resuscitation and care of women who become critically ill due to pregnancy related conditions such as haemorrhage and pre-eclampsia.[§§] The hospital had a dedicated obstetric anaesthetic service in line with National Standards. There was a duty anaesthesiologist immediately available to attend women in the Delivery Suite 24 hours a day in line with relevant guidelines.[8]

Guidelines[8] and National Standards recommend that there is an agreed system in place for the antenatal assessment of high-risk mothers to ensure that the anaesthetic service is given sufficient notice of women at higher risk of potential complications. The hospital held anaesthetic pre-assessment clinics every weekday for women with risk factors for anaesthesia, a history of previous complications during anaesthesia, and all women scheduled for elective caesarean section. This clinic was led by a consultant anaesthesiologist.

Critical care

Critically ill pregnant and postnatal women who required invasive monitoring or close observation, for example women with pre-eclampsia or obstetric haemorrhage, were monitored in the High Dependency Unit in the Delivery Suite.

§§ Pre-eclampsia is a medical condition where high blood pressure and protein in the urine develop during pregnancy. This condition can lead to the development of eclampsia which may be life threatening.

As a stand-alone maternity hospital, the Coombe Women & Infants University Hospital did not have a Level 3[***9] Intensive Care Unit onsite. This meant that critically ill pregnant or postnatal women who required intensive care were transferred out of the hospital for this level of care. Four women were transferred out of the hospital for Intensive Care between January and July 2018. Inspectors were informed that there was no delay in the transfers of these women.

The Coombe Women & Infants University Hospital had formal arrangements in place with St. James's Hospital to accept transfers of women for critical care when required. The hospital had an emergency transfer protocol whereby a woman could be rapidly transferred to St James's Hospital by ambulance when necessary.

Neonatal care

The Coombe Women & Infants University Hospital had a Level 3 Tertiary Neonatal Unit where the full spectrum of neonatal care was provided to term and preterm infants who were critically unwell. The hospital accepted newborns who required complex neonatal care from the Midlands Regional Hospital Portlaoise and other maternity units across the country.

Therapeutic cooling[†††] was also provided at the Neonatal Unit for infants born in the Coombe Women & Infants University Hospital and for infants transferred in from other maternity units.

3.1.3 Communication

Emergency response teams

The hospital had emergency medical response teams in place 24 hours a day, to provide an immediate response to obstetric and neonatal emergencies. Following a 2018 audit on the procedure for informing theatre and anaesthetic staff to the need for an emergency caesarean section, communication with the emergency response team was improved in July 2018. As a result, staff on call for emergencies were given specific information in relation to the level of urgency of the call. For example the team would receive a verbal message by pager when there was a Category 1 caesarean section. Training was provided to inform staff of the changes to the emergency response system. This process was audited and showed improvements in

*** Level 3 critical care is the level of care required for patients who need advanced respiratory support (mechanical ventilation) alone or basic respiratory support along with support of at least one additional organ.

†††Whole body neonatal cooling (WBNC) or therapeutic cooling is 'active' (not passive) cooling administered during the current birth episode as a treatment for hypoxic ischemic encephalopathy. WBNC is only conducted in the four large tertiary hospitals in Dublin and Cork.

staff communicating the type and location of the emergency at the hospital to provide assurance of its effectiveness in August 2018.

Multidisciplinary handover

There were formal arrangements in place for multidisciplinary clinical handover in the Delivery Suite. There was frequent team discussion around care planning during the day about existing and new admissions at both clinical handover and consultant-led rounds which took place up to three times a day in the Delivery Suite. Clinical staff used the Situation-Background-Assessment-Recommendation (SBAR) communication format to communicate information about patients in line with national guidelines. [10] The HSE conducted an audit of compliance with implementation of multidisciplinary clinical handover at the Hospital in 2018, which found that the hospital was compliant with the National Clinical Guideline on Communication (Clinical Handover in the Maternity Services).[10]

There were a number of clinical situations where the relevant consultant was routinely notified so that they could be in attendance, for example in cases of massive obstetric haemorrhage, complex delivery, anaesthetic risks, medical comorbidities, difficult caesarean section or placental abnormalities. It was practice for the most senior non-consultant hospital doctors[‡‡‡] on call to discuss complex cases and transfers with the consultant obstetrician on call. The hospital held a weekly multidisciplinary handover meeting to share information about high-risk women and infants between the obstetric anaesthetic and neonatal teams.

The obstetric team discussed anticipated births and transfers from other hospitals with staff in the neonatal unit and the neonatal team on call. There were clear communication processes in place to inform the anaesthetic team of when women, who had been identified at risk of complications following review in the anaesthetic clinic, were admitted.

Midwifery and nursing managers and senior obstetric, anaesthetic and neonatal medical staff were invited to attend a safety meeting called a "huddle" held at the hospital daily that commenced in July 2018. The aim of this huddle was to identify and manage capacity, workloads and risks in each of the clinical areas at the hospital. Senior clinicians in obstetrics, anaesthesiology and neonatology and senior midwifery and nursing managers shared relevant information about bed occupancy rates, staffing levels, activity levels and high risk women and infants.

‡‡‡ Non-consultant hospital doctor (NCHD) is a term used in Ireland to describe qualified medical practitioners who work under the (direct or nominal) supervision of a consultant in a particular speciality

Inspectors were informed that this was a pilot project at the hospital. Huddles can improve patient safety and provide a collaborative forum to reduce patient harm.[11]

Other findings relevant to communication

Non-consultant hospital doctors on call in the specialties of obstetrics and anaesthesiology said that they had no hesitation about contacting the consultant on duty if they had any concerns about the wellbeing of a woman. There was an agreed process in place for accessing an operating theatre for emergency surgery during and outside core working hours[§§§]. Staff who spoke with inspectors were clear about who should be the senior doctor called in line with Irish Maternity Early Warning System escalation process for the hospital.

Performance information about the quality of care was shared with staff and women in the Delivery Suite on a noticeboard where information including birth statistics was displayed. There was also a 'projects in progress' noticeboard in the Delivery Suite to provide information about current quality improvement projects which included updates on an obstetric anal sphincter injury project, compliance with track and trace of surgical instruments and compliance with blood sample labelling.

3.1.4 Written policies, procedures and guidelines

The hospital had a suite of policies, procedures and guidelines in relation to obstetric emergencies for example resuscitation of the pregnant woman and umbilical cord prolapse. These were accessible electronically to staff in clinical areas. However, not all staff could demonstrate that they could access these policies procedures and guidelines easily on the day of inspection. The hospital needs to ensure that all staff have the necessary training and skills to access policies and procedures and guidelines when required. Obstetric medical staff had access to clinical practice guidelines from the Institute of Obstetricians and Gynaecologists and the Royal College of Physicians of Ireland through a mobile phone application.

The hospital also had guidelines based on National Clinical Effectiveness Committee[****] guidelines including sepsis, clinical handover in maternity services and the Irish Maternity Early Warning System. HSE guidelines in relation to open disclosure[12] were in place and clinical staff had been provided with training and education on these guidelines.

§§§ The Self-assessment tool submitted by the Coombe Women & Infants University Hospital reported that core working hours for medical staff at the hospital were from 08.00hrs to 17.00hrs Monday to Friday.

**** Guidelines produced by the National Clinical Effectiveness Committee have been formally mandated by the Minister of Health.

A safe surgery checklist[††††] was completed for emergency and elective surgical procedures in obstetric operating theatres in line with best practice recommendations. The hospital audited the use of the checklist to provide assurance that it was used effectively. This audit found that staff were compliant with completion of the checklist in 90% of elective and emergency caesarean sections during core working hours. However, compliance with the checklist was reduced to 70% outside of core working hours. The hospital should ensure that this tool is used consistently 24 hours a day.

The maternity unit had a standardised procedure for the estimation and measurement of maternal blood loss.

3.1.5 Maternity service infrastructure, facilities and resources

A previous HIQA inspection in 2016[13] had identified that the infrastructure and design of the main Operating Theatre Department did not meet international best practice guidelines for operating theatre infrastructure. The hospital had submitted a business plan for the operating theatre to be extended and upgraded to the HSE prior to the 2016 inspection. However, funding for this extension and upgrade remained outstanding at the time of this inspection. The design and layout of the Neonatal Intensive Care Unit did not meet recommended guidelines as identified previously in a HIQA inspection report.[14]

Infrastructural improvements to the emergency room assessment area in the Outpatient Department need to be developed to provide a more appropriate clinical environment for assessment of women. Overall, inspectors found that the hospital's physical environment was not in compliance with standard 2.7 of the *National Standards for Safer Better Maternity Services.*

Assessment areas

Inspectors observed that the Emergency Room on the ground floor had limited space for the assessment and management of women who attended this clinical area. This was a potential risk to patient safety, should two women require emergency assessment simultaneously as the room could only accommodate one woman at a time. The triage room within this area was not in line with recommended infrastructural guidelines for triage and assessment areas for pregnant women.[15] Senior management informed HIQA that a business case was submitted to the HSE

†††† A surgical safety checklist is a patient safety communication tool that is used by operating theatre nurses, surgeons, anaesthesiologists and others to discuss together important details about a surgical case so that everyone is familiar with the case and that important steps are not forgotten. Surgical checklists work to improve patient safety during surgery.

to acquire capital funding for a three storey build which would include a new triage and clinical assessment area.

At the time of inspection, this capital funding had yet to be sanctioned. Inspectors were informed that a multidisciplinary working group had been established at the hospital to improve signage and access for women attending the Emergency Room.

Antenatal and postnatal wards

The hospital had 133 inpatient beds for antenatal and postnatal care.

Delivery suite

The Delivery Suite had 11 single spacious en-suite delivery rooms, a birthing pool room, two assessment rooms and a dedicated emergency obstetric theatre. There were two large high dependency rooms in the Delivery Suite that were equipped to care for pregnant and postnatal women who required close monitoring and observation.

Operating theatres for obstetrics and gynaecology

There was access 24 hours a day, seven days a week to operating theatres. During core working hours, emergency surgery such as emergency caesarean sections were performed in a designated obstetric operating theatre located in the Delivery Suite.

The hospital had an operating theatre suite with four operating theatres and a five bedded recovery area for women undergoing obstetric or gynaecological surgery. These theatres were located on the floor above the Delivery Suite. Outside of core working hours, emergency caesarean sections were performed in one of these operating theatres. The operating theatre suite had a designated theatre manager who was also responsible for the organisation and management of the emergency operating theatre in the Delivery Suite.

A previous HIQA inspection in 2016 had identified that the infrastructure and design of the main Operating Theatre Department did not meet international best practice guidelines for operating theatre infrastructure.[13] Following the 2016 inspection, the hospital undertook immediate actions to address risks in relation to the operating theatre ventilation system and reconfiguration of the department to separate clean and dirty functional activities. However, it was identified by the hospital that major capital investment was required to address the operating theatre infrastructural deficits. The hospital had submitted a business plan for the operating theatre to be extended and upgraded to the HSE prior to the 2016 inspection. However, funding for this extension and upgrade remained outstanding at the time of this inspection.

Neonatal unit

The hospital provides level 3‡‡‡‡ (tertiary) neonatal care services.[16] The Neonatal Unit had 40 cots which included 14 Neonatal Intensive Care cots, 10 High Dependency Care cots and 16 Special Care Baby cots. The design and layout of the Neonatal Intensive Care Unit did not meet recommended guidelines.[17] There was limited spacing between incubators that has the potential to increase the risk of cross infection especially in a population of susceptible neonates.[18] This was identified in a previous HIQA inspection in 2017.[14]

Laboratory services

Blood and blood replacement products were accessible when required in an emergency for women and infants.

Urgent haematology, biochemistry and microbiology laboratory results were available to medical staff when required.

3.1.6 Maternity service equipment and supplies

The clinical areas visited by inspectors had emergency resuscitation equipment for women and newborns. Checklists showed that emergency equipment was checked daily in the clinical areas inspected. Emergency supplies and medications were readily available in the clinical areas inspected to manage obstetric emergencies such as maternal haemorrhage, eclampsia and neonatal resuscitation. Fetal monitoring equipment including cardiotocography machines viewed by inspectors was labelled to indicate that they had been serviced.

Table 5 on the next page lists the National Standards relating to effective care and support focused on during this inspection and key findings in relation to the hospital's level of compliance with the National Standards monitored during this inspection.

‡‡‡‡The primary function of tertiary neonatal units is to provide specialised care to infants who are critically unwell. Most of the workload is concentrated on very preterm infants, unwell term infants and infants with major congenital malformations.

Table 5: HIQA's judgments against the National Standards for Safer Better Maternity Services for Effective Care and Support that were monitored during this inspection

Standard 2.1 Maternity care reflects best available evidence of what is known to achieve safe, high-quality outcomes for women and their babies. **Judgment:** Compliant
Standard 2.2 Maternity care is planned and delivered to meet the initial and ongoing assessed needs of women and their babies, while working to meet the needs of all women and babies using the service. **Judgment:** Compliant
Standard 2.3 Women and their babies receive integrated care which is coordinated effectively within and between maternity and other services. **Judgment:** Compliant
Standard 2.4 An identified lead healthcare professional has overall clinical responsibility for the care of each woman and that of her baby. **Judgment:** Compliant
Standard 2.5 All information necessary to support the provision of effective care, including information provided by the woman, is available at the point of clinical decision-making. **Judgment:** Compliant
Standard 2.7 Maternity care is provided in a physical environment which supports the delivery of safe, high-quality care and protects the health and wellbeing of women and their babies. **Key findings:** Infrastructure and design of the main operating theatre department did not meet best practice guidelines. The design and layout of the Neonatal Unit did not meet recommended guidelines and increased the risk of cross infection among neonates. The Emergency Assessment Room had limited space for the assessment and management of women. **Judgment:** Non-compliant
Standard 2.8 The safety and quality of maternity care is systematically monitored, evaluated and continuously improved. **Judgment:** Compliant

3.2 Safe Care and Support

A maternity service focused on safe care and support is continually looking for ways to be more reliable and to improve the safety and quality of its service. In relation to obstetric emergencies, this inspection sought to determine how risks to the maternity service were identified and managed, how patient safety incidents were reported and if learning was shared across the service. The inspection also looked at how the hospital monitored, evaluated and responded to information and data relating to outcomes for women and infants, and feedback from service users and staff.

Inspection findings in relation to safe care and support are described next.

Inspection findings

3.2.1 Maternity service risk management

The hospital had systems in place to identify and manage risks. Risks in relation to the maternity service were recorded in a corporate risk register along with agreed risk treatment measures. The risk register was reviewed monthly by the senior management team. The risk register detailed progress against actions taken and documented risks and timelines for risks to be reviewed and evaluated by named accountable persons. Risks that the hospital determined could not be managed at hospital level had been escalated to the Dublin Midlands Hospital Group. These included risks in relation to:

- midwifery staffing levels
- lack of capital funding for the refurbishment of operating theatres
- expansion of the current building infrastructure.

Senior managers at the hospital informed inspectors that there were ongoing discussions with the HSE in relation to capital funding. Further detail related to midwifery staffing levels is discussed in section 2.2.1 of this report.

Inspectors were informed that hospital management was in the process of recruiting a second clinical risk manager to develop the hospital's risk management structures and processes so that each department within the hospital maintained a local risk register.

Clinical incident reporting

Inspectors found that there was an established practice of incident reporting based on the number of clinical incidents reported each month. Staff who spoke with inspectors were aware of their responsibility to report clinical incidents. Every month the hospital held a clinical governance meeting where clinical incidents were

reviewed and this was well attended by members of management and clinical staff at the hospital.

Clinical incidents were tracked and trended and where improvements were required, plans were put in place to address these. Patient safety incidents were reported on the National Incident Management System§§§§ in line with national guidelines.[19] The hospital issued a newsletter every three months to inform staff about safety alerts, learning from incident management and quality improvement initiatives at the hospital.

The hospital held serious incident management team meetings when serious reportable events***** or serious incidents occurred. However, hospital management reported that there were delays in completing systems analysis investigations in a timely way in line with national guidelines due to the resources required.[19] [20] Inspectors were informed that the hospital was looking at methods to enable more timely investigation of incidents. To facilitate this, managers and members of the multidisciplinary team completed training in June 2018 provided by the Health Service Executive on After Action Review.†††††

Feedback from women

There was a formalised process to monitor compliments and respond to complaints. Information provided to inspectors indicated that the majority of complaints received at the hospital were managed within timelines outlined in national guidelines.[21]

3.2.2 Maternity service monitoring and evaluation

A range of different clinical measurements in relation to the quality and safety of maternity care were gathered at the hospital each month in line with national HSE Irish Maternity Indicator System reporting requirements. This data is gathered nationally by the Office of the National Women and Infants Health Programme and the National Clinical Programme for Obstetrics and Gynaecology[22] and it facilitates the benchmarking of performance against national average rates and over time.

§§§§The State Claims Agencies' (SCA) National Incident Management System (NIMS) is a risk management system that enables public hospitals to report incidents in accordance with their statutory reporting obligation to the SCA (Section 11 of the National Treasury Management Agency (Amendment) Act, 2000).

***** The Health Service Executive developed a list of Serious Reportable Events (SREs) in 2015 as a defined subset of incidents. The HSE requires that SREs are mandatorily reportable by services to the Senior Accountable Officer of the service.

††††† The HSE incident management framework defines After Action Reviews as a structured facilitated discussion of an event, the outcome of which enables the individuals involved in the event to understand why the outcome differed from that which was expected and what learning can be identified to assist improvement.

The hospital's senior management team reviewed data in relation to patient outcomes such as caesarean sections rates, induction of labour rates, perinatal and maternal outcomes on a monthly basis and reviewed clinical incidents, complaints and patient feedback at a weekly team meeting. The hospital published monthly maternity patient safety statements again in line with national HSE reporting requirements. Inspectors found that the hospital used this data and information to identify potential risks to patient safety and opportunities for improvement as required by the National Standards. The Hospital's Senior Management Team also attended monthly meetings of the three Dublin Maternity Hospitals.

Annual clinical audit plan

The hospital had an annual clinical audit plan which was approved by the Master. There were plans at the hospital to centralise the clinical audit function. Clinical audits undertaken at the hospital in the previous 12 months included:

- adherence to care bundle for management of obstetric anal sphincter injuries[ǂǂǂǂǂ]
- timing of emergency caesarean sections
- compliance with documentation of neonatal resuscitation
- adherence with the surgical safety checklist
- effectiveness of the emergency response system
- compliance with thromboprophylaxis guidelines and laboratory test turnaround times.

Annual clinical report

The hospital published a comprehensive annual clinical report that detailed maternal and neonatal outcomes, service activity and initiatives at the hospital. The hospital used the Robson Classification for assessing, monitoring and comparing caesarean sections rates for women at the Hospital as recommended nationally.[23] These rates were published in the annual clinical report. The Coombe Women & Infants University Hospital attended the Irish Annual Clinical Reports Meeting, organised by the Institute of Obstetricians and Gynaecologists. At this yearly meeting the

ǂǂǂǂǂ Many women experience tears to the vaginal and perineum during childbirth. Obstetric anal sphincter injuries are also known as third and fourth degree perineal tears. These types of tears usually occur unexpectedly during childbirth and it is not possible to predict these types of tears. These are tears that involve the muscle (the anal sphincter) that controls the anus, known as a third degree tear. If the tear extends into the lining of the anus or rectum, it is known as a fourth degree tear. (HSE Clinical Practice Guideline: Management of obstetric anal sphincter injury. Institute of Obstetricians and Gynaecologists and Directorate of Clinical Strategy and Programmes, HSE. 2014).

hospital's annual clinical report is assessed by an external assessor and peer-reviewed to enable benchmarking of performance against similar sized units.

3.2.3 Quality improvement initiatives developed by staff at the hospital

The hospital had initiated and developed a number of quality improvement projects aimed at improving the quality and safety of maternity care.

The hospital had identified that the rates of obstetric anal sphincter injuries (OASIs) were higher than national rates in 2016. In response to this finding, a multidisciplinary team at the hospital had developed a care bundle§§§§§ aimed at reducing the incidence of OASIs. The hospital monitored OASI rates monthly and reports detailing the incidence, type of birth and strategies aimed at reducing these injuries were presented at the monthly clinical governance meeting. These findings were also displayed in the Delivery Suite project board to keep clinical staff up to date with improvements.

From analysis of maternal outcomes, a multidisciplinary working group was tasked with implementing strategies to reduce postpartum haemorrhage rates at the hospital. The hospital had recently developed and implemented a structured tool to improve the management and documentation of postpartum haemorrhage as recommended by the National Perinatal Epidemiology Centre.[23] Following this inspection, it is suggested that the hospital audit this tool to ensure that it is effective at improving compliance with adherence to the management of postpartum haemorrhage guidelines.

The hospital held a weekly meeting to review the care provided to women who had a caesarean section in their first pregnancy. The aim of this meeting was to identify opportunities for improvement that could lead to a reduction in caesarean section rates.

A multidisciplinary working group had recently commenced a project to improve women's experience of induction of labour. This project included a staff and patient survey, provision of additional training and education in induction for staff and development of an information booklet for women undergoing induction of labour.

Since July 2018, the hospital had implemented a multidisciplinary daily safety meeting or "huddle" where any safety risks, clinical concerns or bed and staffing shortages could be reviewed.

§§§§§ Care bundle is a small straight forward set of evidenced based practices that when performed collectively and reliably have been proven to improve patient outcomes.

Table 6 lists the National Standards relating to safe care and support focused on during this inspection and key findings in relation to the hospital's level of compliance with the National Standards monitored during this inspection.

Table 6: HIQA's judgments against the National Standards for Safer Better Maternity Services for Safe Care and Support that were monitored during this inspection

Standard 3.2 Maternity service providers protect women and their babies from the risk of avoidable harm through the appropriate design and delivery of maternity services. **Judgment:** Compliant
Standard 3.3 Maternity service providers monitor and learn from information relevant to providing safe services and actively promote learning, both locally and nationally. **Judgment:** Compliant
Standard 3.4 Maternity service providers implement, review and publicly report on a structured quality improvement programme. **Judgment:** Compliant
Standard 3.5 Maternity service providers effectively identify, manage, respond to and report on patient safety incidents. **Judgment:** Compliant

4.0 Conclusion

Women and their babies should have access to safe, high-quality care in a setting that is most appropriate to their needs. Inspectors found that the Coombe Women & Infants University Hospital was compliant with the majority of the National Standards in relation to quality and safety and capacity and capability that were focused on during this inspection.

The hospital had arrangements in place to identify women at higher risk of complications and to ensure that their care is provided in the most appropriate setting. Inspectors found that effective arrangements were in place to detect and respond to obstetric emergencies and to provide or facilitate for on-going care to ill women and or their newborn babies in the most appropriate setting.

The Coombe Women & Infants University Hospital had an effective leadership, governance and management structure to ensure the safety and quality of maternity services. The hospital's senior management team monitored performance including patient outcomes, service user feedback and patient safety incidents and benchmarked its performance against other similar sized hospitals.

The Coombe Women & Infants University Hospital had made significant progress in terms of collaboration with, supporting and sharing expertise and clinical services with Portlaoise Hospital Maternity Unit. However, it is imperative that efforts to progress with the implementation of a full clinical network further advance following this inspection, in the best interest of women and infants.

The hospital should be supported through the Dublin Midlands Hospital Group to progress with improving the infrastructural deficiencies identified through this and previous hospital inspections to allow the hospital to meet the requirements of National Standards. Capital funding from the HSE is required to progress with a time bound action plan to improve operating theatre infrastructure in line with current recommendations for maternity service surgical facilities. Infrastructural improvements to the emergency room assessment area in the Outpatient Department need to be developed to provide a more appropriate clinical environment for assessment of women.

The hospital was staffed with medical staff in the specialties of obstetrics, neonatology and anaesthesiology who were available onsite to provide care to women and newborns on a 24-hour basis.

The hospital used agency midwifery staff to temporarily fill vacant positions in order to meet the national benchmark for midwifery staffing. The hospital should redouble their efforts to recruit and retain midwives to ensure the safety of the services provided.

The hospital had clearly defined mandatory training requirements for clinical staff including fetal monitoring, adult and neonatal resuscitation, multi-professional training for the management of obstetric emergencies. Following this inspection, the hospital needs to ensure that mandatory and essential training is always completed by medical, midwifery and nursing staff within recommended timeframes in line with the National Standards.

5.0 References

1. Health Information and Quality Authority. *National Standards for Safer Better Maternity Services.* Dublin: Health Information and Quality Authority. 2016. Available online from: https://www.hiqa.ie/reports-and-publications/standard/national-standards-safer-better-maternity-services

2. Health Act 2007. Dublin: The Stationery Office; 2007. Available online from: http://www.irishstatutebook.ie/eli/2007/act/23/enacted/en/print

3. Health Information and Quality Authority. *Guide to HIQA's monitoring programme against the National Standards for Safer Better Maternity Care with a focus on obstetric emergencies.* Dublin: Health Information and Quality Authority. 2019. Available online from: https://www.hiqa.ie/reports-and-publications/guide/guide-maternity-standards-monitoring-programme-revised

4. Health Act 2004. Dublin: The Stationery Office; 2004. Available online from: http://www.irishstatutebook.ie/eli/2004/act/42/enacted/en/print

5. Health Information and Quality Authority. *Report of the investigation into the safety, quality and standards of services provided by the Health Service Executive to patients in the Midland Regional Hospital, Portlaoise*. Dublin: Health Information and Quality Authority. 2015. Available online from: https://www.hiqa.ie/sites/default/files/2017-01/Portlaoise-Investigation-Report.pdf

6. Health Information and Quality Authority. *Review of progress made at the Midland Regional Hospital, Portlaoise, in implementing recommendations following HIQA's investigation.* Dublin: Health Information and Quality Authority; 2016. Available online from: https://www.hiqa.ie/sites/default/files/2017-02/MRHP_Review_Report.pdf

7. Health Service Executive. *Final Report of the HSE Midwifery Workforce Planning Project.* Dublin: Health Service Executive; 2016.

8. Association of Anaesthetists of Great Britain & Ireland Obstetric Anaesthetists' Association. *OAA/AAGBI Guidelines for Obstetric Anaesthetic Services 2013*. Available online from: https://www.aagbi.org/sites/default/files/obstetric_anaesthetic_services_2013.pdf

9. Health Service Executive (HSE) Obstetrics & Gynaecology, Anaesthetic and Critical Programmes Clinical Strategy & Programmes Division. *Guidelines for the Critically Ill Woman in Obstetrics*. Dublin: Health Service Executive. Dublin. Version 1.1. 2014. Available online from: https://rcpi-live-cdn.s3.amazonaws.com/wp-

content/uploads/2016/05/25.-Guidelines-for-the-Critically-Ill-Woman-in-Obstetrics.pdf

10. National Clinical Effectiveness Committee. *Communication (Clinical Handover) in Maternity Services - National Clinical Guidelines No.5*. Dublin: Department of Health; 2014. Available online from: http://health.gov.ie/wp-content/uploads/2015/01/National-Clinical-Guideline-No.-5-Clinical-Handover-Nov2014.pdf

11. Goldenhar, L.M. Brady, P.W. Sutcliffe, K.M. Muething, S.E. (2013) Huddling for high reliability and situation awareness British Medical Journal Quality and Safety 22 899-096. Available online from: https://qualitysafety.bmj.com/content/22/11/899

12. Health Service Executive. State Claims Agency. *National Guidelines Open Disclosure. Communicating with service users and their families following adverse events in healthcare.* Dublin: 2013. Health Service Executive. State Claims Agency. Available online from: https://www.hse.ie/eng/about/who/qid/other-quality-improvement-programmes/opendisclosure/opendiscfiles/opdiscnationalguidelines2013.pdf

13. Health Information and Quality Authority. *Report of the unannounced inspection at the Coombe Women & Infants University Hospital, Monitoring programme for unannounced inspections undertaken against the National Standards for the Prevention and Control of Healthcare Associated Infections*. Dublin: Health Information and Quality Authority. 2016 Available online from: https://www.hiqa.ie/system/files?file=inspectionreports/coombe-women-and-infants-university-hospital-16-aug-2016.pdf

14. Health Information and Quality Authority. *Report of the unannounced inspection at the Coombe Women & Infants University Hospital, Monitoring programme for unannounced inspections undertaken against the National Standards for the Prevention and Control of Healthcare Associated Infections*. Dublin: Health Information and Quality Authority. 2017 Available online from: https://www.hiqa.ie/system/files?file=inspectionreports/coombe-women-and-infants-university-hospital-31-may-2017.pdf

15. Department of Health United Kingdom. *Health Building Note 09-02 Maternity Care Facilities.* London: Department of Health. 2013. Available online from: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/147876/HBN_09-02_Final.pdf

16. Health Service Executive (HSE) National Clinical Programme for Paediatrics and Neonatology. *Model of Care for Neonatal Services in Ireland*. Dublin: Health Service Executive (HSE) National Clinical Programme for Paediatrics and Neonatology. 2015. Available online from: https://www.hse.ie/eng/services/publications/clinical-strategy-and-programmes/model-of-care-for-neonatal-services-in-ireland.pdf

17. Department of Health United Kingdom. Health Building Note 09-03 Neonatal Units Facilities. London: Department of Health. 2013. Available online from: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/147879/HBN_09-03_Final.pdf

18. Semple, A. O'Currain, E.O., O'Donovan D. Hanahoe, B. Keady, D. Successful termination of sustained transmission of resident MRSA following extensive NICU refurbishment: an intervention study. Journal of Hospital Infection (2018). Available online from: https://www.sciencedirect.com/science/article/pii/S0195670118303700?dgcid=rss_sd_all

19. Health Service Executive. *Incident Management Framework*. Dublin. Health Service Executive. 2018. Available online from: https://www.hse.ie/eng/about/qavd/incident-management/hse-2018-incident-management-framework-guidance-stories.pdf

20. Mental Health Commission and Health Information and Quality Authority. *National Standards for the Conduct of Reviews and Patient Safety Incidents.* Dublin. Mental Health Commission and Health Information and Quality Authority. 2017 Available online from: https://www.hiqa.ie/sites/default/files/2017-10/National-Standards-Patient-Safety-Incidents.pdf

21. Health Service Executive. *Your Service Your Say. The Management of Service User Feedback for Comments, Compliments and Complaints HSE Policy*. Dublin: Health Service Executive; 2017. Available online from https://www.hse.ie/eng/about/qavd/complaints/ysysguidance/ysys2017.pdf

22. Health Service Executive: National Women and Infants Health Programme and the National Clinical Programme for Obstetrics and Gynaecology. *Irish Maternity Indicator System. National report 2017*. Dublin: Health Service Executive. April 2018. Available online from: https://www.hse.ie/eng/about/who/acute-hospitals-division/woman-infants/national-reports-on-womens-health/imis-national-report-201711.pdf

23. Manning E, Leitao S, Corcoran P, McKernan J, de Foubert P, Greene RA, on behalf of the Severe Maternal Morbidity Group. *Severe Maternal Morbidity in Ireland*

Annual Report 2016. Cork: National Perinatal Epidemiology Centre. 2018. Available online from: https://www.ucc.ie/en/media/research/nationalperinatalepidemiologycentre/annualreports/SevereMaternalMorbidityinIrelandAnnualReport2016.pdf

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