



**Health
Information
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An tÚdarás Um Fhaisnéis
agus Cáilíocht Sláinte

Report of the unannounced inspection of maternity services at the National Maternity Hospital

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

Dates of inspection: 1 May 2019 and 2 May 2019

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.

Table of Contents

1.0	Information about this monitoring programme	6
1.1	Information about this inspection	8
1.2	How inspection findings are presented.....	10
2.0	Capacity and Capability	12
2.1	Leadership, Governance and Management.....	12
2.2	Workforce.....	17
3.0	Safety and Quality.....	24
3.1	Effective Care and Support	24
3.2	Safe Care and Support.....	37
4.0	Conclusion.....	44
5.0	References	46

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 well-being 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 specified³ 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 specified³ 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 National Maternity 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 Governors who appoints 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 Ireland East Hospital Group.[‡] There were 7937 births at the hospital in 2018.

To prepare for this inspection, inspectors reviewed a completed self-assessment tool[§] and preliminary documentation submitted by the National Maternity 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 National Maternity Hospital is included in the Table 1.

Table 1: Inspection details

Dates	Times of inspection	Inspectors
01 May 2019	11:20hrs to 18:15hrs	Siobhan Bourke Denise Lawler
02 May 2019	07.45hrs to 16:30hrs	Dolores Dempsey Ryan Emma Cooke Katrina Sugrue

[†] 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.

[‡] Ireland East Hospital Group (IEHG) comprises 11 hospitals operating across the counties Dublin, Westmeath, Meath, Wexford and Kilkenny. This group is led by a Group Executive Officer with delegated authority to manage statutory hospitals within the group under the Health Act 2004. Maternity services are provided in four hospitals in the Group namely, the National Maternity Hospital, Holles Street, Wexford General Hospital, Regional Hospital Mullingar and St. Luke's General Hospital Kilkenny.

[§] 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 Executive Management Team and
- the hospital's lead consultants 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 presented to the hospital with pregnancy-related concerns were reviewed. These included the Emergency Room and Delivery Ward.
- The Delivery Ward where women were cared for during labour and childbirth.
- The High Dependency Unit where women who required additional monitoring and support were cared for.
- An obstetric operating theatre in the Operating Theatre Department for women undergoing surgery, for example in the case of caesarean section.
- The Neonatal Unit where babies requiring additional monitoring and support were cared for.
- A postnatal ward where women were cared for 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.

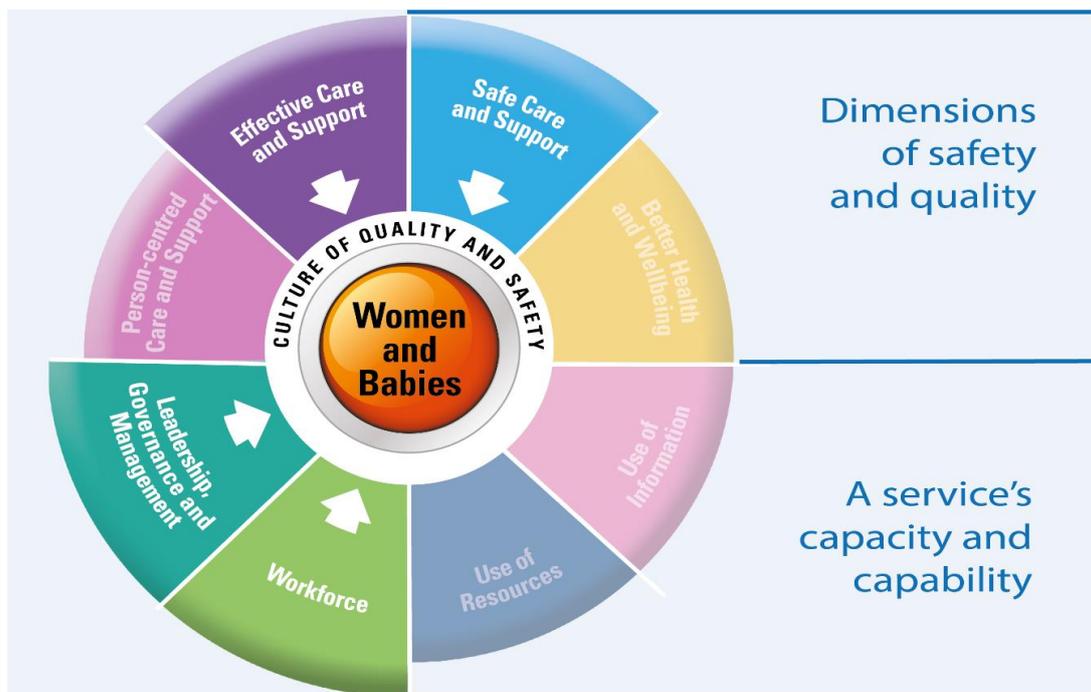
HIQA would like to acknowledge the cooperation of the hospital management team and all staff who facilitated and contributed to this unannounced inspection.

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 Guide³ 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 sections	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 National Maternity 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 service and the people who fund and support it. Good governance arrangements acknowledge the interdependencies between organisational 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

HIQA found that the National Maternity Hospital was not part of a formalised maternity network under a single governance structure. In 2018, Ireland East Hospital Group had established a number of forums to progress with the development of a Women and Children's Health Clinical Academic Directorate across the hospital group. The plan for this Clinical Academic Directorate was the development of a programme which would be clinically led and provide governance and oversight of maternity and paediatric services across the hospital group.⁵

In 2018, Ireland East Hospital Group had established a Maternity Oversight Group which aimed to develop the structures and processes to oversee and monitor the quality and safety within the hospital group's maternity units. The Maternity Oversight Group was chaired by the Chief Executive Officer of the Ireland East Hospital Group. Membership of this Group included Clinical Leads in Obstetrics, General Managers and Directors of Midwifery from the maternity units and hospitals in the Ireland East Hospital Group. Clinical activity recorded in the Maternity Patient Safety Statements for each of the maternity units were reviewed and discussed.

A consultant obstetrician from the National Maternity Hospital was appointed in March 2019 as the Executive Lead for the Women and Children's Health Academic Directorate for the Ireland East Hospital Group. This consultant was to be released from their position at the National Maternity Hospital for 60% of their time to the Ireland East Hospital Group.

At the time of inspection there were no current or planned joint appointments between consultant neonatologists or consultant obstetricians from the National Maternity Hospital and other maternity units in the Ireland East Hospital Group. Inspectors were informed that one consultant obstetrician had been appointed between the Regional Hospital Mullingar and the National Maternity Hospital in 2016 but that this position worked full time in the Maternity Unit at the Regional Hospital Mullingar for the previous two years and no longer rotated between the two sites. There was no rotation of medical and midwifery staff between the four hospitals. There were no shared clinical meetings such as perinatal mortality and morbidity meetings between the National Maternity Hospital and other maternity units or maternity hospitals within the Ireland East Hospital Group.

There were no formalised care pathways to ensure that women with complex high risk pregnancies in the smaller maternity units in the hospital group were accepted to the National Maternity Hospital. Inspectors were informed that in practice women and infants from maternity units in the hospital group were prioritised for admission to the National Maternity Hospital. However, as the National Maternity Hospital is a

national tertiary referral centre, women and infants from all over the country were accepted to the hospital depending on maternal bed and neonatal cot capacity.

In 2018, the Ireland East Hospital Group Director of Nursing implemented and chaired a Group Director of Midwifery meeting each month where the Directors of Midwifery from the three maternity units and the National Maternity Hospital could discuss and review issues such as workforce planning and new service initiatives.

Senior managers at the hospital informed inspectors that the co-location of the National Maternity Hospital to the site at St. Vincent's University Hospital was the main priority for the hospital's development.

The National Maternity 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 Executive Management Committee of Governors (known as the Board). As the hospital was funded under Section 38 of the Health Act 2004, senior managers from the hospital attended monthly performance meetings with the Chief Executive Officer of the Ireland East Hospital Group.

The hospital Executive Management Team comprised the Master, the Clinical Director, the Secretary/General Manager, the Director of Midwifery and the hospital's financial controller. The Director of Midwifery was responsible for the organisation and management of the midwifery service and was a member of the hospital's Executive Management Team in line with National Standards. The Executive Management Team met every week and was responsible for the oversight of the day to day operation of the hospital and to set the strategic direction of the hospital.

Clinical Governance at the hospital was led by the Master who was also the clinical lead for obstetrics. Clinical Governance Executive Meetings were held monthly at the hospital and were attended by:

- the Master
- the Director of Midwifery
- the Secretary/General Manager
- the hospital's Director of Quality, Risk and Patient Safety
- the clinical lead for neonatology
- a consultant obstetrician
- a consultant anaesthesiologist
- the hospital's clinical risk managers
- and the quality manager.

These meetings followed a structured format where an update on progress with patient safety investigations, legal cases, clinical activity and feedback from patients were reviewed.

The hospital had a Quality, Risk, Health and Safety Committee that was chaired by the Secretary/General Manager. This committee reported to the Executive Management Team through the hospital's Secretary/ General Manager. The terms of reference outlined that one of the aims of this committee was to foster and support quality, risk and health and safety improvement culture throughout the hospital. The membership of this committee was multidisciplinary and minutes reviewed indicated that reports from the hospital's clinical risk managers, quality manager and health and safety manager were presented each month to the committee.

The hospital had clinical leads appointed in the specialties of obstetrics, anaesthesiology and neonatology. These clinicians were appointed on a rotational basis and were responsible for arranging training for non-consultant hospital doctors and representing their respective specialties in relation to service provision at hospital.

The hospital had an up-to-date comprehensive statement of purpose that was publicly available and detailed the aims and objectives of the service, a description of the services provided and the models of care provided in line with National Standards.

The hospital had a three year strategic plan for 2016-2018 and at the time of inspection, following a change of Master in January 2019, the hospital was in the process of developing a further three year strategic plan for 2019-2021. Inspectors were informed that the strategic plan was near completion, and was expected to be completed by June 2019.

Safety alerts in relation to medical devices and medicines were communicated to staff in the hospital.

HIQA found that the National Maternity Hospital had a clearly defined and effective leadership, governance and management structure to ensure the quality and safety of maternity services provided at the hospital.

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 met the HSE's national benchmark for midwifery staffing in line with the HSE's Midwifery Workforce Planning Project.⁶ However at the time of the onsite inspection there was a high percentage (approximately 7.5%) of midwifery staff on temporary leave such as maternity leave. Senior managers told inspectors that midwives working at the hospital were offered overtime to fill vacant shifts when required.

The neonatal unit was working to increase its nursing staffing levels in line with National Clinical Care programme recommendations for staffing levels for Level 3 Neonatal units.⁷ During 2018, the hospital had recruited an additional 10 whole time equivalents** (WTE) neonatal nursing staff and had sought approval from Ireland East Hospital Group for a further two positions to bring the number of approved nursing positions to 81 WTE.

The operating theatre department had 31 WTE nursing positions approved and all of these positions were filled at the time of the onsite inspection.

The hospital had an experienced midwife shift leader in place for each shift in the Delivery suite.

** Whole-time equivalent: one whole-time equivalent employee is an employee who works the total number of hours possible for their grade. WTEs are not the same as staff numbers as many staff work reduced hours.

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 urgently when required.

The hospital employed clinical skills facilitators who worked with midwifery staff in the Delivery Ward and maternity wards and nursing staff in the Neonatal Unit to support them to develop their required skills and competencies. The hospital had appointed three Advanced Midwife Practitioners one of whom was appointed for the Emergency Room at the hospital.

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 registered as specialists on the relevant specialist register with the Medical Council in Ireland.

Obstetrics

The hospital had 15.9 WTE consultant obstetricians employed at the hospital. 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 consultant obstetrician and gynaecologist was on call from home every night and this consultant was also on call for any emergencies for women with gynaecological conditions that required consultant review in St. Vincent's University Hospital.

A consultant obstetrician was rostered to be in attendance in the Delivery Ward during core working hours from Monday to Thursday and was free from other duties during these sessions. The consultant on call for the weekend was on call for the

^{††} ^{††} The Self-assessment tool submitted by the National Maternity Hospital reported that core working hours for medical staff at the hospital were from 08.00hrs to 18.00hrs Monday to Friday.

Delivery Ward on Fridays. 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 Ward 24 hours a day.

From Monday to Friday, a senior house officer was assigned to the Emergency Room until 8pm and an obstetric registrar was assigned until 5pm to provide medical advice and care for women who required review. In 2017, the hospital had sought approval from the Ireland East Hospital Group for the appointment of a consultant obstetrician to provide oversight of the Emergency Room which opened in 2018. This position had yet to be approved at the time of the inspection. A consultant obstetrician was assigned to the Emergency Room for two weekdays and on the remaining days, the consultant on call for the labour ward provided obstetric consultant input when required.

Obstetric anaesthesiology

Six consultant anaesthesiologists were employed at the hospital and all had joint appointments with St. Vincent's University Hospital. Thereby the hospital had 3.8 WTE consultant anaesthesiologists employed at the hospital. The hospital had sought approval to increase the number of consultant anaesthesiologists at the hospital and a seventh consultant anaesthesiologist was due to commence working at the hospital in August 2019.

An anaesthesiologist was available 24 hours every day onsite for emergency work on the Delivery Suite and this anaesthesiologist was free from other duties as recommended in national guidelines.⁸ 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 five nights. A rota of two non-consultant hospital doctors in anaesthesiology, one at registrar grade and one at senior house officer grade were onsite at the hospital 24 hours a day.

Neonatology

The National Clinical Programme for Paediatrics and Neonatology advise that each tertiary neonatal unit should have at least seven consultant neonatologists.⁷ Inspectors were informed that the hospital was working to increase the number of consultant neonatologists in line with this recommendation. At the time of the inspection, there were 6.3 WTE consultant neonatologists employed at the hospital. The hospital had an on-call rota outside of core working hours whereby a consultant neonatologist was on call from home usually one in every six nights. 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, management of obstetric emergencies and electronic fetal monitoring.

The National Standards recommend that clinical staff undertake multidisciplinary training appropriate to their scope of practice every two years in obstetric and neonatal emergencies. The National Maternity Hospital provided a professional multidisciplinary training course in the management of obstetric emergencies three to four times a year and provided an in house training programme on the management of obstetric emergencies (known as skills and drills) every month. This programme provided both lecture based and scenario based training for obstetric emergencies such as postpartum haemorrhage, umbilical cord prolapse, maternal collapse and sepsis.

Obstetric medical staff were required to undertake training in the management of obstetric emergencies and basic life support every two years and electronic fetal monitoring every year. Neonatal medical staff were required to undertake a neonatal resuscitation training programme every two years. Anaesthetic medical staff were required to undertake basic life support and training in the management of obstetric emergencies every two years.

Midwifery staff and neonatal nursing staff were required to undertake a neonatal resuscitation training programme every two years. Midwifery staff were also required to undertake training in the management of obstetric emergencies every two years.

Midwifery staff who provided electronic fetal monitoring were required to complete a fetal monitoring programme online every year and attend a fetal monitoring study day every two years.

In October 2018, the hospital commenced a mandatory training programme for clinical and non-clinical staff to enhance team working across the hospital to support high quality and safe patient care. This evidence based training programme focused on team structure, communication, leadership and situation monitoring.

Implementation of this programme was a key recommendation of a patient safety incident investigation at the hospital to improve communication and team working during an obstetric emergency.

All clinical midwifery and medical staff were required to undertake training in clinical handover and Irish Maternity Early Warning System (IMEWS).^{‡‡}

Uptake of mandatory training

Training records were stored electronically at the hospital and enabled managers to monitor the uptake of training by clinical staff. Documentation provided to inspectors, and training records viewed onsite, indicated that all neonatal medical staff and 94% of nursing and midwifery staff had undertaken a neonatal resuscitation programme within the required timeframe.

All medical staff and 93% of nursing and midwifery staff had attended training in adult basic life support in the two year period prior to the inspection.

Documented evidence provided to inspectors indicated that 92% of midwives and 100% of medical staff had undertaken training in the management of obstetric emergencies in the two years prior to inspection.

Eighty five per cent of midwives were up to date with the required training on electronic fetal monitoring while documentation provided to inspectors indicated that only 37% of obstetric medical staff were up to date with this training. Senior managers informed inspectors that when non-consultant medical staff had completed the online training in electronic fetal monitoring there was no system for transferring this information from hospital to hospital as was available for other mandatory training for medical staff across the country. Hospital management should be assured that all staff have completed mandatory training within the required timeframe.

Records provided to inspectors indicated that 760 of the 935 clinical and non-clinical staff (81.3%) at the hospital had completed the mandatory training programme on communication and team work at the hospital between October 2018 and April 2019. Inspectors were provided with scheduled dates for this training to be provided to the remaining staff.

Overall, inspectors found that there was evidence that completion of mandatory training in the management of obstetric emergencies, neonatal resuscitation and communication and team work was well attended at the hospital. However, the hospital must ensure that all clinical staff who provide electronic fetal monitoring attend mandatory and essential training in this area within recommended timeframes. Attendance at this training should be documented and monitored at the hospital.

^{‡‡} Irish Maternity Early Warning System is a nationally agreed system developed for early detection of life threatening illness in pregnancy and the postnatal period. IMEWS should be used for the hospital care of women with a confirmed clinical pregnancy and for up to 42 days in the postnatal period.

Orientation and training of new staff

The hospital held a two day induction programme for non-consultant hospital doctors twice a year. The induction programme was provided by members of the multidisciplinary team at the hospital on areas of practice such as infection prevention and control, IMEWS and sepsis management, accessing laboratory services and clinical risk management. In addition, neonatal medical staff were provided with a three week competency based induction programme that included sessions on developing skills such as neonatal resuscitation and neonatal intubation. The hospital used video laryngoscope equipment which was reported to improve simulated neonatal intubation training.

Newly appointed nursing and midwifery staff, and nursing and midwifery staff rotating to a new clinical area, were provided with a structured induction programme to support them with their integration at the hospital. The clinical skills facilitators in the inpatient wards, the Delivery Ward and the Neonatal Unit were instrumental in supporting new staff during their induction at the hospital.

Other training and education opportunities for staff

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.

The hospital had regular meetings each week to provide teaching and learning opportunities for non-consultant hospital doctors in obstetrics, anaesthesiology and neonatology.

The hospital held a meeting every Friday where labour ward issues such as caesarean sections and electronic fetal monitoring (cardiotocography) were reviewed by midwives and obstetricians to identify any areas for learning and improvement. Other teaching opportunities including, journal club and grand rounds, were held every week at the hospital.

The anaesthetic team provided teaching sessions for non-consultant hospital doctors in anaesthesiology at the hospital two days a week.

Non-clinical staff such as porters and reception staff were also provided with a specific training programme on emergency situations management at the hospital.

Clinical skills facilitators in the Neonatal Unit held a scenario based teaching and learning session every week on neonatal resuscitation.

The hospital held a Neonatal Nursing Conference every year where staff from the hospital and other neonatal units in the country were welcome to attend.

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

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: Low rates of uptake of mandatory training in electronic fetal monitoring for medical staff documented at the hospital.

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 National Maternity Hospital was compliant with ten 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 National Maternity Hospital is a stand-alone maternity hospital that provides a range of general and specialist maternity services for women with normal risk and

high risk pregnancies. 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 hospital provided the three pathways for maternity care namely, supportive care, assisted care and specialised care in line with the National Maternity Strategy.⁹ Each women and infant had a named consultant with clinical responsibility for their care.

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.

The hospital had an Early Pregnancy Assessment Unit (EPAU) where women experiencing complications of early pregnancy were reviewed. The EPAU was open Monday to Friday from 8am to 4pm.

The Fetal Medicine Unit provided fetal ultrasound and fetal medicine services to women booked at the hospital and women referred from other maternity hospitals in the country. Fetal ultrasound scans were offered to all pregnant women at intervals recommended in the National Standards. All women were offered a formal dating ultrasound and a detailed fetal-assessment ultrasound at 20-22 weeks gestation.

Women who attended for care during pregnancy, depending on their risk factors, could be referred to community based midwifery care, consultant led care or a number of specialised clinics.

The hospital held maternal medicine clinics every week where women with underlying medical conditions or complications in a previous pregnancy were reviewed. The multidisciplinary team providing care at these clinics included obstetricians, anaesthesiologists, a pharmacist, midwives and consultant physicians in specialities including, haematology, rheumatology and hepatology from St. Vincent's University Hospital.

The hospital held multidisciplinary meetings and clinics in collaboration with paediatric consultants and clinical specialists from Children's Health Ireland at Crumlin Hospital and Children's Health Ireland at Temple Street Hospital. These specialities included clinical genetics, paediatric cardiology, paediatric neurosurgery and paediatric radiology. These meetings and clinics were provided to review and plan care for pregnant women where a congenital condition was diagnosed or anticipated.

Consultant obstetricians from the National Maternity Hospital attended a combined cardiology clinic in St. Vincent's University Hospital for pregnant women with cardiac conditions.

The hospital also provided an antenatal clinic for women who experienced a previous preterm birth or had risk factors for preterm birth.

A combined diabetes in pregnancy clinic was provided for women with pre pregnancy Diabetes Mellitus and Gestational Diabetes. This antenatal clinic was provided by a multidisciplinary team including consultant obstetricians, consultant endocrinologists, dietitians, midwives and nurses.

Consultant anaesthesiologists at the hospital also provided a specialist pain medicine clinic for pregnant women with a history of chronic pain or pregnancy related conditions for example pelvic pain or lumbosacral pain.

Postnatal clinics

The hospital had a number of postnatal clinics for women who had complicated births or developed complications after birth:

- The hospital held a postnatal clinic for women who had complications during or after the birth of their babies. Women could be referred to this clinic by their general practitioners, public health nurses or other hospitals.
- The hospital also had a perineal clinic where women who sustained obstetric anal sphincter injuries^{§§} were reviewed after birth.
- Women who experienced a birth complicated by shoulder dystocia^{***} or any other traumatic birth could be referred to a postnatal debriefing clinic. The postnatal debriefing clinic was facilitated by a senior midwifery manager and a consultant obstetrician. This clinic provided women with an opportunity to discuss their labour and birth.

§§ 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).

*** Shoulder dystocia is defined as a vaginal cephalic (head first) birth that requires additional obstetric manoeuvres to deliver the baby after the head has delivered and gentle traction has failed.(RCOG ,2012)

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. Pregnant women and women who had recently given birth who presented for non-routine or unscheduled care were reviewed in the Emergency Room on the ground floor of the hospital. The Emergency Room opened in 2018 and had one triage room and four single rooms for assessment of women who presented. If women attended in labour or were over 20 weeks pregnant and presented with pain or bleeding they were assessed and reviewed in the Delivery Ward.

The Emergency Room was staffed with midwives 24 hours a day who used a triage system to initially assess and prioritise women who required urgent midwifery or medical review. A non-consultant hospital doctor at senior house officer grade was assigned to the Emergency Room to provide medical review until 8pm Monday to Friday. A registrar in obstetrics was also assigned until 5pm. Inspectors were informed that at times of peak activity, there may be a delay in providing medical review of women leading to some women leaving the hospital without review. These women were contacted by midwifery staff and advised to return to the hospital or see their General Practitioner. This number of women leaving without medical review was monitored at the hospital and escalated as a potential risk to patient safety to the Master for attention. In response the Master assigned extra medical staff to the Emergency Room during these times.

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 (IMEWS) 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. Information provided to inspectors indicated that 49 pregnant women were transferred into the hospital from other maternity units in 2018.

3.1.2 Access to specialist care and services for women and newborns

There was 24-hour access to emergency obstetric surgery at the hospital. The hospital was staffed and managed so that emergency caesarean sections could be performed within recommended timeframes.

Access to clinical specialists

The hospital had 24-hour access to clinical advice from consultants in the specialties of haematology and microbiology.

A number of consultant anaesthesiologists and consultant obstetricians and gynaecologists had joint appointments between the National Maternity Hospital and nearby St. Vincent's University 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 arrangements in place to access consultant specialists from St. Vincent's University Hospital if required in an emergency situation onsite. The hospital could access radiology services such as computerised axial tomography and interventional radiology when required for women at St. Vincent's University Hospital.

The hospital had pathways in place with St. Vincent's University Hospital, for women with complex medical conditions, who required to give birth at a tertiary adult hospital.

The hospital held a multidisciplinary meeting to plan care for women who were diagnosed with placental abnormalities such as placenta accreta⁺⁺⁺ each month. This meeting involved clinical staff from St. Vincent's University Hospital and the National Maternity Hospital coming together to determine the most appropriate location (either St. Vincent's University Hospital or the National Maternity Hospital) for these women to have their caesarean section depending on their risk factors.

When pregnant women presented to the National Maternity Hospital with concerns or clinical conditions that were not pregnancy related and required review by medical or surgical specialists, St. Vincent's University Hospital was contacted to arrange for review of these women.

As outlined in the National Maternity Strategy, St. Vincent's University Hospital is the planned location for the development of the new National Maternity Hospital.⁹

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

⁺⁺⁺ Placenta accreta (and the more severe forms increta or percreta) is a serious pregnancy condition that occurs when the placenta grows too deeply into the uterus; also known as abnormally adherent placenta. The management of abnormally adherent placenta requires specialist multidisciplinary care.

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

Guidelines⁸ 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 week for women with risk factors for anaesthesia or a history of previous complications during anaesthesia. 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 located in the recovery area of the operating theatre. The High Dependency Unit comprised a two bedded area that was part of the operating theatre recovery area. Women admitted to the High Dependency Unit were reviewed daily or more frequently depending on their clinical needs by consultant obstetricians and consultant anaesthesiologists. 158 women were admitted to the High Dependency Unit at the hospital in 2018.

As a stand-alone maternity hospital, the National Maternity Hospital did not have a Level 3^{§§§10} 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 pregnant or postnatal women were transferred out of the hospital for Intensive Care in 2018. Inspectors were informed that there was no delay in the transfers of these women. The National Maternity Hospital had formal arrangements in place with St. Vincent's University Hospital to accept transfers of women for critical care when required.

Neonatal care

The National Maternity Hospital had a level 3^{****} tertiary neonatal unit where the full spectrum of specialised care was provided to critically ill pre-term and term newborn

††† 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.

§§§ 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.

**** 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.

infants. The hospital accepted newborns that required complex neonatal care from maternity units within the Ireland East Hospital Group and maternity units across the country depending on cot and antenatal bed capacity. Inspectors were informed that the hospital monitored the number of times they were unable to accept transfers of pregnant women and newborns from other maternity units when specialised neonatal care was anticipated. Inspectors were informed that a deficiency of antenatal bed capacity rather than a lack of neonatal cots was the most likely reason that the hospital would be unable to accept transfers in to the hospital.

Therapeutic cooling^{†††} was also provided at the Neonatal Unit for infants born in the National Maternity 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. There was an established procedure for requesting support for obstetric and neonatal emergencies whereby a multidisciplinary response team could be summoned for an emergency by telephoning the hospital emergency number. The hospital switchboard team tested pagers assigned to emergency response teams every day to ensure they were working correctly.

Multidisciplinary handover

There were formal arrangements in place for multidisciplinary handover in the clinical areas inspected. Multidisciplinary clinical handover took place at change of shift each morning between the consultant obstetrician rostered for the Delivery Ward for the day, the on-call obstetric registrars and the midwifery manager for the Delivery Ward. Safety Pauses were held in the postnatal ward and the neonatal unit twice each day to increase staff awareness on relevant patient safety issues. Inspectors were informed that the hospital had planned to commence a hospital wide "safety huddle"^{‡‡‡‡} in May 2019 where senior managers, midwifery and nursing managers, consultants and non-consultant hospital doctors in the specialties of obstetrics, anaesthesiology and neonatology would meet twice each day to discuss clinical

††† 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.

‡‡‡‡ Safety huddles are brief and routine meetings for sharing information about potential or existing safety problems facing patients or workers. They aim to increase safety awareness among front-line staff, allow for teams to develop action plans to address identified safety issues, and foster a culture of safety.

activity, staffing levels and high risk women and neonates. Safety Huddles can improve patient safety and provide a collaborative forum to reduce patient harm.¹¹ Clinical staff used the Identity-Situation-Background-Assessment-Recommendation (ISBAR) communication format to verbally communicate information about patients in line with national guidelines.¹²

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 maternal collapse, massive obstetric haemorrhage, caesarean section in the second stage of labour, anaesthetic risks, caesarean section for placental abnormalities. The hospital had a guideline in place to support this practice. 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 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 with risk factors associated with receiving anaesthesia were admitted.

The hospital held a number of multidisciplinary meetings where medical, midwifery and nursing staff were informed of women with high risk pregnancies. For example, a multidisciplinary fetal medicine meeting and a multidisciplinary maternal medicine meeting was held every week at the hospital to discuss care planning for these women.

Other findings relevant to communication

Medical and midwifery staff who spoke with inspectors said that they would have no hesitation about contacting a consultant on duty if they had concerns about the wellbeing of a woman or neonate or when advice or additional support was needed. There was an agreed process in place for accessing an operating theatre for emergency surgery during and outside of core working hours. Staff who spoke with inspectors were clear about who was the most senior doctor to be called in line with the Irish Early Maternity Warning System escalation process.

There was a clear process in place to inform clinical staff about external and internal safety alerts concerning medicines and medical equipment. All information and the responses relating to safety alerts (external and internal) were shared in ward communication books and during safety pauses at shift handovers. Inspectors observed examples of these in the clinical areas inspected.

§§§§ 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

3.1.4 Written policies, procedures and guidelines

The hospital had a number of policies, procedures and guidelines pertaining to obstetric emergencies, for example, major obstetric haemorrhage, umbilical cord prolapse and shoulder dystocia. The hospital also had policies based on National Clinical Effectiveness Committee guidelines including sepsis, clinical handover in maternity services and the Irish Maternity Early Warning System. Policies, procedures and guidelines were stored electronically in the hospital's document management system. Staff in clinical areas inspected demonstrated that they could easily access policies, procedures and guidelines. Members of the anaesthetic team accessed policies, procedures and guidelines relating to obstetric and anaesthetic emergencies promptly via a specific application on their mobile phones. This controlled application was developed by the Clinical Director at the hospital to improve access to these guidelines for medical staff.

A safe surgery checklist^{*****} was completed for emergency and elective surgical procedures in obstetric operating theatres in line with best practice recommendations. This checklist was audited every month at the hospital to ensure compliance with its use. The hospital had a standardised procedure for the estimation and measurement of maternal blood loss.

3.1.5 Maternity service infrastructure, facilities and resources

The National Maternity Hospital was founded as a charitable lying-in Hospital in 1894. The hospital's infrastructure had been updated and reconfigured over many years. Nonetheless, major infrastructural challenges remain due to the constraints of the current site and the hospital did not meet recommended design and infrastructural specifications for maternity services.¹³

Inspectors were informed that enabling works had commenced on the site of St. Vincent's University Hospital for the planned relocation of the National Maternity Hospital. However, as the planned relocation was anticipated to be in 2023, the hospital required continuous renovations and reconfiguration to enable maternity care to be delivered. These renovations and restructuring were ongoing at the time of the inspection.

Emergency Room

The hospital opened an Emergency Room in 2018 on the ground floor of the hospital near the main entrance and reception area. This Unit had one triage room and four

***** 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.

bright spacious single assessment rooms that were fully equipped to assess maternal and fetal wellbeing.

Antenatal and Postnatal ward

The hospital had 105 inpatient beds for antenatal and postnatal care. On the day of inspection, inspectors visited a postnatal ward with 28 beds and cots. This ward comprised five five-bedded rooms and three single rooms. All of the rooms had ensuite shower and toilet facilities.

Delivery Ward

The Delivery Ward had nine single rooms and one two-bedded room. Two of these rooms had ensuite toilet and shower facilities and one room had ensuite toilet facilities. The Delivery Ward had numerous renovations since a previous HIQA inspection in 2015.¹⁴ The delivery rooms were no longer linked and each room had its own access door. The Delivery Ward's dirty utility room⁺⁺⁺⁺ was renovated and the practice of processing tissue specimens in the Delivery Ward had ceased. Inspectors were informed that expansion of the Delivery Ward with the addition of five additional delivery rooms was due to commence in May 2019 to increase the capacity of the Delivery Ward. The aim of this expansion was to improve timely access to the Delivery Ward for women who needed one to one midwifery care in labour.

Critical Care

The hospital's High Dependency Unit comprised a two bedded area of the operating theatre's recovery area. This clinical area was equipped to care for pregnant and postnatal women who required close monitoring and observation.

Operating theatres for obstetrics and gynaecology

The hospital did not have an operating theatre adjacent to the Delivery Ward. The hospital's Operating Theatre Department was located on the third floor of the hospital, one floor above the Delivery Ward. The hospital had a procedure in place to rapidly transfer women who needed an urgent caesarean section to the operating theatre. The Operating Theatre Department had three operating theatres and a recovery bay with six beds located outside the theatre department. Two of these beds were allocated as High Dependency Unit beds. A previous HIQA inspection¹⁴ in

⁺⁺⁺⁺ A room equipped for the disposal of body fluids and the decontamination of reusable equipment such as bedpans, urinals, commodes and body fluid measuring jugs. Waste, used linen and contaminated instruments may also be temporarily stored in this room prior to collection for disposal, laundering or decontamination.

2015 had identified deficiencies in the infrastructure and design of the Operating Theatre Department facilities. Inspectors were informed that infrastructural and design issues remained a primary risk for the department. However, progress had been made at the time of inspection in addressing some of these infrastructural deficiencies. The hospital had recently obtained Board approval to progress plans to develop the Operating Theatre Department.

Plans viewed by inspectors showed reconfiguration and development of the existing operating theatre footprint and an additional new extension which would add two new operating theatre rooms. The plans included the decommissioning of Theatre 2 which will be converted to a scrub room for one of the new operating theatres and an upgrade of existing facilities to meet projected increases in day care services. These refurbishment plans did not incorporate any changes to the location of the existing operating theatre recovery room which will remain outside the theatre complex once works are completed. As identified in previous inspections, HIQA acknowledges that the age and limited footprint of the hospital building is a barrier to the operating theatre complex meeting international best practice guidelines for operating theatre infrastructure.¹⁵ Inspectors were informed that initial internal works had commenced to prepare for the new extension and a timeline for the completion of planned works was quarter 2, 2020.

Neonatal unit

The National Maternity Hospital provided level 3 (tertiary) neonatal care services. The Neonatal Unit was re-built and renovated in 2016. The Neonatal Unit moved from the fourth floor to the first floor of the hospital as part of the rebuild. The Neonatal Unit had an open plan High Dependency Unit area and an open plan Special Care Baby Unit area. There were three separated Intensive Care Unit areas, two of which were open plan. The third Intensive Care Unit area had four double rooms and a single room with negative pressure isolation facilities. The Neonatal Unit could accommodate 36 cots comprising 18 Intensive Care Cots, 10 High Dependency Cots and eight Special Care Baby Unit Cots.

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.

The hospital had purchased and implemented point of care testing equipment in the operating theatre to expedite blood coagulation results during the management of a major haemorrhage.

3.1.6 Maternity service equipment and supplies

The Delivery Ward had emergency resuscitation equipment for women and newborns. The Neonatal Unit had emergency resuscitation equipment for neonates. Checklists showed that emergency equipment was checked daily in the clinical areas inspected. There was one automated external defibrillator allocated for both the operating theatre recovery room and the adjacent postnatal ward inspected. This was highlighted to hospital management team on the day of inspection.

Resuscitation equipment should be readily and easily accessible to staff for use in an emergency in individual clinical areas and this finding should be addressed so that there is ready access to this equipment in both clinical areas.

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 following 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.

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. Infrastructure and physical environment of the Delivery Ward not in line with recommendations for modern maternity services.

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. Inspectors 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 risk. Clinical midwife and nurse managers monitored electronic clinical area risk registers, with the support of the hospital's risk management department in the clinical areas inspected. At the time of the inspection, the hospital was in the process of implementing a new risk management system. Inspectors were informed that the aim of this system was to enable better integration between the current risk and clinical incident management systems. Risks in relation to the maternity service were recorded in a corporate risk register along with agreed risk treatment measures. Risks that the hospital determined could not be managed at hospital level had been escalated to the Ireland East Hospital Group. These included risks in relation to:

- Infrastructure
- Staffing levels
- Clinical activity
- The Maternal and Newborn Clinical Management System.

Infrastructure

Insufficient Delivery Ward capacity was recorded as a risk to the timely transfer of women to the Delivery ward. This may result in a delay in providing one-to-one care for women. To address this risk, expansion works to provide five extra delivery rooms at the hospital was due to commence in May 2019 and was expected to take 12 months to complete.

The lack of an adult level 3 intensive care unit onsite was also recorded as a risk to patient safety. Controls in place to mitigate this risk included collaborative arrangements with clinical teams in St. Vincent's University Hospital for women with identified risks to give birth in St. Vincent's University Hospital if required. Women

with emergency high-risk clinical situations were transferred by ambulance and accompanied by anaesthetic staff from the National Maternity Hospital. A further control to mitigate this risk was the recruitment of an extra anaesthetic nurse to the operating theatre in 2018.

Staffing levels

Risks associated with inadequate nursing staffing levels in the operating theatre and the Neonatal unit had been escalated to the Ireland East Hospital Group. The hospital sought funding to recruit additional operating theatre nurses and additional neonatal nurses. Ten nursing positions were filled in the Neonatal Unit. A further two nursing positions in the neonatal unit and one position in the operating theatre remained outstanding.

Clinical Activity

Risks associated with unpredictable peaks in activity levels, implementation of new services and lack of capacity to deal with increasing numbers of women requiring high dependency unit and intensive care unit facilities had been escalated to the Ireland East Hospital Group. Controls in place to reduce the risk to patient safety associated with these issues included the ongoing infrastructural developments in the Operating Theatre Department and the Delivery Ward, and recruitment of additional staff. The most effective long-term control to reduce these risks was documented as the planned co-location with St. Vincent's University Hospital.

The Maternal and Newborn Clinical Management System

The hospital had implemented the National Maternal and Newborn Clinical Management System in January 2018 which is an electronic health record for mothers and newborns. Risks associated with the implementation of the electronic maternity healthcare record were recorded on the hospital's corporate risk register. These included risks associated with the quality of clinical data recorded, data protection risks and obtaining information from the system in a timely way. To mitigate these risks, the hospital issued daily reports to managers to identify issues for correction. The Hospital Board had appointed a working group to monitor the risks identified. The hospital had also provided extra administrative support and training for staff to mitigate this risk. The hospital had escalated the risk to the national implementation team for the Maternal and Newborn Clinical Management System for review.

Clinical incident reporting

Inspectors found that there was an established practice of reporting clinical incidents based on the number of clinical incidents reported each month. Staff who spoke with inspectors were aware of their responsibility to report clinical incidents. The hospital had a Clinical Incident Review Group that met every two weeks to review reported clinical incidents and ensure that any improvements to patient care and safety were

implemented and learning shared across the clinical services at the hospital. The Clinical Incident Review Group reported into the Clinical Governance Executive. The Clinical Incident Review Group was multidisciplinary comprising:

- the Clinical Director
- the Director of Midwifery
- a consultant neonatologist
- a consultant obstetrician
- members of the clinical risk management and legal department
- the Quality Manager
- the Clinical Practice Development Co-Ordinator
- senior midwifery and nursing managers
- and obstetric registrars.

Clinical incidents were tracked and trended and where improvements were required, plans were put in place to address these. Staff who spoke with inspectors were provided with feedback on the outcome of reported clinical incidents and were able to provide inspectors with examples of improvements in care from review of clinical incidents. Patient safety incidents were reported on the National Incident Management System^{¶¶¶¶} in line with national guidelines.¹⁶

Feedback from women

There was a formalised process to monitor compliments and respond to complaints from women using the maternity service. Inspectors were informed that all women admitted to the Delivery Ward were offered an evaluation form to complete following the birth of their baby. Inspectors were informed that approximately 200 evaluation forms were received and evaluated at the hospital every month. Inspectors were informed that both negative and positive feedback was shared with clinical staff with the aim of driving improvements to women's experience.

This evaluation form had a tick box where women could select to have a discussion regarding their care at the hospital. A senior midwifery manager in the Delivery Ward was responsible for contacting women by telephone to arrange follow up if requested. The hospital held a postnatal debriefing clinic for women who had a birth complicated by shoulder dystocia or a traumatic birth. This clinic was provided by a consultant obstetrician and the senior clinical midwife manager for the Delivery Ward. In 2018, 56 women were reviewed at this clinic.

¶¶¶¶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).

Feedback and complaints from women and families was an agenda item at the Executive Management Team weekly meetings. Hospital management gave examples of how feedback from women using the maternity service was used to make improvements. A support group for women who were diagnosed with placenta accreta was established in March 2019 in response to feedback from women. This support group was led by a consultant obstetrician and the Director of Midwifery. Peer to peer support from women who had attended the hospital in a previous pregnancy with placenta accreta, provided support to women who were diagnosed in their current pregnancy.

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.¹⁷ This information facilitates national oversight by the HSE in relation to specified clinical outcome and activity measures across the 19 maternity units and maternity hospitals. This information also allows individual maternity units and maternity hospitals to benchmark their performance against national rates over time.

The Executive Management Team at the hospital proactively monitored, analysed and responded to information from multiple sources including serious reportable incidents, incident reviews, legal cases, risk assessments, complaints, audits and patient experience surveys to be assured about the effectiveness of the maternity service as required by National Standards.

Irish Maternity Indicator System data and clinical activity at the hospital was reviewed at the monthly Clinical Governance Executive meetings and at the hospital's Executive Management Team meetings. The hospital published monthly maternity patient safety statements in line with national HSE reporting requirements. The hospital had implemented the Maternal and Newborn Clinical Management System in January 2018. Inspectors were informed that the hospital was closely monitoring the validity of the data used to monitor the maternity service from this system and the accuracy of the information provided was systematically reviewed.

The hospital held a monthly multidisciplinary team meeting comprising anaesthetic and obstetric medical staff and midwifery and operating theatre nursing staff to review all major postpartum haemorrhages^{§§§§§} that occurred at the hospital. The

§§§§§ Major postpartum haemorrhage was defined at the hospital as blood loss greater than 1.5 litres or ongoing severe bleeding, clinical shock, or patient unstable

purpose of these meetings was to review the management and care provided and to make recommendations for practice improvements if required.

A consultant obstetrician and senior midwifery manager reviewed the outcome and care management documented for all women who experienced shoulder dystocia.

Clinical audit

The National Maternity Hospital had a clinical audit programme that was approved by the Master. The hospital's Director of Quality Risk and Patient Safety had developed a policy and procedure to support the internal audit programme and process for the hospital. At the time of inspection, the hospital was in the process of ensuring that all clinical audits and scheduled clinical audits were logged electronically at the hospital.

HSE Nursing and Midwifery Quality Care-Metrics data in relation to care planning, medication and guideline implementation were collected and monitored each month at the hospital.

The hospital had audited compliance with National Clinical Guidelines in Sepsis Management in January 2019. This audit showed good compliance with initiation of the Sepsis Six.^{*****} Opportunities for improvement were identified in relation to consistency with laboratory tests and documentation of patient observations. A quality improvement plan had been developed and communicated to staff at the hospital following this audit which is good practice.

Other clinical audits undertaken at the hospital in the previous 12 months included:

- Compliance with completion of the safe site surgical checklist was audited each month.
- Operating theatre activity including start times, elective and emergency activity hours were monitored.
- Audit of activation of the neonatal emergency bleep system.
- Audit of compliance with the hospital's protocol for management of hypoglycaemia^{†††††} in neonates.
- Audit of compliance with blood transfusion observations.

***** The Sepsis Six consists of three diagnostic and three therapeutic steps – all to be delivered within one hour of the initial diagnosis of sepsis:

††††† Hypoglycaemia refers to low levels of glucose or sugar in the blood

Annual clinical report

The National Maternity Hospital produced a comprehensive annual clinical report that detailed clinical outcomes for women and infants, clinical activity and service developments 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.¹⁸ These rates were published in the annual clinical report. The National Maternity Hospital attended the Irish Annual Clinical Reports Meeting, organised by the Institute of Obstetricians and Gynaecologists. This meeting was held every year where the 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 employed a Director of Quality Risk and Patient Safety and a quality manager. The hospital had initiated and developed a number of quality improvement projects aimed at improving the quality and safety of maternity care including the following:

- In October 2018, the hospital commenced a mandatory training programme for clinical and non-clinical staff to enhance team working across the hospital to support high quality and safe patient care. This evidence based training programme focused on team structure, communication, leadership, situation monitoring and mutual support.
- The hospital had provided training and education to all clinical staff to support the implementation of the Maternal and Newborn Clinical Management System.
- Development of a support group for women with placenta accreta in March 2019.
- Provision of training and education for porters and reception staff on how to seek assistance in an emergency.
- Development of a tool to document telephone calls from women who were not booked at the hospital.
- Implementation of point of care equipment to provide rapid evaluation of blood coagulation levels in cases of obstetric haemorrhage in the operating theatre.
- The hospital had procured equipment to provide high flow humidified nasal oxygenation therapy to improve pre-oxygenation where clinically indicated for women undergoing general anaesthesia.

- The hospital held a patient safety awareness week in 2018. The purpose of this initiative was to provide staff with education and increase staff awareness of key patient safety issues such as medication safety, infection prevention and control and reducing slips, trips and falls. The hospital had planned to hold the 2019 patient safety awareness week in September 2019.

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 National Maternity 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 National Maternity Hospital had a clearly defined and effective leadership, governance and management structure at the hospital to ensure the safety and quality of maternity services. There was good oversight of the quality and safety of services by senior managers at the hospital who used multiple sources of information to identify opportunities for improvement. The hospital's Executive Management Team monitored performance data including patient outcomes, service user feedback and patient safety incidents and benchmarked its performance against other similar sized hospitals. Hospital management was actively working to optimise maternity care and to progress implementation of the National Standards.

HIQA found that the National Maternity Hospital as a large tertiary 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. In addition, the hospital had arrangements in place to detect and respond to obstetric emergencies and to provide or facilitate on-going care to ill women and or their newborn babies in the most appropriate setting.

The hospital was staffed with medical staff in the specialties of obstetrics, neonatology and anaesthetics who were available onsite to provide care to women and newborns on a 24-hour basis. The hospital met the HSE's national benchmark for midwifery staffing in line with the HSE's Midwifery Workforce Planning Project.

The infrastructure of the hospital, despite numerous and ongoing renovations and refurbishments, was not in line with recommended guidelines for maternity care facilities. Progression with the planned new National Maternity Hospital on the site of St. Vincent's University Hospital to ensure access to Level 3 critical care and medical, surgical and diagnostic specialties for the management of women and neonates who require complex care is essential.

The hospital had clearly defined mandatory training requirements for clinical staff including electronic fetal monitoring, adult and neonatal resuscitation, multi-disciplinary training for the management of obstetric emergencies and a communication and team working programme. Following this inspection, the hospital

should ensure that essential training in electronic fetal monitoring is always completed and documented by medical staff within recommended timeframes in line with the National Standards.

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