Report of the unannounced inspection of maternity services at University Maternity Hospital Limerick

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

Dates of inspection: 06 and 07 December 2018

*Safer Better Care*
About the Health Information and Quality Authority (HIQA)

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

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

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

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

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

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

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

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

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

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

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

For the purposes of this monitoring programme, obstetric emergencies are defined as pregnancy-related conditions that can present an immediate threat to the 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 specified\(^3\) National Standards in relation to leadership, governance and management had been implemented. In addition, maternity hospitals and maternity units were assessed to determine if they were resourced to detect and respond to obstetric emergencies which occurred, and explored if clinical staff were supported with specialised regular training to care for women and their newborn babies.

This monitoring programme examined if specified\(^3\) National Standards in relation to effective care and support and safe care and support had been implemented. The programme assessed whether or not maternity hospitals and maternity units could effectively identify women at higher risk of complications in the first instance. It also examined how each maternity hospital or maternity unit provided or arranged for the care of women and newborns in the most appropriate clinical setting. The programme looked at how risks in relation to maternity services were managed and how the service was monitored and evaluated.
In monitoring against the *National Standards for Safer Better Maternity Services*, with a focus on obstetric emergencies, HIQA has identified three specific lines of enquiry (LOE). These lines of enquiry represent what is expected of a service providing a consistently safe, high-quality maternity service, particularly in its response to obstetric emergencies. These lines of enquiry have been used by HIQA to identify key relevant National Standards for assessment during this monitoring programme.

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

**Figure 1 – Monitoring programme lines of enquiry**

**LOE 1:**

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

**LOE 2:**

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

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

**LOE 3:**

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

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

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](http://www.hiqa.ie)

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*Mathernity 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.
1.1 Information about this inspection

University Maternity Hospital Limerick is a statutory standalone maternity hospital which is owned and managed by the Health Service Executive (HSE). The hospital is part of the University Limerick Hospitals Group† (UL Hospitals Group). Within the hospital group structure, maternity services are managed through the Maternal and Child Health Directorate. University Maternity Hospital Limerick is the only maternity hospital within this hospital group. The hospital provides a range of general and specialist maternity services designed to meet the needs of women with low risk and high risk pregnancies. There were 4425 births at the hospital in 2017.

To prepare for this inspection, inspectors reviewed a completed self-assessment tool‡ and preliminary documentation submitted by University Maternity Hospital Limerick 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 University Maternity Hospital Limerick is included in Table 1.

Table 1: - Inspection details

<table>
<thead>
<tr>
<th>Dates</th>
<th>Times of inspection</th>
<th>Inspectors</th>
</tr>
</thead>
<tbody>
<tr>
<td>06 December 2018</td>
<td>11:35hrs to 19:30hrs</td>
<td>Aileen O’ Brien</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Emma Cooke</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Siobhan Bourke</td>
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<tr>
<td></td>
<td></td>
<td>Denise Lawler</td>
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<tr>
<td></td>
<td></td>
<td>Joan Heffernan</td>
</tr>
<tr>
<td>07 December 2018</td>
<td>09:00hrs to 16:30hrs</td>
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</table>

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

- representatives of the hospital’s Maternal and Child Health Directorate Management Team and
- the hospital’s clinical leads in the specialties of obstetrics, anaesthesiology and neonatology.

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

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† UL Hospitals Group comprises University Hospital Limerick, University Maternity Hospital Limerick, St John’s Hospital, Ennis Hospital, Croom Hospital and Nenagh Hospital.

‡ All maternity hospitals and maternity units were asked to complete a self-assessment tool designed by HIQA for this monitoring programme.
- The Maternity Emergency Unit, an area where pregnant and postnatal women who presented to the hospital with pregnancy-related concerns were assessed.
- The Labour Ward where women were cared for during labour and childbirth which also included a special observation bay.
- The Neonatal Unit where babies requiring additional monitoring and support were cared for.
- A postnatal ward where women were cared for following childbirth. This ward also provided care for women admitted for elective caesarean section and for women admitted for induction of labour.
- The Operating Theatre Department where obstetric surgery was performed.

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

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

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

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

Figure 2: The four National Standard themes which were focused on in this monitoring programme
Based on inspection findings, HIQA used four categories to describe the maternity service’s level of compliance with the National Standards monitored.

These categories included the following:

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

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

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

<table>
<thead>
<tr>
<th>Report section</th>
<th>Themes</th>
<th>Standards</th>
<th>Line of enquiry</th>
</tr>
</thead>
<tbody>
<tr>
<td>Section 2: Capacity and Capability:</td>
<td>Leadership, Governance and Management</td>
<td>5.1, 5.2, 5.3, 5.4, 5.5, 5.8 and 5.11</td>
<td>LOE 1</td>
</tr>
<tr>
<td></td>
<td>Workforce</td>
<td>6.1, 6.3, 6.4</td>
<td>LOE 3</td>
</tr>
<tr>
<td>Section 3: Dimensions of Safety and Quality:</td>
<td>Effective Care and Support</td>
<td>2.1, 2.2, 2.3, 2.4, 2.5, 2.7, 2.8</td>
<td>LOE 2</td>
</tr>
<tr>
<td></td>
<td>Safe Care and Support</td>
<td>3.2, 3.3, 3.4, 3.5</td>
<td></td>
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</table>
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, University Maternity Hospital Limerick was compliant with seven National Standards and substantially compliant with three National Standards.

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

University Maternity Hospital Limerick is unique in that it is the only maternity hospital within the UL Hospitals Group.

University Maternity Hospital Limerick leadership, governance and management

Inspectors found that there was a clearly defined and effective leadership, governance and management structure to ensure the quality and safety of maternity services provided at the hospital. UL Hospitals Group had created a Maternal and Child Health Directorate management structure which included maternity services at University Maternity Hospital Limerick. The Directorate Management Team comprised a clinical director, a director of midwifery, a general manager and a business manager who were based at University Maternity Hospital Limerick.

The Clinical Director of the Maternal and Child Health Directorate held overall managerial responsibility and accountability for the maternity service at University Maternity Hospital Limerick. The Clinical Director reported to the Chief Clinical Director of UL Hospitals Group who in turn reported to the hospital group Chief Executive Officer. The Clinical Director and the Director of Midwifery were both members of the UL Hospitals Group executive management team.

The Maternal and Child Health Directorate had clearly defined service priorities for 2018 which included the following:

- roll out of a perinatal mental health service
- introduction of a high risk obstetric anaesthetic clinic
- increasing labour ward and operating theatre staffing levels
- electronic learning notices for staff.

There was oversight of the governance of the maternity service at the hospital at the Maternal and Child Health Directorate Governance Group which met every two weeks. This group had oversight of performance indicators, risk management, and the quality and safety of the service.

The Directorate Management Team reported to the UL Hospitals Serious Incident Management Team monthly and the hospital group Quality & Safety Executive Committee quarterly on the progress of serious reportable incident reviews and findings. Inter-directorate serious incidents were discussed at these meetings. The Quality Improvement Oversight Committee oversaw the implementation of the Quality Improvement Programme at the hospital and reported to the Directorate Management
Team which reported in relation to quality improvements to the hospital group Quality Improvement Committee.

Clinical leads had been appointed in each of the specialties of obstetrics, anaesthesiology and neonatology at University Maternity Hospital Limerick. 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 and directorate management level.

Safety alerts in relation to medical devices and medicines were communicated to staff at the hospital. The hospital Statement of Purpose needs to be revised to include information about the services provided at the hospital. This should be made publicly available in line with the National Standards.

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

<table>
<thead>
<tr>
<th>Standard 5.1</th>
<th>Maternity service providers have clear accountability arrangements to achieve the delivery of safe, high-quality maternity care.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Judgment:</strong></td>
<td>Compliant</td>
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</table>

<table>
<thead>
<tr>
<th>Standard 5.2</th>
<th>Maternity service providers have formalized governance arrangements for assuring the delivery of safe, high-quality maternity care.</th>
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<tbody>
<tr>
<td><strong>Judgment:</strong></td>
<td>Compliant</td>
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</table>

<table>
<thead>
<tr>
<th>Standard 5.3</th>
<th>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.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Key findings:</strong></td>
<td>The statement of purpose did not detail the services provided at the hospital in line with the National Standard.</td>
</tr>
<tr>
<td><strong>Judgment:</strong></td>
<td>Substantially compliant</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Standard 5.4</th>
<th>Maternity service providers set clear objectives and have a clear plan for delivering safe, high-quality maternity services.</th>
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</thead>
<tbody>
<tr>
<td><strong>Judgment:</strong></td>
<td>Compliant</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Standard 5.5</th>
<th>Maternity service providers have effective management arrangements to support and promote the delivery of safe, high-quality maternity services.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Judgment:</strong></td>
<td>Compliant</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Standard 5.8</th>
<th>Maternity service providers systematically monitor, identify and act on opportunities to improve the safety and quality of their maternity services.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Judgment:</strong></td>
<td>Compliant</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Standard 5.11</th>
<th>Maternity service providers act on standards and alerts, and take into account recommendations and guidance issued by relevant regulatory bodies.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Judgment:</strong></td>
<td>Compliant</td>
</tr>
</tbody>
</table>
2.2 Workforce

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

Inspection findings in relation to workforce are described next.

Inspection findings

2.2.1 Midwifery and nursing staffing

The hospital did not meet the HSE’s national benchmark for midwifery staffing in line with the HSE’s Midwifery Workforce Planning Project. At the time of the onsite inspection, inspectors were informed that there were 20 whole-time equivalent (WTE) midwifery positions vacant at the hospital, which equated to approximately 15% of the midwifery workforce at the hospital. The hospital was actively working to recruit additional midwives. The hospital employed agency midwives where available and redeployed midwives from other clinical areas in the hospital to ensure that all women received one to one care in labour and to provide additional support in the Operating Theatre Department as required.

There was a shift leader rostered on each shift in the Labour Ward. Due to midwifery staffing shortages, the shift leader was not always supernumerary. Similarly in the Neonatal Unit and the postnatal ward inspected, clinical nurse managers were not always supernumerary. Hospital management had identified a requirement for an additional five WTE midwives to facilitate rostering of supernumerary shift leaders in the Labour Ward.

During core working hours the hospital had a senior clinical midwifery manager who was responsible for oversight of the both the Labour Ward and the Operating Theatre Department. Outside of core working hours a senior midwife manager was rostered to oversee operational management at the hospital.

Inspectors were informed that the Operating Theatre Department had nurse and midwife staffing deficiencies of five WTE’s at the time of the onsite inspection. The

§ Whole-time equivalent (WTE): 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.
hospital had recruited internationally and five nurses were due to commence employment at the hospital in 2019.

Advanced nurse practitioners in the specialties of neonatology and an advanced midwife practitioner in diabetes were in position at the hospital.

Specialist support staff

There were also deficiencies at the hospital in relation to key support staff. There were an insufficient number of sonographers at the hospital to facilitate the implementation of fetal ultrasound scanning at 20-22 weeks gestation. The hospital did not have a dedicated clinical pharmacist, a finding that was previously highlighted by HIQA following an inspection at University Hospital Limerick in May 2018. Infection prevention and control advice was provided by the Infection Prevention and Control Team based in University Hospital Limerick but the hospital did not have an infection prevention and control nurse onsite on every weekday.

2.2.2 Medical staff

Medical staff availability

There was good onsite consultant presence at the hospital during core working hours during this inspection. On-call consultant obstetricians, anaesthetists and neonatologists were accessible to medical and midwifery staff and staff who spoke with inspectors said that they were onsite promptly when called to attend.

The hospital was staffed with non-consultant hospital doctors 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. Junior non-consultant hospital doctors at intern grade were not rostered to cover the on-call rota.

Consultants in the specialties of obstetrics, anaesthesiology and neonatology were registered as specialists with the Medical Council in Ireland.

Obstetrics

Prior to this onsite inspection, the consultant obstetrician on duty for the Labour Ward was also allocated operating theatre responsibilities. Hospital management was working to put a system in place whereby one consultant obstetrician would be assigned to be in attendance in the Labour Ward and a second consultant was assigned to the obstetric operating theatre during core working hours. A trial of this arrangement had just commenced at the hospital. A consultant obstetrician had also been appointed as Labour Ward lead.
The hospital had an on-call rota outside of core working hours for consultant obstetricians whereby consultants were on call usually one in every seven nights. However, the consultant on call for the maternity hospital was also on call for the gynaecology service at University Hospital Limerick. Inspectors were informed that if the consultant obstetrician on call needed to attend University Hospital Limerick, another consultant obstetrician who was not rostered on call was contacted to provide cover at the maternity hospital during this timeframe. This arrangement was based on the good will of consultant obstetricians working at the hospital and is not sustainable in the long term. The hospital management team had sought approval to appoint two more consultant obstetricians and gynaecologists to manage increased service demands. One consultant had been recently appointed and hospital management was awaiting funding for a further position. Following this inspection, the hospital needs to review the consultant out of hours on-call rota so that both hospital sites can access a consultant obstetrician and gynaecologist when required.

Hospital management had also identified a need to increase consultant obstetricians at the hospital in the longer term. On-call consultant obstetricians conducted ward rounds on Saturdays, Sundays and public holidays. A rota of two non-consultant hospital doctors in obstetrics, one at registrar grade and one at senior house officer grade was in place at the hospital 24 hours a day. An additional obstetric senior house officer was rostered to the Maternity Emergency Unit from 5-8.30pm from Monday to Friday.

**Anaesthesiology**

A consultant anaesthesiology with specialist training and experience in obstetric anaesthesia was the lead anaesthesiologist at the hospital. The anaesthetic team worked to respond to obstetric emergencies and calls from the Labour Ward in a timely manner.

The hospital had an on-call rota outside of core working hours for consultant anaesthesiologists whereby consultants were usually on call one in every seven nights. Inspectors were informed that the rota for consultant anaesthesiologists for the maternity services was shared among a pool of consultant anaesthesiologists for University Hospital Limerick with one consultant on call exclusively for University Maternity Hospital Limerick. During core working hours, one consultant anaesthesiologist and one registrar in anaesthesiology were onsite at University Maternity Hospital Limerick. A rota was in place whereby one non-consultant hospital doctor in anaesthesiology at registrar grade was in place to provide anaesthetic care at the hospital outside of core working hours and at weekends.

There was an insufficient number of consultant anaesthesiologists to provide a dedicated obstetric anaesthetic clinic at the hospital. Hospital management had sought approval to increase anaesthetic services to progress this in line with directorate priorities for 2018.
Neonatology

Medical care for newborns at the hospital was led by consultant neonatologists. 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 four nights. A designated consultant neonatologist on-call rota has been in place at the hospital since 2015. The hospital had four WTE consultant neonatologists positions approved at the hospital. A fifth consultant neonatologist position had been approved and hospital management anticipated that this position would be filled in 2019.

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 neonatal care at 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 in relation to obstetrics emergencies. Training uptake by doctors, midwives and nurses was overseen by hospital management which is good practice.

All doctors, midwives and nurses working in the Labour Ward and the Operating Theatre Department were required to complete electronic training modules in each of eight obstetric emergency situations every year. These staff were also required to attend at least one skills and drills session in relation to each of the eight situations every two years. All other midwives and nurses were required to complete either a skills and drills session or electronic training in each of the eight obstetric emergency situations every two years. Practical multidisciplinary training for obstetric emergencies was provided for relevant clinical staff at the hospital twice a year. Obstetric emergencies were practiced through live skills and drills (simulation training) which were held weekly in the Labour Ward for clinical staff.

Medical and midwifery staff in the Labour Ward were required to undertake electronic online cardiotocography training within three months of commencement of employment and thereafter at yearly intervals. These staff were also required to attend a fetal monitoring education programme every two years and a morning case review session either once a year or every two years depending on work location. Learning in relation to cardiotocography interpretation was further supported by weekly caesarean section meetings in the Labour Ward and daily Labour Ward Huddles where cardiotocography interpretation was discussed. The lead obstetrician went through a different aspect of cardiotocography training with the team of doctors and midwives each week.
The hospital had collaborated with a UK maternity hospital to facilitate formal multidisciplinary cardiotocography interpretation courses which were held twice a year in Limerick. This course was also offered free of charge to clinical staff working at the hospital and to clinical staff from other Irish maternity units and hospitals.

All staff were required to undertake training in relation to the Irish Maternity Early Warning System and sepsis once a year and basic life support every two years. All staff working in the Labour Ward and the Operating Theatre Department were required to attend a massive haemorrhage real time training drill at least once a year. Midwives were also required to rotate in clinical areas to maintain competence and skills.

Non-consultant hospital doctors in obstetrics were required to undertake formal training in fetal ultrasonography before independently performing fetal ultrasounds. Non-consultant hospital doctors in paediatrics were required to undertake training in neonatal resuscitation prior to commencing work at the hospital and thereafter every two years. Non-consultant hospital doctors in obstetrics were required to undertake training in basic life support.

**Uptake of mandatory training**

The hospital had a standardised system for maintaining staff training records which reflected each staff member’s specialist training and uptake of mandatory training. Staff uptake of mandatory training was recorded locally by line managers for midwives and nurses and specialist registers for doctors and this was overseen by hospital managers. It was hospital policy to implement a plan of action for staff who had not achieved the expected training uptake standard.

Training records reviewed showed that 100% of midwifery staff and 90% of medical staff had attended fetal monitoring training in the past two years. All doctors, 76% of midwives and 50% of nurses had attended neonatal resuscitation training. Seventy nine percent of doctors, 100% of nurses and 60% of midwives had attended basic life support training. Eighty four percent of doctors had attended practical obstetric emergency management training. Thirty three percent of midwives had attended a practical obstetric emergency management training day in addition to uptake of live drills ranging from 57-81% relation to obstetric emergencies by both midwifery and medical staff. Over 90% of medical and midwifery staff had attended Irish Maternity Early Warning System training. All doctors had attended clinical handover and sepsis training.

**Orientation and training of new staff**

Midwifery clinical skills facilitators were responsible for induction training, ongoing training and updating of new and existing staff midwives and nursing staff. There were 2.5 WTE midwifery clinical skills facilitators assigned to support clinical staff in the
postnatal and antenatal wards, the Labour Ward, the Operating Theatre Department and the Neonatal Unit. The hospital had developed a competency assessment tool for anaesthetic nursing and midwifery roles in the Operating Theatre Department.

Non-consultant hospital doctors new to the hospital were provided with a period of orientation whereby they went on call with a more experienced colleague until they were familiar with on call responsibilities.

Midwifery and nursing staff were provided with clinical and corporate induction when commencing employment at the hospital. Clinical areas had an orientation and induction programme for newly registered midwives, newly employed midwives and nurses and for staff midwives and nurses on internal rotation. Induction training was provided for new non-consultant hospital doctors in January and July each year.

**Other training and education opportunities for staff**

Neonatal resuscitation drills were held frequently in the Neonatal Unit for clinical staff. Inspectors were informed that 10 of 50 (20%) nurses and midwives in the Neonatal Unit were qualified instructors in neonatal resuscitation. Medical staff in anaesthesiology undertook training in relation to advanced cardiorespiratory resuscitation for adults.

Forty three of fifty nurses and midwives (86%) working in the Neonatal Unit had undertaken post-graduate training in neonatal care. Of 20.4 WTE midwifery and nursing staff in Operating Theatre Department, a total of four (20%) staff had either completed or were in the process of completing a postgraduate peri-operative nursing course. This finding should be reviewed by hospital management and measures should be implemented to ensure that nurses working in the Operating Theatre Department are facilitated and supported to undertake postgraduate training in peri-operative nursing. This is in keeping with a recommendation made following a theatre staffing audit performed at the hospital in 2016.

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. Doctors undertaking higher specialist training in obstetrics and gynaecology and anaesthesiology had competency-based assessments for procedural and technical skills. There were regular meetings to provide teaching and learning opportunities for non-consultant hospital doctors in obstetrics, anaesthesiology and neonatology. Medical staff said they received very good support from consultants and that they had no hesitation about contacting a consultant on call to discuss a clinical case or to ask for advice or support.

Multidisciplinary weekly ‘quality lunches’ scheduled at the hospital provided a forum for staff to share learning in relation to quality improvement projects, audit and clinical...
report findings. Regular multidisciplinary meetings were held to discuss clinical issues such as placental abnormalities and caesarean section. Clinical staff were actively encouraged and supported to undertake audit and quality improvement projects.

Twenty four midwifery and nursing staff were supported to undertake postgraduate education in 2017 which included areas such as neonatal intensive care, high dependency care, perinatal mental health, quality and safety, education and research and master’s degrees.

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

<table>
<thead>
<tr>
<th>Table 4 - HIQA’s judgments against the National Standards for Safer Better Maternity Services for Workforce that were monitored during this inspection</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Standard 6.1</strong> Maternity service providers plan, organize and manage their workforce to achieve the service objectives for safe, high-quality maternity care</td>
</tr>
<tr>
<td><strong>Key findings:</strong> Lack of an adequate number of anaesthesiologists and neonatologists to implement designated medical staff rotas for obstetric anaesthesiology and neonatology.</td>
</tr>
<tr>
<td><strong>Judgment:</strong> Substantially compliant</td>
</tr>
<tr>
<td><strong>Standard 6.3</strong> Maternity service providers ensure their workforce has the competencies and training required to deliver safe, high-quality maternity care.</td>
</tr>
<tr>
<td><strong>Key findings:</strong> The hospital did not ensure that all midwifery and medical staff had undertaken mandatory training in adult and neonatal resuscitation and practical obstetric emergency management within the required timeframe.</td>
</tr>
<tr>
<td><strong>Judgment:</strong> Substantially compliant</td>
</tr>
<tr>
<td><strong>Standard 6.4</strong> Maternity service providers support their workforce in delivering safe, high-quality maternity care.</td>
</tr>
<tr>
<td><strong>Judgment:</strong> Compliant</td>
</tr>
</tbody>
</table>
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, University Maternity Hospital Limerick was compliant with nine National Standards and substantially compliant with one National Standard 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

University Maternity Hospital Limerick provided a range of general and specialist maternity services for women with low 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

Assessment and referral

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

- a maternity emergency unit
- an early pregnancy assessment unit
- a perinatal ultrasound service
- maternal fetal medicine high-risk clinics
- low risk antenatal clinics
- a multidisciplinary perinatal mental health service.

All pregnant women attending the hospital were offered a formal dating fetal ultrasound scan in the first trimester of pregnancy and a fetal ultrasound scan to assess fetal growth and wellbeing in the third trimester at 31-32 weeks gestation. National Standards recommend that pregnant women are offered a detailed fetal assessment ultrasound scan at 20–22 weeks’ gestation. Inspectors were informed that approximately one third of booked pregnant women were provided with a detailed fetal assessment ultrasound scan at 20–22 weeks’ gestation. This fetal ultrasound scan was provided to women with risk factors such as family history of congenital fetal anomaly, increased maternal age and previous pregnancy complications.

The hospital had sought approval and funding to appoint two additional WTE ultrasonographers to enable the hospital to provide fetal ultrasounds to all women at 20-22 weeks’ gestation. This finding needs to be reviewed by the maternity services directorate and the hospital needs to determine the resources required to fully implement the National Standard in relation to detailed fetal ultrasound scanning.

Pregnant women who attended a booking appointment at the hospital were referred to a maternal fetal medicine clinic if they had risk factors or underlying medical conditions. Women with conditions including diabetes mellitus and maternal obesity, medical co-morbidities, multiple births and vaginal birth for caesarean section could be referred to a number of consultant-led antenatal clinics.

The hospital was supported by a consultant endocrinologist based at UL Hospitals to provide specialist care to women for women with pre-pregnancy diabetes mellitus and gestational diabetes.
The hospital had an Early Pregnancy Assessment Unit for women with suspected complications in early pregnancy. This unit operated by appointment from 2pm to 5pm from Monday to Friday every week.

**Admission pathways**

There were established pathways for the assessment, management and where necessary, admission of women who attended the hospital with obstetric problems 24 hours a day, seven days a week. Women who presented to the hospital could be assessed and admitted through the Maternity Emergency Unit which was open 24 hours a day. There were also direct admissions from the antenatal clinic for women within criteria. The hospital had an assessment and transfer pathway in the event that a newborn baby was brought to the hospital from home. Parents were advised to attend their general practitioner (GP) or University Hospital Limerick if they had concerns about the health of their newborn baby. If newborn babies were brought in from home to University Maternity Hospital Limerick, they were transferred to University Hospital Limerick following initial assessment and management.

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

### 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.

Inspectors were informed that elective surgical cases for example caesarean sections were sometimes performed outside of core working hours on weekdays in the Operating Theatre Department. Elective surgery was scheduled between 9 to 5pm Monday to Friday. Documentation reviewed indicated that approximately one third of elective operating theatre cases (14 of 41) were performed after 5pm and before 8am over a small sample period of three weeks in November and December 2018. This finding was communicated to the hospital management team at the time of inspection and it was recommended by inspectors that this practice be reviewed. Documentation reviewed showed that similar findings were identified in an audit of theatre staffing carried out at the hospital in 2016. Ideally, elective surgery should be performed during core working hours when there are more staff on site at the hospital.

Similar to other standalone maternity hospitals, the hospital did not have specialist consultant surgeons or specialist medical consultants based onsite at the hospital. However, the hospital had measures in place to access consultant specialists from
University Hospital Limerick which is located approximately 5kms away from University Maternity Hospital Limerick. For example, if the expertise of a general surgeon was required at University Maternity Hospital Limerick, arrangements were in place whereby a surgeon from University Hospital Limerick would attend onsite at the hospital.

When pregnant women presented to University Maternity Hospital Limerick with concerns or clinical conditions that were not pregnancy-related and required review by medical or surgical specialists, they were either transferred or referred to University Hospital Limerick for review as appropriate.

The hospital had arrangements in place to facilitate and support the birth of a baby at University Hospital Limerick if this was necessary in specific clinical situations for the wellbeing of the pregnant woman. For example, women with underlying medical conditions such as cardiac disease and women with placental anomalies who were at greater risk of haemorrhage went to University Hospital Limerick for caesarean section. A team of midwives, obstetricians and neonatal medical and nursing staff from University Maternity Hospital Limerick attended University Hospital Limerick for caesarean births under such circumstances. Inspectors were informed that the number of women transferred to University Hospital Limerick for caesarean section was small and that this was monitored closely at the hospital.

The hospital had clear guidelines and care pathways for women who required high dependency care or intensive care to access these services in University Hospital Limerick. Women who developed complications in University Maternity Hospital Limerick were transferred to critical care facilities in University Hospital Limerick as required.

There was 24-hour access to clinical advice from consultants in the specialties of haematology and microbiology who were based at University Hospital Limerick.

**Obstetric anaesthesiology services**

Obstetric anaesthesiologists are required to assist with the resuscitation and care of women who become critically ill due to pregnancy-related conditions for example haemorrhage and pre-eclampsia.** They are also responsible for the provision of pain relief such as epidural anaesthesia for women in labour and for the provision of anaesthesia for women who require caesarean section and other surgery during birth. The hospital had a dedicated obstetric anaesthesiology 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.6

**Pre-eclampsia is a medical condition where high blood pressure and protein in the urine develop during pregnancy. If left untreated, it may result in seizures at which point it is known as eclampsia.**
Guidelines\textsuperscript{6} 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. Inspectors were informed that the hospital had provided a dedicated consultant-led pre-assessment anaesthetic clinic until 2016. Consultant anaesthesiologists who provided anaesthetic services at University Maternity Hospital Limerick also worked across the five hospitals in UL Hospitals Group. The consultant-led pre anaesthetic clinic could not be continued due to staffing shortages among the cohort of consultant anaesthesiologists in the hospital group. Despite this deficiency, inspectors were informed that in practice, women who were identified antenatally with risk factors for anaesthesia were reviewed by the consultant anaesthesiologist on duty at University Maternity Hospital Limerick.

HIQA was informed that hospital management had submitted a business case to UL Hospitals Group to increase anaesthesiology consultant sessions at the hospital and for funding for a clinical nurse or midwife manager position with a special interest in anaesthesia. These posts had yet to be approved at the hospital.

**Critical care**

As a standalone maternity hospital, University Maternity Hospital Limerick did not have a High Dependency Unit (Level 2) or a Level 3\textsuperscript{7} Intensive Care Unit onsite. Women who required additional monitoring or intervention or single organ support, for example women with pre-eclampsia or obstetric haemorrhage were monitored in a special observation bay in the Labour Ward at the hospital. These women were reviewed jointly by a consultant obstetrician and a consultant anaesthesiologist every day or more frequently as required.

Critically ill pregnant and postnatal women who required intensive or high dependency care were transferred to University Hospital Limerick. The hospital had formal arrangements in place for the timely transfer of women to University Hospital Limerick when required.

**Neonatal care**

University Maternity Hospital had a level 2 regional neonatal unit which provided high dependency and intensive neonatal care for premature infants born at greater than 23 weeks gestation or greater than 500 grams in weight and for sick term infants.

\textsuperscript{7} 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.
Newborns that required therapeutic cooling‡‡ for neonatal encephalopathy had passive cooling commenced at the hospital and were then transferred to a tertiary maternity hospital in line with the HSE’s model of care for neonatal services in Ireland.⁸ Urgent transfers of newborns requiring neonatal intensive care were organised through the National Neonatal Transport Programme.⁹ The Neonatal Unit at the hospital again provided care for these babies when they were transferred back from the specialist hospital for ongoing care.

Medical care for newborns was provided by consultant neonatologists who operated a designated neonatology rota at the hospital.

**Perinatal mental healthcare**

UL Hospitals Group and HSE Mid-West Community Health Care had recently established the first Specialist Perinatal Mental Health Service in Ireland outside of Dublin, in line with the National Maternity Strategy⁹ and the new national model of care for perinatal mental health which was launched in 2017.¹⁰

The hospital group appointed a consultant psychiatrist who specialised in perinatal mental health in June 2018. This consultant joined a multidisciplinary team that included a consultant obstetrician, a clinical midwife manager 2 perinatal mental health, a clinical nurse specialist, a social worker and a clinical psychologist to provide support to women with moderate to severe mental health concerns during and after birth. This service is a welcome development. University Maternity Hospital Limerick hosted an annual perinatal mental health conference in 2017 and most recently in December 2018.

**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 using either an electronic pager number or by telephoning the hospital emergency number. Pagers carried by staff assigned to emergency response teams were tested daily by the hospital switchboard team.

‡‡ 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 (HIE). WBNC is only conducted in the four large tertiary maternity hospitals in Dublin and Cork.

§§ The National Neonatal Transport Programme is a retrieval service for the stabilisation and transportation of premature and sick neonates up to the age of six weeks corrected gestational age, who require transfer for specialist care within Ireland and abroad. The service operates 24 hours a day seven days a week.
There was also a system in place to contact neonatal nursing staff if they were urgently required to attend an emergency in the Labour Ward or the Operating Theatre Department.

Inspectors were informed that in the infrequent event that a baby in the postnatal ward required resuscitation, it was hospital policy for staff to rapidly carry the baby to the Neonatal Unit for emergency medical attention. This practice was highlighted to hospital management as a potential safety concern during the inspection. It is recommended that this practice is reviewed and risk assessed.

**Multidisciplinary handover**

There were formal arrangements in place for multidisciplinary clinical handover in each of the inpatient clinical areas inspected. Medical clinical handover took place twice a day when the on-call obstetric team handed over to the obstetric team on duty in the morning and this was repeated in the evening to hand over to the on-call team on duty. There was frequent team discussion around care planning during the day about existing and new admissions at both clinical handover and consultant-led rounds in the Labour Ward. Each Friday medical staff also used a template developed at the hospital to document relevant information and care instructions in the healthcare records of women with identified risks for the attention of weekend on-call team and midwifery staff. Clinical staff used the Identity-Situation-Background-Assessment-Recommendation communication format to communicate information about patients in line with national guidelines.\(^\text{11}\)

Twice daily 'safety huddle' meetings were held to share and communicate relevant clinical information about existing and new admissions, women with higher risk of developing complications and the operating theatre schedule. These meetings were held seven days a week. The morning meeting was attended by midwife managers, the consultant obstetrician on call in addition to the consultant obstetrician, consultant neonatologist and non-consultant hospital doctors coming on duty. The afternoon meeting was attended by the full multidisciplinary team and midwife and nurse managers from all wards at the hospital.

There were a number of clinical scenarios where relevant obstetric, anaesthesiology or paediatric or neonatology consultants were routinely notified so that they could be in attendance at birth, for example in cases of massive obstetric haemorrhage, complex delivery, anaesthetic risks, medical comorbidities, difficult caesarean section, placental abnormalities or anticipated complex neonatal issues. It was practice for the most

\(^{***}\) 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.
senior non-consultant hospital doctors††† on call to discuss complex cases and transfers with the relevant consultant 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. The anaesthesiologist on duty was informed when women with known anaesthetic risks were admitted. Staff in the Operating Theatre and Labour Ward also met every weekday morning to discuss the day’s operating theatre schedule.

**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 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.

A multidisciplinary meeting was held weekly in the Labour Ward where potential risks and relevant information about high risk women and babies was shared among the multidisciplinary team. Management hosted a weekly ‘Quality Lunch’ to communicate information to staff about the work of the hospital’s quality improvement programme. A multidisciplinary obstetric and midwifery forum was established at the hospital for open discussion about identified clinical practice issues and to enhance communication among clinical staff working at the hospital.

**3.1.4 Written policies, procedures and guidelines**

The hospital had a suite of policies, procedures and guidelines in relation to obstetric emergencies for example, resuscitation of the pregnant woman and umbilical cord prolapse. However, the majority of policies, procedures and guidelines reviewed by inspectors were due for review at the time of inspection. These documents were stored electronically in the hospital’s document management system which could be accessed by staff in clinical areas. Inspectors were informed that a hospital-group wide initiative was planned to identify documents that needed to be updated and those that were obsolete.

††† Non-consultant hospital doctor 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
The hospital also had policies based on National Clinical Effectiveness Committee guidelines in relation to sepsis, clinical handover in maternity services and the Irish Maternity Early Warning System. A national maternal sepsis audit carried out by the HSE at the hospital in 2017 showed good implementation of treatment guidelines for sepsis. A national clinical handover audit at the hospital in 2016 showed that the hospital had worked to embed the Identity-Situation-Background-Assessment-Recommendation communication format as the clinical handover tool and had developed a video to aid staff training. This video was available on ‘HSEland’, the HSE’s electronic learning platform. Audit of national sepsis guideline implementation was repeated at the hospital in 2018. An audit around Irish Maternity Early Warning System escalation was performed at the hospital in 2016, any areas of non-compliance with hospital policy were followed up with a quality improvement plan.

A safe surgery checklist was completed for emergency and elective surgical procedures in obstetric operating theatres in line with best practice recommendations. The hospital had a standardised procedure for the estimation and measurement of maternal blood loss.

### 3.1.5 Maternity service infrastructure and facilities and resources

The hospital was originally built in 1960 and it was designed at that time to facilitate 3000 births per year. Some additions had been made in the past 10 years to accommodate the Maternity Emergency Unit and one new Operating Theatre.

The infrastructure and design of the hospital was outdated and did not meet recommended specifications for maternity services. Space and infrastructure for the implementation of new services and technologies was limited by the size and age of the building. The hospital did not have a blood bank or a laboratory onsite. As stated, the ultimate aim was for the maternity service to be co-located with University Hospital Limerick but there was no agreed timeframe for this move. This development needs to be progressed.

Overall, inspectors found that the hospital’s physical environment was not in compliance with standard 2.7 of the National Standards for Safer Better Maternity Services.

#### Assessment areas

The Maternity Emergency Unit was located beside the main reception desk on the ground floor of the hospital and was clearly signposted. This unit comprised six trolley

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Guidelines produced by the national clinical effectiveness committee have been formally mandated by the Minister of Health.

A surgical safety checklist is a patient safety communication tool that is used by operating theatre nurses, surgeons, anaesthetists 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.
spaces within an open plan area. The unit also included one ultrasound scanning room which was also used by the Early Pregnancy Assessment Unit. Staff explained to inspectors that the location of the Early Pregnancy Assessment Unit within the Maternity Emergency Unit was not an ideal location for the care of women who had experienced a pregnancy loss. Space limitation at the hospital made it difficult to relocate or expand clinical services.

**Antenatal Ward**

There was one antenatal ward at the hospital which comprised 29 beds configured as multi-occupancy and single rooms.

**Postnatal wards**

There were two postnatal wards at the hospital each comprising 27 beds configured as four four-bedded wards, two three-bedded wards and five single rooms. In each of the postnatal wards one four bedded room was located just outside the ward entrance doors. This configuration was less than an ideal from a staff workflow perspective. Overall space between beds in multi-occupancy rooms was limited for the accommodation of both mothers and their babies.

**The Labour Ward**

The Labour Ward had seven delivery rooms and one special observation bay that was equipped for women who required close monitoring and observation during pregnancy or immediately after birth.

One of the seven delivery rooms had been recently renovated to include a birthing pool to facilitate women with low risk pregnancies to use immersion in water for labour. This room had an en-suite toilet and shower facilities.

The remaining six single delivery rooms did not have ensuite toilet or shower facilities. There was very little storage space in the Labour Ward which meant that equipment and supplies were stored in corridors.

**Operating theatres for obstetric surgery**

There were two dedicated operating theatres for obstetric cases within the Operating Theatre Department which was located on the same floor as and adjacent to the Labour Ward. Access to the operating theatre was through the Labour Ward and access to staff on-call accommodation was through the Operating Theatre Department which was less than ideal.

**Neonatal unit**

The Neonatal Unit was a self-contained unit staffed for 19 cots, which comprised four intensive care cots, five high dependency cots and 10 special care baby cots. There
were isolation facilities for four cots in the unit. Inspectors observed that there was inadequate storage space for equipment and that space between cots was limited. Inspectors were informed that the unit operated at 100% capacity or over and that during busy periods accommodated up to 27 babies. There were 20 babies in the unit on the first day of inspection. There was insufficient space in the unit to meet increased service demands. Neonatal units should be designed to meet service requirements in line with relevant international guidelines for infrastructure and design of neonatal care facilities.16

In order to deal with periods of increased demand for cots, babies who were stable could be transferred to the Paediatric Unit at University Hospital Limerick but this option was available during summer months only. If neonatal cots were not available at the hospital babies were transferred in-utero to a maternity hospital in Cork or Dublin.

**Laboratory services**

There was no laboratory onsite at the hospital to process blood samples or to provide blood products for women who required them. University Maternity Hospital Limerick sent all samples that required laboratory testing to the pathology laboratories at University Hospital Limerick.

The lack of laboratory services and a blood bank onsite was identified as a risk to patient safety and was documented on the hospital risk register and had been escalated as a risk to the Chief Executive Officer of the hospital group. The hospital was reliant on haematology laboratory services based at University Hospital Limerick. The following controls had been put in place to mitigate this risk at University Maternity Hospital Limerick:

- All women in labour had a blood sample saved for blood group and hold **** on admission to the hospital. This was to ensure that if a woman needed blood or blood products in an emergency, the haematology laboratory at University Hospital Limerick could process the sample urgently.
- The hospital maintained a supply of four units of Type O negative blood on site for emergency use as required.
- The hospital maintained a supply of fibrinogen†††† onsite for the management of obstetric haemorrhage.
- There was a direct emergency phone line between University Maternity Hospital Limerick and the haematology laboratory in University Hospital Limerick.
- Twice yearly live practice drills were carried out to test the hospital’s major obstetric haemorrhage guidelines and processes. These drills were

**** Blood test required for the determination of blood group and antibody status and required for blood and component provision by hospital laboratory staff at short notice within a defined timeframe.
†††† Fibrinogen is a protein, a coagulation factor (factor I) that is essential for blood clot formation.
multidisciplinary and included obstetric, anaesthesiology, midwifery, nursing and portering staff at the hospital in addition to laboratory technical staff and haematology medical staff at University Hospital Limerick.

- Women with placental anomalies who were at higher risk of bleeding were transferred to University Hospital Limerick for elective caesarean section.
- All cases of major obstetric haemorrhage were reviewed at the Serious Incident Management Team meetings held at the hospital so that any identified opportunities for improvement could be addressed.

In addition, the hospital had purchased an automated blood bank system that could store and dispense units of blood on site if required. The timeline for implementation of this system was early 2019. Hospital management informed inspectors that these processes were to ensure that blood and blood products were rapidly accessible when required in an emergency situation for women and infants.

Inspectors were informed that as there were no laboratory services on site, point of care testing where possible was utilised. The hospital had requested onsite point of care testing for blood coagulation tests to improve the management of haemorrhage and pre-eclampsia. This had yet to be approved at hospital group level and needs to be addressed.

Staff who spoke with inspectors confirmed that 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 clinical staff from the laboratory at University Hospital Limerick as required.

### 3.1.6 Maternity service equipment and supplies

The Labour Ward had emergency resuscitation equipment for women and newborns. Checklists showed that emergency equipment was checked regularly in the Labour Ward. There was less consistency in the Neonatal Unit where records indicated that the emergency resuscitation trolley was last checked in October 2018. There was only one automated external defibrillator allocated for both the Operating Theatre Department and the Labour Ward. In the postnatal wards inspected the emergency resuscitation trolley was stored in a room on the ward rather than on the ward corridor. 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.

Emergency supplies and medications were readily available in the clinical areas inspected to manage obstetric emergencies such as maternal haemorrhage and pre-
eclampsia. Cardiotocography\textsuperscript{+++} machines for fetal monitoring viewed by inspectors were labelled to show that they had been serviced.

Individual bed spaces in the postnatal ward inspected did not have a piped oxygen supply. Portable oxygen tanks and a portable suction unit were available if required. Trolley spaces in the Maternity Emergency Unit were fitted with piped oxygen but not wall suction equipment, again a portable suction unit was available if required. Guidelines for maternity care facilities recommend that an oxygen supply should be available per bed space in multi-room in-patient accommodation.\textsuperscript{15}

Inspectors observed that the postnatal ward was not equipped with a neonatal resuscitaire. As described earlier, it was practice at the hospital to carry a baby to the neonatal unit if emergency resuscitation was required. Review of this practice is recommended.

The hospital had also sought approval for funding to purchase ultrasound equipment to facilitate central venous access device insertion. This funding was still awaiting approval at the time of inspection. This needs to be addressed so that the required equipment is available to staff to facilitate ultrasound-guided central venous access device insertion.

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

<table>
<thead>
<tr>
<th>Standard 2.1</th>
<th>Maternity care reflects best available evidence of what is known to achieve safe, high-quality outcomes for women and their babies.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Judgment:</strong></td>
<td>Compliant</td>
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</table>

<table>
<thead>
<tr>
<th>Standard 2.2</th>
<th>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.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Key findings:</strong></td>
<td>Fetal anomaly scans at 20-22 weeks gestation were not offered to all women. Lack of a dedicated anaesthetic pre-assessment clinic.</td>
</tr>
<tr>
<td><strong>Judgment:</strong></td>
<td>Substantially compliant</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Standard 2.3</th>
<th>Women and their babies receive integrated care which is coordinated effectively within and between maternity and other services.</th>
</tr>
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<tbody>
<tr>
<td><strong>Judgment:</strong></td>
<td>Compliant</td>
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<table>
<thead>
<tr>
<th>Standard 2.4</th>
<th>An identified lead healthcare professional has overall clinical responsibility for the care of each woman and that of her baby.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Judgment:</strong></td>
<td>Compliant</td>
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<table>
<thead>
<tr>
<th>Standard 2.5</th>
<th>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.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Judgment:</strong></td>
<td>Compliant</td>
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<table>
<thead>
<tr>
<th>Standard 2.7</th>
<th>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.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Key findings:</strong></td>
<td>Outdated hospital infrastructure and lack of a blood bank and laboratory onsite.</td>
</tr>
<tr>
<td><strong>Judgment:</strong></td>
<td>Non-compliant</td>
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<table>
<thead>
<tr>
<th>Standard 2.8</th>
<th>The safety and quality of maternity care is systematically monitored, evaluated and continuously improved.</th>
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<tr>
<td><strong>Judgment:</strong></td>
<td>Compliant.</td>
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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, the inspection sought to determine how risks to the maternity service were identified and managed, how patient safety incidents were reported and if learning was shared across the service. The inspection also looked at how the hospital monitored, evaluated and responded to information and data relating to outcomes for women and infants and feedback from service users and staff.

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

**Inspection findings**

3.2.1 Maternity service risk management

The hospital had systems in place to identify and manage risk. Risks in relation to the maternity service were recorded in the hospital risk register which included agreed control measures. The risk register was reviewed and updated every six weeks at a directorate level University Maternity Hospital Limerick Risk Register Committee. Risks that could not be managed at hospital level were escalated to the UL Hospitals Group corporate risk register. Risks recorded in the risk register included:

- medical, midwifery and nursing staffing deficiencies
- lack of a clinical pharmacist
- lack of ultrasound scanning to screen neonates for developmental dysplasia of hip
- lack of a blood bank onsite
- lack of an anaesthetic pre-assessment clinic
- overcrowding in the Neonatal Unit.

Medical, midwifery and nursing staffing deficiencies have been discussed in this report. Documentation reviewed showed that the appointment of a clinical pharmacist at the hospital was at an advanced stage. Hospital management was exploring various options to implement ultrasound scanning for developmental dysplasia of hip. Neonatology medical and nursing staff attended clinical handover in the Labour Ward so that activity levels in the Neonatal Unit could be anticipated and managed. Neonatal Unit staff met more frequently during the day to discuss and manage activity levels when demands for cots in the Neonatal Unit increased.

The hospital had engaged with the HSE in relation to hospital infrastructure with the ultimate aim of co-locating the maternity service with the University Hospital Limerick. There was no agreed funding or timeframe for completion of this work.
Clinical incident reporting

Inspectors found that there was an established practice of incident reporting at the hospital based on the number of clinical incidents reported each month. Staff who spoke with inspectors were aware of their responsibility to report clinical incidents. Clinical incidents were reviewed at Directorate Management Team meetings which were held every two weeks.

Clinical incidents were tracked and trended and where improvements were required, plans were put in place to address these. Patient safety incidents were reported onto the National Incident Management System in line with national guidelines. The management of serious incidents and serious reportable events was overseen by the Serious Incident Management Team who met every two weeks.

Learning from serious incidents was routinely shared with relevant clinical staff through written learning notices which were circulated to clinical staff from the Serious Incident Management Team following clinical incident occurrence. These learning notices were in a one-page format with information clearly presented under the headings of identify, situation, assessment and recommendations. Inspectors saw learning notices that had been shared with clinical staff in relation to the following:

- admission and discharge policies
- documentation and record keeping
- classification of caesarean section
- compliance with hospital policies
- intrapartum fetal monitoring.

This is good practice which could be adopted by other maternity services.

Feedback from women

There was a formalised process to monitor compliments and respond to complaints from women using the maternity service. The hospital invited women using the maternity service to provide feedback about their experience. Staff at the hospital had

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5555 The State Claims Agency (SCA) National Incident Management System (NIMS) is a risk management system that enables public hospitals to report incidents in accordance with their statutory reporting obligations.

6666 Serious Reportable Events are a defined subset of incidents which are either serious or that should not occur if the available preventative measures have been effectively implemented by healthcare providers. The HSE requires that Serious Reportable Events are mandatorily reportable by services to the Senior Accountable Officer of the service.
also completed a survey to identify women’s opinions on their experience of cardiotocography monitoring and staff communication during labour.

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.\textsuperscript{18} This information also allows individual maternity units and maternity hospitals to benchmark performance against national rates over time. The hospital published monthly maternity patient safety statements in line with national HSE reporting requirements.

At hospital level, performance measurements and trends were overseen at Maternal and Child Health Directorate Team meetings and at Directorate Governance Group Meetings. Performance data was also discussed at audit committee and quality improvement meetings. Multiple sources of information such as findings from national quality midwifery metrics, clinical incident reviews, risk assessments, complaints, and audit were used by management at the hospital to identify potential risks to patient safety and opportunities for improvement. University Maternity Hospital Limerick management completed a local assessment against the National Standards in October 2018 and had developed quality improvement plans to progress implementation of National Standards where indicated.

Hospital management was aware that caesarean section rates at the hospital were higher than the national rate in 2017. The Irish Maternity Indicator System annual report for 2017 notes that there was considerable variation in caesarean section rates across the 19 maternity units. In view of such variation, clinical staff are advised to use the Robson Classification for assessing, monitoring and comparing caesarean section rates.\textsuperscript{18,19} Clinical staff at the hospital analysed and trended their caesarean section data monthly and reviewed indications for caesarean section and related decision making which is good practice. In looking at ways to address this upward trend, women who were suitable for vaginal birth after caesarean section were referred antenatally to a maternal fetal medicine high risk clinic at the hospital. In addition, the hospital planned to change local practice in relation to induction of labour in January 2019 with a view to reducing the caesarean section rate for women who required induction of labour.

Multidisciplinary perinatal mortality and morbidity meetings were held monthly at the hospital. Any untoward trends were reviewed and recommendations for practice, if indicated, were addressed at directorate level. Maternal morbidity meetings were also held at the hospital.
Maternity service data was presented each month at hospital group management meetings in a performance pack which included maternity patient safety statements, midwifery quality care metrics, women’s experience feedback, progress with maternal and child health priorities for 2018, audit, clinical incident and complaint trends, finance, absenteeism and risk registers.

**Clinical audit**

University Maternity Hospital Limerick had a comprehensive clinical audit programme with planned audits defined in the hospital’s annual clinical audit programme by the directorate management team. Audits performed in 2018 were aligned to national, hospital group, directorate and local level priorities. In 2018 the hospitals’ clinical audit programme focused on the following topics:

- venous thromboembolism
- group B Streptococcus infection
- perinatal mental health
- cardiotocography interpretation
- documentation
- clinical handover
- Irish maternity indicator data
- midwifery metrics
- induction and caesarean section
- medication prescribing and
- sepsis.

There was a clear system in place to ensure that all of the audits conducted in the maternity service were consistently followed up with clear action plans to address any opportunities for improvement that had been identified. Audit results were fed back to staff in clinical areas and discussed at clinical midwifery senior management meetings and at audit committee meetings.

**Annual clinical report**

University Maternity Hospital Limerick produced an annual clinical report that detailed service priorities, maternal and neonatal outcomes and service activity. The report also included information in relation to achievements in midwifery and nursing.

Senior managers and clinical staff attended an annual meeting with colleagues from other maternity units in Ireland. At the Annual Clinical Reports Meeting, organised by the Institute of Obstetricians and Gynaecologists, maternity service annual clinical reports from participating hospitals are assessed by an external assessor and peer-reviewed to enable benchmarking of performance against similar sized units. This is good practice.
3.2.3 Quality improvement initiatives developed by staff at the hospital

Inspectors found that the hospital had implemented a structured quality improvement programme in line with National Standards. The lead consultant obstetrician at the hospital was also the Chairperson of the UL Hospital Group Quality Improvement Committee. UL Hospitals Group hosted its inaugural Clinical Audit and Quality Improvement Conference in June 2018.

The maternity hospital had completed multiple quality improvement projects aimed at improving the quality and safety of maternity care at the hospital. Quality improvement projects were aligned to opportunities for improvement identified through monitoring and evaluation of the service. Examples of quality improvement projects carried out by staff relevant to this monitoring programme included the following:

- an individualised care plan for high-risk antenatal patients admitted for long inpatient stay
- a perinatal mental health referral pathway
- a care pathway for women with very high body mass index
- a care plan for high risk antenatal patients admitted with placenta praevia
- an Early Pregnancy Assessment Unit pathway
- hypoxic ischaemic encephalopathy and human factors
- emergency medication boxes for obstetric emergencies in clinical areas
- gentle birth, a women-centred approach to caesarean section
- baby falls prevention
- a new postnatal discharge letter using the Identity-Situation-Background-Assessment-Recommendation communication tool
- risk information and consent
- communication (Clinical Handover) in Maternity Services
- improving the functioning of the multidisciplinary safety communication huddle
- introduction of the Identity-Situation-Background-Assessment-Recommendation communication tool including an educational video
- audit process
- adherence to fetal fibronectin guideline
- caring behaviours assurance systems.

A workshop was facilitated by the hospital in 2018 that included participation from maternity service users and staff which was aimed at improving service user experience and multi-professional working across different groups.

The Quality Improvement Oversight Committee at the hospital oversaw the implementation of quality improvements. The Quality Improvement Oversight Committee reported to the Directorate Governance Team which reported to the UL Hospitals Group Quality Improvement Committee. Weekly quality improvement lunches
were held at the hospital at which staff presented their quality improvement initiatives to colleagues.

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**

<table>
<thead>
<tr>
<th>Standard 3.2</th>
<th>Maternity service providers protect women and their babies from the risk of avoidable harm through the appropriate design and delivery of maternity services.</th>
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<tr>
<th>Standard 3.3</th>
<th>Maternity service providers monitor and learn from information relevant to providing safe services and actively promote learning, both locally and nationally.</th>
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<tr>
<th>Standard 3.4</th>
<th>Maternity service providers implement, review and publicly report on a structured quality improvement programme.</th>
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<tr>
<th>Standard 3.5</th>
<th>Maternity service providers effectively identify, manage, respond to and report on patient safety incidents.</th>
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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 University Maternity Hospital Limerick were compliant with the majority of the National Standards in relation to capacity and capability and safety and quality that were focused on during this inspection.

University Maternity Hospital Limerick had a clearly defined and effective leadership, governance and management structure at the hospital and within the UL Hospitals Group directorate structure to ensure the safety and quality of maternity services. Hospital management were actively working to optimise maternal care and to progress implementation of the National Standards.

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.

Hospital management had a strategic objective to achieve good outcomes for babies and to further this had worked effectively to educate clinical staff in relation to cardiotocography interpretation. Training by way of regular cardiotocography master classes was also offered free of charge to clinical staff from other maternity hospitals.

There was a strong focus on quality improvement at the hospital and through a structured programme, clinical staff used quality improvement methodology to enhance patient safety and experience whenever opportunities for improvement were identified. There were good supports for staff to develop and enhance clinical skills.

The hospital had established the first specialist perinatal mental health service outside of Dublin which is a very significant and positive development.

The outdated design and size of the hospital created significant challenges in improving and expanding maternity services. This was particularly notable in relation to the absence of a blood bank and laboratory services at the hospital. Although strategies were put in place to manage these risks at the hospital, hospital management had identified the need to progress the co-location of the maternity service at the University Hospital Limerick site.

The hospital needs to be supported at hospital group and national level to progress the recruitment of additional midwives and nurses. In addition, the anaesthesiology service needs to be sufficiently resourced to reinstate the high risk obstetric anaesthetic clinic and the fetal ultrasound service needs to be resourced to provide universal anomaly scans to pregnant women at 20-22 weeks gestation.
5.0 References


