Health Information and Quality Authority

An tÚdarás Um Fhaisnéis agus Cáilíocht Sláinte

Report of the unannounced inspection of maternity services at South Tipperary General Hospital

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

Dates of inspection: 27 February 2019 and 28 February 2019

Safer Better Care

About the Health Information and Quality Authority (HIQA)

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

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

- **Setting standards for health and social care services** — Developing person-centred standards and guidance, based on evidence and international best practice, for health and social care services in Ireland.
- **Regulating social care services** — The Chief Inspector within HIQA is responsible for registering and inspecting residential services for older people and people with a disability, and children's special care units.
- **Regulating health services —** Regulating medical exposure to ionising radiation.
- **Monitoring services** — Monitoring the safety and quality of health services and children's social services, and investigating as necessary serious concerns about the health and welfare of people who use these services.
- **Health technology assessment** — Evaluating the clinical and cost-effectiveness of health programmes, policies, medicines, medical equipment, diagnostic and surgical techniques, health promotion and protection activities, and providing advice to enable the best use of resources and the best outcomes for people who use our health service.
- **Health information** — Advising on the efficient and secure collection and sharing of health information, setting standards, evaluating information resources and publishing information on the delivery and performance of Ireland's health and social care services.
- **National Care Experience Programme** — Carrying out national service-user experience surveys across a range of health services, in conjunction with the Department of Health and the HSE.

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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 purpose of writing this report, compliance with the National Standards is reported in line with the themes of the National Standards. The lines of enquiry for this monitoring programme are listed in Figure 1.

Figure 1 – Monitoring programme lines of enquiry

LOE 1:

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

LOE 2:

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

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

LOE 3:

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

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

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

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

1.1 Information about this inspection

South Tipperary General Hospital is a statutory acute hospital which is owned and managed by the Health Service Executive. The hospital is part of the South/South West Hospital Group.[†] The Maternity Unit is co-located with the general hospital and has the lowest number of births in Ireland. There were 969 births at the hospital in 2018.

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

Table 1: Inspection details

Dates	Times of inspection	Inspectors
27 February 2019	10:50hrs to 18:15hrs	Siobhan Bourke Mary Dunnion Denise Lawler Dolores Dempsey Ryan
28 February 2019	07.30:hrs to 14:15hrs	

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

- representatives of the hospital's Senior Management Team and
- the hospital's lead consultants in each of the clinical specialties of obstetrics, anaesthesiology and paediatrics.

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

[†] The South Southwest Hospital Group is comprised of Cork University. Hospital, University Hospital Waterford, Mercy University Hospital, Cork University Maternity Hospital, South Tipperary General Hospital, University Hospital Kerry, South Infirmary Victoria University Hospital, Bantry General Hospital, Mallow General Hospital and Lourdes Orthopaedic Hospital.

[‡] All maternity hospitals and maternity units were asked to complete a self-assessment tool designed by HIQA for this monitoring programme

- Assessment areas where pregnant and postnatal women who presented to the hospital with pregnancy-related concerns were reviewed. These included the Emergency Department in the main hospital and the Early Pregnancy Assessment Unit/ Gynaecology Ward Triage Room.
- The Labour Ward where women were cared for during labour and childbirth.
- The Maternity Ward where women were cared for before and after childbirth.
- The Intensive Care Unit where women who required additional monitoring and support were cared for.
- An operating theatre in the main Operating Theatre Department where obstetric surgery for example caesarean section was performed.
- The Special Care Baby Unit where babies requiring additional monitoring and support were cared for.

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

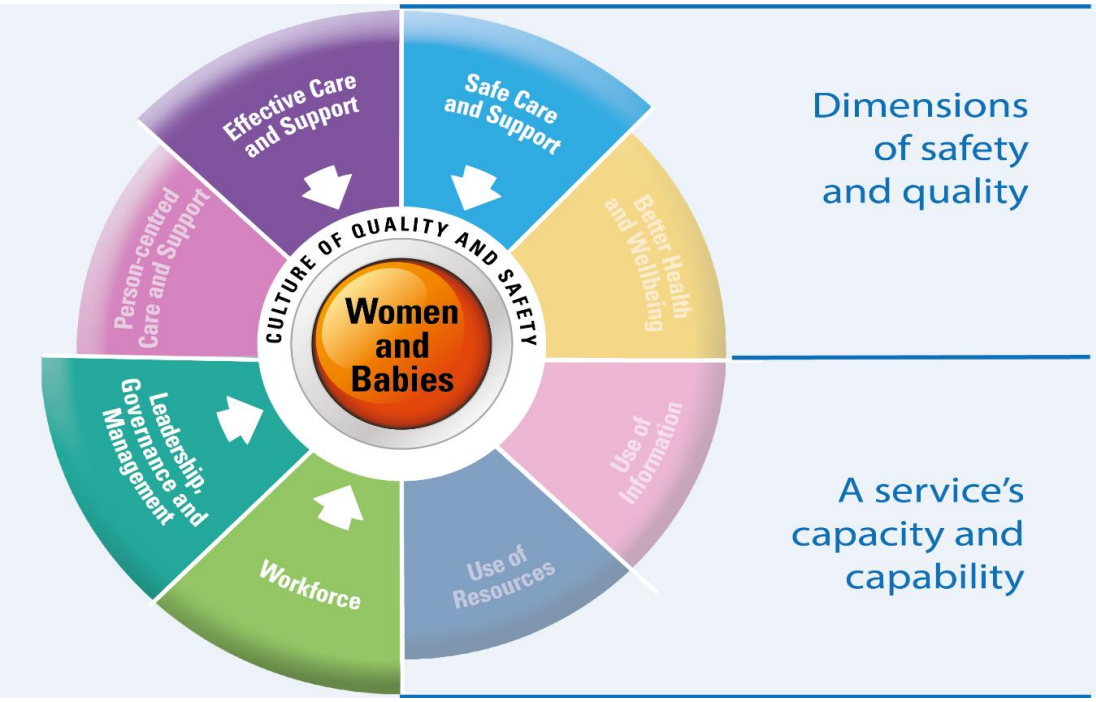
HIQA would like to acknowledge the cooperation of the hospital management team and all staff who facilitated and contributed to this unannounced inspection.

1.2 How inspection findings are presented

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

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

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



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

These categories included the following:

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

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

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

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

2.0 Capacity and Capability

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

This section describes arrangements for the leadership, governance and management of the maternity service at this hospital, and HIQA's evaluation of how effective these were in ensuring that a high quality safe service was being provided. It will also describe progress made in the establishment of a maternity network from the perspective of this hospital. This section also describes the way the hospital was resourced with a multidisciplinary workforce that was trained and available to deal with obstetric emergencies 24-hours a day.

During this inspection, inspectors looked at 10 National Standards in relation to leadership, governance and management and workforce. Of these, South Tipperary General Hospital was compliant with six National Standards, substantially compliant with three National Standards and partially compliant with one National Standard.

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

2.1 Leadership, Governance and Management

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

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

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

Inspection findings

2.1.1 Maternity service leadership, governance and management

Maternity network

At the time of inspection, HIQA found that the maternity service at South Tipperary General Hospital was not part of a formalised maternity network. In making this observation, HIQA acknowledges preparatory efforts advanced by the South/South West Hospital Group in working to progress a maternity network to incorporate maternity services within the group under one governance structure. In February 2017 the South/South West Hospital Group had established a maternity services directorate under the leadership of a clinical director for maternity services in contemplation of the formation of a formal maternity network. In the interim of the transition to a formalised maternity network, operational responsibility and accountability for the maternity service at South Tipperary General Hospital rested with the General Manager of the hospital.

Inspectors were informed that significant developments had been put in place to progress with the implementation of a maternity network to provide support to the maternity service at South Tipperary General Hospital.

The South/ South West Hospital Group Maternity Services Directorate had implemented a mandatory acceptance policy to facilitate transfer of women and newborn infants who required specialist care to Cork University Maternity Hospital. Clinical staff and managers who spoke with inspectors reported that this was a welcome development at the hospital and improved access to care in a specialised maternity hospital for this group of women and newborn infants.

South Tipperary General Hospital was supported by the South/ South West Hospital Group Maternity Services Directorate to provide a fetal anomaly ultrasound scan service for all pregnant women in line with the National Standards.

The Director of Midwifery attended a daily telephone meeting where activity levels and women and neonates with high risks or complex care needs in all four maternity units in the South/South West Hospital Group were discussed with the Group Clinical Director for Maternity Services.

The Director of Midwifery attended an executive management committee meeting of the South/South West Hospital Group Maternity Directorate every two weeks. The Irish Maternity Indicator System[§] (IMIS) data for the four maternity units were

§ This data is gathered at the hospital each month and reported to the National Clinical Programme For Obstetrics and Gynaecology in line with national HSE reporting requirements

reviewed at these meetings and Maternity Patient Safety Statements** for all four sites were signed off by the South/ South West Hospital Group Clinical Director for maternity services.

The South/ South West Hospital Group Clinical Director for Maternity Services attended South Tipperary General Hospital to provide a clinic every two months for women who experienced recurrent pregnancy loss.

The Neonatal Unit in Cork University Maternity Hospital provided support for training and education to neonatal medical and nursing staff from South Tipperary General Hospital. Policies and guidelines for the management of neonates in the Special Care Baby Unit were shared between Cork University Maternity Hospital and South Tipperary General Hospital.

Inspectors were informed that formal delegation of accountability and governance of the maternity services at South Tipperary General Hospital to the South/ South West Hospital Group Clinical Director for Maternity Services was expected in late 2019.

Following this inspection, the South/South West Hospital Group now needs to actively progress the implementation of a managed maternity network in order to facilitate a single governance framework; recruitment of hospital consultants with joint appointments in the networked hospitals; and rotation of staff between sites to meet training and service requirements as recommended in the National Maternity Strategy.[4]

South Tipperary General Hospital leadership, governance and management

The General Manager at South Tipperary General Hospital had overall managerial responsibility and accountability for the maternity service at the hospital. The Director of Midwifery, who was responsible for the organisation and management of the midwifery service, was a member of the hospital's Executive Management Team in line with the National Standards.

Monthly Executive Management Team meetings were chaired by the General Manager. Membership of this team included the Clinical Director for the hospital, the Clinical Lead for Obstetrics and Gynaecology and the Director of Midwifery in addition to other senior operational managers and clinical leads at the hospital. The Chief Operations Officer for the South/South West Hospital Group was also a member.

** The Maternity Patient Safety Statement contains information on 17 metrics covering a range of clinical activities, major obstetric events, modes of delivery and clinical incidents

The Terms of Reference of the Executive Management Team outlined that the purpose of the team was to have full accountability for leading and directing all aspects of performance at the hospital and ensuring safe effective services are delivered for all service users of the hospital. The General Manager, the Director of Nursing, the Director of Midwifery and the Clinical Director also met every week to discuss the day to day management of the Maternity Unit and the wider hospital.

The General Manager reported to the Chief Executive Officer of the South/South West Hospital Group and attended monthly performance meetings with the South/South West Hospital Group management team. Documentation provided to inspectors indicated that maternal and neonatal outcomes, midwifery metrics, risks in relation to maternity services and maternity staffing deficiencies were presented for discussion at these meetings.

Clinical leads were appointed in each of the specialities of obstetrics, anaesthesiology and paediatrics at the hospital. These clinicians were responsible for overseeing training for non-consultant hospital doctors and representing their respective specialties in relation to service provision at the hospital. The clinical lead for anaesthesiology was also the Clinical Director for the Hospital.

Quality Risk and Patient Safety Governance Group

The hospital had a Quality Risk and Patient Safety Governance group which was chaired by a consultant paediatrician. This group reported to the Executive Management Team at the hospital. Maternity services were represented at this meeting by the Director of Midwifery or a senior midwifery manager in her absence. The Quality Risk and Patient Safety Governance Group meet each month and agenda items included the corporate risk register, medication safety updates, nutrition and hydration committee feedback, infection prevention and control issues and maternity services issues.

Review of the hospital's organisational diagram indicated that there were over thirty committees and working groups at the hospital and the majority of these reported to the Quality Risk and Patient Safety Governance Group. Inspectors were informed that the General Manager, Clinical Director or Director of Nursing were members of many of these committees and groups. Inspectors found this structure to be complex and the same small group of managers were responsible for directing the implementation of quality and safety at local committee level and overseeing the entire process at executive management level. This finding has been previously raised for review by HIQA during previous inspections and is not beneficial to sustainable governance and management of the hospital.[5] In correspondence received following the inspection, HIQA was informed that the South/South West Hospital Group planned for the Executive Medical Director of the hospital group to

undertake a review of the governance structure at the hospital. This review was to be concluded before the end of September 2019.

Obstetrics and Gynaecology Governance meeting

An Obstetrics and Gynaecology Governance Group meeting was held each month at the hospital and was chaired by the Clinical Lead for Obstetrics. Membership of this Group included the hospital's:

- General Manager
- Clinical Director
- Clinical Risk Manager
- Director of Midwifery
- Director of Nursing
- a consultant paediatrician
- and nursing and midwifery managers.

At these meetings monthly IMIS data and Maternity Patient Safety Statements for the hospital were reviewed and signed off by the Clinical Lead for Obstetrics. Midwifery metrics, updates on clinical incidents, complaints and patient feedback and risks relevant to the maternity services were also reviewed.

Safety alerts in relation to medical devices and medicines were communicated to staff at the hospital. The Maternity Unit at the hospital had a statement of purpose that was provided to inspectors. This should be reviewed and developed to include maternity service aims and objectives and a description of the services and model of care available at the hospital. An updated statement of purpose should be made publicly available in line with the National Standards.

Overall, Inspectors found that the hospital had clear accountability arrangements to achieve the delivery of safe care at the hospital. Nonetheless, the governance and management structures at the hospital were found to be over complicated and needs to be reviewed following this inspection.

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

Table 3: HIQA's judgments against the National Standards for Safer Better Maternity Services for leadership, governance and management that were monitored during this inspection

Standard 5.1 Maternity service providers have clear accountability arrangements to achieve the delivery of safe, high-quality maternity care. **Judgment:** Compliant
Standard 5.2 Maternity service providers have formalized governance arrangements for assuring the delivery of safe, high-quality maternity care. **Key findings:** Overcomplicated committee structures at the hospital. Maternity network arrangements not formalised at time of inspection. **Judgment:** Substantially compliant
Standard 5.3 Maternity service providers maintain a publicly available statement of purpose that accurately describes the services provided to women and their babies, including how and where they are provided. **Key findings:** The statement of purpose did not detail the services provided at the hospital in line with the National Standard. **Judgment:** Substantially compliant
Standard 5.4 Maternity service providers set clear objectives and have a clear plan for delivering safe, high-quality maternity services. **Judgment:** Compliant
Standard 5.5 Maternity service providers have effective management arrangements to support and promote the delivery of safe, high-quality maternity services. **Judgment:** Compliant
Standard 5.8 Maternity service providers systematically monitor, identify and act on opportunities to improve the safety and quality of their maternity services. **Judgment:** Compliant
Standard 5.11 Maternity service providers act on standards and alerts, and take into account recommendations and guidance issued by relevant regulatory bodies. **Judgment:** Compliant

2.2 Workforce

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

Inspection findings in relation to workforce are described next.

Inspection findings

2.2.1 Midwifery and nursing staffing

The hospital met the HSE's national benchmark for midwifery staffing in line with the HSE's Midwifery Workforce Planning Project.[6] At the time of inspection, the Maternity Unit including the Special Care Baby Unit had 58 whole time equivalent (WTE) midwifery and nursing positions approved at the hospital. Inspectors were informed that the Maternity Unit, inclusive of the Special Care Baby Unit had 47.7 WTE permanent positions filled, 6.34 permanent vacancies and 5.5 WTE on temporary leave. The hospital offered overtime to their midwifery staff to fill vacant shifts when required. Overseas and national recruitment of midwives and nurses was ongoing at the hospital.

The hospital did not have a designated shift leader for each shift in the labour ward. Inspectors were informed that a senior experienced midwife was however rostered when a shift leader was not available. Inspectors were informed that all women in established labour had one to one support. The hospital should continue their efforts to recruit and retain midwives to ensure the safety of the services provided.

Specialist support staff

The Maternity Unit had recently employed a clinical skills facilitator to support midwives to develop their required skills and competencies. This is in line with National Standards. This position was reported by staff as being a welcome development to provide training and education in the maternity unit.

Fetal ultrasonographers were employed to provide a fetal ultrasound service during core working hours. At the time of the onsite inspection funding had been approved for an additional midwife to commence education and training in fetal ultrasonography in September 2019.

There were sufficient numbers of nursing staff available to staff operating theatres during core working hours. The hospital's Operating Theatre Department was managed by a senior clinical nurse manager and a middle grade clinical nurse manager. It was reported that the Operating Theatre Department had its full complement of nursing staff. Eighty two percent of operating theatre nursing staff had specialist qualifications in perioperative nursing. Three nursing staff were on-call outside of core working hours to manage emergency surgeries including caesarean sections. The hospital had arrangements in place for extra nursing staff to assist in the operating theatre should two coinciding emergencies occur.

2.2.2 Medical staff

Medical staff availability

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

Consultants in the specialties of obstetrics, anaesthesiology and paediatrics were not all employed on permanent contracts. Two consultants employed in the speciality of obstetrics and gynaecology and two consultant anaesthesiologists were not registered as specialists with the Medical Council in Ireland. This information was included on the hospital's risk register and hospital management were working to address this. This was attributed by management to difficulties in recruiting medical staff at the hospital despite regular recruitment campaigns.

Obstetrics

The hospital had approval for four permanent consultant obstetrician and gynaecologists at the hospital. Three of these positions were filled at the time of inspection. One of these four positions was filled on a permanent basis, two on long-term temporary contracts and the fourth position was vacant at the time of inspection. The hospital had interviewed for two consultant obstetrician and Gynaecologists in 2017 and 2018 but was unable to fill these positions. Inspectors were informed that there were plans to re-advertise for three consultant obstetrician and gynaecologists in 2019. These positions were to be joint appointments with Cork University Maternity Hospital and University Hospital Waterford.

At the time of inspection, consultant obstetricians were on-call one in every three nights. HIQA is of the view that this level of consultant obstetrician staffing does not enable a sustainable on-call rota. A consultant obstetrician was rostered to be on-call for the labour ward from Monday to Friday during core working hours. 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 were on-call onsite in the Maternity Unit 24 hours a day.

Anaesthesiology

The hospital had five whole time equivalent consultant anaesthesiologists employed at the hospital. Four of these positions were filled on a permanent basis and one position was filled by a long-term locum consultant anaesthesiologist. The hospital had an on-call rota outside of core working hours for consultant anaesthesiologists whereby consultants were on-call off site usually one in every five nights. These consultant anaesthesiologists were responsible for providing anaesthetic services for the Emergency Department, Intensive Care Unit, general surgery and the Maternity Unit. During core working hours two consultant anaesthesiologists were assigned to the operating theatres while the third consultant anaesthesiologist was on-call for the Maternity Unit and Intensive Care Unit. During core working hours, one registrar in anaesthesiology was assigned to the Intensive Care Unit and to the maternity service. National recommendations issued in 2016 specify that there should be two consultant anaesthesiologists and two non-consultant hospital doctors in anaesthesiology on-call outside of core working hours.[7] In response to this recommendation, the hospital had assigned a second registrar in anaesthesiology to be on-call onsite at the hospital outside core working hours. This ensured that hospital had two registrars in anaesthesiology on-call onsite, where one registrar in anaesthesiology was immediately available for emergency work in the labour ward in line with National Guidelines.[8]

Paediatrics

Neonatal care at the hospital was led by consultant paediatricians. The hospital had five consultant paediatrician positions approved and at the time of the onsite inspection two of these positions were filled on a permanent contract. Two positions were filled on a temporary contract and all four consultant paediatricians were on the specialist register of the Irish Medical Council. The fifth consultant paediatrician position was due to be advertised in 2019. At the time of the onsite inspection, consultant paediatricians at the hospital were on-call off site one in every four nights.

During core working hours and out of hours a paediatric registrar and a paediatric senior house office were available onsite to attend for any neonatal emergencies in the hospital.

Staffing level findings

National Standards recommend that staffing levels are maintained at adequate and nationally accepted levels to meet service need and that workforce planning takes into account annual leave, study leave, maternity leave and sick leave.[1] Inspectors found that there were difficulties associated with the recruitment and retention of consultant obstetricians and gynaecologists, paediatricians and midwives at the hospital. The South/South West Hospital Group should ensure that the hospital is supported to meet these challenges to ensure the safety and quality of the maternity service in line with the National Maternity Strategy.[4]

2.2.3 Training and education of multidisciplinary staff

Mandatory training requirements

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

Mandatory training requirements for obstetric medical staff working in the maternity service included practical obstetric multi-professional training and fetal monitoring every year. Non-consultant hospital doctors in paediatrics were required to undertake training in neonatal resuscitation either prior to commencing employment at the hospital or within the first four weeks of employment. Anaesthesiology medical staff were required to undertake training in advanced critical life support and practical obstetric multi-professional training. Midwifery staff were required to undertake training in electronic fetal monitoring, practical obstetric multi-professional training every year and basic life support and neonatal resuscitation every two years.

The hospital had changed their programme for multidisciplinary team training for the management of obstetric emergencies in 2018. To facilitate this change in practice, a consultant obstetrician, a consultant anaesthesiologist, two obstetric registrars and two midwives had completed a training programme in the United Kingdom. The hospital had provided one course of the new programme in February 2019 and had planned to provide the course four times each year.

Uptake of mandatory training

Training records provided to inspectors in relation to fetal monitoring indicated that 70% of obstetric medical staff and 91% of midwifery staff had undertaken fetal monitoring training in the previous two years. It is essential that hospital management ensures that medical staff are facilitated to meet mandatory training requirements in relation to electronic fetal monitoring in line with the National Standards.

All obstetric medical staff and 76% of midwives had completed multidisciplinary training in the management of obstetric emergencies. Eighty percent of midwives and all nursing staff in the Special Care Baby Unit had completed neonatal resuscitation training. Eight two percent of medical staff were up to date with neonatal resuscitation training.

All obstetric medical staff and 74% of nursing and midwifery staff in the Maternity Unit had completed basic life support in the previous two years.

Clinical governance arrangements at the hospital require improvement to ensure that clinical staff have undertaken mandatory and essential training at the required frequency, appropriate to their scope of practice.

Orientation and training of new staff

Medical, midwifery and nursing staff were provided with induction when commencing employment at the hospital. Discipline specific induction booklets and packs were provided to new staff. The Maternity Unit had an orientation and induction programme for newly registered midwives and newly employed midwives.

Other training and education opportunities for staff

Obstetric emergencies were practised through live skills and drills (simulation training) that were led by the clinical skills facilitator every two weeks. Skills and drills in relation to obstetric emergencies were also held in the obstetric operating theatre.

The hospital held weekly meetings where caesarean sections for the previous week and electronic fetal monitoring (cardiotocography) were reviewed. Attendance records provided to inspectors indicated that these meetings were well attended by operating theatre nursing staff, midwifery staff and obstetric and anaesthesiology medical staff.

Four nurses from the Special Care Baby Unit were facilitated to undertake a postgraduate programme in Neonatal Nursing in Cork University Maternity Hospital in 2018.

Video linkage between Cork University Maternity Hospital and South Tipperary General Hospital each Friday had commenced in January 2019 so that clinical midwifery and medical staff at the hospital could participate in educational sessions and research updates presented in Cork University Maternity Hospital. This initiative was led by the Clinical Director for Maternity Services for the South/South West Hospital Group and was welcomed at the hospital.

The hospital was recognised as a site for undergraduate midwifery training. It was not a recognised site for higher specialist training for doctors in the specialties of obstetrics and gynaecology, anaesthesiology and paediatrics.

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

Table 4: HIQA's judgments against the National Standards for Safer Better Maternity Services for Workforce that were monitored during this inspection
Standard 6.1 Maternity service providers plan, organize and manage their workforce to achieve the service objectives for safe, high-quality maternity care **Key findings:** This inspection identified staffing deficiencies in relation to consultant positions in obstetrics and gynaecology and paediatrics at the hospital. **Judgment:** Partially compliant
Standard 6.3 Maternity service providers ensure their workforce has the competencies and training required to deliver safe, high-quality maternity care. **Key findings:** Not all staff were up to date with mandatory training in the management of obstetric emergencies and electronic fetal monitoring. **Judgment:** Substantially compliant
Standard 6.4 Maternity service providers support their workforce in delivering safe, high-quality maternity care. **Judgment:** Compliant

3.0 Safety and Quality

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

During this inspection, inspectors looked at 11 National Standards in relation to safe and effective care. Of these, South Tipperary General Hospital was compliant with six National Standards, substantially compliant with four National Standards and non-compliant with one National Standard.

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

3.1 Effective Care and Support

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

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

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

Inspection findings

South Tipperary General Hospital provided maternity services for women with low and high risk pregnancies. In line with National Standards, each woman and infant had a named consultant with clinical responsibility for their care.

3.1.1 Assessment, admission and referral of pregnant or postnatal women

Assessment and referral of pregnant women and neonates

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. Pregnant women who were referred for booking by their General Practitioner were allocated to one of three consultant led clinics at the hospital. Two outreach antenatal clinics were also provided in Tipperary town and Thurles where one of the consultant obstetricians, an obstetric registrar and two midwives provided antenatal care on alternate weeks. Inspectors were informed that all pregnant women were seen by one of the consultant obstetricians at their booking visit. At the time of the onsite inspection, the hospital had recently introduced a pathway where women had their first trimester fetal ultrasound scan and their booking visit with a midwife and consultant obstetrician on the same day.

Since 2018, a formal dating fetal ultrasound and a detailed 20-22 week fetal assessment ultrasound scan service were offered to all pregnant women as recommended in the National Standards. Inspectors were informed that this initiative had greatly improved the safety and quality of the maternity service delivered at the hospital as it facilitated decision making to enable women's care to be allocated to the most appropriate setting. The hospital had observed an increase in the transfer of women with high risk pregnancies for specialist care to Cork University Maternity Hospital.

There were no midwifery led antenatal care services for women with low risk pregnancies at the hospital. Inspectors were informed that midwifery managers and consultant obstetricians at the hospital were developing business plans to expand these midwifery services in line with the National Maternity Strategy. This needs to be progressed.

HSE Guidelines recommend that each maternity unit or maternity hospital must have a designated outpatient Early Pregnancy Assessment Unit (EPAU) with dedicated space for ultrasonography clinical assessment and investigation, counselling and a waiting area.[9]

South Tipperary General Hospital did not have a designated outpatient EPAU as recommended in national guidelines. Women who required assessment in an early pregnancy unit were reviewed in a treatment room on the gynaecology ward where scheduled and unscheduled early pregnancy assessment and unscheduled gynaecology assessments were provided. Hospital management were aware of this issue and had submitted a business plan to the South/South West Hospital Group in 2017 to provide a dedicated Early Pregnancy Assessment Unit, Fetal Ultrasound unit and Fetal Assessment Unit and counselling room on the floor above the maternity unit. HIQA was informed that this project was on the capital programme with HSE estates and progression with this relocation was planned for 2019.

The hospital had clear criteria for the referral of women with medical and pregnancy related complications who required specialist care at a tertiary centre. Inspectors were informed that women were referred at their booking appointment or following admission during pregnancy as clinically indicated.

Where preterm birth at 32 weeks gestation or less was anticipated, women were referred to either University Hospital Waterford's Maternity Unit where there was a Level 2 (regional) neonatal care unit or to Cork University Maternity Hospital with higher level neonatal intensive care facilities in line with current national guidelines.[10]

This practice was supported by a mandatory acceptance policy for transfer of women and neonates developed by the South/South West Hospital Group Maternity Directorate Executive Management Committee. Clinical staff and managers who spoke with inspectors reported that this policy was a welcome development in the provision of safe maternity care at the hospital. Information provided to HIQA indicated that 15 pregnant women were transferred out of South Tipperary General Hospital in 2018. This is good practice and indicates that women were being risk categorised to ensure they were cared for in the most appropriate setting in line with National Standards.

Midwifery and medical staff carried out risk assessments of women at booking clinics during pregnancy and during and after birth. The maternity service had implemented the Irish Maternity Early Warning System for pregnant and postnatal women. Inspectors were informed that the Irish Maternity Early Warning System was used in both the general hospital and maternity unit for all pregnant and postnatal women in line with National Guidelines. Compliance with the use of the IMEWS was monitored monthly at the hospital with rates reported from 87% to 100% in 2018.

Admission pathways

There were established pathways for the assessment, management and where necessary, admission of women who attended the hospital with pregnancy related problems 24-hours a day, seven days a week.

There was a single point of entry to the hospital through the Emergency Department, 24-hours a day where women in labour or with concerns during pregnancy or after birth presented for review. All women were triaged by a nurse in the Emergency Department on arrival and had their IMEWS recorded.

If women presented with pregnancy related problems less than 20 weeks gestation, the obstetric registrar was contacted to review the woman. Depending on the woman's clinical condition, assessment and management was provided either in the Emergency Department by an obstetric registrar or in the Gynaecology Treatment Room on the Gynaecology Ward. The Gynaecology Treatment Room had a midwife assigned from 08.00hrs to 21.00hrs, Monday to Friday. Outside of these hours, this room was staffed with nurses and midwives from the Gynaecology ward. Midwifery staff from the Maternity Unit were called to attend women who presented with pregnancy related problems if a midwife was not on duty in the Gynaecology Ward.

If women presented with pregnancy-related problems when they were greater than 20 weeks gestation or if they presented in labour at any time of the day or night, they were advised to attend the Emergency Department where again they were triaged by a nurse from the Emergency Department and then sent to the Maternity Unit or Labour ward depending on their clinical condition. Women who contacted the maternity unit directly during daytime hours could be advised by clinical staff to come to the maternity unit for review depending on their concerns.

Pregnant or postnatal women who presented to the Emergency Department with a surgical or medical problem unrelated to pregnancy, were referred to the obstetric registrar for review to out rule any pregnancy related complications and then referred to the medical or surgical team on-call at the hospital for assessment.

The hospital had a written pathway in place to guide staff on the management of women presenting to the Emergency Department that had been updated in May 2018. However, staff who spoke with inspectors reported that components of this pathway were not clear to clinical staff in the Emergency Department. This was brought to the attention of hospital managers for review during the onsite inspection.

3.1.2 Access to specialist care and services for women and newborns

Access to clinical specialists

As the Maternity Unit was co-located with a general hospital, there was direct access to consultants in specialities such as respiratory medicine, cardiology, endocrinology, psychiatry and general surgeons onsite at the hospital. Clinical staff could access these specialities as needed for women attending the maternity service.
As with similar sized acute hospitals in Ireland, there was no access to a vascular surgeon or an interventional radiology service onsite. If pregnant women were diagnosed with placental abnormalities such as placenta accreta,[††] they were referred by their obstetric team to Cork University Maternity Hospital for management and birth.

Clinical advice from consultants in microbiology and haematology was provided 24 hours a day seven days a week to clinical staff at the hospital from consultants based at University Hospital Waterford who had clinical sessions at South Tipperary General Hospital.

The hospital had a social worker onsite and was seeking funding for a second social worker to provide care for women attending the maternity service in line with the National Maternity Strategy.

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. Guidelines[8] recommend that there is a duty anaesthesiologist immediately available to attend women in the Labour Ward 24 hours a day.

The anaesthetic service in the hospital was led by a consultant anaesthesiologist who was also the hospital's Clinical Director. Anaesthetic services were provided to women in the maternity services as well as patients in the main hospital. The

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

‡‡ 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.

anaesthesiology rota was arranged so that a duty anaesthesiologist was immediately available to attend women in the labour ward 24 hours a day.

Outside of core working hours, the hospital had an on-call rota whereby a consultant anaesthesiologist was on-call from home and two registrars in anaesthesiology were on-call on site at the hospital. One of the registrars was allocated to respond immediately to the Maternity Unit.

Guidelines[8] and National Standards recommend that there is an agreed system in place for the antenatal assessment of high risk mothers to ensure that the anaesthetic service is given sufficient notice of women at higher risk of potential complications. The hospital held a consultant led anaesthetic clinic each week where pregnant women with risk factors for anaesthesia or a history of previous complications during anaesthesia were reviewed. The hospital had clear criteria for referral of women to the anaesthetic service.

Critical care

The Maternity Unit was not resourced or equipped to facilitate the provision of level 2 critical care.[§§] National Standards recommend that specialised birth centres have a high-dependency or observation unit to manage the clinically deteriorating woman. In the absence of this facility, as is the case in a number of smaller maternity units in Ireland[11], pregnant and post-natal women are cared for in the general Intensive Care Unit at the hospital if their condition necessitated level 2 or level 3[***] critical care.

The hospital had guidelines in place for the transfer and admission of a pregnant or postnatal woman to the Intensive Care Unit in the hospital if her condition necessitated critical care. Admission to the Intensive Care Unit was authorised by the consultant anaesthesiologist on-call for the hospital. Care of patients in the Intensive Care Unit at the hospital was overseen by the obstetric team in conjunction with the anaesthetic team. Pregnant and postnatal women admitted to critical care facilities at the hospital were reviewed by the obstetric team regularly and midwifery care was provided as clinically indicated by midwives from the Maternity Unit. Women who required more advanced critical care in a Level 3S[†††] critical care unit were transferred to Cork University Hospital. This was supported by a hospital group level inter-hospital transfer policy which specified that there was a mandatory acceptance policy when a transfer request was made. This is good practice. Information

§§ Level 2 is the level of care needed for patients requiring invasive monitoring and or intervention including support for a single failing organ system (excluding advanced respiratory support).
*** Level 3 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.
††† A level 3S critical care unit provides general critical care, multi-organ support, multispecialty support and critical care specialties for example neurocritical and cardiothoracic.

provided to HIQA indicated that five pregnant or postnatal women were admitted to the Intensive Care Unit at the hospital.

Neonatal care

South Tipperary General Hospital reported in the self-assessment tool submitted to HIQA that the hospital had a Level 1 neonatal unit (local unit).[10] In line with the model of care for neonatal services in Ireland, this meant that the hospital provided special care for premature infants born at greater than 32 weeks gestation and for sick term infants.[10] Medical care for infants admitted to the Special Care Baby Unit was provided by one of the four consultant paediatricians working at the hospital who undertook newborn care as part of their duties and on-call roster. The Special Care Baby Unit provided Continuous Positive Airway Pressure (CPAP)[‡‡‡] to babies over 32 weeks who required it. Twelve babies had CPAP at the hospital in 2018.

Newborns that required therapeutic cooling[§§§] for neonatal encephalopathy had passive cooling commenced at the hospital and were then transferred to Cork University Maternity Hospital. Urgent transfers of newborns requiring neonatal intensive care were organised through the National Neonatal Transport programme.[****] Thirteen babies were transferred out of the Special Care Baby Unit in 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. At the time of the onsite inspection, the Maternity Unit had recently installed a cardiac arrest alert system to standardise practice across the hospital. An emergency number was used to communicate with switchboard of the need for obstetric and anaesthesiology staff presence at an obstetric emergency. In the case of a neonatal emergency, the paediatric registrar and paediatric senior house officer were contacted. Consultant anaesthesiologists, obstetricians and paediatricians on-call were also contacted to attend for obstetric and neonatal emergencies. Staff who spoke with inspectors stated that response times were appropriate. However, emergency response times

‡‡‡ Method of maintaining low pressure distension of lungs during inspiration and expiration when infant breathing spontaneously.

§§§ 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.

were not audited at the hospital. Following this inspection the hospital should audit the timeliness and effectiveness of the emergency response systems to provide assurance that the hospital can provide an effective timely response to obstetric emergencies.

Multidisciplinary handover

Inspectors identified that nationally mandated guidelines[12] in relation to clinical handover in maternity services had not been fully implemented at the hospital. The Labour ward held a 9am daily handover that was attended by non-consultant obstetric medical staff, a midwifery shift leader and the consultant obstetrician on-call for the day. Inspectors found that multidisciplinary handover between obstetrics, midwifery and the anaesthesiologist on duty did not occur in the maternity unit. Following this inspection, the hospital should review the systems of clinical handover at the Maternity Unit to ensure that all clinical disciplines involved in the care of pregnant and postnatal women share information to identity potential clinical concerns to improve the safety of care provided in the maternity unit.

Inspectors were informed that the consultant obstetrician on-call for the day conducted a morning ward round in the Labour Ward and the maternity ward. The two consultant obstetricians not on-call also conducted wardrounds to review women under their clinical responsibility every weekday. On-call consultant obstetricians conducted ward rounds on Saturdays, Sundays and public holidays.

The obstetric team on-call discussed anticipated births and transfers to other hospitals with the paediatric team on-call. The anaesthesiologist on duty was informed by obstetric and midwifery staff when women with known anaesthetic risks were admitted. Clinical assessment information from the anaesthetic high risk clinic was included in the woman's healthcare record.

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 Maternity Early Warning System escalation process.

The Director of Midwifery and a senior midwifery manager along with midwifery managers from the three maternity units in the South/South West Hospital Group participated in a daily teleconference with the Group Clinical Director for Maternity Services. The Group Clinical Director for Maternity Services was informed at this

teleconference of each maternity unit's activity and staffing levels. Women with pregnancy related complications or neonates who may require transfer between the maternity units and hospital were also discussed.

3.1.4 Written policies, procedures and guidelines

The Maternity Unit had a suite of policies procedures and guidelines for the management of obstetric emergencies for example; postpartum haemorrhage, shoulder dystocia and cord prolapse. 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. The Maternity Unit had an established multidisciplinary committee for the development and review of policies, procedures and guidelines specific to maternity care. Inspectors found that some policies procedures and guidelines required review and updating at the time of inspection. The Maternity Unit had a standardised procedure for the estimation and measurement of maternal blood loss. Staff at the Maternity Unit had developed and implemented a structured tool to improve the management and documentation of postpartum haemorrhage as recommended nationally.[11] Following this inspection, it is advised that the hospital audit this tool to ensure that it is effective at improving compliance with adherence to the management of postpartum haemorrhage guidelines. A similar structured tool had also been developed and implemented for the management of eclampsia.

Nursing and medical staff working in the Special Care Baby Unit reported that they adapted guidelines from Cork University Maternity Hospital for local use. Clinical staff were able to access these policies procedures and guidelines electronically at the hospital.

A safe surgery checklist[‡‡‡‡] was completed for emergency and elective surgical procedures in obstetric operating theatres in line with best practice recommendations. Compliance with the use of this checklist was audited at the hospital in 2017 and following this audit, changes were made to the checklist to improve compliance. Inspectors were informed that operating theatre staff planned to re-audit compliance with the checklist in March 2019.

South Tipperary General Hospital did not have a controlled document management system for policies, procedures and guidelines. Inspectors were informed that

[††††] 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, anaesthesiologists and others to discuss together important details about a surgical case so that everyone is familiar with the case and that important steps are not forgotten. Surgical checklists work to improve patient safety during surgery.

funding for an electronic controlled document management system had been received from the South/South West Hospital Group. However, implementation of this system was a challenge at the hospital due to the absence of an Information Communication and Technology (ICT) manager. Following the inspection, correspondence provided to HIQA indicated that appointment of an ICT manager for the hospital had been approved in April 2019.

3.1.5 Maternity service infrastructure, facilities and resources

Inspectors found that the layout and infrastructure of the Maternity Unit was of a poor standard and did not meet recommended design and infrastructural specifications for maternity services.[13] The Maternity Unit had numerous entry points which was identified by the hospital as a risk to baby security. In addition, inspectors observed that the absence of signage in both the main hospital and maternity unit, made it challenging to locate the area of the Maternity Unit or hospital services required. Hospital management were aware of this concern and were consulting with HSE Estates to improve signage across the hospital. This needs to be addressed.

Assessment areas

All women attending the Maternity Unit outside of scheduled appointments presented to the Emergency Department, located on the ground floor of the hospital. If women were critically unwell, they were admitted to one of the adult resuscitation rooms. Inspectors found that there was no designated room in the Emergency Department for the assessment of women requiring gynaecological examination. Consequently, if women needed review by the obstetric team in the Emergency Department, they were accommodated in one of the cubicles. This does not promote privacy and dignity for women. Inspectors were informed that where possible women were referred to the gynaecology treatment room for assessment to avoid this.

Gynaecology Treatment room/EPAU

Women less than 20 weeks gestation who presented for emergency assessment were referred from the Emergency Department to the Gynaecology Treatment Room for assessment and review which was located on the first floor of the hospital beside the gynaecology ward. This room was equipped with one trolley and an ultrasound machine. There was no separate suitable room to counsel women or to provide a private space to receive sensitive or distressing information. There was limited space for storage of medical equipment and supplies. Inspectors were informed that this treatment room was also used to provide scheduled appointments for women requiring early pregnancy assessment and for women presenting with gynaecology problems. The layout of this room was not in line with recommended infrastructural guidelines for triage and assessment areas for pregnant women.[13] There was a

waiting room in close proximity to the room where women who were referred from the Emergency Department for review and women who had scheduled appointments for an early pregnancy ultrasound could wait.

Antenatal and post-natal ward

The main inpatient accommodation in the Maternity Unit was a combined antenatal and postnatal ward with 20 beds. The ward had four four-bedded rooms and four single rooms. One of the single rooms had recently been converted to a fetal ultrasound room to accommodate the expansion of the fetal ultrasound services in line with National Standards. There were inadequate shower, bathroom and toilet facilities in the maternity unit. Again the design and infrastructure of the Maternity Unit required updating and improvement to provide an appropriate clinical environment for women and their babies.

Labour ward

The labour ward had two single rooms and one four-bedded assessment room. Again none of these rooms had ensuite toilet or shower facilities. The four bedded assessment room was multifunctional and reported usage included:

- Assessment of women over 20 weeks gestation referred from the Emergency Department who presented with pregnancy related complications
- Assessment of women admitted for elective caesarean sections
- Accommodation of women for fetal monitoring during and after induction of labour
- Observation of women who required close monitoring with preeclampsia or postpartum haemorrhage
- An overflow ward for antenatal and postnatal women at times of increased activity when the maternity ward was full.

The labour ward rooms and assessment room did not meet recommended design and infrastructural specifications for delivery suite accommodation. There were no storage facilities in the labour ward; therefore the emergency trolley for adult resuscitation was stored in one of the two labour ward rooms.

National Standards recommend that an obstetric operating theatre is in or adjacent to the labour ward. The operating theatres at the hospital were located on the floor below the maternity unit. Inspectors were informed that it took approximately seven minutes to transfer a woman for an emergency caesarean section from the labour ward to the operating theatre. In the event of an immediate risk to a foetus and to mitigate the risk of a delay in transfer in a time critical emergency, the hospital had equipped one of the two labour ward rooms with an anaesthetic machine and

anaesthetic trolley and supplies to perform an urgent Category 1 caesarean section.[§§§§] Floor space was also limited in the room, considering the number of staff that are required to attend a woman requiring an emergency caesarean section. Inspectors were informed that this arrangement was rarely used and was used once so far in 2019, and five times in 2018 for time critical emergency caesarean sections such as umbilical cord prolapse. Controls put in place to reduce the risk with the use of this room included assigning two registrars in anaesthesiology and the operating theatre nursing team to attend for these emergencies. The consultant obstetrician and the consultant anaesthesiologist on-call were also called to attend. Inspectors found that this room did not meet recommended infrastructural and ventilation specifications of a modern surgical facility.[14] The hospital should ensure its use should be closely monitored and risk assessed by the hospital's infection prevention control team. The hospital should ensure that any future development plans should address this issue to ensure that operating room infrastructure is in line with best practice guidelines and standards.

Special Care Baby Unit

The Special Care Baby Unit was a Level one neonatal unit and provided special care for premature infants born at greater than 32 weeks gestation and for sick term infants. It was located in the Maternity Unit in close proximity to the labour ward. Inspectors found that the physical layout and infrastructure of the Special Care Baby Unit in the Maternity Unit required renovation and reconfiguration to meet recommended guidelines.[15] The unit had capacity for five cots to accommodate five newborns. There was no isolation room in the unit. Inspectors were informed that if an infant was found to have a transmissible infection on screening, arrangements were made for them to be transferred to a single isolation room in the paediatric ward to mitigate the risk of cross infection. Hospital management had identified the risks associated with the infrastructure of the Special Care Baby Unit and it was recorded on the hospital risk register and was escalated as a risk to the South/South West Hospital Group.

Operating theatres

There was 24-hour access to emergency obstetric surgery at the hospital. Elective obstetric surgery, including caesarean sections, and the majority of emergency caesarean sections were performed in the operating theatre department located on the first floor of the hospital. The operating theatre comprised four operating

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

theatres and a four bedded recovery area. One operating theatre was available for emergency surgery such as caesarean sections at all times.

Laboratory services

Blood and blood replacement products were accessible when required in an emergency for women and infants. Urgent haematology, biochemistry and microbiology laboratory results were available to medical staff when required.

3.1.6 Maternity service equipment and supplies

Emergency supplies and medications were readily available in the clinical areas inspected to manage obstetric emergencies such as maternal haemorrhage, pre-eclampsia and neonatal resuscitation and sepsis. The hospital had recently purchased trolleys to store pre-assembled supplies for managing obstetric emergencies and staff reported that they were working well. Cardiotocography***** machines for fetal monitoring viewed by inspectors were labelled to indicate when they had been serviced.

Overall findings in relation to infrastructure

Maternity care should be 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.[1] Overall, HIQA found that the hospital was not compliant with Standard 2.7 from the *National Standards for Safer Better Maternity Services* in light of the location, infrastructure and physical environment in the Maternity Unit in South Tipperary General Hospital. As well as the physical infrastructure, its location in relation to operating theatres and its numerous entry points required review. HIQA was informed that there was a long-term plan with a clearly defined development control plan for the hospital approved by the South/South West Hospital Group and HSE Estates. This plan required significant capital investment to address these deficiencies at the Maternity Unit and was queued for funding.

Table 5 on following pages 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.

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

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

Standard 2.1 Maternity care reflects best available evidence of what is known to achieve safe, high-quality outcomes for women and their babies. **Judgment:** Compliant
Standard 2.2 Maternity care is planned and delivered to meet the initial and ongoing assessed needs of women and their babies, while working to meet the needs of all women and babies using the service. **Key findings:** Lack of designated clinical area for Early pregnancy Assessment Unit. Supernumerary shift leaders not in place 24-hours a day seven days a week. **Judgment:** Substantially compliant
Standard 2.3 Women and their babies receive integrated care which is coordinated effectively within and between maternity and other services. **Key findings:** Components of the written pathway for review of women presenting to the Emergency Department were not clearly defined for staff. Inspectors identified that nationally mandated guidelines in relation to clinical handover in maternity services had not been fully implemented at the hospital. **Judgment:** Substantially compliant
Standard 2.4 An identified lead healthcare professional has overall clinical responsibility for the care of each woman and that of her baby. **Judgment:** Compliant
Standard 2.5 All information necessary to support the provision of effective care, including information provided by the woman, is available at the point of clinical decision-making. **Judgment:** Compliant

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

Standard 2.7 Maternity care is provided in a physical environment which supports the delivery of safe, high-quality care and protects the health and wellbeing of women and their babies. **Key findings:** This inspection identified that the overall infrastructure in the Maternity Unit was poor. Operating theatre not located adjacent or beside maternity unit. Risk of transmission of infections between neonates due to the infrastructure of the Special Care Baby Unit. **Judgment:** Non-compliant
Standard 2.8 The safety and quality of maternity care is systematically monitored, evaluated and continuously improved. **Key findings:** Some clinical guidelines required reauditing to promote continuous quality improvement. **Judgment:** Substantially compliant

3.2 Safe Care and Support

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

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

Inspection findings

3.2.1 Maternity service risk management

The hospital had systems in place to identify and manage risks. Risks and agreed treatment measures in relation to the maternity service were recorded in clinical area risk registers and in the corporate risk register for South Tipperary General Hospital. The hospital held risk register management meeting every month where risks recorded on the corporate risk register were reviewed either every month or every two months depending on the rating given to the risk by senior hospital managers. Updates on the risk register were formally reported through the hospital's Executive Quality and Safety Committee. Risks that could not be managed at hospital level were escalated to the South/South West Hospital Group. Risks relating to the hospital were presented as part of the monthly performance management report to the South/South West Hospital Group.

Review of the corporate risk register by inspectors indicated that five of the 44 risks rated as red or high risk were in relation to the provision of maternity services including:

- The infrastructure of the maternity unit, the Special Care Baby Unit, Early Pregnancy Assessment Unit and Fetal Assessment Unit.
- Baby security in the maternity unit.
- Insufficient capacity to provide a designated Early Pregnancy Assessment Unit.
- Recruitment of consultant obstetricians and midwives.
- Inability to fully implement HIQA Portlaoise recommendations.

The infrastructure of the Maternity Unit as stated previously was not in line with recommended guidelines. An infrastructural survey undertaken at the hospital in 2018 outlined that the Maternity Unit was not functionally suitable due to the

number of entry points and its location in relation to emergency operating theatres. The hospital had escalated this risk and submitted a business case to the South/South West Hospital Group for a new build unit with isolation facilities for the Special Care Baby Unit. There was no agreed funding or timeframe for this development.

Baby security was identified as a risk in the Maternity Unit due to multiple entrance points and an out-dated baby security tagging system. Controls in place to address this risk included swipe access to the lift and entrance areas and regular walk arounds by security staff. Funding had been sought from the South/South West Hospital Group to install a real time location[†††††] baby security tagging system to mitigate this risk. Documentation provided to HIQA indicated that purchase of a new baby security tagging system for implementation across the maternity units in the South/South West Group was at procurement stage with the HSE.

As outlined previously, the hospital submitted a business case in 2017 to the South/South West Hospital Group for the development of a designated Early Pregnancy Assessment Unit with counselling facilities, a Fetal Ultrasound Room and a Fetal Assessment room on the third floor of the hospital. HIQA was informed that this project was on the capital programme with HSE Estates and progression with this relocation was planned for 2019. In the interim, the hospital continued to provide this service as well as unscheduled gynaecology assessment and reviews in the Gynaecology Treatment Room.

The hospital was unable to recruit medical staff registered on the Specialist Register with the Irish Medical Council to fill approved permanent and temporary consultant positions including obstetrics and gynaecology. This risk was escalated to the South/South West Hospital Group. Hospital managers told inspectors that controls put in place to manage the risk at the hospital included regular advertising and recruitment campaigns for permanent positions. Risk assessments were also completed on temporary consultants by the hospital's Clinical Director, clinical leads and General Manager.

Recruitment at a national and international level was continuous at the hospital to address the risks in relation to midwifery and nursing shortages for the Maternity Unit and Special Care Baby Unit. Overtime and redeployment of staff where appropriate was also undertaken by hospital management. Funding for a second social worker at the hospital was also sought from the South/South West Hospital Group to increase social worker provision at the hospital for maternity and paediatric services.

[†††††] Real time location systems are used to identify and track the location of objects or people in real time within a building.

The hospital had recorded as a risk to service users in the maternity services its inability to fully implement the recommendations arising from HIQA's Investigation into the safety, quality and standard of services provided by the HSE to patients in the Midland Regional Hospital Portlaoise.[16] One of these recommendations outlined the need for the HSE to prioritise the development of strong clinical networks underpinned by a group based system of clinical and corporate governance. As outlined in Section 2.1.1 of this report, implementation of the remaining HIQA Portlaoise recommendations for the hospital was dependent on the formalisation of a maternity network for the South/South West Hospital Group. Inspectors were informed that formal delegation of responsibility and accountability for the maternity service at South Tipperary General Hospital to the Clinical Director for Maternity Services for the South/South West Hospital Group was expected in late 2019.

Clinical incident reporting

Inspectors found that there was an established practice of incident reporting at the Maternity Unit and staff who spoke with inspectors were aware of their responsibility to report clinical incidents. Clinical incidents for the Maternity Unit were reviewed at the Obstetrics and Gynaecology Governance meeting each month and this meeting was well attended by clinical staff and members of the management team at the hospital. Patient safety incidents were reported onto the National Incident Management System[‡‡‡‡‡] in line with national guidelines.[17] Clinical incidents were tracked and trended and where improvements were required, plans were put in place to address these.

The hospital held serious incident management team meetings when serious reportable events[§§§§§] or serious incidents occurred. These meetings were attended by the hospital's General Manager, the Clinical Lead for obstetrics, the Director of Midwifery and the hospital's Clinical Risk Manager.

Feedback from women

There was a formalised process to monitor and respond to complaints. Complaints in relation to maternity services were a standing item on the agenda of the obstetrics and gynaecology governance meeting. Inspectors were informed that one of the

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

senior midwifery managers where possible offered women an opportunity to discuss their care after birth.

The hospital had participated in a survey of women's experiences of maternity care in the South/South West Hospital Group in 2017. The findings of this survey were sent to the hospital in 2018 and indicated that the majority of women (over 90%) reported being satisfied with their pregnancy care, their labour and birth and their hospital care after birth. The hospital should develop an action plan to implement the recommendations of this survey relevant to the maternity services provided at the hospital.

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 (IMIS) reporting requirements. This data is gathered nationally by the HSE's Office of the National Women and Infants Health Programme and the National Clinical Programme for Obstetrics and Gynaecology[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.

IMIS data and HSE Nursing and Midwifery Care-Metrics data was reviewed at the obstetrics gynaecology monthly meeting. Clinical activity, national quality metrics were included in the performance report to the South/South West Hospital Group.

Inspectors found that the hospital used patient outcome data to identify potential risks to patient safety and opportunities for improvement. In 2018, hospital managers observed that the rates of postpartum haemorrhage at the hospital were higher than the national average. The hospital conducted an audit of women who experienced postpartum haemorrhages at the hospital. The audit findings were reviewed by the obstetric gynaecology governance group and practice changes to the medical management of third stage of labour was introduced in December 2018. Clinical staff reported that this change had an impact on reducing the number of women experiencing postpartum haemorrhages and staff planned to repeat the clinical audit in 2019 to confirm this finding.

Hospital management was also aware that caesarean section rates at the hospital were higher than the national rate. In 2018 information provided to inspectors indicated that that caesarean section rates at the hospital were 39.7%. Internationally, the rate of caesarean section has risen steadily over the last number of decades with wide variation in caesarean section rates among countries. Ireland's caesarean section rate is above the average rate for Organisation for Economic

Cooperation and Development (OECD) countries [19] Due to considerable variation in caesarean section rates across Ireland, maternity services are advised to analyse their deliveries and outcomes using the Robson 10-Group Classification Scheme.[11]

Managers told inspectors that South Tipperary General Hospital had commenced using the Robson 10-Group Classification in 2018. Inspectors were informed that following analysis of this data, the hospital planned to change the management of induction of labour for first time mothers and to look at the care pathway for women with previous caesarean sections. This should be progressed.

Clinical audit

Service providers should regularly audit the care provided to women and their babies to ensure that it is being provided in line with the National Clinical Effectiveness Committee's National Clinical Guidelines and HSE national programme guidelines.[1] The hospital developed a planned programme of clinical audit for 2018 and 2019. Clinical audits undertaken in the maternity service in the previous 12 months included audits in relation the following:

- Postpartum haemorrhage
- Audit of blood transfusions in pregnant and postnatal women
- Sepsis audit
- Venous thromboembolism prophylaxis
- HSE Nursing and Midwifery Quality Care-Metrics
- Outcome of vaginal birth after caesarean section
- Perineal suturing.

An audit of compliance with HSE guidelines on venous thromboembolism prophylaxis in pregnancy found while there was good compliance with documentation of risk assessment at the booking visit, compliance with re-assessment at each hospital admission and after birth required improvement. Following the audit, the hospital provided updated education to midwifery and medical staff on venous thromboembolism prophylaxis. The hospital needs to ensure that this audit is repeated to ascertain if improvement has been achieved.

HSE Nursing and Midwifery Quality Care-Metrics were monitored every month in the labour ward to review documented practice around midwifery care planning, monitoring in labour, fetal heart monitoring and use of Irish Maternity Early Warning System. Documentation provided to inspectors outlined that the average scores for these metrics ranged from between 94% to 100% in 2018. When compliance with individual care indicators were reduced, action plans to address this concern was implemented.

A maternal sepsis audit was carried out by the HSE at the hospital in May and June 2018. This audit identified opportunities for improvement in relation to the implementation of national sepsis guidelines. The Hospital had implemented an action plan with agreed timeframes and identified persons responsible for implementing the recommendations of this audit report. The hospital needs to repeat this audit to provide assurance that compliance with these guidelines has been achieved. It is essential that hospital management ensures that national guidelines in relation to sepsis are consistently implemented at the hospital. Staff were informed of audit results at the obstetrics and gynaecology governance meeting and during midwifery handover.

Annual clinical report

The Maternity Unit at South Tipperary General Hospital produced an annual clinical report that detailed service priorities, maternal and neonatal outcomes and service activity. The report also included information in relation to new services in maternity care developed at the hospital in 2018. The 2018 annual clinical report viewed by inspectors did not include the Robson 10-Group Classification for assessing, monitoring and comparing caesarean sections rates for women at the hospital as recommended nationally.

3.2.3 Quality improvement initiatives developed by staff at the hospital

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

- The hospital had implemented formal dating and detailed 20-22 week fetal ultrasound scans for all women booking at the hospital in 2018.
- A bereavement specialist midwife had recently been appointed to provide support for women experiencing pregnancy loss and perinatal death in line with the National Standards for Bereavement Care following Pregnancy Loss and Perinatal Death.[20]
- The hospital had a project in place to improve the first booking visit for women so that women had their booking ultrasound scan, appointment with a midwife and consultant obstetrician on the same day.
- A clinical midwifery skills facilitator was appointed to support staff with education and training at the hospital.
- A clinical specialist midwife specialist in lactation had been appointed at the hospital
- A clinic for women who experienced recurrent pregnancy loss, led by the Clinical Director for the South/South West Maternity Services Directorate was held every two months at the hospital.

Inspectors found that there was some evidence of quality improvement initiatives to drive improvement in the provision of maternity services at the hospital. However, the hospital needs to implement, review and report publically on a structured quality improvement programme in line with National Standards.

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

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

Standard 3.2 Maternity service providers protect women and their babies from the risk of avoidable harm through the appropriate design and delivery of maternity services. **Judgment:** Compliant
Standard 3.3 Maternity service providers monitor and learn from information relevant to providing safe services and actively promote learning, both locally and nationally. **Judgment:** Compliant
Standard 3.4 Maternity service providers implement, review and publicly report on a structured quality improvement programme. **Key findings:** No structured quality improvement programme in place but some quality improvement initiatives in place. **Judgment:** Substantially compliant
Standard 3.5 Maternity service providers effectively identify, manage, respond to and report on patient safety incidents. **Judgment:** Compliant

4.0 Conclusion

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

HIQA found that South Tipperary General Hospital was not part of a formalised maternity network under a single governance structure as defined in the National Maternity Strategy. The hospital had however benefited from the formative structures and processes initiated by the Clinical Director of the Maternity Services Directorate for the South/South West Hospital Group. This included implementation of a mandatory transfer policy for women and babies from South Tipperary General Hospital who required specialist care to Cork University Maternity Hospital. The implementation of a formalised maternity network under a single governance structure needs to be progressed by the South/South West Hospital Group in line with National Standards and the National Maternity Strategy.

Inspectors found that the hospital had clear accountability arrangements to achieve the delivery of safe care at the hospital. Nonetheless, the governance and management structures at the hospital were found to be complex and need to be reviewed to ensure the sustainability of the quality and safety of the maternity services provided at the hospital.

The hospital was challenged in the recruitment of permanent consultant obstetricians, consultant paediatricians and midwives. Despite ongoing recruitment a number of these positions remained vacant.

It was evident to inspectors that the hospital had implemented a number of developments to enhance training and education in relation to obstetric emergencies at the hospital. The appointment of a clinical skills facilitator and the implementation of a hospital based multi-disciplinary training for obstetric emergencies was reported positively by clinical staff. Hospital management should continue to monitor the uptake of mandatory training to ensure that it is always completed within recommended timeframes.

HIQA found that the Maternity Unit at South Tipperary General Hospital had arrangements in place to identify women at higher risk of complications and to ensure that their care is provided in the most appropriate setting. In addition, the hospital had arrangements in place to detect and respond to obstetric emergencies

and to provide or facilitate on-going care to ill women and/or their newborn babies in the most appropriate setting. Notwithstanding these findings the hospital needs to review the location and function of the Early Pregnancy Assessment Unit and the Gynaecology Treatment Room.

Inspectors found that the general state of the infrastructure and the layout of the Maternity Unit was poor. Compliance with the National Standard to provide maternity care in a physical environment which supports the delivery of safe high quality care and protects the health and wellbeing of women and their babies cannot be achieved without significant investment to improve the current infrastructure.

Following this inspection the hospital needs to address the opportunities for improvement identified in this report and requires the support of the HSE to progress the development of maternity services at the hospital and the transition to a formalised maternity network.

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For further information please contact:

Health Information and Quality Authority
Dublin Regional Office
George's Court
George's Lane
Smithfield
Dublin 7

Phone: +353 (0) 1 814 7400
Email: qualityandsafety@hiqa.ie
URL: www.hiqa.ie

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