

Maternity - Safety and Quality Essentials

Summary This policy directive outlines the essential elements of implementing effective clinical governance systems, ensuring the delivery of high-quality maternity services for all NSW maternity services. It aims to minimise harm and promote safety and quality through the use of data, collaboration, and a focus on continuous quality improvement.

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Maternity – Safety and Quality Essentials

POLICY STATEMENT

NSW Health is committed to the implementation of safe, reliable, and resilient safety systems across all maternity services in NSW.

This Policy Directive outlines a clinical governance framework for maternity services, derived from the NSW Health Safety Systems Model and aligned with the National Safety and Quality Health Service (NSQHS) Standards.

SUMMARY OF POLICY REQUIREMENTS

Embedding Safety Strategically

All local health district (District) maternity services are to implement governance structures that promote safety and quality. Districts require managerial and clinical leadership positions that are responsible for operational and strategic aspects of maternity services. Regular monitoring, evaluation and reporting of the key deliverables assigned to maternity leadership positions are essential.

Collaborative agreements are required to enable shared leadership across the Tiered Perinatal Networks (TPN).

Consumers are to be supported and encouraged to be actively involved in maternity service activities.

Accountable Leadership and Culture

Accountable leadership plays a crucial role in driving improvements in safety and quality and extends beyond the sole responsibility of maternity leaders. Districts are required to:

- Ensure all staff are informed and aware of the importance of safety and quality, and their individual roles and responsibilities in safety improvement.
- Ensure safety and quality behaviour and capability is included in performance review discussions for all maternity staff.
- Implement the Clinical Excellence Commission *Safety Culture Framework*, undertake regular safety culture measurements, and utilise the [Aboriginal Cultural Engagement Self-Assessment tool](#) to ensure delivery of culturally safe and accessible maternity services for Aboriginal women and women having an Aboriginal baby (sections 3.1 *Patient Safety Culture* and 3.2 *Organisational Safety Culture*).
- Districts are required to ensure allocation of resources that support staff self-care and emotional and psychological support (section 3 *Accountable Leadership and Culture*).

Safety Governance

Districts are required to:

- Complete the *Governance and Accountability in NSW Health Maternity Services – Self-Assessment Tool* annually and associated monitoring and reporting (section 4 *Safety Governance*).
- Implement a clearly defined and documented governance structure (section 4.1 *Maternity Safety Governance Structure*).
- Establish multidisciplinary Maternity Safety and Quality Committees with clearly defined and articulated reporting lines.

Safety Intelligence

Districts are required to:

- Ensure the development, implementation and utilisation of a maternity safety and quality surveillance strategy and have dedicated data and analytics support and resources for maternity services (section 5.2 *Data Surveillance Strategy*).
- Ensure near real time data is accessible to clinicians to support women to make informed decisions through the continuum of their pregnancy, birth, and the postnatal period.

Safety and Improvement Capability

Ensuring safety and quality improvement capability requires Districts to have clear executive sponsorship, and a collective governance commitment across maternity services.

Districts are to ensure that the healthcare safety and quality capabilities are included in position descriptions for all maternity leadership positions, recruitment selection criteria, professional career development goals and to guide safety and quality capability development of other clinicians.

It is recommended that all District and facility maternity leaders complete the Safety and Quality Essentials Pathway.

Safety Improvement

Embedding safety and quality improvement as business as usual is pivotal to improving the safety and quality of maternity services.

Districts are required to implement a number of processes to achieve this including identifying quality improvement opportunities and having clear quality improvement goals, ensuring regular auditing processes, implementing morbidity and mortality review meetings, and disseminating outcomes and lessons learnt from these processes (section 7 *Safety Improvement*).

REVISION HISTORY

Version	Approved By	Amendment Notes
PD2023_031 October 2023	Deputy Secretary, Health System Strategy and Patient Experience	Complete revision to align with current safety and quality principles and standards.
PD2009_003 January 2009	Director General	New policy directive

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1. BACKGROUND

Australia is one of the safest countries in the world in which to be pregnant and to give birth. On rare occasions, pregnancy and the birth episode of care can result in harm to either the woman and/ or her baby. Fortunately, rates of serious harm in maternity care in New South Wales are low [1]. Regardless of the seriousness of harm, the impact on the woman, her baby, family, and maternity care providers can be significant. Harm may include physical and/ or psychological injury (temporary or permanent), negative impacts on mental health, associated financial burdens and in extreme cases even death [2]. There can also be a negative impact on maternity care providers' wellbeing.

Reducing avoidable harm to women and their babies and improving the safety and quality of maternity care has been identified as a global priority [3]. The professionalism, skills, and performance of individual clinicians are crucial factors that heavily influence the safety and quality of maternity care provided to every woman and her baby [4].

The executive and maternity leadership team need to have a shared vision, purpose, strategy, and mental model of safety and quality that embraces both safety I and safety II principles. Safety and quality in maternity must be a priority at all levels of the organisation. The use of near real time data, including women's experiences, is essential to identify and monitor current and emerging clinical risks, and support and promote a culture of continuous quality improvement as the norm.

Promoting safety and quality is an organisational leadership responsibility working in collaboration with one another, with clinicians and key stakeholders both internal and external to the health service, including consumers.

1.1. Safety I and Safety II

Safety I principles are considered the traditional approach to safety management and are critical for reducing errors and preventing harm. Safety I principles include a culture of consistent and reliable incident reporting, robust incident analysis such as serious adverse event reviews (SAERs) and other risk reduction strategies that aim to prevent errors from occurring in the first instance [5].

Safety II principles focus on understanding the complex systems and processes that contribute to safe care and improving these processes to enhance safety. It includes continuous quality improvement driven by data and consumer feedback, staff empowerment and support to generate and sustain change, and learning from what goes right as well as what goes wrong [5].

When combined, safety I and safety II principles create a comprehensive approach to improving the safety and quality of maternity care. It can lead to improved outcomes for women and their babies, a safe work environment for clinicians and increased efficiency and effectiveness in the delivery of maternity care [5].

1.2. About this document

This Policy Directive describes the essential components for the implementation and sustainability of safe, reliable, and resilient safety systems across all NSW maternity

services. These components are derived from the NSW Health Safety System Model (see Figure 1) and are underpinned by both safety I and safety II principles.

It describes the key components of a clinical governance framework for maternity services, based on the National Safety and Quality Health Service (NSQHS) Standards.

It also outlines the roles and responsibilities of, and essential partnerships between, women, their families and consumers, clinicians, managers, governing bodies (local health district boards) and Chief Executives, and individual maternity services in implementing effective clinical governance systems in NSW maternity services.

Figure 1. NSW Health Safety System Model

NSW Health Safety System Model



1.3. Key definitions

Co-Leadership Model	Two leaders equally positioned, working in collaboration, and sharing the responsibilities of leadership.
Governance	Encompasses the system by which an organisation is controlled and operates, and the mechanisms by which it, and its people, are held to account.
Harm	Presence of an identifiable, modifiable cause of injury or impairment (either temporary or permanent) as a result of pregnancy, the birth episode of care and associated interventions and procedures with both [6]. This may be physical and/ or psychological.

Must	Indicates a mandatory action
Patient Safety Culture	For the purpose of this Policy Directive, refers to women, their families and support people feeling safe, supported, and empowered to speak up for safety without fear of ridicule, retribution, or their concerns being dismissed.
Quality	The degree to which health services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge [7].
Quality Improvement Data System (QIDS)	An electronic system developed by the Clinical Excellence Commission to give easy access to information at all levels of the organisation, for the purpose of improving the safety and quality of health service delivery [8].
Safety	Prevention of error and adverse effects associated with health care [9].
Safety Culture	The aspects of organisational culture that relate to health and safety management. It is defined as ‘a product of individual and group values, attitudes, perceptions, competencies and patterns of behaviour that determine the commitment to, and the style and proficiency of an organisation’s health and safety management’ [10].
Should	Indicates an action that should be followed unless there are justifiable reasons for taking a different course of action.

Throughout this Policy Directive, the terms ‘woman’ and ‘women’ are used. The use of the term woman is not meant to exclude those who give birth and do not identify as female.

It is crucial to use the preferred language and terminology as described and guided by each individual person when providing care.

1.4. Legal and legislative framework

This Policy Directive is to be read in conjunction with the following documents:

Table 1. Related NSW Health Policy Documents

Document Number	Document Title
IB2023_032	<i>Healthcare Rights</i>
IB2023_006	<i>Connecting, Listening and Responding: A Blueprint for Action – Maternity Care in NSW</i>
GL2022_002	<i>Maternity and Neonatal Service Capability</i>

PD2023_003	<i>Lookback</i>
PD2020_047	<i>Incident Management</i>
PD2020_014	<i>Tiered Networking Arrangements for Perinatal Care in NSW</i>
PD2014_028	<i>Open Disclosure Policy</i>
PD2005_680	<i>Patient Safety and Clinical Quality Program</i>

Table 2. Australian Standards, Frameworks, and Strategy Documents

Document Title
The National Safety and Quality Health Service (NSQHS) Standards
Australian Safety and Quality Framework for Health Care
National Model Clinical Governance Framework
Woman-centred Care: Strategic directions for Australian maternity services
National Framework for Health Services for Aboriginal and Torres Strait Island Children and Families

2. EMBEDDING SAFETY STRATEGICALLY

2.1. Partnering with Consumers

Consumers play an integral role in influencing the organisational and strategic processes of maternity services. They are essential in informing quality improvement, as well as the development, co-design, and sustainability of maternity services. Partnering with consumers provides an opportunity for consumers to:

- Advocate for policy and practice changes that promote safe, high quality, equitable, trauma informed and culturally safe maternity care, that reflects the current needs of the community.
- Provide constructive feedback on their experiences to identify areas for improvement.
- Participate in co-designing maternity services including models of care to meet the needs and preferences of their community.

Chief Executives are responsible for ensuring that local consumers are supported and encouraged to actively participate and contribute to local health district (District) maternity services. Districts are responsible for ensuring processes are established to involve consumers in maternity activities such as:

- maternity Consumer Advisory Groups
- Aboriginal Community/ Women's Reference Groups
- District clinical stream/ networks meetings
- maternity Safety and Quality Committees at facility and District level.

2.2. Service Structure

Embedding safety strategically is reliant on effective and functional maternity service structures. All District Chief Executives are responsible for ensuring the necessary governance structures are in place that support effective safety and quality systems for maternity services. Depending on the size of the maternity service, the following service structures are recommended:

Table 3. Maternity Service Structure Recommendations

Births ¹	Service Structure	Requirements
>8,000	Network structure	Covering maternity and women's health (at a minimum). Midwifery and Obstetrics co-leadership model. Part of a matrix structure of Clinical Networks working within Operational Networks.
4,000 – 8,000*	Stream structure	Covering maternity, women's health, and neonates (at a minimum). Midwifery and Obstetrics co-leadership model. Part of a matrix structure of clinical streams working across facilities.
<4,000**	Co-leadership structure	Midwifery and Obstetrics co-leadership model working in collaboration with each facility's management team and supported by District clinical governance.

Chief Executives must ensure that there are managerial and clinical leadership positions (both operational and strategic) with responsibilities for maternity services. These positions are accountable for implementing and monitoring a core set of key deliverables. They are also required to represent maternity safety and quality at facility, District, and state levels. Other deliverables relevant to the priorities of the District should be included.

It is the responsibility of the Chief Executive to ensure that all key deliverables are allocated to the most appropriate position(s) and are articulated in relevant position descriptions with each position having clear reporting lines and responsibilities. The minimum required key deliverables are outlined in appendix 1. All positions must also have clinical risk management responsibilities.

The key deliverables and position(s) responsible must be clearly documented and communicated throughout all levels of the organisation. Systems and processes are to be established to regularly monitor, evaluate, and report on progress of these key deliverables (such as monthly accountability meetings and 90-day action plans).

As a minimum, all Districts should have the following positions (or equivalent) to support their service structures:

¹ Based on place of residence of women irrespective of insurance status and place of birth

*Services with 4,000 – 8000 may wish to implement a network structure

**Services with <4,000 birth may wish to implement a stream structure

- executive sponsorship (responsible for supporting the co-leads)
- obstetric and Midwifery clinical co-leads
- District Clinical Midwife Consultant(s) (CMC)
- patient Safety Officer(s) with a responsibility for maternity services in their portfolio
- data analytic support position(s) to support maternity services.

Individual services should also have:

- formally appointed Director/ Head of Department of Obstetrics
- dedicated Midwifery Unit Manager(s) and/ or Midwifery Manager.

2.3. Co-Leadership Model

The District Chief Executive is responsible for ensuring the appointment of District Obstetric and Midwifery co-leads (the co-leads). The co-leads along with other maternity leaders and operational and strategic managers of maternity services need to work in collaboration with other clinicians (both within and external to maternity services) and support staff to optimise the safety and quality of maternity care. Collaboration requires effective communication, trust, co-operation, respect, and an understanding and valuing of the knowledge, skills, and expertise of others.

A co-leadership model is essential in leading, influencing and ensuring:

- The implementation of a responsive leadership approach that prioritises the needs and preferences of women, their families and consumers, clinicians, and other stakeholders to improve the safety and quality of maternity care.
- Dynamic and flexible leadership that fosters active listening, collaboration, teamwork, and open, honest communication.
- Role modelling respectful collaboration between professions from those leading and managing maternity services.
- Collective oversight for governance and accountability of maternity services including quality improvement initiatives, and all aspects of *Connecting, Listening, and Responding: A Blueprint for Action – Maternity Care in NSW* [the Blueprint] ([IB2023_006](#)).
- Shared decision making between disciplines that draws upon the unique skills, experience, and expertise of everyone.
- Engagement of obstetricians and midwives in safety and quality activities including continuous quality improvement.

2.4. Tiered Perinatal Network

Collectively, it is the responsibility of the Chief Executives from each District to ensure that there are collaborative agreements in place that enable shared leadership across the Tiered Perinatal Network (TPN) as described in this Policy Directive.

The Obstetric and Midwifery co-leads are responsible for ensuring all available resources, skills, knowledge, and expertise within the TPN are utilised to optimise safety and quality of maternity care locally. In addition to the requirements outlined in NSW Health Policy Directive *Tiered Networking Arrangements for Perinatal Care in NSW* ([PD2020_014](#)), this includes (but not limited to) participation in:

- District clinical steams/ networks
- complex case reviews and care planning
- serious adverse event reviews (SAERs)
- morbidity and mortality (M&M) meetings
- quality improvement initiatives
- providing leadership capability, development, and mentoring.

3. ACCOUNTABLE LEADERSHIP AND CULTURE

Accountable leadership and a strong safety culture is crucial for improving the safety and quality of maternity care. Accountable leaders:

- Create a culture where women and their families feel safe and empowered to advocate for themselves (or on behalf of their loved one).
- Empower clinicians to identify and report safety concerns without fear of retribution.
- Promote and support a restorative, compassionate culture for clinicians, women, and their families when incidents occur to repair trust and relationships that may be impacted because of an adverse event.
- Take responsibility for the safety and quality of maternity care, and lead by example to promote a systemic culture of accountability. This includes ensuring a shared vision, purpose, strategy and a mental model of safety and quality.
- Have oversight of performance and outcomes to identify and act on emerging risks and promote a culture of continuous improvement.
- Are transparent about their decision-making processes and are willing to answer questions and address concerns.
- Promote a culture that emphasises mutual respect, trust, collaboration, and open two-way communication to ensure psychological safety.

Each local health district (District) is to ensure that:

- Processes are implemented to ensure all staff are informed and aware of the importance of safety and quality to the organisation and their individual roles and responsibilities in achieving improvements in clinical outcomes and care.
- There are processes implemented to ensure that safety culture strengths and areas for improvement are communicated to all staff.

- [Healthcare Safety and Quality Capabilities](#) are included in position descriptions for all maternity clinicians and are used to guide safety and quality capability development.
- There are clear escalation processes accessible to all clinicians, support staff, women, and their families to raise safety concerns.
- All staff have the opportunity for educational support and training to enable effective communication between peers, managers, and consumers when there are concerns for patient safety.
- Safety and quality behaviour and capability form a central part of the performance review discussions for all maternity clinicians.
- All clinicians and maternity leaders have been trained in and understand the intent of [open disclosure](#).
- Lessons learnt and opportunities for improvement from investigating adverse clinical outcomes are disseminated and closing the loop occurs.
- Resources are allocated to and available for staff self-care and emotional and psychological support such as debriefing following serious incidents and reflective clinical supervision.

3.1. Patient Safety Culture

Districts have a responsibility to ensure a strong patient safety culture. Women should feel safe speaking freely about their personal preferences for their maternity care (even if the request is outside of what is recommended), their individual religious, cultural and spiritual needs, as well as their concerns.

Districts are required to:

- Ensure women are supported to:
 - discuss their personal preferences in relation to their maternity care
 - ask questions about their pregnancy care, and recommended treatment/ interventions, including why they are necessary
 - request further information to ensure full understanding of their care and recommended treatment/ intervention
 - share their concerns about their care, recommended treatments/ interventions, or a care provider's professionalism
 - seek a second opinion if they are unsure about their plan of care, a diagnosis or recommended treatment/ intervention
 - advocate for themselves and their baby's safety (or on behalf of their loved one). For example, requesting or declining a specific test or treatment/ intervention.
 - make informed decisions about their care and their choices and preferences are respected.

- Ensure women are provided with evidence-based information in an appropriate format to enable them to make informed decisions about their maternity care.
- Develop and implement initiatives that focus on ensuring women and their families feel safe to speak up for safety such as [REACH](#).
- Ensure that socially and culturally respectful maternity care for Aboriginal women and women having an Aboriginal baby is coordinated in collaboration with Aboriginal health professionals such as midwives, Aboriginal Health Workers, Aboriginal Health Practitioners, and Aboriginal liaison officers [11].

3.2. Organisational Safety Culture

A strong organisational safety culture helps to prevent accidents, errors, and adverse events and can improve the quality of care, clinical outcomes, and women's experiences of care. The Clinical Excellence Commission's [Safety Culture Framework](#) outlines the key components necessary for ensuring a strong safety culture. Districts are responsible for ensuring the implementation and integration of the safety culture framework across maternity services.

3.2.1. Safety Culture Measurement

It is recommended that individual maternity services undertake a safety culture measurement/ review annually. This is to ensure that maternity services are maintaining a strong safety culture, to identify any areas for improvement and to evaluate improvements that have been made because of the baseline measurement. As part of a comprehensive approach to improvement, the results enable services to proactively address safety issues for women, families and staff and improve clinical outcomes.

An additional safety culture measurement should be considered whenever there is a significant change in the maternity service, such as:

- Increases in clinical incident severity (Harm Score²) being reported and/ or recurrent concerning themes identified through incident review and analysis.
- Significant changes to leadership or management structures, staffing levels, or the physical clinical environment.

Resources for undertaking a safety culture measurement can be found on the Clinical Excellence Commission [website](#). Additional resources can also be found on the Australian Commission on Safety and Quality in Health Care [website](#).

In addition, the NSW Health [Aboriginal Cultural Engagement Self-Assessment Tool](#) is available to health services to assess whether there has been a measured approach towards the delivery of culturally safe and accessible health services for Aboriginal women, women having an Aboriginal baby and their families.

² Harm Score as defined in NSW Health Policy Directive *Incident Management* ([PD2020_047](#))

4. SAFETY GOVERNANCE

The elements described in the [National Model Clinical Governance Framework](#) are mandatory for health services to meet requirements of the National Safety and Quality Health Service (NSQHS) Standards for accreditation [12]. However, the framework does not stipulate how health services should develop or implement their clinical governance systems.

NSW Health services are required to implement strategies to meet the requirements of the [NSQHS standards for clinical governance](#) that consider their local circumstances. The *National Model Clinical Governance Framework* expands upon the NSQHS Standards by providing additional details on both corporate and clinical governance, as well as defining the duties and obligations of individuals working within a healthcare organisation [12].

The *Governance and Accountability in NSW Health Maternity Services - Self-assessment Tool* (see appendix 2) has been developed to assist local health districts (Districts) and individual facilities in self-assessing their maternity services against the essential clinical governance components required of NSW Health maternity services. These components are essential for ensuring robust safety governance in their maternity services. Supporting evidence must be available to demonstrate how each component is being met.

The Chief Executive is responsible for ensuring that the District undertakes the self-assessment annually and associated monitoring and reporting occurs. Input from each maternity service, including community-based maternity services, such as Aboriginal Maternal Infant Health Service (AMIHS), maternity clinicians, and District and local facility Executive is required to complete the assessment.

Upon completion of the self-assessment, Districts are required to develop and implement an improvement plan (or update an existing plan) to address any gaps that are identified. This is to be done in collaboration with the District executives, Clinical Governance, the co-leads, and individual maternity services. The action plan must be endorsed by the Chief Executive.

Progress on the implementation of the improvement plan at both District and local facility level is to be reviewed every 90 days (90-day action plans) and monitored by the District clinical stream/ network or equivalent and local Maternity Safety and Quality Committee (responsible for local facility actions) with support from the co-leads.

A bi-annual District progress report is to be provided to the Chief Executive and District Board via the District's Clinical stream/ network. Districts will be required to provide evidence of completion of the self-assessment.

The NSW Ministry of Health can request evidence of completion of the self-assessment tool and/ or a report on progress and outcomes of improvements made as required.

4.1. Maternity Safety Governance Structure

Implementing and maintaining a robust maternity safety governance structure is essential for ensuring the safety and wellbeing of women and their families. Each District is required to have a clearly defined and documented governance structure that reflects their own local circumstances and:

- has clearly identified Executive Sponsorship

- demonstrates centralised and coordinated responsibilities and oversight of safety in maternity services
- has clearly defined communication pathways from the Executive level down to the frontline clinician level and vice versa
- includes linkages to the District Board and District Health Care Quality Committee (HCQC)
- includes linkages to Ministry of Health and relevant NSW Pillars that support patient safety and quality improvement.

4.2. Maternity Safety and Quality Committees

It is the responsibility of the Chief Executive to ensure the establishment of multidisciplinary Maternity Safety and Quality Committees (MSQC). The MSQC can be established either for each individual maternity service or encompassing several smaller maternity services located within a stream/ network, sector or equivalent. The MSQC must have clearly defined and articulated reporting lines to the relevant facility patient safety and quality committee as well as District clinical streams/ networks or equivalent.

Membership should take into consideration the local circumstances of the individual maternity service.

The recommended membership and core responsibilities of the MSQC are outlined in [appendix 3](#).

4.3. Maternity Resilience Assessments

The aim of a resilience assessment (the assessment) is to assess the ability of maternity services to maintain safety, flexibility, and their capability to recover from a range of potential adverse events [4]. It offers maternity services the opportunity to review how their internal systems adjust to changing information, relationships, goals, threats, and other factors [4].

The assessment also provides opportunities to identify areas for improvement against the core elements that are related to the safety maturity of the District or individual maternity service. The assessment may be done across an entire District or for an individual maternity service.

Undertaking a resilience assessment should be considered by the District under the following circumstances:

- Increases in serious clinical incidents as measured by increasing trends in the numbers of ims+ notifications received (Harm Score 1 and Harm Score 2 incidents).
- Increases in adverse clinical outcomes as measured by deteriorating trends across multiple clinical key outcome indicators (in comparison to hospital peer groups and statewide performance).
- To evaluate improvements that have been made as a result of a baseline resilience assessment (by undertaking a self-assessment).

The NSW Ministry of Health may request a resilience assessment of a District or individual maternity service.

The Clinical Excellence Commission is available to support Districts to undertake a resilience assessment. Further information can be found [here](#).

5. SAFETY INTELLIGENCE

Safety Intelligence focuses on data and information, allowing health services to monitor incident trends and clinical outcomes over time. These trends are utilised to inform safety and quality decisions. The use of near real time, meaningful and triangulated data (multiple datasets, methods, and investigations) is vital for system wide learning and improvement, and for the minimisation of harm to women, their baby, families, and clinicians [13].

5.1. Data and Analytics Support

Clinical leaders in maternity services need to have access to dedicated data and analytics support and resources. Allocation of data and analytic support should be proportionate to the volume and complexity of clinical activity across the local health district (District).

Chief Executives are responsible for ensuring the appointment of dedicated data and analytics support and resources for maternity services.

5.2. Data Surveillance Strategy

Chief Executives are to ensure the development, implementation, and utilisation of a maternity safety and quality data surveillance strategy. The strategy must enable District and local maternity service level:

- near real time monitoring
- ongoing surveillance of clinical outcome data over time
- benchmarking against hospital peer groups and statewide performance.

Districts are required to ensure maternity data is readily available, accessible, and regularly communicated to maternity clinicians, managers, and District executives. All strategic and operational functions and decisions are to be data informed and data driven.

The purpose of the data surveillance strategy is to:

- Inform the provision of individualised clinical care.
- Identify, monitor, and respond to unwarranted clinical variation.
- Identify, monitor, and respond to potential clinical risks.
- Identify areas for improvement and support quality improvement, research, and innovation.
- Monitor the outcomes of quality improvement initiatives at both District and local unit levels.

- Measure District and individual maternity service outcomes and benchmark against other local facilities, hospital peer groups and state performance.
- Identify when a Lookback process may be required (see NSW Health Policy Directive *Lookback* [[PD2023_003](#)]).
- Support service planning and evaluation.

The minimum required safety and quality indicators to be monitored are outlined in [appendix 4](#). Any additional measures stipulated in the District's annual service agreement are also to be included. Districts may wish to include additional safety and quality indicators as locally identified.

The following measures are also to be included in the surveillance strategy:

- rates of maternal and neonatal clinical (patient) incidents as reported in ims+ (all Harm Scores)
- findings from audits and reviews of clinical processes and outcomes
- patient reported measures (including experience and health and wellbeing outcomes) [11]
- themes from consumer complaints and compliments
- mandatory training compliance rates.

Districts may also wish to include additional Australian Institute of Health and Welfare (AIHW) [National Core Maternity Indicators](#) as part of their data surveillance strategy.

5.3. Supporting Informed Decision Making

To support women with informed decision making, Districts should support clinicians to use locally reported outcome data and evidenced based practice that considers the woman's individual circumstances, values, and beliefs. Districts are responsible for ensuring that near real time data is readily accessible to clinicians for this purpose.

Written or electronic information provided to women needs to be evidence based, culturally responsive, accessible and in-language where possible.

To support women to make informed decisions, clinicians must liaise with appropriate support services including Aboriginal Health Professionals and interpreter services.

Districts may consider publicly reporting clinical outcome data for their maternity services. This must occur in consultation with consumers.

6. SAFETY AND IMPROVEMENT CAPABILITY

All local health districts (Districts) are to ensure that there is clear executive sponsorship and a collective governance commitment across maternity services for safety and quality capability development.

To support reliable healthcare outcomes, the Clinical Excellence Commission in consultation with NSW Health staff have developed the [Healthcare Safety and Quality Capabilities](#). This

resource describes the knowledge, skills, abilities, and behaviours expected of NSW Health staff to include safety and quality improvement in their daily practice. This complements the [NSW Public Sector Capability Framework](#).

Districts are to ensure that the healthcare safety and quality capabilities are included in position descriptions for all maternity leadership positions, recruitment selection criteria, and professional career development goals. They are also to be used to guide the safety and quality capability development of other clinicians. Additional improvement capability resources can be found on the Clinical Excellence Commission website [here](#).

In addition, [The Safety and Quality Essentials Pathway](#) has been designed to meet the current safety and quality capability needs of everyone in NSW Health. Starting with the essentials, it also provides a path for ongoing training and career development. To support quality improvement initiatives locally, it is recommended that as a minimum all District and facility maternity leaders complete the Safety and Quality Essentials Pathway.

7. SAFETY IMPROVEMENT

Safety and quality improvement is a continuous process of monitoring and improving the safety and quality of care provided by maternity services.

Local Health District Boards and Executive play a key role in ensuring maternity care is safe and the risk of harm is reduced by the questions they ask about the organisation's commitment and core values to patient safety. Additional information for District Boards can be found on the [CEC website](#).

Districts are required to:

- Identify, implement, and evaluate quality improvement initiatives based on their District and individual maternity service safety intelligence; and as directed by NSW Health or other agencies as required.
- Develop clear quality improvement goals based on identified areas for improvement e.g., reduce the incidence of a particular measure (percentage reduction) annually until in line with statewide performance or better.
- Establish and maintain regular audit and review processes for clinical procedures and outcomes as required by NSW Health policy documents and any other clinical procedure and/ or outcome as locally identified.
- Implement, monitor, and evaluate district wide and local facility maternity and perinatal [morbidity and mortality meetings](#).
- Develop, action, and monitor implementation plans for all relevant NSW Health policies, guidelines, clinical care standards and other directives/ programs.
- Establish and maintain processes for the review of district policies, procedures, and protocols to align them to state requirements and ensure that they reflect best-practice and current evidence.
- Implement and maintain systems and processes for the monitoring and management of unwarranted clinical variation.

- Implement and monitor risk assessment processes where required.
- Disseminate outcomes and lessons learnt from serious adverse event reviews (SAERs) and other clinical incident reviews, quality improvement activities, clinical audits, morbidity and mortality meetings and any other processes where there is opportunity for learnings as locally identified.

The Clinical Excellence Commission provides a range of tools and resources to support NSW Health staff to improve the quality of care. These tools and resources can be found on the CEC [website](#). Several quality improvement [toolkits](#) are also available.

8. REFERENCES

- [1] Clinical Excellence Commission, "Biannual Incident Report January 2017 - December 2020," 2022. [Online]. Available: https://www.cec.health.nsw.gov.au/__data/assets/pdf_file/0020/808301/Biannual-Incident-Report-2017-2020.pdf. [Accessed 30 March 2023].
- [2] B. Huner, C. Derksen, M. Schmiedhofer, S. Lippke, W. Janni and C. Scholz, "Preventable adverse event in obstetrics - systematic assessment of the incidence and linked risk factors," *Healthcare (Basel)*, vol. 10, no. 1, p. 97, January 2022.
- [3] E. Liberati, C. Tarrant, J. Willars, T. Draycott, C. Winter, K. Kuberska, A. Paton, S. Marjanovic, B. Leach, C. Lichten, L. Hocking, S. Ball and M. Dixon-Woods, "Seven features of safety in maternity units: a framework based on multisite ethnography and stakeholder consultation," *British Medical Journal Quality and Safety*, vol. 30, pp. 444-456, 2021.
- [4] Clinical Excellence Commission, *Resilience Assessment in Maternity Services - A Facilitation Guide*, Sydney: Clinical Excellence Commission, 2022.
- [5] E. Hollnagel, R. L. Wears and J. Braithwaite, *Resilient Health Care*, Farnham, United Kingdom: Ashgate Publishing, 2013.
- [6] M. Nabhan, T. Elraiyyah, D. Brown, J. Dilling, A. LeBlanc, V. Montori, T. Morgenthaler, J. Naessens, L. Prokop, V. Roger, S. Swensen, R. Thompson and M. Murad, "What is preventable harm in healthcare? A systematic review of definitions," *BMC Health Services Research*, vol. 12, p. 128, 2012.
- [7] K. Lohr and S. Schroeder, "A strategy for quality assurance in Medicare," *New England Journal of Medicine*, vol. 322, pp. 1161-71, 1990.
- [8] Clinical Excellence Commission, "User Manual: Quality Improvement Data System Version 2.2," Clinical Excellence Commission, Sydney, August 2020 [intranet].

- [9] Australian Commission on Safety and Quality in Health Care, "The state of patient safety and quality in Australian Hospitals 2019," ACSQH, Sydney, 2019.
- [10] Australian Commission on Safety and Quality in Health Care, "Patient Safety Culture," [Online]. Available: <https://www.safetyandquality.gov.au/our-work/indicators-measurement-and-reporting/patient-safety-culture>. [Accessed 24 February 2023].
- [11] NSW Ministry of Health, "Connecting, Listening and Responding: A Blueprint for Action - Maternity Care in NSW," March 2023. [Online]. Available: <https://www.health.nsw.gov.au/kidsfamilies/MCFhealth/professionals/Publications/maternity-care-in-nsw.pdf>.
- [12] Australian Commission of Safety and Quality in Health Care, "National Model Clinical Governance Framework," 2017. [Online]. Available: <https://www.safetyandquality.gov.au/publications-and-resources/resource-library/national-model-clinical-governance-framework>. [Accessed January 2023].
- [13] Clinical Excellence Commission, "NSW Health Safety System Model. How Do You Know Your System is Safe?," Clinical Excellence Commission, Sydney, 2021.

9. APPENDICES

1. Appendix 1: Managerial, Operational, Strategic and Clinical Leadership Position(s) Key Deliverables
2. Appendix 2: Governance and Accountability in NSW Health Maternity Services – Self Assessment Tool
3. Appendix 3: Recommended Membership and Core Responsibilities of Maternity Safety and Quality Committees (MSQC)
4. Appendix 4: Minimum Safety and Quality Indicators

9.1. Appendix 1: Managerial, Operational, Strategic and Clinical Leadership Position(s) Key Deliverables

Clinical performance and effectiveness:

- Managing workforce issues to ensure excellence in leadership, teamwork, safety systems, healthy culture, and optimal patient safety outcomes.
- Maintenance of personal professional skills, competence, and performance.
- Implement and resource effective systems for management of:
 - credentialing and defining scope of clinical practice
 - clinical education and training
 - individual performance monitoring and management
 - safety and quality education and training.
- Reliable, rapid, and effective response to indications of clinical underperformance.
- Systematic monitoring of safety and quality outcomes across all clinical areas.
- Effective peer review meetings.
- Promote teamwork and collaboration through effective handover, multidisciplinary team meetings, and safety huddles.

Governance, leadership, and culture:

- Oversight for governance and accountability of maternity services including quality improvement initiatives, and all aspects of *Connecting, Listening, and Responding: A Blueprint for Action – Maternity Care in NSW* (the Blueprint) [[IB2023_006](#)].
- Undertaking and reporting service capability assessments.
- Actively communicate to all staff the commitment of the health service organisation to the delivery of safe, high-quality, high-value care
- Create opportunities for the workforce to receive education in safety and quality practice and systems.
- Model the safety and quality values of the health service organisation in all aspects of management.
- Support clinicians who embrace clinical leadership roles.
- Co-lead the development of business plans, strategic plans, and organisational policies and procedures relevant to safety and quality.
- Integrate safety and quality into organisational plans, policies, and procedures.
- Set up effective relationships with relevant health services to support good clinical outcomes.
- Ensuring establishment and the ongoing functioning of Maternity Safety and Quality Committees.
- Ensuring safety and quality activities and workforce planning are aligned with principles of safety culture.

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- Representing maternity safety and quality at facility, District, and state levels.

Patient safety and quality systems:

- Coordinate and oversee the design of systems for the delivery of clinical care.
- Engage with clinicians and consumers on all system re-design issues.
- Advocate appropriate resources to implement well-designed models and safety systems of care.
- Respond to identified concerns about the design of systems.
- Periodically, systematically review the design of systems for safety and quality.
- Ensure active clinician engagement in the operational policy and procedure framework.
- Ensure availability and analysis of data and information to clinicians to support quality planning, assurance, and improvement.
- Ensure that safety and quality systems reflect the role of the health service organisation within a wider network of local and other health services and providers.
- Implement effective systems for monitoring and management of:
 - quality improvement and measurement
 - risk management
 - incident management
 - open disclosure
 - feedback and complaints.
- Systematically monitor outcomes across all safety and quality systems
- Regularly contribute to reports on safety and quality outcomes to the facility Maternity Safety and Quality Committee and Facility Safety and Quality Committee or equivalent.

Evidence Informed Clinical Practices:

- Ensure that policies, procedures, and protocols emphasise safety and quality principles.
 - Set up mechanisms to maintain currency of policies, procedures, and protocols, and communicate changes to the workforce.
 - Review the use and effectiveness of organisational policies, procedures and protocols through clinical audits or performance reviews.
 - Periodically review District policies, procedures, and protocols to align them to state requirements and ensure that they reflect best-practice and current evidence.
 - Actively participate in and provide advice on the development, review and evaluation of NSW Health policy documents and clinical care standards as requested.
 - Implementing systems for the monitoring and management of unwarranted clinical variation.
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9.2. Appendix 2: Governance and Accountability in NSW Health Maternity Services – Self Assessment Tool

REQUIREMENTS		IMPLEMENTATION STATUS		
Governance Leadership and Culture				
1.	Executive and maternity leadership have a shared vision and strategy for safety and quality in maternity services.	Fully <input type="checkbox"/>	Partially <input type="checkbox"/>	Not <input type="checkbox"/>
		Reason partially/ not implemented:		
2.	Our maternity service has a strategy with clear safety and quality priorities that is designed in partnership with our clinicians, women and their families and is data informed.	Fully <input type="checkbox"/>	Partially <input type="checkbox"/>	Not <input type="checkbox"/>
		Reason partially/ not implemented:		
3.	There are managerial and clinical leadership positions (both operational and strategic) with responsibilities for maternity services.	Fully <input type="checkbox"/>	Partially <input type="checkbox"/>	Not <input type="checkbox"/>
		Reason partially/ not implemented:		
4.	All key deliverables (see appendix 1) have been allocated to the most appropriate positions(s) and are articulated in the relevant position descriptions.	Fully <input type="checkbox"/>	Partially <input type="checkbox"/>	Not <input type="checkbox"/>
		Reason partially/ not implemented:		
5.	We have a functional co-leadership model – obstetrics and midwifery.	Fully <input type="checkbox"/>	Partially <input type="checkbox"/>	Not <input type="checkbox"/>
		Reason partially/ not implemented:		

6.	Our maternity service structure is aligned to the service structure requirements and recommendations.	Fully <input type="checkbox"/>	Partially <input type="checkbox"/>	Not <input type="checkbox"/>
		Reason partially/ not implemented:		
7.	We have a safety culture in maternity services inclusive of just culture, a system which encourages reporting and learning from adverse events.	Fully <input type="checkbox"/>	Partially <input type="checkbox"/>	Not <input type="checkbox"/>
		Reason partially/ not implemented:		
8.	Our obstetric and midwifery co-leads can demonstrate maintenance of contemporary professional clinical skills and knowledge.	Fully <input type="checkbox"/>	Partially <input type="checkbox"/>	Not <input type="checkbox"/>
		Reason partially/ not implemented:		
9.	The position descriptions for all maternity clinicians include their role and responsibilities for safety and quality outcomes/ activities.	Fully <input type="checkbox"/>	Partially <input type="checkbox"/>	Not <input type="checkbox"/>
		Reason partially/ not implemented:		
10.	The service consistently uses monthly accountability meetings and 90 day action plans as part of safety and quality accountability for individuals and teams.	Fully <input type="checkbox"/>	Partially <input type="checkbox"/>	Not <input type="checkbox"/>
		Reason partially/ not implemented:		
Patient safety and quality systems				
11.	We can demonstrate a robust system of clinical audit and review to ensure that the documented safety and quality requirements in policies, procedures and protocols are reliably embedded.	Fully <input type="checkbox"/>	Partially <input type="checkbox"/>	Not <input type="checkbox"/>
		Reason partially/ not implemented:		

12.	Our data surveillance strategy enables us to readily access, analyse and use safety and quality processes, experience and outcome data to support quality planning, assurance and improvement.	Fully <input type="checkbox"/>	Partially <input type="checkbox"/>	Not <input type="checkbox"/>
		Reason partially/ not implemented:		
13.	We have effective systems for: <ul style="list-style-type: none"> o data surveillance o quality improvement and measurement o incident management o open disclosure o consumer feedback and complaints o reporting on safety and quality outcomes o monitoring compliance with mandatory training. 	Fully <input type="checkbox"/>	Partially <input type="checkbox"/>	Not <input type="checkbox"/>
		Reason partially/ not implemented:		
14.	Leadership coordinates and oversees the design, resourcing, and review of systems for the delivery of clinical care by engaging with frontline clinicians and consumers on system design and re-design issues.	Fully <input type="checkbox"/>	Partially <input type="checkbox"/>	Not <input type="checkbox"/>
		Reason partially/ not implemented:		
15.	We have access to dedicated safety and quality resources, including Patient Safety Officers, Clinical Midwifery Consultants and data and analytics support.	Fully <input type="checkbox"/>	Partially <input type="checkbox"/>	Not <input type="checkbox"/>
		Reason partially/ not implemented:		
Clinical performance and effectiveness				
16.	The District manages workforce issues to ensure excellence in leadership, teamwork, safety systems, safety culture and optimal patient safety outcomes.	Fully <input type="checkbox"/>	Partially <input type="checkbox"/>	Not <input type="checkbox"/>
		Reason partially/ not implemented:		

17.	The District has systems that monitor and support the maintenance of professional skills, competence and performance across maternity services.	Fully <input type="checkbox"/>	Partially <input type="checkbox"/>	Not <input type="checkbox"/>
		Reason partially/ not implemented:		
18.	<p>Effective systems for:</p> <ul style="list-style-type: none"> o credentialing and defining scope of clinical practice o clinical education and training o individual performance monitoring and management o safety and quality education and training o reliable, rapid and effective responses to indications of clinical underperformance o monitoring and acting on unwarranted clinical variation o peer review o systematic monitoring of safety and quality outcomes o promoting teamwork and collaboration. 	Fully <input type="checkbox"/>	Partially <input type="checkbox"/>	Not <input type="checkbox"/>
		Reason partially/ not implemented:		

9.3. Appendix 3: Recommended Membership and Core Responsibilities of Maternity Safety and Quality Committees (MSQC)

The recommended membership of the MSQC includes:

- Director of Obstetrics and other senior Obstetrician(s)
- Clinical Midwife Consultant(s)
- Midwifery Unit Manager(s)/ Maternity Manager/s
- Paediatricians/ Neonatologists
- Patient Safety Officer(s)/ Clinical Governance representative
- Obstetric and Midwifery co-leads
- hospital Executive representative
- junior obstetric and midwifery clinicians
- consumer representative(s)
- representatives from other healthcare disciplines as required
- other positions as identified by the facility.

Core responsibilities of the MSQC should include:

- Monitoring and analysis of local clinical incident and clinical outcome data, key performance indicators and trends (including Harm Score 3 and Harm Score 4 incidents), and clinical audit findings.
- Benchmarking of clinical outcome data and key outcome indicators against hospital peer groups.
- Development, implementation, and evaluation of quality improvement initiatives to address areas for improvement as identified through the monitoring and analysis of clinical incident and clinical performance data, key clinical outcome indicators, and clinical audit findings.
- Oversight of the completion of Harm Score 1 and Harm Score 2 serious incident review recommendations.
- Oversight for the completion of clinical audits and implementation of improvements based on audit findings.
- Review and analysis of consumer complaints and feedback and development, implementation, and evaluation of quality improvement activities to address identified areas for improvement.
- Dissemination of clinical incident and clinical outcome data, key performance indicators, consumer complaints and feedback, and audit findings to clinicians via multidisciplinary team meetings, ward meetings and morbidity and mortality (M&M) meetings etc.

- Identification of areas of unwarranted clinical variation and the development and implementation of strategies to reduced unwarranted clinical variation.
- Ensure the Perinatal Morbidity and Mortality (M&M) Meetings are formalised as a risk management activity and utilised as a feedback mechanism to clinicians on identified incidents and risk.
- Ensuring sharing of lessons learnt from incidents with relevant clinicians via multidisciplinary team meetings, ward meetings, M&M meetings, education, or simulation sessions.
- Quarterly reporting of safety and quality activities of the local maternity service and MSQC to the facility Safety and Quality Committee, and local health district (District) clinical stream/ network or equivalent
- Ensuring all maternal deaths are reported to the Clinical Excellence Commission in accordance with *Reporting of Maternal Deaths to the NSW Clinical Excellence Commission* ([PD2021_006](#)).
- Any other core responsibilities as identified by the facility.

Units with small numbers of perinatal deaths may also include the clinical review and classification of perinatal deaths in accordance with NSW Health Policy Directive *Investigation, Review and Reporting of Perinatal Deaths* ([PD2022_046](#)) as a core function of the MSQC in lieu of a dedicated Perinatal Mortality Review Committee. The terms of reference for these meetings, when combined, must outline, and meet the requirements of both Policy Directives.

9.4. Appendix 4: Minimum Safety and Quality Indicators

The minimum required safety and quality indicators to be monitored include:

Safety and Quality Indicator	Definition
Antenatal	
Induction of Labour	Percentage of women undergoing induction of labour at any gestation and for any indication. First intervention must occur prior to the onset of contractions. A minimum one (1) induction method must have been used ³ . Includes artificial rupture of membranes in the absence of any other induction method.
Smoking during pregnancy	Percentage of women who smoke during the first 20 weeks and those who continue to smoke after the first 20 weeks of pregnancy
Stillbirths ≥ 28 weeks gestation	Stillbirth occurring ≥ 28 weeks gestation before the onset of labour
Labour and Birth	
Planned births < 39 weeks gestation	Planned birth < 39 weeks gestation in the absence of a medical indication
Late preterm births (34 – 36 weeks and 6 days gestation)	Planned and unplanned late preterm births occurring between 34 and 36 weeks and 6 days gestation
Early term births (37 – 38 weeks and 6 days gestation)	Planned early term births occurring between 37 – 38 weeks and 6 days gestation in the absence of a medical indication
Assisted vaginal births (forceps or vacuum)	Rates of forceps or vacuum births performed at any gestation
Overall caesarean section rate (emergency and elective)	Caesarean section rate for emergency and elective caesarean sections combined
Emergency caesarean section rate	Rates of emergency caesarean section where the decision for caesarean section was made during labour or when a planned caesarean section was brought forward due to maternal or fetal deterioration.
Elective caesarean section rate	Rates of planned caesarean section where the decision for caesarean section was made prior to labour
Caesarean section rate (primips)	Rates of primary caesarean section occurring in a woman's first pregnancy > 20 weeks gestation
Caesarean section under general anaesthetic	Any caesarean section performed under a general anaesthetic

³ All induction methods are detailed in the NSW Health Policy Directive *Maternity - Oxytocin for the Induction of Labour at or Beyond Term* ([PD2011_075](#))

Primary Postpartum haemorrhage $\geq 1000\text{mLs}$	Postpartum haemorrhage $\geq 1000\text{mLs}$ occurring in the first 24hrs following birth
Maternal blood transfusion	Maternal blood transfusion during the birth episode of care
Uterine rupture	Occurrence of a uterine rupture at any stage of pregnancy or as identified in the immediate postnatal period
Peripartum hysterectomy	Unplanned hysterectomy occurring during the birth episode of care
3rd and 4th degree perineal tears (all vaginal births)	3rd and 4th degree perineal tears associated with any mode of birth
Unexpected intrapartum stillbirths	Stillbirths ≥ 28 weeks gestation that occur during labour, where a livebirth was expected
Postnatal	
Postnatal maternal admission to intensive Care (ICU)/ High Dependency Unit (HDU)	Maternal admission to ICU/ HDU for any reason during the postnatal period associated with the labour and birth admission
Neonatal	
Fetal growth restriction ($< 3^{\text{rd}}$ centile at ≥ 40 weeks gestation)	Fetal growth restriction ($< 3^{\text{rd}}$ centile at ≥ 40 weeks gestation) confirmed either antenatally or after birth
Apgar score < 7 at 5 minutes (37+ weeks gestation)	Apgar score < 7 at 5 minutes (37+ weeks gestation)
Admission to a Neonatal Unit anytime afterbirth ≥ 36 weeks gestation	Admission to a Neonatal Unit anytime afterbirth ≥ 36 weeks gestation for any indication
Neonatal birth trauma	As described by the Australian Commission on Safety and Quality in Health Care, Hospital Acquired Complications specifications