Safer Care Victoria

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A systems-focused framework for Morbidity and Mortality meetings

About this framework

This framework has been developed following health sector research, consultation, and extensive literature review. This process has identified key factors to successful Morbidity and Mortality (M&M) meetings, which have been integrated into this framework.

The tool and templates (The Toolkit) associated with the framework have been developed for health services with the aim to support the development and running of M&M meetings and surrounding governance structures. In using the provided Toolkit health services can maximise the use of the collective experience of the clinicians that attend M&M meetings to drive systems improvement.

The framework and the associated Toolkit can be adapted to enable local implementation and in varying clinical contexts.

Framework & Toolkit inclusions

- Overarching framework for best-practice M&M meetings
- Systems-Focused M&M Case Review Tool
- Sample templates:
  - M&M Terms of Reference (ToR)
  - M&M Agenda
  - M&M PowerPoint presentation slide deck
  - M&M Record of learning template (including recommendation/action monitoring tables)
  - M&M Quarterly/Periodic Report for higher governance committees (for smaller health services this may be used biannually or annually)

Contents

Introduction

Morbidity and Mortality (M&M) meetings are common practice in healthcare. They are a structured forum for peer review, education, and are traditionally conducted to review cases that have resulted in patient harm or death. The purpose of M&Ms is to collectively learn from and prevent such events occurring again. Despite the potential for learning and improvement, evidence suggests that M&Ms are underutilised for this purpose. M&M meetings currently lack consistent structure across units, hospitals, and health services.[1 2] They also generally lack a robust systems approach that can identify and respond to broader systems related factors.

This framework provides practical guidance on how to develop and implement a systems-focused M&M process. It promotes a shift in approach from focusing on individual performance to broader system related factors which is critical for the development of stronger recommendations, resulting in sustainable organisational change and quality improvement. A human factors lens and systems approach will promote psychological safety as it moves away from a focus on individuals and blame. Blame culture is counterproductive to eliminating adverse events and presents a barrier to the delivery of safe care.

A systems approach will encourage staff to speak up for safety and discuss events without fear of retribution. It also promotes shared accountability for safety between people responsible for delivering care at the frontline, and the broader organisation, who is responsible for creating work conditions that are safe and fit for purpose, including culture, systems, and processes. This aligns with SCV safety culture conceptual framework principles and Just Culture principles. [3]

SCV developed this framework and toolkit to reduce variation in M&M practice and enhance the robustness and consistency of M&M case reviews. [4-11] The standardised, structured, and systematic approach in this framework will directly support organisations in identifying and implementing best practice methodologies for the establishment and management of Morbidity and Mortality meetings. [1 12-14]

Delivering System Impact from Morbidity & Mortality Meetings

The framework describes the requirements for establishing and managing an effective M&M meeting. In Figure 1 the sequence of steps is outlined from the four key enablers through to system impact.

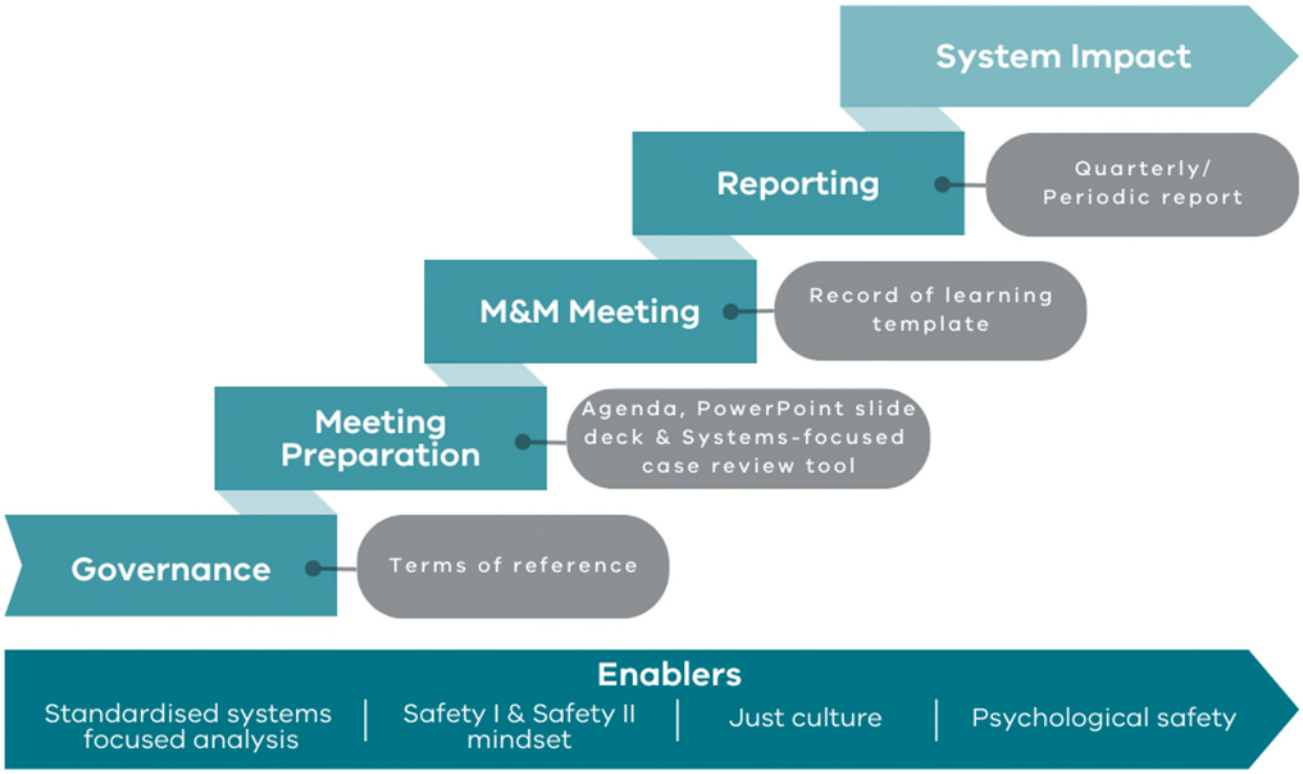

Figure 1: Overarching systems-focused framework and accompanying tools for best practice M&M Meetings

Enablers

Standardised systems focused analysis

Human error is a normal part of everyday life that helps us to learn and improve. Adverse events are frequently attributed to 'human error', particularly if there are no other obvious, visible failures that appear to have caused the event. It is human nature to jump to conclusions and blame those that were closest to the event (in time and proximity). This has led to people being 'named, shamed, blamed, and retrained', or even worse dismissed, over their involvement with adverse patient safety events. M&M meetings (and case reviews) should focus on systems improvement rather than individual error. [13]

Safety science shows that human performance cannot be viewed in isolation. Instead, it must be viewed within the context it occurs to understand why actions and decisions were made at the time, and why things made sense to the people at the time.

We know that the design of systems, especially those that are as complex as healthcare, influence human behaviour. Well-designed systems support humans to perform well, whereas poorly designed systems can contribute to the making of errors. Applying a structured systems-approach is key to understanding human performance, by placing it into the broader systems context and then identifying where improvements need to be made.

A system can be defined in many ways. SCV defines health as a socio-technical system with several layers comprising of cultural, social and external factors, organisational and management factors, work environmental factors, task and technology factors, team factors, as well as staff and patient factors (Figure 2 and 3). This definition has been adapted from the London Protocol and guides the systems approach.

Figure 2: The health sociotechnical system [14]

Figure 3: Contributing factors per system layer [14]

The key principle of a systems-focused approach is that adverse events usually occur due to multiple contributing factors that interact. These contributing factors sit at different levels of the system. For example, they might relate to safety culture, staffing, the design of equipment and technology, policies and procedures or the physical design of work environments.

A consistent, standardised systems approach to analyse cases in M&M meetings is key to:

- improve the quality of presentation.
- enhance learning and sharing.
- foster a safety culture with a focus on Just Culture and psychological safety by being objective and systems focused.
- focus on actions for improvement that will create sustainable system changes [2]

Using a systems approach in M&M case review requires practitioners to:

- **Understand system relationships and interactions**; for each case being analysed, try to recognise the interactions and relationships between the different layers of the healthcare system, and understand how they contributed to events. Future change and improvement are dependent on considering and identifying these interactions.
- **Actively seek multiple perspectives**; where possible, capture the perspectives of all relevant staff groups during analysis - there will be different perspectives on how the system works, and interactions and relationships between layers will vary. Often there can be a gap between "work-as-imagined" or "work- as-prescribed" (what is thought to happen and is set out in policies etc.) and "work- as- done" (what is actually done).

Safety I and Safety II mindset

Traditional approaches define safety as the absence of negative outcomes such as adverse events. The focus of this 'Safety I' approach is to examine adverse events that occur and address 'what went wrong'. This traditional approach has several limitations, including problems with attempting to identify root causes which is most often difficult for complex systems such as healthcare [15]

The Safety-II approach is complimentary to Safety-I and examines all performance. Safety-II uses positive outcomes to understand how things could potentially go wrong in other cases or similar situations. [16] Safety-II is therefore a more proactive approach to harm prevention. Safety-II also recognises that frontline healthcare staff represent the variable component of our complex socio-technical healthcare system. The everyday adjustments made by staff (the variability), can result in either a positive or adverse outcome. [15]

Just culture

A Just Culture is part of a safety culture that:

- Helps to provide a psychologically safe workplace where employees feel safe to report adverse events and near misses.
- Manages the innate cognitive biases (Appendix 1: Cognitive bias table) we all have as part of being human.
- Adopts the concept of shared accountability between the organisation and an individual when adverse events occur [17 18].

A Just Culture opposes the historical focus of M&M meetings, the 'name, shame, blame and retrain' mentality, by shifting the focus from the individual to the broader organisation. [13]

In organisations where a Just Culture is promoted and encouraged, all patient safety event reviews use a systems-thinking lens to place individual actions in the context of broader system factors present at the time. This creates a balanced review and informs the development of meaningful recommendations to reduce and/or prevent future harm. [19]

More information on Just Culture can be found on the SCV website.

Psychological safety

Psychological safety is the belief held by individuals that it is acceptable to speak up and take interpersonal risks, through the form of expressing ideas and concerns, asking questions, and admitting mistakes; all without fear of negative consequences. [20-22] When staff feel psychologically safe, they can make suggestions and challenge others' ideas and ways of thinking and/or working [23], including those in authority. Psychological safety creates honesty and openness that helps reduce risks and creates new ideas within a team. It is a key factor in team performance and key to achieving a Just Culture. [23]

When reviewing adverse events, it is critical to focus on systems rather than individuals. This ensures the review process is fair, objective and in line with contemporary safety science.

Four elements of psychological safety:

- **Inclusion safety** – members feel safe to belong to the team/meeting.
- **Learner safety** – members can learn through asking questions.
- **Contributor safety** – members feel safe to contribute their own ideas.
- **Challenger safety** – member can question others' ideas or suggest significant changes. [24]

For an M&M meeting to function in this way, leadership that models behaviours of a positive safety culture is crucial. Good leadership fosters an environment where all participants can contribute to constructive and non-judgemental discussion without fear of criticism. [25]

There are three core leadership behaviours which support team/meeting psychological safety:

- **Framing events as a learning problem** rather than a performance problem. The focus should be on learning how to do it better next time.
- **Acknowledging their own fallibility**. When a leader admits mistake or is unsure of the answer, they allow and encourage others to do the same.
- **Modelling curiosity and asking questions**. Leaders should remain curious, ask others their thoughts and to contribute to the meeting discussions. In doing this the leader is creating a space and need for people to speak up. [26]

Governance

Governance refers to the system by which an entity is managed, operated, and held to account. An effective governance process for the M&M meeting group will be defined and agreed on, either by each individual health service, and/or by services within a regional partnership.

The governance structure will include:

- Clearly defined reporting lines evidenced through the organisational chart. Specificity regarding what information is shared and where responsibilities for action lie is critical.
- A formal ToR (see Terms of Reference template) to define the scope of the meeting, and the roles and responsibilities of key individuals. It will establish meeting leadership, membership (which should be multidisciplinary). It will define meeting frequency, format, and reporting. Together with describing the review process including case selection, case presentation, root cause analysis (RCA) and action plans, data acquisition and analysis and evaluation and continuous improvement measures.

A well-functioning M&M meeting group will be evident as

- Meeting findings will be integrated into the health service's existing clinical governance structure to inform, align, and action system change across the entire organisation. If there is no existing clinical governance structure, then this should be developed.
- Recommendations and related actions will be assigned to a responsible person (or position). Regular monitoring/reporting ensures action points are followed up and completed in a timely manner which improves accountability.
- There will be an agreed communication pathway for escalation and reporting within the health service and where relevant to other external agencies/governing bodies.

The role of the M&M chair

Effective meeting governance will be supported through effective chairing which will ensure that the design and execution of the meeting promotes delivery of the desired outcomes.

The meeting chair will be responsible for defining the agenda and managing meeting planning - ensuring a quorum is met and that key representatives are able to attend. The chair will also ensure meeting Record of learnings are distributed, actions and recommendations are followed up and that members are sufficiently empowered in meetings to meaningfully contribute. The chair should also ensure that discussion of cases is respectful, productive and that findings are accurately summarised and captured.

Significantly, the chair will play a key role in ensuring that the principles outlined in this framework are enacted.

Code of conduct

Meeting governance should also be underpinned by a code of conduct which will outline acceptable behaviour during meetings.

The code of conduct should be agreed upon on a regular basis (e.g. every 1-2 years, or when a new chair is assigned) and should be documented in the M&M meeting ToR. A brief reminder of these behavioural responsibilities should be agreed upon at the start of every meeting by all participants.

Some suggested values for behaviours include:

- valuing differing opinions
- willingness from all participants to contribute to discussions
- objective review of cases
- constructive discussion and debate
- mutual respect and trust
- challenging those who do not adhere to the values. [27]

Multidisciplinary and Interdisciplinary membership

The involvement of multidisciplinary and interdisciplinary staff is a widely accepted key principle of modern M&M meetings. All staff involved in the care of a patient can benefit from case reviews and discussions at M&M meetings, particularly where an adverse patient outcome was identified.

The active participation from all disciplines and specialties in M&M discussions enhances reflective practice, promotes the exploration of different perspectives and experiences, and can highlight team insights into identified issues and potential solutions. [28-30] Multi- and interdisciplinary involvement is also beneficial when recommendations and actions extend across multiple departments/disciplines, as implementation is likely to be more successful with earlier input.

M&M meetings should be considered a core activity for all unit/department clinicians as part of their continuing professional development.

Who should attend?

Refer to the ToR to determine the meeting membership including the chairperson/facilitator, the secretariat, and other required attendees. Invitations should also extend to:

- **All clinical disciplines involved in the care of patients** in the unit/department holding the M&M meetings.
- **Staff from other specialties (interdisciplinary involvement)**, particularly when they have had significant involvement in the patient's journey, or to provide subject matter expert oversight.
- **Clinical Governance executives/managers, risk management, quality and safety staff,** which will strengthen organisational governance oversight and systems-focused reviews.

Involvement of a quality and safety team, can support staff by providing oversight to inform, align and action system change. Their involvement bridges the disconnect that is often seen between hospital quality & safety departments and frontline healthcare staff [18].

Meeting Preparation

Effective organisation of M&M meetings is key to ensure that meetings are run consistently, and actions are documented and monitored appropriately. Failure to prepare and organise meetings in advance risks staff disengagement from the process. [25]

The characteristics of an effectively run M&M meeting include:

- Meetings held at regular intervals; frequency will be dependent on individual unit/department and/or organisation size, workload, and volume of cases requiring review. For larger organisations, shorter and more frequent meetings are likely to be more engaging for staff, ensure cases are reviewed relatively contemporaneously, and requires less preparation time. [4 25]
- Where possible, hold M&M meetings in protected time and during regular business hours to enable maximal staff attendance.
- An agenda (see M&M Agenda template) is created and distributed to all relevant staff prior to the meeting. Early distribution ensures:
  - There are no surprises. Involved staff must be informed their case will be presented at the meeting so they can choose whether to attend the meeting and be actively involved in discussions.
  - Those involved are given the opportunity to tell their story and provide context. Their input will provide feedback on positive aspects of cases, identify opportunities for improvement, and may assist in proposing solutions. [31]

Effective M&M meetings are dependent on strong administrative support as described below.

Key administration tasks

- Book an appropriate meeting space that will accommodate all invited staff, providing adequate privacy to discuss sensitive clinical information and allowing for display of relevant meeting documents/presentations.
- Distribute meeting invites and an agenda with consideration for a virtual link for online participation to encourage staff engagement.
- Maintain records of attendance.
- Take meeting notes for the purpose of updating presentation slides and generating the Record of learning. Particular attention should be paid to discussion points and any new or additional contributory factors considered relevant.
- Any notes taken during the meeting should be considered confidential. They should be de-identified, kept securely, and destroyed when no longer required.
- Generate and circulate the record of learnings report (see Record of learnings & recommendation/action monitoring template).
- Manage action items from previous meeting/s, including recommendation/action log.
- Maintain a secure, restricted access database of all M&M cases. Copies of both Record of learnings and PowerPoint slides should be stored to assist with future review and follow-up of recommendations.
- Local and operational quality and safety oversight of this database can assist with tracking local trends and the identification of recurrent patient safety-related incident themes and associated improvement initiatives.
- Generate Quarterly/Periodic reports (see Quarterly/Periodic report template) for higher governance committees/hospital boards with documented aggregate trend data, high-risk organisational issues and mitigation strategies.

Case selection

The Head of Unit/Department or a delegated departmental Quality Lead should determine which cases qualify for M&M review, the number of which will vary according to health service size and case load.

Formal reporting requirements should be considered when selecting cases for review. Cases requiring formal reporting include:

- Selected deaths (to Coroner or to the Office of the Chief Psychiatrist - contact the Coronial Admissions and Enquiries to determine if a death is reportable).
- Cases that meet Sentinel Event criteria,
- Cases that meet legislative criteria for Statutory Duty of Candour.

Cases referred for M&M review that meet reporting criteria may inform/contribute to the formal adverse event review but cannot replace that process.

Consideration should be given to delaying presentation of sentinel event or SAPSE cases at an M&M meeting until the formal review is completed. If these cases are discussed prior to formal review completion, a repeat presentation at the conclusion of the formal event review may be required to share and disseminate findings and recommendations.

Restricting M&M case selection to only mortality reviews and adverse outcomes limits learning and improvement opportunities. Safety-II cases should be reviewed to provide opportunities to understand and learn from everyday clinical work and when care goes well. [2 17 32 33] Safety-II cases that could be reviewed include:

- Excellent care episodes (both expected and unexpected successes)
- Cases that had a positive outcome yet had the potential to go poorly, particularly if there have been previous events with a poor outcome, or multiple near misses with the same theme.

Other types of cases to be reviewed should have one of the following:

- **Outcome impact**: a potential or actual adverse outcome for the patient that requires review to understand what happened and why, and to address any potential risks for patient safety in the system.
- **Learning potential**: cases from which all staff and the broader healthcare organisation can learn.
- **Systems impact**: a recurrent event, or an event that is likely to occur again in the future and could potentially be addressed through systems-based recommendations.

Mortality screening & mortality cases for review

Standardisation of mortality screening will assist health services in applying a consistent approach to the review of all deaths. An initial screening process will identify which cases warrant further assessment and discussion at an M&M meeting to identify any areas for improvement. Deaths that are screened and classified as unexpected, preventable, or as a direct result of medical intervention e.g. deaths screened and categorised as 3, 4, and 5 in the mortality classification table (Table 1) below should be reviewed and escalated as a sentinel event or SAPSE where required.

Table 1: Mortality classification

Classification	
1a	Anticipated/expected death and all appropriate management was undertaken (eg terminal illness, disease progression)
1b	Death post out of hospital cardiac/respiratory arrest despite appropriate management
2	Death that occurred despite known preventative measures taken in an adequate and timely fashion
3	Unexpected death that was not reasonably preventable with clinical intervention*
4	Unexpected death unrelated to illness progression, different from expected outcome, preventable and/or steps not taken to prevent it*
5	Unexpected death*
*Note. Category 3,4 and 5 should be reviewed in M&M meetings	

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Unit Key Performance Indicator Monitoring

The inclusion of objective data analysis (where available) will help to contextualise and compare your organisation's outcomes over time and against local and/or national benchmarks. Analysis may include statistical key performance indicators (KPIs) specific to individual organisations and departments/units. Examples of KPIs to review could include:

- Safety culture – refer to Victorian safety culture guide
- Bed access and flow block
- door to needle/balloon time (cardiac catheterisation)
- hospital acquired complications as per Australian Commission on Safety and Quality in Health Care (ACSQHC). For more information on these see Hospital-acquired complications (HACs) | Australian Commission on Safety and Quality in Health Care.
- access to health care including:
  - numbers of patients requiring transfers to other facilities
  - reasons for transfer
  - mode of transfer (Newborn Emergency Transport Service (NETs), Paediatric Infant Perinatal Emergency Retrieval (PIPER), Adult Retrieval Victoria (ARV), Ambulance Victoria (AV))
- use of telemedicine support service (i.e. Victorian Virtual ED (VVED) service)
- mental health presentations
- maternity care including Severe Acute Maternal Morbidity (SAMM). For more information on SAMM see:
  - Maternal morbidity indicators | Australian Commission on Safety and Quality in Health Care
  - Maternal Death or Harm | Safer Care Victoria / Consultative Council on Obstetric and Paediatric Mortality and Morbidity (CCOPMM)

Cases identified from or related to any of these KPI categories can be reviewed and discussed in more detail at M&M meetings to examine them for any systems contributory factors.

Tables 2 & 3 summarise potential sources for cases to be presented at M&M meetings. They also list the types of cases that are not appropriate for discussion.

Table 2: Summary of cases for M&M presentations

Potential sources for appropriate cases:
Selected deaths e.g. • Unexpected deaths, deaths as a result of medical intervention, and/or those referred to the Coroner
Cases identified through the Victorian Health Incident Management System (VHIMS)/Riskman/other institutional reporting systems e.g. • ISR 1s & 2s, sentinel events, and serious adverse patient safety events (SAPSEs) • ISR 3s & 4s, lower harm events
Cases identified through hospital medico-legal claims
Cases relating to key performance indicators e.g. • Iatrogenic complications of treatment, significant patient injuries (including delayed discharges due to complications) • Unplanned readmissions (ED – within 72hrs, inpatient units – within 30 days)

• Unplanned ICU admissions • Unplanned returned to theatre (same admission, or following recent admission) • Healthcare associated infections e.g. surgical site infection, pneumonia, peripheral IV cannula infections, infected prostheses • ACSQHC Clinical Care Standards (https://www.safetyandquality.gov.au/standards/clinical-care-standards) e.g. venous thromboembolism, delirium, sepsis etc. • Severe Acute Maternal Morbidity Indicators (https://www.safetyandquality.gov.au/publications-and-resources/resource-library/severe-acute-maternal-morbidity-samm-definitions-and-specifications)
Cases referred from other clinical units
Near misses
Severe Acute Maternal Morbidity (https://www.safercare.vic.gov.au/report-manage-issues/mental-harm-death) • Women who were pregnant or had given birth in the past 42 days, who were admitted to an adult intensive care unit, or • Women who nearly died but survived a complication that occurred during pregnancy, childbirth or within 42 days of birth or termination of pregnancy.
Themes from organisational risk register
Significant consumer or family/carer feedback
Safety-II cases e.g. • Consumer and/or interdisciplinary compliments • Excellent care episodes (both expected and unexpected successes) • Complex presentations with positive outcomes despite multiple risk factors

Table 3: Inappropriate M&M cases

Inappropriate cases for M&M review (examples)
Individual performance issues (including overt violations and risky/reckless behaviours)
Where harm is suspected to be intentional

Theming M&M meetings

To augment learning potential from M&M cases, departments could consider grouping clinical cases with a certain theme or clinical problem. This could help identify patterns across outcomes and findings that can lead to broader learning opportunities. Such case themes may be identified after multiple of the same, or very similar patient safety events. Examining multiple of the same cases in one meeting can strengthen the examination of both systems and clinical issues, and the actionable recommendations proposed. This approach could also be considered on a broader perspective to encourage sharing and learnings among health services within a region.

Systems themes identified from M&M meetings should be monitored on a departmental/unit (for larger services with multiple departments), and higher governance level (or organisation wide). This will help health services identify key risks that warrant addition to the organisational risk register and implement mitigation strategies to address these. This is covered in more depth in the section on Sharing lessons learned & governance oversight.

Standardised presentation format

The Chair/Facilitator of the M&M meeting should set the tone of the meeting and brief the attendees on values, attitudes, and behaviours to be upheld. Standard elements of an M&M meeting should include:

- Acknowledgement of Country
- reminder to staff of their roles and responsibilities as part of the M&M team
- purpose of the meeting focusing on Just Culture principles and a psychologically safe environment for learning and system improvement
- reminder of patient and staff confidentiality. There should be no patient or staff identifiers.

An action monitoring table is advised to ensure ongoing accountability for previous meeting recommendations, and to discuss potential barriers to completion. Dedicating time to review these at the start of every meeting can help sustain staff engagement in change implementation and fosters a positive safety culture.

Unit specific KPI monitoring relevant to patient safety can be included to monitor trends over time. Comparison to other hospitals and/or national standards is recommended if that data is available.

SBAR or ISBAR format

The known and validated "Situation-Background-Assessment-Recommendation" (SBAR or ISBAR if "Introduction" included) approach is recommended for presenting M&M cases. The SBAR model has also been shown to improve the quality of presentations and educational outcomes. [35] Table 4 describes this in more detail. An M&M PowerPoint slide deck template has also been developed to support this approach.

Table 4: ISBAR format for M&M case presentations

Heading	What to include
Introduction	Brief description of patient's relevant clinical information; single slide only Admitting diagnosis, procedure/operation (this could be combined with "Situation")
Situation	Statement of problem/situation of event Timeline of event based on the medical record. Only present relevant information "What happened" and "why" there is a need to review the case
Background	Clinical information relevant to the event: • Past history • Indication for intervention, procedural details • Hospital course (include relevant labs/imaging), non-procedural events related to adverse event • How/when event/complication was recognised • Management of event
Assessment & Analysis	Identify contributing factors using the systems-focused case analysis tool. This includes what happened at the time of the event from the perspective of those involved. Both the personal and systems reflections are needed. This information can only be obtained by talking with a sensitive, Just Culture focused approach, to staff involved in the case PRIOR to the M&M meeting. Use questions as shown in Figure 3 as a guide as to how to approach speaking to staff. Present any relevant evidence-based literature related to the event. Summarise learning points (positive and negative) to inform improvement.
Recommendations (& Actions)	Identify systems-based recommendations to mitigate the reoccurrence of the same event in the future/ reduce harm if the event were to reoccur. For safety-II cases, extract lessons learnt about what went well and develop them into recommendations to assist with future cases where similar cases may have an adverse outcome [2]

Systems-Focused Case Review Tool

The Systems-Focused Case Review Tool, which is part of the M&M toolkit, guides staff to consider key contributory factors, within each layer of the socio-technical healthcare system. It can be used for both Safety-I (cases with an adverse outcome) and Safety-II cases (positive outcome cases) and can highlight both positive and negative contributors in cases and events reviewed.

Case analysis should ideally be carried out prior to the meeting, the outcomes can then be used to support higher level discussions during meetings. For all cases reviewed it is important to acknowledge that:

- Staff do not set out to intentionally cause patient harm.
- Decisions made were based on a dynamic situation, often with limited information. Consider the context in which the event occurred.
- In retrospective case reviews, you know the outcome, and you have access to information that was not available at the time. Cognitive biases affect how we view events and any decisions made (e.g. hindsight bias and attribution bias). Biases need to be recognised and considered during the review process.

Within the tool there are several trigger questions to help case reflection.

Document management

It is suggested that health services develop a platform (e.g. a secure database, site or portal) to hold information from M&M reviews. This should be discussed and decided upon by executive staff and the quality & safety team (or equivalent).

If developed, the platform could contain:

- Portals for multiple departments/units with individualised administrative controls to maintain membership lists and personnel with access to the portal.
- Meeting management:
  - M&M ToR specific to each department
  - calendars with scheduled meetings and their relevant agendas
  - templates for individual unit use (to aid presentation preparation, Record of learnings and other regular reporting)
  - lists of suggested cases for presentation
  - central storage for previous presentations, Record of learnings, recommendation monitoring, and general themes.
  - storage of higher governance committee periodic reports.

A secure platform allows clinical governance/quality and safety unit and executive access to all M&M review data for organisational oversight of trend data and themes.

If the platform described is not achievable, health services should ensure that as a minimum:

- M&M documents are kept in a secure location
- M&M documents are accessible by all relevant parties within the department/unit, executive and quality teams
- there are clear reporting lines both up to executive, and back to the departmental/unit level.

M&M Meeting

The M&M meeting chair (or facilitator) plays an essential role in managing the meeting such that the proceedings follow the agenda, that there is full and productive engagement of the members in case reviews and that this is achieved whilst fostering a positive safety culture among members. Key elements of this include:

- A focus on the system, not on individuals.
- A focus on learning, not on blaming. Discussions that apportion blame should be terminated and any feedback should be fair, constructive, useful, and delivered sensitively.
- Discussion is open and non-judgemental.
- Staff contributions are valued.
- Where there is conflict, it is managed diplomatically and sensitively.
- Limitations of hindsight and outcome biases are recognised.

All meeting participants have a responsibility to model appropriate professional behaviour that is non-judgemental and creates an open and honest environment for objective case review. [2 36]

Members should:

- be mindful of the emotional impact that cases may have on colleagues.
- be ready to provide additional peer support when needed [2].

The anticipated result is a positive and safe team culture with trust, shared understanding, and accountability.

Case Review Discussions

Successful and comprehensive case discussions are only achievable through the leadership of the M&M chairperson. Case review should follow a standardised format and after each case presentation summary the meeting should be opened to all staff present for further discussion.

The Systems-Focused Review Tool is most effective when used during the preparation of case presentations, but it can be used during meetings to:

- Guide systems-focused reflections and discussion,
- Promote a safety culture by steering away from individual blame; and
- Provide some safety systems education to clinical staff.

With either method of use, the discussion is an opportunity for staff to volunteer any additional information not mentioned or considered during the formal case presentation. Discussions can be used to clarify, respectfully challenge analyses and comments from colleagues, or propose new or additional contributing system-factors not previously considered.

It is common for case presentations and meeting discussions to be “problem saturated”. A Safety-II approach emphasises learning from positive situations and considers frontline healthcare staff as a resource. It is therefore important to consider:

- What went well despite the sometimes-adverse outcome and complexities?
- How can the positive aspects be replicated?
- How do things mostly go right, and what contributed this time to the adverse outcome?

- What positive capacities can be encouraged?

Following constructive discussion, recommendations, and actions to address the system failures can be considered and discussed amongst the craft group. (37)

Key points to remember

- All information should be de-identified (for both patients and staff involved).
- Analysis and discussions should focus on systems and processes, not individuals.
- Consider the impact all elements outlined in the Systems-Focused Case Review Tool.
- Recognise cognitive biases when forming opinions where the outcome is known.
- Record key discussion points, recommendations and actions, and broad themes identified during the meeting; these can be circulated in the M&M Record of learnings report (see template) and in the Quarterly/Periodic reports.

Recommendations & actions development

Recommendations are developed at the end of a case review. The goal of these is to develop and implement system improvements to prevent a similar event from occurring in the future or reduce the risk of harm to an individual should the same or similar event reoccur. To be effective, recommendations need to directly address the safety issues identified.

Recommendations should not be confused with actions.

- **Recommendations** describe the end goal/outcome that is aimed to be achieved.
- **Actions** are the steps that need to be taken to achieve the recommendation.

Recommendation and action example

Safety issue identified: Similar drug packaging for high potency opiate medication, and poor drug cupboard design (higher potency drugs not clearly labelled/separated from others) contributed to a confusion of both medications and consequent medication errors.

Recommendation: Redesign the drug cupboard and source medications with non-lookalike packaging to support staff in differentiating medications effectively.

Action: Pharmacy to separate high potency drugs from others and use warning labels (interim action to address real and present risks to patient safety). Pharmacy to review and source medication with non-lookalike packaging from alternative suppliers and engage human factors expert to assist cupboard redesign.

See the Record of learnings template which includes recommendation and actions monitoring to guide activity in this area.

S.M.A.R.T principles and recommendation strength

Recommendations should be written and developed in accordance with S.M.A.R.T principles as shown in Figure 4. [38 39]

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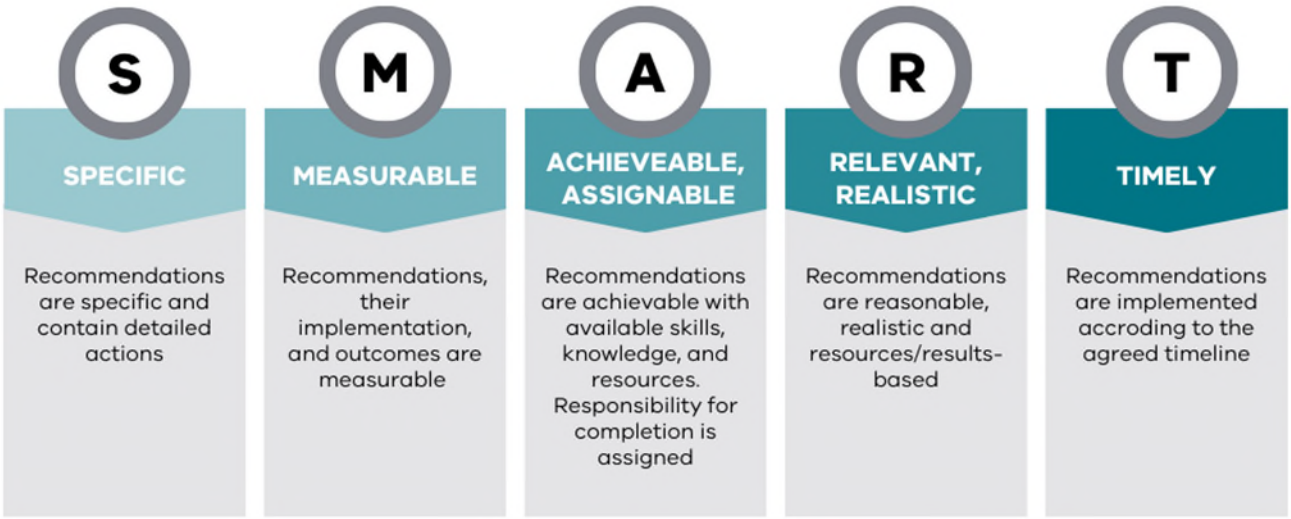

Figure 4: S.M.A.R.T principles for development of recommendations

Recommendations can be considered according to their strength or level of impact on the system. Generally, a recommendation can be considered strong, moderate, or weak in relation to their system impact and, quality and safety improvement, Figure 5 represents this hierarchy. [40] Further information on types of recommendations and their strength can be found in Appendix 2: Guide to strength of recommendations table.

It is important to consider any work already in progress at the health service, how recommendations should be supported, and any working parties or groups that need to be developed or engaged to assist in implementation.

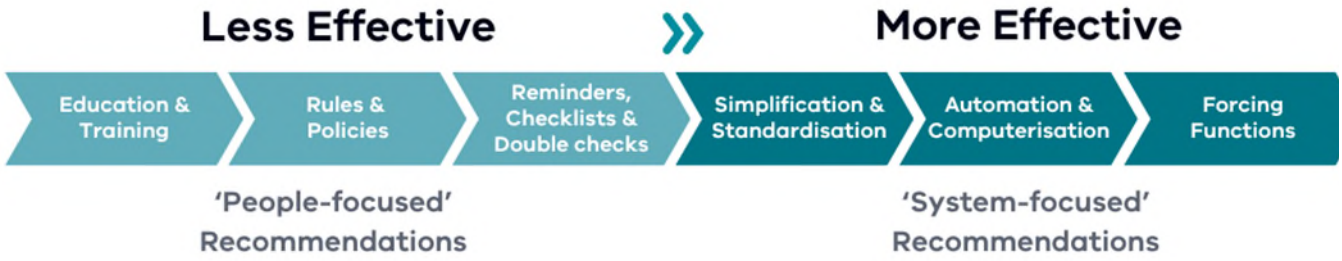

Figure 5: Hierarchy of recommendation effectiveness [41]

Moderate and strong recommendations are systems focused. They will consider automation and computerisation, forcing functions or simplification and standardisation.

Weak recommendations are people-focused and aimed at education and training, reminders, checklists and double checks or rules and policies.

To have maximal impact, recommendations should be strong to moderate. Weak recommendations should be considered in the short term to support systems-focused recommendations, however, should not be the only recommendations developed. It is better to have fewer, high quality, moderate to strong recommendations than multiple weaker ones.

Key points to remember

Recommendations and actions should:

- Be relevant to the quality and safety issue/s identified.
- Focus on addressing quality and safety issues with systems improvements.
- Be agreed upon by all members present at the meeting.
- Help prevent recurrence of a similar event or reduce the risk of recurrence of similar events.
- Be **S.M.A.R.T** (specific, measurable, achievable, realistic, and time-based).
- Have individuals assigned/allocated to ensure actions are completed; they should be aware and agree to this responsibility.
- Be recorded in the form of M&M record of learnings that contain an Action Monitoring Report to maintain accountability.

The central aim of the M&M meeting is to learn from events and improve patient care. M&M meetings should not operate in isolation. Currently M&M meetings are often 'siloed' in individual departments/units, making them a relatively untapped resource for broader organisational change. [1] With effective governance oversight and clear reporting lines, lessons learned in M&M's can be shared with department/unit M&M members, other professions, and the organisation more broadly to drive quality improvement initiatives.

M&M Record of learnings

M&M Record of learnings that contain a recommendation & action monitoring report are the simplest method of sharing learnings.

Forwarding the Record of learnings document via established clinical governance pathways improves and maintains organisational governance oversight, process support, and accountability, as does the regular review of action monitoring report tables at the start of M&M meetings. Regular review at the departmental and organisational level develops clear reporting lines and enables responsible persons to provide regular status updates and escalate issues where significant barriers are identified.

Reporting

The M&M meeting will report through the organisations governance structure with meeting findings utilised to inform, align, and action system change across the entire organisation.

Quarterly reporting

Formal periodical reports of M&M outcome data using the M&M Quarterly/Periodic report template provides higher governance committees with individual department trend analyses, themes, and recommendation monitoring.

With appropriate Clinical Governance and/or Quality & Safety team (or similar) support, this periodical review ensures that:

- Improvements in care have been made, agreed actions have been followed up and completed, and any changes to care systems implemented are monitored.
- Where actions have not been completed, escalation and traction can be gained to achieve these actions.
- Patterns or themes in emerging safety issues are identified; outcome data can be reviewed and analysed to identify broader organisational risks and potential quality and safety improvement initiatives.

Meeting evaluation

Regular evaluation of M&M meetings should take place, for member and participant feedback to ensure the meeting is achieving its purpose as described in the ToR.

Evaluation should seek to capture evidence of the impact of M&M meetings on improving the quality and safety of patient care, team performance and organisational learning.[(2)] Any feedback from participants should be acted on accordingly.

The reflective questions below could assist in M&M process evaluation:

- What is working well?
- What could be done better?
- Are the goals of the M&M meeting process being consistently met?
- What evidence is there that the meetings are making a difference in terms of patient care and learning from an individual, departmental and/or organisational level?
- Has a systems approach to learning and improvement been adopted?
- Are human factors principles and approaches being applied?
- Is the M&M process contributing to building a strong safety culture? [(2)]

Methods of assessment

- Surveys of meeting participants (email or another format).
- Evaluation forms post meeting on a periodic basis.
- Open discussion – additional evaluation meeting or added on to the end of an existing meeting.
- Formal focus group with key stakeholders.
- Informal discussions with selected participants (multi-/interdisciplinary craft groups).
- Outcome data review relating to reduction in events and complaints.

Review of M&M outcomes (KPI trends, and emerging themes/trends) should be conducted at both a unit/departmental level and by the relevant higher governance committee to ensure accountability is upheld, recommendations have been completed within the agreed time and the recommendations implemented have resulted in improved quality and safety. This process will also provide an opportunity for any barriers to implementation to be discussed and escalated as required.

System impact

Sharing lessons learned

Sharing of review outcomes is key to achieving system-wide improvement in the safety of care. Robust processes should be in place that support the broad sharing of lessons learned from M&M meetings. At an organisation level, review outcomes should be shared within and across speciality departments and sites. This will ensure that learnings are applied in other areas where similar events may occur. Significantly. outcomes should be shared not only within the health service, but also across the health sector. At an organisational level, review outcomes and learnings could be shared at:

- Ward/ Unit meetings
- With education units to inform simulation activities and scheduled learning
- Quality and Safety meetings/huddles
- With National Standard leads/special interest groups.

More broadly, case presentations, including outcomes, learnings and improvement strategies, could be presented at regional M&M meetings.

When sharing review outcomes, it is valuable to consider the potential impact on the staff who were involved in the events. It may be more appropriate to focus on themes and systems improvement opportunities, rather than communicate in depth case information.

Utilising adverse event reporting systems for sharing

Organisational adverse event reporting and management systems such as Riskman/VHIMs can be used to share review findings. Incidents reported via these systems can be used to document events, and subsequently record outputs from M&M reviews. Recommendations and related actions, along with any lessons learned, are then formally documented, and linked to the original incident report and shared with relevant linked staff and with specified distribution groups specialties. Some organisations may also have access to Riskman Q (or similar) to monitor improvement activities within their departments or integrate multiple projects for broader organisational impact.

Summary of ways to share outcomes from event reviews

- Feeding back findings to craft group and multi-/interdisciplinary staff who have participated
  - M&M Record of learnings
  - Key safety messages at staff huddles, handovers, and department/unit education meetings
  - Documenting outputs in adverse event reporting and management systems
- Sharing lessons more broadly
  - Quality meetings, including local, organisational, or regional levels
  - A monthly quality newsletter with de-identified case summaries outlying one or two key findings staff can learn from
  - Aggregated data on themes from findings and lessons learned
  - Incorporated into education and training across health service e.g. interdisciplinary simulation and induction training
  - Hospital "Grand Rounds" - hospital wide educational meeting inviting all staff to attend

Appendix 1: Cognitive bias table [18, 41]

Bias type	Definition
Stereotyping	The tendency to associate certain attributes, characteristics, and behaviours with members of a particular group of people
Hindsight bias	". . . reporting an outcome produces an unjustified increase in its perceived predictability, for it seems to have appeared more likely than it actually was."
Outcome bias	Tendency to evaluate a decision based on its outcome rather than the factors that contributed to the decision at the time it was made
Saliency	Prominent items of information are more likely to receive attention and are given more weight
Confirmation bias (includes related positive hypothesis testing, search satisficing, premature closure)	The tendency to more easily accept and look for information that confirms existing beliefs.
Primacy and recency effect	We tend to best remember the first and last piece of information
Groupthink	The desire for harmony or conformity in a group leads to irrational decision-making outcomes
Fundamental attribution error	When someone else does something, we emphasise character or intention rather than external factors to explain behaviour (and the opposite when we do something)
Availability bias	". . . situations in which people assess the frequency of a class or the probability of an event by the ease with which instances or occurrences can be brought to mind."
Framing effect	"The psychological principles that govern the perception of decision problems and the evaluation of probabilities and outcomes produce predictable shifts of preference when the same problem is framed in different ways."
Optimistic bias	"According to popular belief, people tend to think they are invulnerable. They expect others to be victims of misfortune, not themselves. Such ideas imply not merely a hopeful outlook on life, but an error in judgment that can be labelled unrealistic optimism."
Base rate neglect (also denominator neglect and pseudo diagnostic reasoning)	". . . refers to people's tendency to pay too much attention to numerators in ratios (i.e., the number of times a target event has happened) and insufficient attention to denominators (i.e., the overall opportunities for it to happen)."
Overconfidence	". . . an individual's overvaluation of her or his own skills, knowledge, or judgment."
Anchoring bias	". . . people make estimates by starting from an initial value that is adjusted to yield the final answer. The initial value, or starting point, may be suggested by the formulation of the problem, or it may be the result of a partial computation."
Impact bias	". . . people overestimate the intensity and duration of their emotional reactions to future events—even when they know what the future event is likely to entail, and they are not in a particularly 'hot' or 'cold' emotional state at the time of making their forecast."
Order effect	". . . refers to the phenomenon that the temporal order in which information is presented affects the final judgment of an event."

Appendix 2: Guide to strength of recommendations [38]

Strength	Recommendation category	Example
Strong actions	Architectural/physical changes in surroundings	Replace revolving doors at the main entrance into the building with powered sliding or swinging doors to reduce patient falls.
	New devices with usability testing	Perform pre-purchase testing of blood glucose monitors and test strips to select the most appropriate for the patient population.
	Engineering control (forcing functions which force the user to complete the action)	Eliminate the use of universal adapters and peripheral devices for medical equipment; use tubing/fittings that can only be connected the correct way.
	Simplify process and remove unnecessary steps	Remove unnecessary steps in a process; standardise the make and model of medication pumps used throughout the organisation; use barcoding for medication administration.
	Tangible involvement by leadership	Participate in unit patient safety evaluations and interact with staff, purchase needed equipment, ensure staffing and workload is balanced.
Moderate actions	Redundancy	Use two RNs to independently calculate high-risk medication dosages.
	Increase in staffing/decrease in workload	Make float staff available to assist when workloads peak during the day.
	Software enhancements or modifications	Use computer alerts for drug–drug interactions.
	Eliminate/reduce distractions	Provide quiet rooms for programming PCA pumps; remove distractions for nurses when programming medication pumps.
	Education using simulation-based training with periodic refresher sessions/observations	Conduct patient handover in a simulation lab environment, with after-action critiques and debriefing.
	Checklist/cognitive aids	Use pre-induction and pre-incision checklists in operating rooms; use a checklist when reprocessing flexible fibre optic endoscopes.
	Eliminate look- and sound-alikes	Do not store look-alikes next to one another in the medication room.
	Standardised communication tools	Use read-back for all critical lab values; use read-back or repeat-back for all verbal medication orders, use a standardised patient handover format.
	Standardise process	Implementing a new standardised process for handover.

Strength	Recommendation category	Example
Weak actions	Double checks	One person calculates dosage, another person reviews their calculation.
	Warnings	Add audible alarms or caution labels.
	New procedure/memorandum/policy	Remember to check IV sites every two hours.
	Training	Demonstrate the defibrillator during an in-service training.
	Share outcomes/educational reference	Present at M&M as educational example. Share in newsletters. Add to orientation guides
	Further review/develop action plan	Present at M&M as educational example. Share in newsletters. Add to orientation guides

Appendix 3: Other educational resources

The NSW Clinical Excellence Commission have developed a podcast series to explore the guiding principles of effective M&M meetings. They discuss the significant challenges in relation to culture and leadership, and highlight the significance of psychological safety, effective leadership, and diversity of team perspectives to enhance M&Ms for learning and improvement.

Listen to the podcast on your phone or desktop via Spotify or Google Podcasts.

Victorian Safety Culture Guide

Victorian Clinical Governance Framework

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