Introducing an M&M Rounds framework to Island Health

Updated January 2024

the Ottawa M&M Model:
A Guide to Enhancing Morbidity & Mortality Rounds

For Presenters

- Case Selection and Analysis guide
- Presentation Preparation template
- Tips for enhancing your session

For Facilitators

- Guide to preparing for and administering M&M rounds
- Recommendations on moderating M&M rounds
- Tips for increasing the effectiveness of M&M rounds

Adapted for Island Health by the Health Authority Medical Quality Committee (HAMQC) mortality review working group from "The Ottawa M&M Model: A Guide to Enhancing Morbidity & Mortality Rounds", Version 4.0 (August 2021).
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Contents

The Background

ACKNOWLEDGEMENTS

This model was developed at the Ottawa Hospital to reinvent the approach to M&M rounds[1,2]. Many thanks to Lisa Calder and Edmond Kwok for sharing their expertise and learning with us.

ORIGINS OF M&M ROUNDS

The first documented morbidity and mortality review activity in modern medicine occurred at the beginning of the 20th century. Ernest Codman, a surgeon at Massachusetts General Hospital, developed and published the idea of an "End Result" system - individual patients were tracked with regards to their clinical course, and identified errors would be reviewed with the goal of preventing future ones[3]. However, Codman's system was framed more as a physician-focused punitive process rather than a patient-centered quality and safety activity, and the medical community rejected this idea.

Two decades after Codman's initial work, a group of anesthesiologists in Philadelphia created the Anesthesia Mortality Committee in 1935, where peri-operative mortalities would be submitted for open peer review with the goal of developing recommendations for improved future management of similar cases[4]. This seminal work laid the foundations for M&M rounds as we know them today. The Accreditation Council for Graduate Medical Education declared regular M&M review activities as a mandated requirement for residency training certification in 1983[5], and M&M rounds have become ubiquitous across specialties in modern medicine.

THE PROBLEM WITH CURRENT M&M ROUNDS

Despite decades of regular M&M rounds held throughout medicine, there has been very little published evidence on the overall quality of these rounds, and even less on their effectiveness in reducing preventable medical errors. A number of observational studies have shown that while M&M rounds were regularly held by many different groups, only a small minority of them had explicit discussions around medical errors[6,7] or formal structures in place to assist in proper case analyses[8,9]. Only a few studies (with narrow scope of specialty groups) have been published to definitively demonstrate any measurable impact on improved patient safety or reduced medical errors.

THE OM3 MODEL

After a current state analysis of the Ottawa Hospital academic tertiary care hospital, 4 main reasons why M&M rounds (regardless of specialty) were ineffective were found:

1. For those clinical groups that hold regular M&M rounds, the actual goal/purpose of these rounds were unclear, or if stated at all, to both the presenters and the participants
2. Presenters were frequently tasked with M&M rounds activities without structured guidance on how to prepare a M&M case for presentation and discussion
3. Cases often entered around rare and unusual cases (fascinomas) with limited learnings and generalizability
4. There was a universal lack of explicit mechanisms for actioning any potential issues arising out of M&M rounds discussions

The Ottawa M& Model was developed in response to the perceived gaps listed above. A working group consisting of experts in patient safety, medical education and healthcare change management (in addition to frontline healthcare professional) initially developing a guiding document to assist the average M&M rounds presenter in case preparation. Over time, additional important contributing factors to effective rounds were realized and incorporated. The cumulation of these efforts evolved into the final OM3 approach that was implemented and evaluated across different specialities [10 11]. The critical components of the OM3 model are summarized in Box 1 to the right.

This document is designed to provide guidance and advice for both:

a) Individuals who are tasked with presenting cases at M&M rounds, i.e. the Presenter; and
b) Those who are responsible for organizing and moderating those rounds, i.e. the Facilitator.

KEY COMPONENTS
Appropriate Case Selection
Structured Cases Analysis (Cognitive/System Errors)
Creation & Dissemination of Bottom Lines/Summaries
Development of Effector/ Administrative Pathway for Action Items
Encourage Inter-professional & Multidisciplinary Involvement

Box 1: Components of the OM3

M& M ROUNDS AT ISLAND HEALTH

The Health Authority Medical Advisory Committee (HAMAC) has a responsibility to ensure high quality medical care. The Health Authority Medical Quality Committee (HAMQC), a subcommittee of the Health Authority Medical Advisory Committee (HAMAC), is working towards a standardized, island-wide approach to morbidity and mortality rounds (M&M rounds), to support a standardized approach to learn from clinical experiences and raise quality and safety issues through the organization.

M&M rounds provide a forum for medical education, quality improvement, and risk management. They enhance the ability of medical staff to participate in clinical care quality improvement and bring together the multidisciplinary team to learn as a team and to escalate improvement ideals beyond their sphere of influence, all of which will contribute to improved patient care quality and safety in Island Health.

WHY THIS MODEL AT ISLAND HEALTH

A working group of the HAMQC undertook a review of potential M&M rounds models for adoption within Island Health. OM3 was chosen because it focuses on reviews for learning and serves a different purpose than critical incident reviews, case rounds, and medical grand rounds. This model will provide a common template to identify issues of concern for clinical staff that are distinct from patient safety events and provide a unified mechanism to elevate those concerns to the HAMQC, the HAMAC, and the Board of Directors.

Patient Safety and Learning System

The Patient Safety and Learning System (PSLS) is a voluntary reporting system that enables notification, tracking and theming of patient safety events. M&M rounds support review of events reported in the PSLS system, particularly no harm and low harm events; however, not all cases chosen for review at

M&M rounds are patient safety events (see “Choosing an Appropriate Case”). Cases reviewed in M&M rounds that have not yet been reported in PSLS, and are found to have elements of patient safety, should be reported in PSLS to ensure comprehensive tracking. Review findings may be included at the time of retrospective reporting and the PSLS file closed off. Significant patient safety events (severe harm, death, and/or “Never Events”) may undergo reviews according to the Patient Safety Incident Management process, which also supports systems learning.

Patient Care Quality Office

All health authorities in British Columbia have a Patient Care Quality Office (PCQO) that is mandated to oversee a legislated process of complaints resolution within a defined timeframe. The PCQO process was developed to record, track, report and facilitate resolution to feedback about quality issues in publicly-funded facilities and programs in British Columbia. While M&M rounds support an approach to review events brought by patients and families either directly to a care provider or through the PCQO, the PCQO process is a factual review and is not protected by section 51 of the BC Evidence Act. The required organizational response through the PCQO process may extend beyond the M&M Rounds approach.

For Presenters

So, you've been tasked with presenting a M&M rounds case at your clinical group's next M&M rounds…and if you're like many other of your colleagues, you might be experiencing any (or all!) of the following:

- Slightly nervous about talking about "errors" or adverse outcomes
- Do not have a case in mind and/or not sure where to find one
- Unsure about how to approach analyzing the case
- Feeling lost as to how to structure your presentation to maximize potential lessons learned

Have no fear! Read on for a step-by-step guide on how to prepare and deliver an effective M&M rounds presentation that's meaningful for your group. The OM3 is designed to help focus M&M discussions around potential issues that can happen to anyone, by providing a structured, blame-free approach. Who knows, in the process you may even learn a little bit more about quality and patient safety, and ultimately find this to be a fun and rewarding experience!

CHOOSING AN APPROPRIATE CASE

The first step is to find an appropriate case for your M&M rounds. It is important to recognize that not all cases with morbidity and/or mortality are suitable for discussion at rounds. You really want to maximize the valuable time the audience is spending at these rounds and focus the group's attention to issues that can help prevent similar future cases. As such, we recommend that cases presented at M&M rounds have **ALL** of the following three criteria:

1. **Adverse outcome such as death, disability, harm, injury, or a near miss** (potential harm avoided - for example, a patient given incorrect medication due to mislabeling of syringe - potential for harm but the patient ultimately wasn't affected).
2. **Lessons to be learned about cognitive biases and/or system issues**
3. **Opportunities for improvement can be acted upon**

While it may be tempting to present rare and unusual cases, or fascinomas, generally speaking they are often less impactful for M&M rounds discussion than learning from more common cases that have the potential to occur frequently in your group's practice setting. For example, a case of the "pain-free aortic dissection" that a physician might see once every 10 years, will be less impactful than M&M rounds discussions around a missed opportunity to give antibiotics in a patient with early sepsis. Fascinomas should be reserved for other medical education rounds such as interesting Case Rounds.

It is also important that you present a case **in which you were involved.** Often, potential factors that may have contributed to the case can only be fully recalled and analyzed by individuals in the patient's circle of care. Retrospective chart reviews by someone not involved in the case may provide a limited perspective, as many nuances related to cognitive biases and environmental factors (e.g. business aspects of running a clinic) are usually not documented. Having another person reviewing someone else's case may also create the setting for an unwanted "blame and shame" culture, instead of creating a blame-free environment where each individual in the group feels safe to openly discuss ways to improve quality of care and patient safety.

With the above criteria mind, you can now start looking for a suitable case. Presenters often ask where one should even start looking, since many clinicians do not have a robust system in place to prospectively keep track of all their patients and any associated morbidity/mortality. In our experience, here are some potential ways for you to identify a case:

- Cases identified in your group/hospital's patient safety and learning system (PSLS)
- Cases with an unexpected bounce-back or readmission
- Cases highlighted to you by Department Head, Medical Health Officer or the coroner
- Cases where you were provided follow-up by a colleague or consultant
- Cases related to a patient complaint
- Cases which cause you to think about them long after they occurred
- Cases which highlight a recurring system issue/frustration

Remember, you can always ask advice from your group's M&M rounds facilitator for guidance and advice!

It is easy to track potential cases in powerchart by creating a custom "patient list" (see Appendix A for details). If you are involved in a case that you may wish to review, simply add to your custom list. Remember to select "QA/QI Reviewer" when you come back to look at the case later.

PERFORMING A CASE ANALYSIS

Now that you have a case selected, the next step is to do a proper case analysis in preparation for the actual M&M rounds presentation. Keep in mind that the ultimate goal of your M&M rounds is to discuss cases of adverse outcomes which provide lessons that may help prevent future adverse outcomes and improve quality of care. To that end, we recommend that you review your case from two perspectives:

1. Were there any *cognitive biases* that contributed to the outcome?
2. Were there any *system issues* which contributed to the outcome?

Cognitive Biases

Clinical decision-making is an extremely complex process, and healthcare professionals often develop adaptive mechanisms (referred to as *heuristics*) because we are faced with repeated similar experiences in a busy clinical environment. There is a large body of psychology literature which has developed the widely accepted dual process theories (DPTs) of reasoning in trying to understand how we subconsciously utilize Type 1 (intuitive, fast) vs Type 2 (analytical, slow) processes, and how clinicians predictably make cognitive errors as a result of well-defined biases[13,14]. It has been proposed that one of the best ways we can combat these decision-making errors is to first explicitly be made aware of these biases. We can then develop cognitive forcing strategies to prevent them in the future[10].

To help you identify potential cognitive biases that may have contributed to your M&M rounds case, **Appendix B** provides a summary of some of the more common diagnostic cognitive biases. Remember that many of these are common "cognitive traps" that any one of your colleagues in the same situation could have been subject to. As human beings we are all subject to these regardless of our level of training or expertise. Framing your discussions around these biases will help encourage an open, blame-free forum where lessons can be learned.

Be aware that hindsight bias can creep in when reviewing cases too. Consider the information that was available and observable at the time the event was unfolding : what seems obvious now was anything but, then. Explore together 'why it made sense at the time'. Encourage the group to avoid viewing an event through the "retrospectoscope", which can lead to oversimplifications of explanation and, at times, a blaming mindset, of ourselves and/or others.

System Issues

System-level issues often relate to problem(s) beyond just the individual clinician or team, and pertains to how your clinical setting operates. The following is one example of how system issues can be categorized[15]:

- Patient factors: e.g. any communication barrier (due to language, intoxication, obtunded, critically ill, etc.), or behaviour eliciting affective bias
- Skill-set errors: e.g. procedural complications or errors in interpretation of ECGs, laboratory/diagnostic imaging tests
- Task-based errors: e.g. failure of routine behaviours such as regular bedside care, attention to vital signs and appropriate monitoring (often reflects work overload)
- Personal impairment: e.g. personal factors that impact job performance such as fatigue, illness, emotional distress
- Teamwork failure: e.g. breakdown in communication between team members, across shifts, between teams, and across specialty boundaries, or due to inappropriate assignment of unqualified personnel to a given task - this includes resident and student supervision
- Local environmental contributors: e.g. appropriate staffing, stocking, functional equipment, sufficient policies and guidelines
- Hospital-wide contributors: e.g. access to patient services, consultants, inpatient beds, specialty treatments
- Hospital administration contributors: e.g. budgetary constraints, hospital policies and guidelines
- External contributors: e.g. paramedic services, provincial regulations and priorities, public health campaigns

There are often multiple cognitive/system issues at play to ultimately lead to an adverse outcome. Consider Reason's Swiss Cheese Model of error causation:

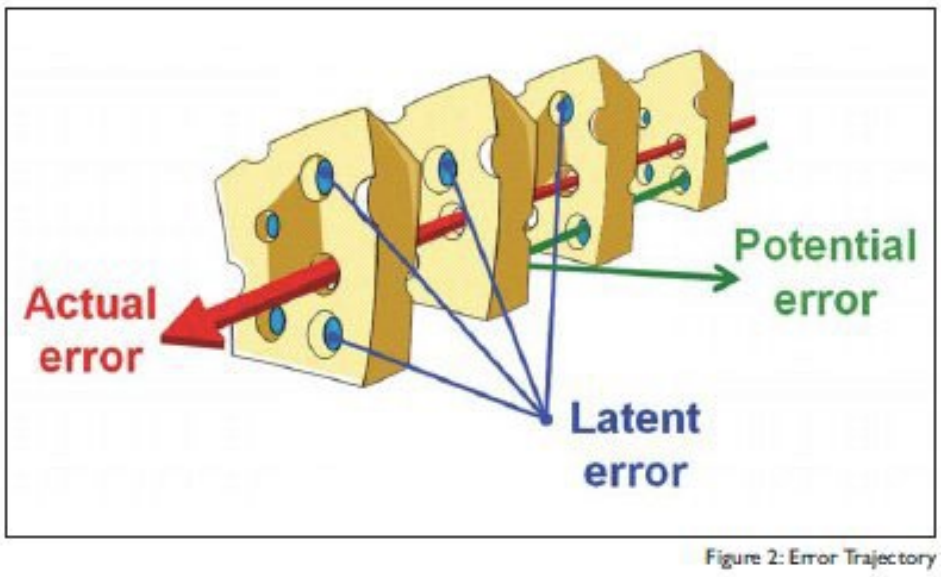


Figure 2: James Reason's Swiss Cheese Model[16]

The different layers can represent points throughout a patient's journey where cognitive and/or system errors could potentially have been prevented. Using such frameworks to systematically review your M&M rounds case will help you identify cognitive and system issues that may have gone unnoticed at first glance.

Framework for Surgical Specialties

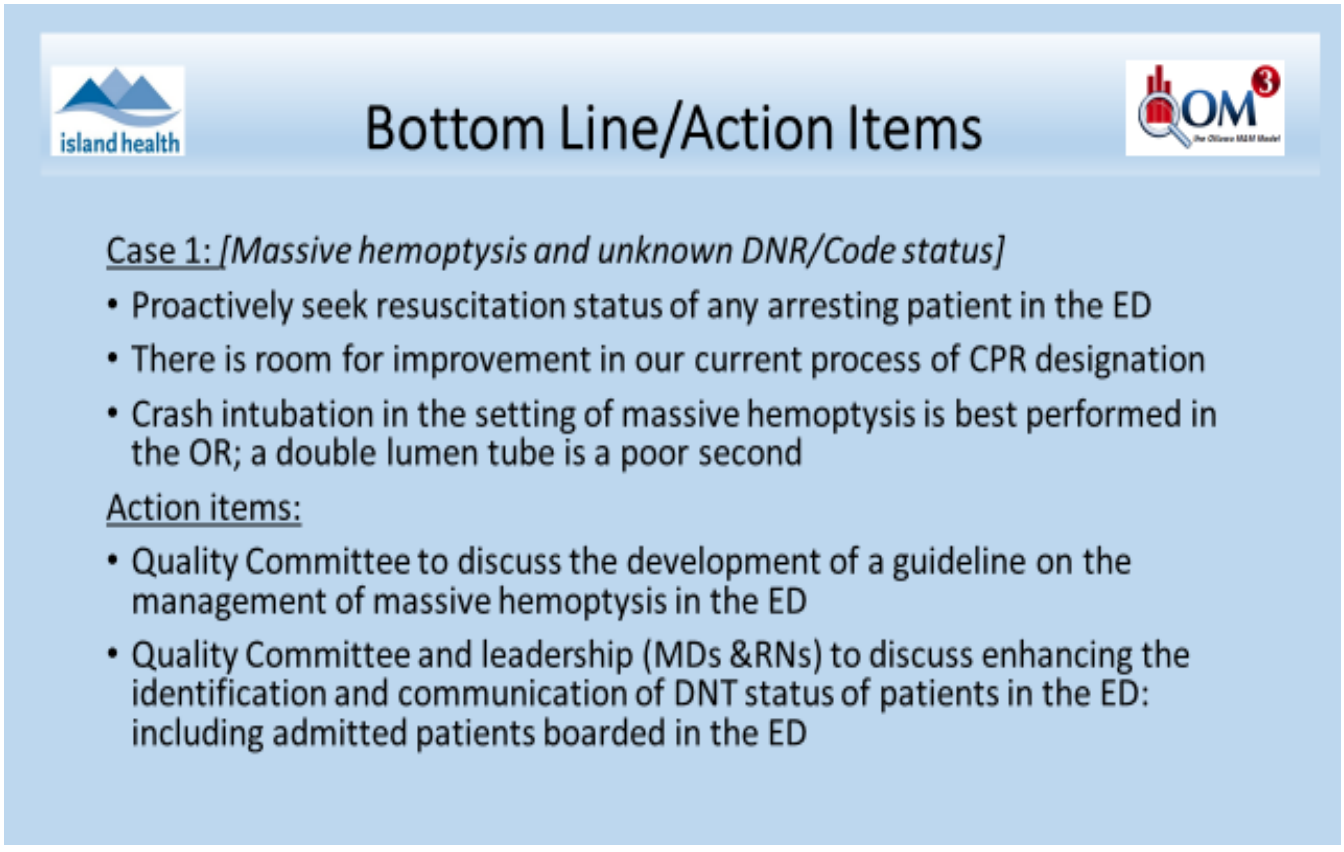
Ottawa's experience with implementing the OM3 in various surgical groups identified the need for a slightly different case analysis framework which reflected commonly understood processes of care. In consultation with surgeons, they developed a Surgical Specialty Case Analysis Tool to help reframe cognitive/system issues as they relate to specific steps within the Pre-OP/Intra-OP/Post-OP continuum. Please refer to **Appendix C** to help you identify potential issues in your surgical M&M case.

M&M Bottom Lines

Now that you have finished analyzing your case, it is time to create "bottom lines" that summarize cognitive and system issues which are suitable for action by your group. When drawing lessons from your M&M rounds case, consider *action items* that can be made, such as:

1. Any cognitive de-biasing strategies
2. Education regarding evidence, practice guidelines, policies, procedures, use of simulation
3. Changes to the system and how the department/division works
4. Ways that the adverse outcome in a similar patient could be mitigated

The following is an example of what a Bottom Lines slide may look like:



When contemplating your proposed actions and recommendations, be cognizant that certain types of interventions are much more effective and consistent than others in reducing errors and improving patient safety. The following diagram depicts the hierarchy of effectiveness, based on human factors theory, which ranks various categories of intervention based on their overall effectiveness:

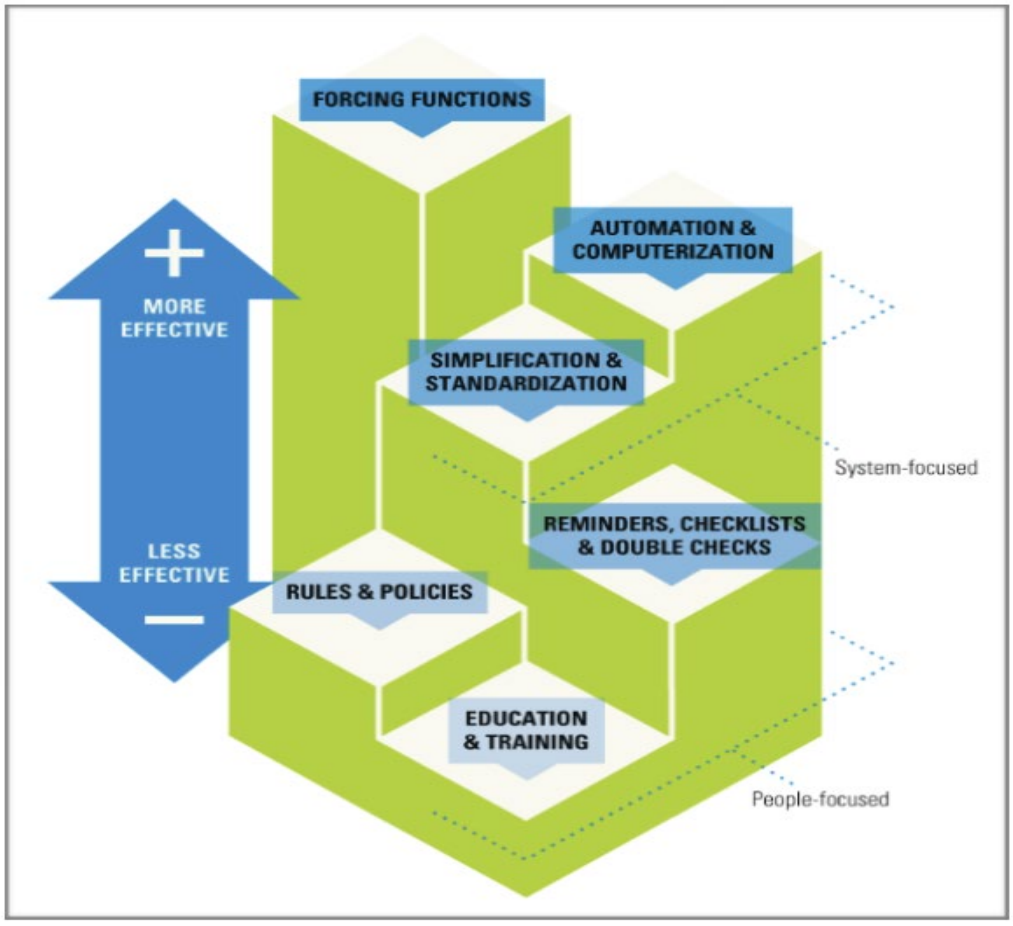


Figure 3: the Hierarchy of Effectiveness[17]

PREPARING FOR PRESENTATION

Time Structure

You are now ready to make the final preparations for your upcoming M&M rounds presentation. One of the most neglected aspects of traditional M&M rounds is proper planning around how much time to spend on different aspects of the case presentation. Instead of devoting a majority of the session to simple recounting of a case's clinical details, you should spend a majority of the time sharing the findings of your thorough case analysis. We recommend splitting up your session evenly into thirds for describing the case to the audience; for your analysis; and for open discussion.

So, for a 30-min M&M presentation:

- 10 minutes for review of the case and state of evidence on current management
- 10 minutes for case analysis in terms of cognitive and system issues
- 10 minutes for discussion, review of bottom lines and consensus on potential action items

Slides

Every M&M case presentation should have a few mandatory slides (see **Appendix D** for templates):

- Title slide
- Goal of M&M rounds - opening with a reminder statement about the purpose of M&M rounds will help frame your audience's mindset, and focus blame-free discussions around improving quality of care and patient safety.
- Confidentiality - there will often be rotating learners or new staff members at your rounds; it is good practice to always remind the audience about patient confidentiality and Section 51 of the BC Evidence Act.
- Hierarchy of effectiveness
- Case Presentation - remember not to spend too much time on this section, just enough information to set the stage for open discussion. Recall that there should not be any patient identifiers.
- Case Analysis - walk through the cognitive/system issues you found during your review
- Discussion - open this part of the presentation to the group. They may have further insights into other cognitive/system issues you didn't think of.
- Bottom Lines

Confidentiality

Please remember these rounds are confidential and we need to endeavour to protect the privacy of patients. No patient initials, dates, times, or names of staff involved should appear in your presentation. Rounds should be structured under Section 51 of the BC Evidence Act to promote a safe, open and blame-free environment for learning. This provides protection against disclosure of documents and conversations, although facts are not protected. In order to apply Section 51 protection, the purpose of the review must be for learning and improvement within hospital, mental health facility or ambulance during transfer, and must be conducted under an approved council or committee.

Other Tips & Advice

- Think about whether you can make your rounds inter-professional and multi-disciplinary. Email the nurse manager and ask them to invite nurses involved in the case. Would it be helpful to have a pharmacist or social worker present? Are there consultants from other services you could invite? Other allied health members? Any of these individuals may even be willing to "co-present" the case with you!
- Consider briefly discussing your selected case at least 1-2 weeks ahead of time with a colleague to confirm you have identified a clear cognitive/system issue. Check with your group's M&M facilitator for ideas and advice.
- While involving patients and/or their families can be powerful in M&M rounds, we aim to explore the opportunity as a second phase of rounds implementation.

For Facilitators

So, you've been tasked with organizing and/or moderating your clinical group's M&M rounds…and like many others in your position, you might be wondering:

- How often should we hold M&M rounds? How many cases should we review?
- Who should be invited to these rounds?
- How do I help presenters prepare their cases to have impactful discussions?
- What is my role during the presentations?
- What can I do to ensure meaningful actions arise out of M&M rounds?

The following few pages will aim to help provide some guidance to those questions.

PRE-M&M ROUNDS

Who to Invite

One of the critical components of the OM3 is encouraging inter-professional and multidisciplinary participation at M&M rounds. Traditionally M&M rounds have been held in silos; physicians reviewing cases amongst themselves, hospital administration in another forum, and allied health professionals on their own, etc. However, healthcare today is delivered in a team-based approach, with physicians, nurses, allied health professionals, and anyone within the patient's circle of care being actively involved. All participants within that team can have important insights into not only the identification of cognitive/system issues related to a case, but also the development of potential solutions to address those issues.

We strongly recommend that, if not already happening, you open up invitations for M&M rounds to nursing and allied health professionals. In appropriate cases, it can be beneficial to also invite representatives from other specialties and hospital administration.

Frequency & Duration of Rounds

There is no right answer when it comes to how often a clinical group should hold M&M rounds, or how many absolute number of cases should be reviewed at these forums. Each group will have their own frequency of potential M&M cases relative to the acuity of their practice, and the most important first step is to simply start holding regular M&M rounds!

While some groups may host monthly or even weekly M&M rounds, the required **minimum is 3 times per year.** It may not be practical or appropriate to review all mortalities at this forum. M&M rounds serve a different purpose than critical incident reviews, case rounds, and medical grand rounds – you want to devote the time set aside for M&M rounds to really highlight examples of cases where tangible lessons can be learned to improve quality and patient safety.

Once you have set a regular time slot for M&M rounds, it is important to consider how long to devote to each individual case. Based on our experience, **at minimum** your presenter should have **30 minutes** to present his/her case according to the OM3 structure. Depending on the complexities involved in the case, you may need to allot 60 minutes to allow for meaningful discussion and generation of potential action items.

Preparing the Presenter

As the facilitator for your group's M&M rounds, the presenters will likely turn to you for guidance and advice. The materials provided in the OM3 package contain information on many of the common questions people have when preparing for their rounds, so it is important for you to be familiar with the contents of this entire package in order to help assist your colleagues. As a quick reminder, your presenters should:

- present a case that they are actually involved with (their own cases)
- review the "For Presenters" portion of the OM3 package
- consider reviewing their presentations with you 1 week prior to the actual M&M rounds for feedback and advice

We recommend sending your presenters all the relevant materials **one month** ahead of their scheduled M&M rounds; it usually takes busy healthcare professionals some time to look for an appropriate case, review the OM3 structure, and to do a proper case analysis.

MODERATING M&M ROUNDS

Setting the Stage

At the beginning of each M&M rounds, you should provide an update on the actions from the previous meeting. Secondly, provide a very brief introduction of the presenter(s), as well as a reminder to the audience as to the ultimate goal of these rounds. You can help set the tone for a blame-free environment for your presenters to openly discuss potential areas of improvement related to their cases, and to create psychological safety so that participants feel able to comment and discuss errors without retribution.

Confidentiality

It is important to emphasize patient confidentiality while making your rounds more inter-professional and multidisciplinary. Ensure that your presenters remembered to de-identify all their materials, and remind the audience at the beginning of each rounds about confidentiality and Section 51 of the BC Evidence Act.

Discussions about the cases outside the M&M rounds forum should not be held in hallways/elevators, etc.

Time

One of your roles as Facilitator is to maintain timeliness, which may include actively moving presenters along throughout their presentations (see **Time Structure** in the "For Presenters" section), as well as asking the audience to hold their questions until the discussion section of the presentation.

Facilitate Discussion

Our experience with improving the quality of M&M rounds have shown that one of the most critical factors to success is having a facilitator actively moderate discussions. You can help highlight and reiterate key cognitive and system issues for the group; jot down feedback from the audience and seek consensus on bottom lines; maintain a blame-free environment throughout the rounds; and focus on recommendations that can be actioned.

POST-M&M ROUNDS

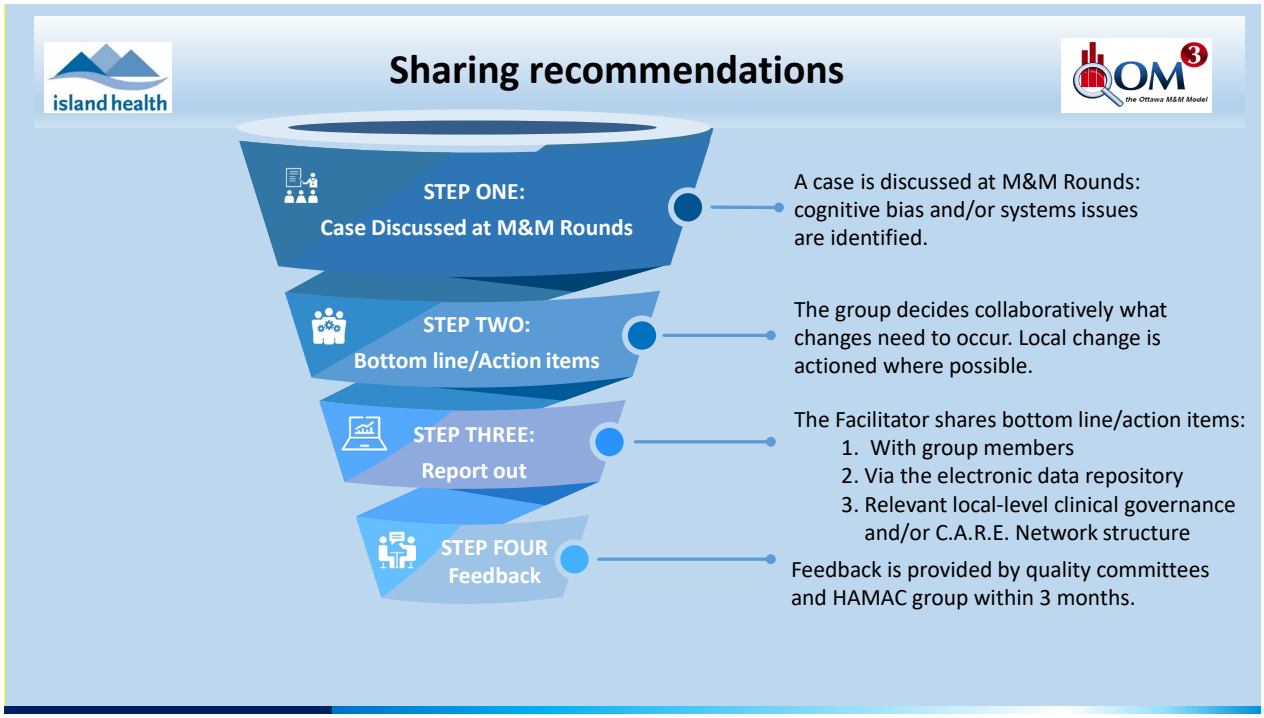
Bottom Line Summaries

After each M&M rounds, collect the Bottom Line slides from each of your presenters. Review and edit them as necessary based on the open group discussions (remember, try to avoid "try harder" type of bottom lines or "more training", but seek out actual system changes). Have the original presenters review your final, de-identified Bottom Line summaries, and then disseminate them to your group members, nursing, allied health, and senior management (this is particularly useful for those who missed attending rounds, but also for serving as a quick database of M&M issues discussed over time).

End the meeting with "what would you like to see happen?" and bring back the update at your next M&M rounds.

Effecting Change

Efforts to improve the impact of your M&M rounds do not end once the presentations are over. If your group was successful in holding high quality M&M rounds, you should end each one with potential ideas for change and concrete action items. Your final role as facilitator is to share the "bottom lines" slide including the "what would you like to see happen" with both the M&M working group and your designated Clinical Governance structure.



M&M working group collects information through the electronic data repository the electronic data repository https://redcap.link/om3rounds-facilitator-survey (Appendix F). Please complete this after every meeting – it takes 3-5 minutes to complete and Island Health login is required. As a facilitator, you can also request reports of completed intakes from the data repository to share with your group

members. Bottom line/Action item themes from all M&M groups will be identified and reported indirectly to HAMAC, identifying common issues across all groups.

Your M&M group should identify the Clinical Governance structure which is the best fit for you. For site-based groups, this may be the local-level clinical governance structure and for Departments, Divisions or programs, this may be a C.A.R.E. Network committee. This "designated" clinical governance structure should be entered into your Terms of Reference (Appendix G). Forward a copy of your Bottom Line/Action items, indicating which ones you are handling locally and which you are requesting assistance with. Example of issues that can be addressed locally include education on an existing policy/guideline or simple process changes such as how physicians do ward rounds on a local unit. Small changes made locally can have big impacts. The Clinical Governance structures function as a resource for action and driver for change. **It is important to know that not every recommendation will be actioned by Clinical Governance structures**. Sharing issues and recommendations helps the organization to prioritize and action change, a concern identified locally may be echoed across the organization. Every voice counts.

The Clinical Governance structures can facilitate changes at the site, geographic or program level. Examples include:

1) C.A.R.E. Network committees: Updates to an existing order set.
2) Local-level clinical governance structure: Review patient referral patterns and transfer protocols within a single site

Specialized issues should go to the appropriate C.A.R.E. Network committee, for example Laboratory Medicine, Restorative Health. Let your designated Clinical Governance structure know if you have sent bottom line/action items to other C.A.R.E. Network committees or local-level clinical governance structures.
You may also want to share your Bottom line/Action item themes with your Local Medical Advisory Committee (LMAC). Please note that HAMAC will receive an aggregate report of M&M group themes.

If you would like to review more detailed information on Clinical Governance please visit the Island Health Intranet. VIHA Login is required.

Closing the Loop

The M&M Rounds Working Group and the designated Clinical Governance structure will acknowledge receipt of the bottom line slide and recommendations and reach out to the facilitator within 3 months to share an update. You should provide this feedback at your M&M rounds.

FINAL THOUGHTS

We sincerely hope the OM3 have provided you and your group a useful structure to enhancing your M&M rounds. We encourage all clinical groups to customize the OM3 framework to their suit specific needs. As the champion for your group, remember:

- Don't give up!
- Cultural change (especially in healthcare) takes time!
- Be persistent - improving quality of care is worth it!

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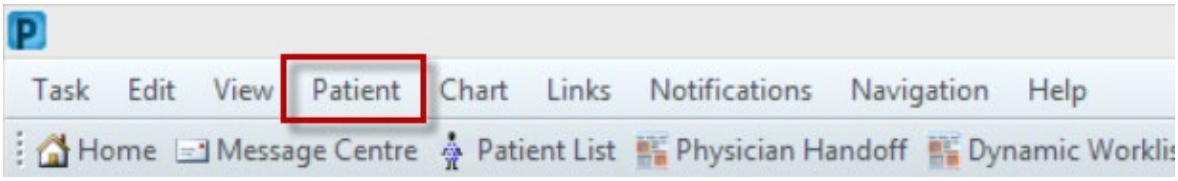
APPENDICES

Appendix A: Creating a custom patient list in powerchart

These lists are self-managed. You can add and remove patients as needed. Right-clicking on a patient on a list allows you to select **Add to a Patient List**. This is also available within the patient's chart on the tool bar.



1. Click the **List Maintenance icon**
2. In the **Modify Patient Lists** window, click **New.**
3. From the **Patient List Types** list, select **Custom** and then click **Next**.
4. From the **Custom Patient List** window, type a name for your list and then click **Finish**.
5. Select your list from the **Available Lists** column and click
6. When your custom list moves to the **Active List** column, click **OK**.

Appendix B: Classification Scheme for Cognitive Dispositions to Respond (CDRs)

Errors of Over-Attachment to a Particular Diagnosis

• **Anchoring:** the tendency to perceptually lock on to salient features in the patient's initial presentation too early in the diagnostic process and failing to adjust this initial impression in the light of later information. This CDR might be severely compounded by the Confirmation Bias.

• **Confirmation bias:** the tendency to look for confirming evidence to support a diagnosis rather than look for disconfirming evidence to refute it, despite the latter being more persuasive and definitive.

• **Premature closure:** a powerful CDR accounting for a high proportion of missed diagnoses. It is the tendency to apply premature closure to the decision making process, accepting a diagnosis before it has been fully verified. The consequences of the bias are reflected in the maxim: "when a diagnosis is made, the thinking stops."

Errors Due to Failure to Consider Alternative Diagnoses

• **Multiple alternative bias**: a multiplicity of options on a differential diagnosis might lead to significant conflict and uncertainty. The process might be simplified by reverting to a smaller subset with which the physician is familiar, but might result in inadequate consideration of other possibilities. One such strategy is the 3 diagnosis differential: "it is probably A, but it might be B, or I don't know (C)". Although this approach has some heuristic value, if the disease calls in the C category and is not pursued adequately, it minimized the change that serious diagnoses are made.

• **Representativeness bias:** drive the diagnostician toward looking for prototypical manifestations of disease: "if it looks like a duck, walks like a duck, quacks like a duck, then it is a duck." Yet, restraining decision making along these pattern recognition lines leads to atypical variants being missed.

• **Search satisficing:** reflects the universal tendency to call of a search once something is found. Co-morbidities, second foreign bodies, other fractures, and co-ingestants in poisoning may all be missed.

Errors Due to Inheriting Someone Else's Thinking

• **Diagnostic momentum:** once diagnostic labels are attached to patients they tend to become stickier and stickier. Through intermediaries (patients, paramedics, nurses, physicians) what might have started as a possibility gathers increasing momentum until it becomes definite, and other possibilities are excluded.

• **Framing effect**: how diagnosticians see things might be strongly influenced by the way in which the problem is framed, e.g. physicians' perceptions of risk to the patient may be strongly influenced by whether the outcome is expressed in terms of the possibility that the patient might die or might live. In terms of diagnosis, physicians should be aware of how patients, nurses, and other physicians frame potential outcomes and contingencies to the clinical problem to them.

• **Bandwagon effect:** the tendency for people to believe and do certain things because many others are doing so. Group-think is an example, and it can have a disastrous impact on team decision making and patient care.

Errors in Prevalence Perception or Estimation

• **Availability bias:** the disposition to judge things as being more likely, or frequently occurring, if they readily come to mind. Thus, recent experience with a disease might inflate the likelihood of its being diagnosed. Conversely, if a disease has not been seen for a long time (is less available), it might be underdiagnosed.

• **Base-Rate neglect:** the tendency to ignore the true prevalence of a disease, either inflating or reducing its base-rate, and distorting Bayesian reasoning. However, in some cases clinicians might (consciously or otherwise) deliberately inflate the likelihood of disease, such as in the strategy of "rule out worst-case scenario" to avoid missing a rare but significant diagnosis.

• **Hindsight bias**: knowing the outcome might profoundly influence perception of past events and prevent a realistic appraisal of what actually occurred. In the context of diagnostic error, it may compromise learning through either an underestimation (illusion of failure) or overestimation (illusion of control) of the decision maker's abilities.

Errors Involving Patient Characteristics or Presentation Context

• **Fundamental attribution error:** the tendency to be judgemental and blame patients for their illness (dispositional causes) rather than examine the circumstances (situational factors) that might have been responsible. In particular, psychiatric patients, minorities, and other marginalized groups tend to suffer from this CDR. Cultural differences exist in terms of the respective weights attributed to dispositional and situational causes.

• **Triage cueing:** the triage process occurs throughout the healthcare system, from the self-triage of patients to the selection of a specialist by the referring physician. Many CDRs are initiated at triage, leading to the maxim: "geography is destiny." Once a patient is referred to a specific discipline, the bass within that discipline to look at the patient only from their own perspective is referred to as "deformation professionnelle".

• **Ying-yang out:** when patients have been subjected to exhaustive and unavailing diagnostic investigations, they are said to have been worked up the yin-yang. The yinyang out is the tendency to believe that nothing further can be done to throw light on the dark place where, and if, any definitive diagnosis resides for the patient, i.e. the physician is let out of further diagnostic effort. This might prove ultimately to the true, but to adopt the strategy at the outset is fraught with the change of a variety of errors.

Errors Associated with Physician Affect, Personality, or Decision Style

• **Commission bias:** results from the obligation toward beneficence, in that harm to the patient can only be prevented by active intervention. It is the tendency toward action rather than inaction. It is more likely in over-confident physicians. Commission bias is less common than omission bias.

• **Omission bias:** the tendency toward inaction and rooted in the principle of non-maleficence. In hindsight, events that have occurred through the natural progression of a disease are more acceptable than those that may be attributed directly to the action of the physician. The bias might be sustained by the reinforcement often associated with not doing anything, but it may prove disastrous. Omission biases typically outnumber commission biases.

• **Outcome bias:** the tendency to opt for diagnostic decisions that will lead to good outcomes, rather than those associated with bad outcomes, thereby avoiding chagrin associated with the latter. It is a form of value bias in that physicians might express a stronger likelihood in their decision-making for what they hope will happen rather than for what they really believe might happen. This may result in serious diagnoses being minimized.

• **Over confidence/under confidence:** a universal tendency to believe we know more than we do. Overconfidence reflects a tendency to act on incomplete information, intuitions, or hunches. Too much faith is placed in opinion instead of carefully gathered evidence.

• **Zebra retreat:** occurs when a rare diagnosis (zebra) figures prominently on the differential diagnosis but the physician retreats from it for various reasons: perceived inertia in the system and barriers to obtaining special or costly tests; self-consciousness and under confidence about entertaining a remote and unusual diagnosis and gaining a reputation for being esoteric; the fear of being seen as unrealistic and wasteful of resources; under- or overestimating the base-rate for the diagnosis; team members may exert coercive pressure to avoid wasting the team's time; inconvenience of the time of day or weekend and difficulty getting access to specialists; unfamiliarity with the diagnosis might make the physician less likely to go down an unfamiliar road; fatigue or other distractions may tip the physician toward retreat.

Appendix C: Surgical Specialty Case Analysis Tool

WERE THERE ISSUES RELATED TO:

Pre-OP	Intra-OP	Post-OP
1. Communication/care prior to surgical consult	1. Protocols/Checklists	1. Post-op orders/pathways
2. Diagnosis	2. Choice of surgical approach	2. Communication with ICU/PACU
3. Staging investigations	3. OR leadership	3. Communication within surgical team
4. Evaluation of fitness for surgery	4. Teamwork	4. Communication with consultants
5. Consultation	5. Work environment (assistants/timing)	5. Identification/diagnosis: a. Recognition of adverse event b. Treatment of adverse event
6. Other patient factors	6. Equipment	6. Discharge instructions
7. Timing/prioritizing surgery	7. Other	7. Appropriateness of follow-up care
8. Other		8. Other

For each area selected above, were there COGNITIVE and/or SYSTEM issues?

Pre-op	Definitions
1. Communication/care prior to surgical consult	- Includes referral from primary care physician and any specialist care prior to receiving consult
2. Diagnosis	- Includes cognitive issues such as anchoring on a simpler rather than a complex diagnosis (**Anchoring**: the tendency to perceptually lock on to salient features in the patient's initial presentation too early in the diagnostic process and failing to adjust this initial impression in the light of later information) - Includes a system issue such as delay in diagnostic imaging
3. Staging investigations	- Includes both cognitive and system issues where appropriate investigations may have been omitted
4. Evaluation of fitness for surgery	- Includes omission bias which may have led to incomplete information - Includes clarity of written communication
5. Consultation	- e.g. anesthesiology, cardiology etc. - Includes lack of appropriate consultation (system or cognitive issues) - Includes conflicting opinions potentially due to system related communication issues or teamwork failure - e.g of a cognitive issue: **Bandwagon** effect: the tendency for people to believe and do certain things because many others are doing so.
6. Other patient factors	- Includes patient's personality or potentially psychiatric diagnoses which may lead to affective bias (counter-transference) among health care provider/team.
7. Timing/prioritizing surgery	- Includes system issues which may have led to delays
8. Other	

Intra-Op	Definitions
1. Protocols/Checklists	- E.g. surgical checklists, sponge counts, antibiotic administration, etc. - Includes failure of an existing protocol to achieve objectives in a given case - Includes the identification of an opportunity to standardize care
2. Choice of surgical approach	- Includes cognitive biases which may have led to a given decision as well as other factors such as fatigue, personal impairment - Includes system issues if there was a lack of availability of equipment to perform a given preferred approach
3. OR leadership	- Was situational awareness maintained (did the leader know what was going on around them at all critical points or were they fixated on a task)? - Was decision making clear to all team members? - Was communication effective with team members?
4. Teamwork	- Consider all members of the team – was situational awareness maintained? (i.e. did all team members know what was going on around them at various critical points) - Were there any communication barriers within the team – could be related to personality conflicts or fatigue or team dynamics or response to stress
5. Work environment (assistants/timing)	- e.g. late night, post-call residents etc. - Includes fatigue of providers - Includes availability of personnel - Includes heating/cooling issues of room
6. Equipment	- Includes access/functioning/trouble-shooting of equipment
7. Other	

Post-Op	Definitions
1. Post-op orders/pathways	- Includes clarity of orders, errors of omission - Includes opportunities identified for standardization of care - Includes failure of existing protocols/pathways to achieve objectives
2. Communication with ICU/PACU	- Includes cognitive issues related to teamwork communication - Includes oral and written communication
3. Communication within surgical team	- Includes availability and responsiveness of team - Includes oral and written communication - Includes teamwork failure in communication
4. Communication with consultants	- Includes oral and written communication - Includes conflict management - Includes teamwork failure in communication
8. Identification/diagnosis: a. Recognition of adverse event 5. Treatment of adverse event	- a. Recognition of Adverse Events: o Includes appropriate identification of adverse outcome related to healthcare provided rather than progression of disease o Includes disclosure of adverse event to patient and/or family - b. Treatment of Adverse Events o Includes appropriate mitigation of harm once adverse event identified o Includes appropriate communication with team members involved and discussion of methods to prevent recurrence
6. Discharge instructions	- Includes errors of omission - Includes affective bias if patient factors influence communication - Includes written and oral communication
7. Appropriateness of follow-up care	- e.g. physio, social work etc. - Includes system issues such as access to primary care and specialist care - Includes system issues such as efficiency of booking - Includes communication issues with patients and/or family
8. Other	

M&M Rounds

Department:

Date:

Presenter:

Confidentiality Statement

- We need to protect the privacy of patients
- These rounds are strictly confidential
- No patient initials, dates, times or names of staff involved will appear in this presentation.

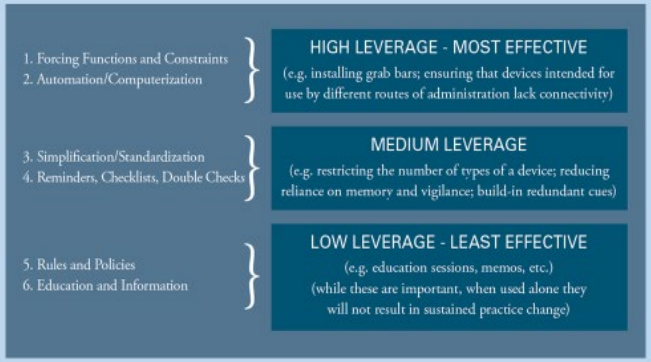
Goal of M&M Rounds

To improve the quality of care and patient safety outcomes

Section 51 Protection

- Purpose is for learning and improvement
  - within hospital, mental health facility or ambulance during transfer
- Conducted under approved council/committee
- Opinion **is** protected
- Fact ***is not*** protected

Hierarchy of Effectiveness



Case Presentation

Case Analysis

Cognitive Issues

System Issues

Discussion

Bottom Line/Action Items

Building Trust in Support of Psychological Safety for Effective Dialogue

Early results from the piloting of the OM3 model have indicated that, at times, people haven't necessarily felt completely safe to share their thoughts and opinions as part of the case discussion.

Building trust generally takes time and relationship. However, there are some things we might try, that are known to help. One is the setting of 'ground agreements', where we make it clear from the outset how it is we are asking people to be with one another. Some suggestions:

- Speak and listen with respect
- Speak and listen from the heart
- Take the time you need to say what you need to say, while maintaining mindfulness of the need for others to have time to speak
- Honour privacy
- Take care of yourself

Opening it up to the group for any additional agreements that might come forward is an opportunity to co-create the setting, and is an effective way to get people engaged from the outset.

As well, icebreaking questions, ranging from fun and silly to deeply meaningful, are another way to engage people, offer an opportunity for vulnerability, and can quickly build trust and rapport with people in the room. A few options:

Is there something that has made you smile recently?

Pineapple pizza. Yay or nay?

Please introduce yourself, and tell us about one value you are trying to lean into recently, and why.

Helping people walk away feeling engaged is just as important towards building that ongoing sense of psychological safety. Consider asking the group to offer 'a phrase or a word' to report out on the conversation as part of the closing of the session as well.

We'd welcome feedback on these questions (were they effective, too 'hokey', etc.) As well, if you come up with one or some of your own that seem to have good success, we'd love to be able to share those with groups across the Region.

Appendix F: Data repository

M&M Rounds Data Repository (https://redcap.link/om3rounds-facilitator-survey) – VIHA Login is required. The intake will take approximately 3-5 minutes to complete.

As the Facilitator you can request customized reports from the M&M Working Group using the information captured to see the frequency of your meetings, attendance and the information captured in the Bottom Line/Action slide. The more complete the intake, the better the reports you can request.

Demographics

This section provides demographic data so the HAMQC M&M Working Group can determine who is doing rounds and what the frequency of the rounds are.

Facilitator Name

* must provide value

Which option best describes your most recent M&M Round?

Your rounds can include multi-disciplinary team members and representation from other specialities and still be Departmental or Division Based. Please choose the option that best fits based on the case discussed and the participants attending.

- ○ Site Based: physician representation tied to a site.
- ○ Departmental: physician representation tied to a department or a division within a department.
- ○ Program Based: physician representation crosses multiple departments in a specific area of care (e.g. Trauma services).

reset

Facility or site where M&M rounds occurred.

For topics that cover multiple sites please use the checkboxes to indicate which sites were represented in the discussion.

If selecting Island-wide, please do not check any of the other boxes.

- ☐ Campbell River Hospital
- ☐ Comox Valley Hospital
- ☐ Port Hardy Hospital
- ☐ Port McNeill Hospital
- ☐ Nanaimo Regional General Hospital
- ☐ West Coast General Hospital
- ☐ Tofino General Hospital
- ☐ Cowichan District Hospital
- ☐ Lady Minto Gulf Islands Hospital
- ☐ Saanich Peninsula Hospital
- ☐ Royal Jubilee Hospital
- ☐ Victoria General Hospital
- ☐ Island-wide
- ☐ Site/Facility not listed (Other)

Physician Department of M&M Rounds
Please check all that apply

- [ ] Anesthesiology, Pain and Perioperative Medicine
- [ ] Emergency Medicine
- [ ] Critical Care Medicine
- [ ] Imaging Medicine
- [ ] Maternity Care
- [ ] Medicine
- [ ] Midwifery
- [ ] Pathology & Laboratory Medicine
- [ ] Pediatrics
- [ ] Primary Care
- [ ] Psychiatry
- [ ] Surgery
- [ ] Division of Nurse Practitioners
- [ ] Other

M&M Rounds Details

Please complete the form below regarding your recent rounds. Theming data helps to address widespread concerns.

Date Rounds Occurred
If exact date is unknown, please choose best guess for the date.

Today Y-M-D

Please share the number of attendees at this M&M round.
If unsure, please share the approximate number.

Did you have medical staff or medical learners at your rounds?

- ○ Yes
- ○ No

reset

Did you have non-medical staff representation at your rounds?
This includes Allied Health professionals and Administrative Staff.

- ○ Yes
- ○ No

reset

Please "Copy and Paste" the text from your **Bottom Line / Action Slide**. into the text box below.
* must provide value

Expand

In addition to copy and pasting your bottom line slide text in the note box above, you also have the option of uploading your bottom line/action slide.

You do not need to upload your entire presentation, just the bottom line/action slide.
This upload will be shared with the HAMQC M&M Working Group.

Upload file

Please identify the most appropriate C.A.R.E. Network

- ○ Critical Care
- ○ Diagnostic Imaging
- ○ Emergency Medicine
- ○ Home and Community Care (includes Specialty Geriatric Services, Palliative & End of Life)
- ○ Laboratory Medicine
- ○ Long-term Care
- ○ Medicine (includes Brain Health, Heart Health, Renal)
- ○ Mental Health & Substance Use
- ○ Pediatrics
- ○ Perinatal, Newborn and Women's Health
- ○ Primary Care
- ○ Rehabilitation / Restorative Health
- ○ Surgery (includes Trauma)

reset

Submit

Save & Return Later

Appendix G: Terms of Reference

Morbidity & Mortality (M&M) OM3-model Terms of reference

Morbidity and Mortality Rounds: (Name) Group
Terms of reference

Context

The Morbidity and Mortality Rounds (Name) Group provide medical staff with a forum for medical education, quality improvement and risk management. The implementation of an evidence-informed structured M&M rounds will provide a mechanism for linkage between Medical Staff and Quality and Safety, and contribute to the broader system-wide goal to impact on organisational quality and safety.

Where necessary, discussion and reports leading are protected under Section 51 of the Evidence Act.

Section 51 may be used by this group to carry out activities for the purpose of studying, investigating or evaluating the provision of health care with a view to evaluating, controlling and reporting on clinical practice in a hospital or during transportation to and from that hospital in order to continually maintain and improve the safety and quality of patient care.

Role

The Morbidity and Mortality Rounds (Name) Group will support a standardized approach to learn from clinical experiences and raise quality and safety issues through the organization.

Principles

The Morbidity and Mortality Rounds (Name) Group will align with the organizational values of Courage, Aspiration, Respect, and Empathy. Additionally, it will be guided by the following principles:

1. Shared accountability for quality across the organization and between professions.
2. Shared information relating to quality in order to promote learning and spread of good practice.
3. Timeliness and responsiveness, recognizing that matters presenting an urgent threat to safety are expedited, signaling quality and safety as a top priority in Island Health.
4. A culture of continuous improvement and psychologically safe learning environments.

Reporting lines and responsibilities

The Morbidity and Mortality Rounds (Name) Group reports to the Health Authority Medical Advisory Committee via Morbidity and Mortality Rounds Working Group.

The Morbidity and Mortality Rounds (Name) Group reports the Bottom Line/Action items to (name) Clinical Governance structure.

Duties and Responsibilities

1. The principles of the Ottawa M&M model are applied:
    a. Standardized approach

    b. Learning opportunity
    c. Protected discussion
    d. Medical education
    e. Quality improvement
    f. Risk management
2. The group has an identified Clinical Governance structure for reporting
3. The group shares the "Bottom Line/Action item" slide with HAMAC M&M working group and the identified Clinical Governance structure
4. Reviews are case-based
5. Rounds occur regularly
6. Multidisciplinary involvement recommended
7. Lessons learned focus on cognitive bias and/or system factors

Matters Reviewed by the Committee:

The Committee shall review matters which may give rise to quality of care concerns.

Preference is for cases to be presented by those who were involved directly, not reviewed by a third party. This format is different from critical incident analysis framework, although may be used as an adjunct.

Cases reviewed in M&M rounds that have not yet been reported in PSLS, and are found to have elements of patient safety should be reported in PSLS to ensure comprehensive tracking. Review findings may be included at the time of retrospective reporting and the PSLS file closed off.

Case Selection

It is strongly recommended that cases reviewed meet the following criteria:

1. Adverse outcome such as death, disability, harm, injury, or a near miss (potential harm avoided – for example, a patient given incorrect medication due to mislabeling of syringe – potential for harm but the patient ultimately wasn't affected)
2. Lessons to be learned about cognitive biases and/or system issues
3. Opportunities for improvement can be acted upon

Leadership, membership and decision-making

An M&M rounds facilitator will be identified.

Membership

All medical staff and multidisciplinary colleagues are eligible for membership.

Normally, decisions will be taken by consensus. Where consensus cannot be reached, decision will be by majority vote.

Membership will be reviewed every 2 years or more frequently, if required.

Quorum will be those in attendance.

Conduct of meetings

Ground rules

1) Meetings will begin and end on time.
2) Ideally, all decisions will be by consensus.
3) Psychological safety principles will apply.