MEDICAL OPERATIONS COORDINATION CENTERS TOOLKIT
THIRD EDITION

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HEALTHCARE EMERGENCY PREPAREDNESS
INFORMATION GATEWAY

Medical Operations Coordination Centers Toolkit

Third Edition

Originally Produced in 2020 by the NRCC Healthcare Resilience Task Force

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PURPOSE AND SCOPE

This Medical Operations Coordination Centers (MOCCs)[1] Toolkit offers considerations aimed to assist state, local, tribal, and territorial (SLTT) governments, cooperative entities such as health care coalitions (HCCs) or trauma/emergency medical services (EMS) regions, and health care systems to ensure optimal balancing of patients across health care facilities and systems. Health care providers can use this toolkit to ensure patients receive the highest available level of care during disasters or on a day-to-day basis. Medical and other subject matter experts (SMEs) from the U.S. government developed this toolkit as a reference to support SLTT governments in establishing and operationalizing MOCCs.

This document is not proscriptive. The functions described in the document can be achieved through multiple mechanisms and should build on local needs and resources available. There are many operational and coordination considerations that are not addressed in this document, including transportation (and, specifically, coordination of scarce inter-facility transport resources that may affect the ability to optimally balance loads across longer distances), local and state regulations, available specialty care resources, and potential executive actions that may support or restrict MOCC operations.

This toolkit describes functions and operating considerations for MOCCs at three levels:
1. Sub-State, Regional Medical Operations Coordination Centers (RMOCCs)
2. State Medical Operations Coordination Centers (SMOCCs)
3. Interstate Medical Operations Coordination Centers (IMOCCs)

Additional supporting documents are included in the appendices.

Related ASPR TRACIE Resources

- COVID-19 Patient Surge and Scarce Resource Allocation (Resource Page)
- Critical Care Load-Balancing Operational Template
- Excess Mortality and COVID-19 Surges: Defining the Problem and Solutions
- Medical Operations Coordination Centers (MOCC)/Patient Load-Balancing: Summary of Lessons Learned during COVID-19
- Patient Movement, MOCCs, and Tracking Topic Collection
- The Exchange, Issue 18: Innovations in Health Care Surge Capacity Management
    - Augmenting Rural Hospital Capacity in California: Lessons Learned from COVID-19
    - Managing Patient Surge in Rural Areas: Experiences from Gallup Indian Medical Center
    - Managing a Pediatric Tripledemic: Lessons Learned from 2022
    - The Evolution of Patient Load Balancing: The Southwest Texas Regional Advisory Council

Other Relevant Resources

- Association Between Caseload Surge and COVID-19 Survival in 558 U.S. Hospitals, March to August 2020
- Critical Care Coordination Center
- PICU in the MICU: How Adult ICUs Can Support Pediatric Care in Public Health Emergencies
- The Maryland (USA) Critical Care Coordination Center (C4): From Pandemic to Permanence
- The Minnesota Medical Operations Coordination Center: A COVID-19 Statewide Response to Ensure Access to Critical Care and Medical-Surgical Beds
- Using Two Statewide Medical Operations Coordination Centers to Load Balance in Pediatric Hospitals During a Severe Respiratory Surge in the United States
- WRAP-EM Pediatric Surge Playbook

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[1] Appendix A lists acronyms used throughout this toolkit.

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MOCC BACKGROUND

Though the term MOCC was developed in 2020, use of regional capacity coordination/transfer management centers pre-dates the COVID-19 pandemic. They are used in multiple jurisdictions to direct trauma cases to the closest appropriate available facility and health care systems often use similar centers to manage transfers and capacity across multiple hospitals.[2] However, the COVID-19 pandemic revealed large gaps in the ability to maximize use of available hospital resources without centralized, jurisdiction-wide coordination.

MOCCs are a critical method of ensuring that health care assets are used consistently across a region—often a state, sometimes across an HCC, and more rarely across state lines. MOCCs help to promote a consistent standard of care across a region. Therefore, they are a key tool in promotion of access to critical and specialty care and maximizing use of the resources available but also ensuring equity, as hospitals serving a larger proportion of at-risk populations are often impacted by higher degrees of strain.

> **Load-Balancing vs. Transfer Management**
>
> Load-balancing – moving patients from an overloaded hospital to less burdened facilities to distribute strain more equitably or to free up beds in a specialty center for patients that require specialized care (e.g., moving medical patients to a community hospital from a burn center to accommodate a large number of burn patients).
>
> Transfer management – receive transfer requests and ensure that patients being cared for in a facility that does not provide the necessary services are prioritized and transfer arranged to a facility with the appropriate capacity and capabilities.

Toward the start of the pandemic, urban hospitals that provide care for disadvantaged populations were disproportionately burdened. As the pandemic went on, rural hospitals (particularly those not affiliated with a health care system that included a tertiary care center) had tremendous difficulty transferring patients to higher levels of care.[3]

Multiple states facing these challenges augmented functions of existing coordination centers or developed statewide MOCCs with significant success placing patients in hospitals relative to beds or other resources available by both load-balancing and transfer management.[4]

MOCCs may be located within emergency operations centers (EOCs) at the sub-state regional, statewide, and federal regional levels (Federal Emergency Management Agency [FEMA]/U.S. Department of Health and Human Services [HHS] regions) or may be located in free-standing, existing EMS or health care system coordination centers with tight connection to operating EOCs. Some MOCCs support health care staffing and manage scarce resource allocation. Government entities, HCCs, Regional Disaster Health Response System (RDHRS) regions, or other entities may operate MOCCs. MOCCs rely upon a broad range of stakeholders to provide the health care personnel and data needed to understand current capacity and gaps in the health care system and facilitate

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[2] Franklin, B., Yenduri, R., Parekh, V., et al. (2023). Hospital Capacity Command Centers: A Benchmarking Survey on an Emerging Mechanism to Manage Patient Flow. The Joint Commission Journal on Quality and Patient Safety. 49(4):189-198.

[3] Mitchell, S., Taylor, M., Paulsen, M., and Morris, S. (2023). The Statewide Patient Load Balancing Work of Washington State's Medical Operations Coordination Center. Disaster Medicine and Public Health Preparedness. 17:e556.

[4] Franklin, B., Mitchell, S., Villarroel, L, et al. (2023). State Capacity Coordination Centers to Facilitate Access to Acute Care: A National Survey and Analysis. NEJM Catalyst Innovations in Care Delivery. 5(1).

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referrals and load-balancing through patient transfers (refer to Appendix B for example checklist). Key stakeholder groups include health care facilities, EMS, and supporting SLTT governmental partners.

Optimally, MOCCs are used on a daily basis to manage trauma and other transfers and act as a single point of contact for transfer requests, information and capacity coordination. This may include EMS and healthcare system communication/coordination centers that take on expanded roles in the region when certain conditions or triggers are met. MOCCs that are only stood up during disasters will often suffer from significant delays and operational issues compared to those that build off daily coordination activities.

A key point is that the MOCC should not replace or interfere with usual referral partners or discourage health care systems from distributing patients and prioritizing beds and transfers within their organization. When these usual systems are saturated, the MOCC benefits both patients and providers by providing a "one-call" alternative to multiple phone calls to different hospitals and health care systems looking for a bed. Just as disaster response spills over from local to state to federal, high-capacity situations require escalation to a "next level" of coordination of resources – in this case, a MOCC. The key difference between a MOCC and a health care system transfer/resource management hub is that by state requirement or voluntary agreement, *all* hospitals in the MOCC service area participate.

MOCCs may be used daily to manage EMS traffic as well as hospital referrals but have a critical role during disasters. These may include public health emergencies but also mass casualty incidents, particularly those requiring specialty care referral prioritization, such as burn and pediatric incidents. Key functions may include:

- Directing EMS units to hospitals with capacity.
- Directing secondary referrals to the most appropriate hospital (i.e., those with capacity and/or the most appropriate level of care given the patient's condition).
- Serving as a one-call referral line to achieve rapid placement of patients needing critical care,

Key Principles of Load Balancing:

Any facility can request load-balancing based on voluntary cooperation of the other facilities subject to available beds (e.g., need to free up specialty care capacity).

The MOCC should monitor bed availability in and around their operational area to ensure a common level of saturation.

Policies should be in place that guide actions when a facility is considered overwhelmed compared to other facilities that would prompt load-balancing to occur. Thresholds could include changes to staffing that are more dire than those taken at other facilities (e.g., using non-traditional staff in intensive care units) or involve a percentage of occupied beds beyond usual capacity that is more than X% different from others in the area.

Load-balancing assumes that usual surge capacity actions have taken place across the affected hospitals to maximize use of space and staff.

Example MOCC Information

- COVID-19 Clinical Rounds on MOCCs
- Maryland MIEMSS C4
- Michigan Community Health Emergency Coordination Center (CHECC)
- Minnesota Critical Care Coordination Center (C4)
- Nebraska Medical Emergency Operations Center (NE MEOC)
- Southwest Texas Regional Advisory Council (STRAC) Regional Medical Operations Center
- Utah COVID-19 Medical Surge Operations Plan
- Washington Medical Coordination Center (WMCC) Operational Guidance

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particularly when the referring hospital does not provide the services required (e.g., emergency dialysis, multi-organ failure support, management of acute respiratory distress syndrome). MOCCs can be used solely to meet critical care needs but may also be used for all bed types.

- Providing consultation with specialty medical providers when required to help prioritize a patient for transfer or receive instructions for care-in-place when this is required for a period of time. (Appendix C provides pediatric considerations for MOCCs.)
- Convening hospitals for situational information sharing, including current contingency measures and potential need for load-balancing/negotiation of load-balancing. Note that this may be an HCC function, or the state may provide this forum, but it is critical that the providers from major health care systems and those from small, more rural hospitals have a foundation to share this information.
- Managing load-balancing between overwhelmed facilities and those with more overall capacity. This may include moving patients from tertiary centers to smaller community hospitals.

ATTRIBUTES

As related to the outlined functions, key attributes of a MOCC as described in the National Healthcare Preparedness and Response Capabilities released in 2024 are:

- A central point of contact accessible and responsive 24/7.
- Current facility capacity and capability information (i.e., baseline capabilities, current strain metrics, and beds available).
- A mechanism for prioritizing patient transfers based on clinical information.
- The ability to provide or connect to specialty consultation support (optimally by telemedicine), as required, for patients who will not be moved to higher levels of care.
- Authorization to compel acceptance of a transfer, based on a rotation or other equitable mechanism, when the MOCC clinical staff identifies a patient at high risk of deterioration or death and the current hospital does not offer the services required.
- The ability to function effectively across jurisdictional boundaries, when required.
- The ability to communicate and coordinate pre-hospital care with EMS.
- Policies in compliance with the Emergency Medical Treatment and Labor Act (EMTALA), disability rights, and other applicable laws

Data Systems and Policies
MOCCs at all levels will need data systems that support effective resource allocation and improve patient tracking. This involves three key aspects:

- Submission of relevant data from health care (particularly hospitals, but also EMS and in some jurisdictions long-term care or specialty hospitals).
- Intake and formatting of data for MOCC staff (e.g., "dashboards" or other easily referable form).
- Analysis/validation of data by MOCC personnel relative to requests.

This may be as rudimentary as "polling" hospitals by text or phone or using a messaging application to update the MOCC on capacity changes, with that data represented in a spreadsheet. Far preferable is to develop

"reports" or macros in the electronic health record (EHR) that supply data to a spreadsheet or specialized software program viewable by the MOCC. This improves accuracy (assuming standard data definitions) and drastically reduces the workload for the hospitals.

MOCCs should have a standing dataset that defines each hospital's capabilities. This is important when trying to match patients to an appropriate hospital, which may include a community hospital that offers limited critical care services (refer to the MOCC Operations section for further information).

Data for load-balancing and patient placement is dynamic. MOCCs may use a variety of data to monitor hospital strain (e.g., census, patients receiving mechanical ventilation/critical care interventions, emergency department boarding) for load-balancing needs and capacity data to guide patient transfers (refer to the MOCC Operations section for further information).

During the COVID-19 pandemic, many MOCCs used simple spreadsheet "bed boards" and texting or phone calls to inform their decisions, which was sufficient, but suboptimal. MOCCs should look for opportunities to move from manual data collection and entry to automated systems. Some of this data, particularly over time, could be considered of proprietary value. Data agreements will need to be in place about which data can be made public and in what forms (e.g., that only aggregate data is released publicly, that only certain users have access to facility-specific data, and that the uses of the data are limited to the functions of MOCC operations and quality improvement and/or as directed by state disaster authorities).

Authorities

For the most part, MOCC operations depend on voluntary cooperative actions in the interest of equity and access to care. However, the MOCC must have delegated authority to obtain necessary data, ensure participation of all hospitals in its operating area/within the jurisdiction served, and, when necessary, require patient movement for load-balancing or to ensure that emergency transfers get to a hospital where the appropriate services can be provided (via a rotational or other equitable mechanism). These authorities may be granted by a governor's emergency order, statute, or by mutual signed agreements with all hospitals in the region. Some authorities for the MOCC may only exist during a declaration of emergency whereas others (e.g., daily bed counts, some baseline functions of the MOCC such as a referral call line) may have daily functions with the agreement of the major health care systems. The MOCC policy should specify the authorities under which the MOCC operates and how those change during emergency declarations.

Medical Direction

Medical consultation serves two critical roles at the MOCC: providing "care-in-place" instructions when the patient will need continued care at the facility while awaiting transfer/placement and to help the referring facility determine what level of care is required for the patient under the current circumstances (e.g., at times critical care beds may be reserved for patients requiring blood pressure support or mechanical ventilation). A medical director is needed for the MOCC to both assist in the development of policy and to oversee medical aspects of operation. The MOCC often has to use medical information about patients to help prioritize which patients to transfer first and to determine which destinations are most appropriate. These functions require a medical director with a background in emergency medicine or critical care and a deep understanding of the health care systems in the area. To provide coverage over extended operational periods, the medical director

should identify similarly trained alternates to serve on call. Specialty providers such as pediatric and burn care specialists should also be available to support the MOCC. For example, during the pediatric respiratory virus surge of 2022-2023 (i.e., "tripledemic") many MOCCs used pediatric critical care providers routinely for weeks to provide care-in-place advice and help prioritize transfers.[5] This may be an annual need in many areas and usually occurs without any emergency declarations. The medical director with an on-call group of providers needs to be available to provide consultation when required, 24/7.

Liability

MOCC operations during a declared disaster are usually protected under state law from liability exposure (except in extreme cases of misconduct). However, many areas of the United States experience substantial delays to transfer and often have to prioritize transfers and support care-in-place on a routine basis when tertiary care capacity is limited. This is often most pronounced during respiratory virus surges (particularly for pediatrics). MOCC prioritization decisions and care-in-place support advice in these cases is legally vulnerable. In some states, the Medical Reserve Corps (MRC) and its personnel can be protected from liability when activated during non-disaster events (i.e., making all staff MRC members and "activating" them for non-disaster incidents if the legal avenue to do so is available may be an avenue of protection). For MOCCs with daily operations responsibilities that are not directly state operated (with state-contracted staff), statutory language protecting the MOCC staff, advice, and decisions from legal exposure is essential.

ORGANIZATION

Many different models of MOCC operations exist. Based on the available resources and who is operating the MOCC, the following are likely the five most viable models:

- Integration of the MOCC into a jurisdictional EOC (e.g., emergency management agency EOC or health department EOC).
- Integration of the MOCC into an existing regional EMS communications hub.
- Integration of the MOCC into a major health care system referral center or HCC (with support from the state and/or other health care systems).
- Interstate integration of MOCC activities at the FEMA or other multi-state regional level with support and coordination from HHS regional staff (e.g., IMOCC).
- Virtual MOCC operations utilizing web-based tools and distributed personnel and answering points for a common phone number may be integrated into any of the other approaches.

Each model has advantages and disadvantages. Integration of the MOCC into an existing EOC structure ensures state support and a discrete connection to the state emergency operations structure, including reimbursement and links to state operations (including EMS operations). However, changes in demand for the MOCC over time cannot be integrated as easily and the MOCC is limited operationally to when the EOC is open.

Integration into an EMS communications center or major health care system or HCC call center offers the opportunity to expand and contract operations according to demand and can provide a constant point of

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[5] Mitchell, S., Merkel, M., Eriksson, C., et al. (2023). Using Two Statewide Medical Operations Coordination Centers to Load Balance in Pediatric Hospitals During a Severe Respiratory Surge in the United States. Pediatric Critical Care Medicine. 24(9):775-781.

contact and support during influenza season and other high-capacity times during which an EOC would not be expected to be open. Disadvantages include the potential lack of staff, potential optics issues with having a health care system managing the MOCC on behalf of other systems, cost, and lack of state authorities and legal protections.

Virtual MOCC operations are an excellent way to distribute and rotate responsibility and offer flexibility for expansion and contraction of operations but rely on technological solutions, such as web-based platforms and forwarding phone numbers, and still have administrative and technical costs that must be absorbed. Distribution of responsibility can often lead to problems with familiarity with process, so responsibility should not be diffused too broadly. Use of virtual technologies to support MOCC operations is essential, however, as consultation for care-in-place, consultation with specialty providers, and clinical prioritization are almost certain to occur via virtual means.

IMOCCs build upon SMOCCs and RMOCCs to coordinate across several affected states. In this case, it may be best to integrate regional HHS/ASPR personnel to help facilitate and support this effort. Both rural/frontier and densely populated areas that refer to facilities in several nearby states should strongly consider this model to ensure consistency of care and information sharing. Depending on the need, the same disaster versus daily operational considerations apply as they do for SMOCCs and RMOCCs.

It should be acknowledged that many hospitals and health care systems may be reluctant to participate in a MOCC. Thoughtful partner engagement is important to acknowledge and address the issues of data and patient referral protection. Many health care systems will want assurances about how their data can be used and who can see it. These same systems are likely to have concerns about an external entity having the potential to manage transfers and potentially require them to accept a transfer or patients from an overloaded hospital. However, MOCCs should not prevent or interfere with health care systems managing patients within their systems; in fact, internal patient management is encouraged. The MOCC should be an entity that speeds access to definitive care and assists across health care systems to ensure equitable access to care. In some cases, appropriate load-balancing may help health care systems continue with usual business and procedures when that might not otherwise be possible, improving care and continuity of operations for all facilities. With these goals in mind and understanding that every hospital stands to benefit from a MOCC, a deliberate, thoughtful process should enable concerns to be addressed to permit successful implementation.

INITIAL CONSIDERATIONS

When initiating a MOCC, many questions need to be addressed. It is best to ensure that the key partners have a role in shaping the construct of the MOCC and have an opportunity to provide input on the functions and operational policy. Please review the sections following this one for further guidance. Common questions include:

- **When will the MOCC be activated?**
  - There are multiple situations in which a MOCC can be extremely useful. Any time the health care system is operating under surge conditions and patients are routinely boarding in emergency departments awaiting an inpatient bed, a MOCC process may be valuable. MOCCs can be activated during a seasonal (e.g., influenza) situation or natural disaster, with a variety of

implications for location of the MOCC as well as funding and liability protections for the MOCC staff. A pandemic such as COVID-19 that stressed multiple facilities and systems is a key indication, as are mass casualty incidents that require prioritized patient distribution to specialty (e.g., burn or pediatric) facilities.

- o A MOCC that functions on a daily basis for the triage and distribution of patients with time-sensitive emergencies will likely be easier to scale up during a mass casualty or surge event.
- o Agreed-upon triggers for different MOCC roles and authorities can be helpful. For example, a region may agree that use of non-traditional spaces or staff for critical care at a hospital constitutes a "crisis" trigger that requires load-balancing if other hospitals are not similarly affected and that a ventilated patient boarding in a critical access hospital meets criteria for a required transfer to a tertiary center. Staffing contingencies, surge conditions (e.g., percent above baseline), or acuity (e.g., number of ventilated patients) are all potential indicators or triggers for MOCC actions.

- **What organization should/will operate the MOCC?**
  - o This may depend on whether the MOCC is seen as solely an emergency entity of the state or whether it is an ongoing resource (e.g., for influenza season) maintained by the health care systems. Part of this decision involves the degree to which the health care systems are committed to working together, the degree to which the state wishes to have control over the processes, and what options are available for current and future funding.

- **What authorities does/should the MOCC have?**
  - o At minimum, the MOCC needs the authority to obtain data and require individual transfers via an equitable mechanism when there is a clear risk of a poor outcome. These situations and the data that support these decisions should be clearly defined ahead of activation. Forcing transfers should be a relatively rare occurrence, as the primary function of the MOCC is to use data on available beds to make sure that the region uses all its resources to respond to the demand.

- **What liability protections are afforded MOCC personnel?**
  - o When the MOCC is purely a state entity, liability is usually addressed under the emergency declaration or via state statute. However, if the MOCC is to operate outside emergency circumstances, the functions should be examined, particularly clinical consultation or transfer prioritization decisions that could be subject to liability. Either the state or the health care system hosting the MOCC or employing the MOCC staff should clearly document the liability protections.

- **Will the MOCC work across state lines and, if so, how far and with what systems/facilities?**
  - o Many traditional patient referral patterns extend across state lines, with data from hospitals and health care systems outside the state used to help inform transfer decisions. Because those health care systems often benefit from being able to refer patients into the state hosting the MOCC they are often willing to share data and accept referrals knowing that this will be a "two-way" street. SMOCC to SMOCC direct coordination is another option. Regional, multi-state agreements may result in a single MOCC for several states (i.e., an IMOCC) depending on distribution of resources and the incident specifics. Understanding adjacent state plans and points of contact is critical to success, particularly during a no-notice incident.

- **How can the MOCC be reached/accessed?**
  - A common gateway phone number should be agreed upon and reserved for current and future MOCC use.
- **Who will staff the MOCC? How will staffing be expanded when needed?**
  - During a no-notice incident, a pre-existing roster of staff and structure must be in place to allow a rapid start-up. Operations during a no-notice incident will be maximal at onset. SMEs may be busy with response operations, depending on the location of the incident, and the roster should include experts in emergency medicine, trauma, critical care, burn, pediatrics, and EMS drawn from across the region to ensure availability of enough individuals. Call-takers and supervisors should ideally be drawn from health care system staff who have similar daily responsibilities (although with just-in-time training and call scripts those with less background may be able to function in the initial call-taking role). Supervisors must have health care system experience with patient placement.
- **Who will set MOCC policy?**
  - Even if MOCC policy is to be set by the state, an integrated process for policy development with the hospital association and hospital leadership is essential for the system to function well. Operational policy will need to be developed over time to cover all aspects of the MOCC from medical direction to call-taking to policies on transfer management and load-balancing.
- **Who will comprise the group that will help develop and modify the policies of operation of the MOCC?**
  - Developing and modifying policies will be an ongoing need of the MOCC and the policy group should represent the key private-public partners including the state health department, emergency management, hospital association, medical direction/critical care, and hospital service line experts in patient placement, informatics, and other necessary disciplines. A governance agreement should specify how policies will be adopted by the MOCC.
- **How will transportation/EMS be integrated into transfer decision-making?**
  - In many cases, specialized transportation may be needed or there may be competition for critical care ground or air assets that requires prioritization. In many cases, daily EMS needs will be higher and inter-facility transfers may cover longer distances to reach a hospital with capacity leading to critical stresses on EMS. Integration with EMS at the state or regional level can greatly assist the MOCC functions by helping match the best available transportation resources to patient needs while attempting to balance the need for emergency EMS coverage. This is a particular issue for pediatric critical care transport.
- **How will EMS be reimbursed for transfers to a similar or lower level of care?**
  - When load-balancing operations are performed, it is often difficult to bill insurance for a transfer to a hospital that provides similar services ("lateral transfer"). In some cases, hourly reimbursement for the ambulance and staff time spent on transfers through state emergency funding, activation of ambulance strike teams, or utilization of ambulances through the federal ambulance contract (if the need cannot be met by state resources) may be options. Payors should engage in discussions of reimbursement for these services when conditions indicate a benefit to the patient from transfer due to surge conditions at the facility of origin as this may be an issue outside of disaster situations.

- **Who will be the MOCC manager?**
    - o Running a MOCC requires deep familiarity with call center operations, patient placement, EMS capabilities, hospital/health care system capabilities, policy development, and personnel management. Healthcare or EMS call center managers are potentially optimal choices for the manager role.
- **Who will be the medical director for the MOCC?**
    - o While public health directors may be physicians, it may not be ideal for them to direct the MOCC both because of competing priorities (the MOCC medical director may need to respond to questions at any time) and because their skill set is often not aligned with the emergency medicine/critical care knowledge that is optimal for a MOCC medical director. Medical directors should also be well-known in the region and have a good knowledge base of the health care system, ideally with a background in emergency planning and the ability to help lead consensus-driven discussions as the majority of MOCC decisions are collaborative and not command-based.
- **How will the MOCC provide or facilitate clinical consultation for care-in-place awaiting transfer if required?**
    - o In some cases, or during low-volume periods, the need for clinical consultation will be infrequent. However, the medical director may need to have a rotational call schedule for coverage, particularly for critical care. A roster of critical care, emergency medicine, pediatric, burn, trauma, and other specialty providers should be maintained for no-notice incident needs and rostering during prolonged incidents.
- **How will the MOCC prioritize patients for transfer when requests exceed capacity – including critical care and pediatrics?**
    - o Sometimes the number of patient placement requests will exceed available resources. In these cases, an SME (e.g., critical care) should help prioritize the waiting patients for transfer, as well as help determine the most appropriate facility. This may mean that only selected patients are referred to a children's hospital, for example. Agreeing on general written frameworks for directing referrals to specialty centers/specialty beds is helpful and can improve efficiency and decrease confusion. For example, when pediatric hospitals are full, first direct those age >12 with no major congenital or complicated health conditions to community hospital care, then shift that down to age >8 as demand increases. Knowledge of the capabilities of non-specialty hospitals can be an important part of this process. Appendix C includes pediatric considerations for MOCCs. These situations are often indicators of crisis conditions and should be coordinated with any crisis standards of care plans/response at the state level.
- **How frequently and by what means will hospitals/providers be convened on calls to review the current situation and determine what load-balancing may be required between facilities?**
    - o Hospitals must have a way to share information between the critical care/patient placement providers to not only share existing contingency strategies but also to provide updates and share new strategies/issues. The MOCC may not be the primary convener but should participate in these discussions and share updates. When load-balancing is required, the MOCC should have a process to convene patient placement and critical care providers from each of the major health care systems to discuss the situation and, to the degree possible, agree on patient distribution (the MOCC may have ultimate authority to force transfers, but this should generally be a last resort).

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- **How does the MOCC request/receive real-time information about available beds?**
  - The MOCC should have a process and points of contact to ensure up-to-date information. Ideally, real-time data systems should show available beds and indicators of strain.[6] If this type of information is not available, "polling" when beds are needed, use of texting to update bed availability, and other means to ensure that the MOCC has near real-time data may be used.
- **What other data will the MOCC collect? Who is the data reported to, and how does it inform ongoing operations (e.g., total requests, total patients placed, origin hospital, receiving hospital, bed type requested)?**
  - Daily data may differ from incident data, and at certain times the capacity situation may dictate the need for further information. The MOCC should have clearly outlined expectations for the type and frequency of information exchanged and how those expectations may change based on available resources. Data protection and use agreements should be in place. Further, the MOCC should commit to sharing information about its functions (number of placements, type of placement, type of originating facility, type of receiving facility, time to placement, mode of transport, or other data) so that MOCC operations can be improved and monitoring trends over time may drive additional policy development. Optimally, patient outcomes should be accessible to help define the risks of system strain and transfer delay, and optimize MOCC prioritization and placement activities.
- **Will the MOCC function be limited to ICU beds or apply to all bed types?**
  - Patients requiring critical care are the most vulnerable to deterioration and death and are the primary reason for MOCC functions. However, knowing floor bed availability and helping match available beds to patients can be a huge benefit to the hospitals and may be included, with the understanding that this can dramatically increase the number of calls.
  - Intermediate/monitored bed placement often will involve physician input, as the criteria for these units varies not only between facilities, but often varies with the dynamic demands of the incident as patients who normally might be hospitalized in an ICU are placed on step-down units. Even for ICU bed requests when beds are not immediately available, a consultation will often be required to determine whether the patient could be cared for on another unit. In some cases, critical interventions are required that do not necessarily require a specific bed type (ERCP, surgical intervention, dialysis) and may require the MOCC to determine the best available nearby hospital.
  - Sometimes, MOCC functions exclude specialty referrals such as trauma, pediatrics, or burn based on defined referral pathways for these cohorts, but consideration should be given as to how large volumes of such patients will be handled. For example, pediatric inpatient beds often require regional management when more than one specialty center exists in a region, and capacity situations are common during respiratory virus epidemics.

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[6] Hick, J., Toner, E., Hanfling, D., et al. (2024). Data and Disasters: Essential Information Needed for All Healthcare Threats. Health Security. 22(1):3-10.

- **Will the MOCC be a regional coordination point for Extracorporeal Membrane Oxygenation (ECMO)?**
  - ECMO is used in selected patients when mechanical ventilation is failing to provide adequate oxygenation or for cardiovascular support. ECMO has limited availability and is extremely resource intensive. Having a regional approach to ECMO consultation and transfer is important if more than one system is providing it. The MOCC can be a natural gateway/point of entry for an ECMO regional triage process even if it does not manage the policies.
- **Can the MOCC require a system to accept a transfer (particularly if that transfer originates from a critical access/community hospital with a critically ill patient who cannot receive the services needed)?**
  - One of the key authorities the MOCC should have is the ability to place (by rotation or other equitable distribution means) patients who are at high risk of deterioration or death because they are at a hospital that does not offer the services required. This mechanism should be clearly described and only used when no hospital within a reasonable distance is able to offer the bed/service required. In this case, the patient may need to be transferred to the emergency department of a receiving hospital that offers the necessary services regardless of the beds available.
- **What patient data will be collected by the MOCC staff? How will equity be ensured in this process?**
  - The MOCC should have a standardized patient information form that collects at minimum the age, diagnosis, current condition, and current major interventions to facilitate placement. The medical director/consultant may have to discuss additional specifics with the receiving facility to determine the most appropriate placement if this is not easily achievable. The MOCC should prohibit use of financial or other information that could subject the referral to bias and the receiving facilities should not be able to make insurance status a condition of accepting a transfer. Demographic information may be collected and used in quality improvement and review processes. Legal interpretation should be sought to define if the MOCC as proposed/operated is a Health Insurance Portability and Accountability Act (HIPAA) protected entity and what information technology and other safeguards may need to be in place to ensure privacy and compliance.
- **Will the MOCC manage resources aside from beds?**
  - Most MOCCs during COVID-19 were state-level and focused on coordination of patient transfers. However, during a mass casualty incident, HCC/sub-state RMOCCs may play a critical role and may also be called upon to broker staff, medications, and other resources and requests. In some jurisdictions, the MOCC coordinates long-term care and behavioral health bed and transfer requests in addition to acute medical care. If the RMOCC is not designed to assist with these requests, there should be another mechanism (e.g., emergency management structures with health care liaison) to refer them to.

MOCC FUNDING OPTIONS

Funding solutions are unique to each entity based on several factors, including the funding target and type of emergency declaration. If the MOCC is activated during a declared disaster, most operational expenses should be reimbursable. Entities should reach out to regional HHS and FEMA representatives for the most recent grant and program guidance. SLTT and sub-state regional governments may access several sources of federal funding to support the establishment and operation of MOCCs. Funding from these sources is subject to program-

specific cost allowability, eligibility requirements, and potential state cost-share requirements. Duplicative funding from multiple sources for the same service is not allowable under most funding agreements. Funding sources may become available or expire, so a careful search for options should be undertaken. Ideally, the state or participating health care systems should provide financial support for daily MOCC operations.

ASPR Hospital Preparedness Program

HHS's Administration for Strategic Preparedness and Response (ASPR) Hospital Preparedness Program (HPP) annual cooperative agreement recipients (62 states, select localities, territories, and freely associated states) and subrecipients (e.g., HCCs) may utilize this funding to operationalize a MOCC. However, depending on the state and the type of MOCC envisioned, this may consume a disproportionate amount of funding and risk destabilizing other preparedness work. Balanced sources of MOCC funding are suggested for most states rather than funding the MOCC solely with HPP funds.

Hospital association recipients and subrecipients (hospitals and other health care entities) and public health entities used a variety of federal funds during the COVID-19 pandemic to initiate and sustain MOCC operations. This included activities that supported the MOCC including: (a) to update existing pandemic or emergency preparedness plans to include COVID-19 preparedness activities, such as approaches for the assessment, transport, and treatment of persons suspected or confirmed to have COVID-19; (b) to update the existing patient transport plan to include an approach that allows for intra- and inter-state transport of potential or confirmed COVID-19 patients, as necessary; (c) to provide training and technical support, as necessary, to EMS agencies and 911/Public Safety Answering Points (PSAPs) on screening 911 callers in order to direct non-acute patients to the appropriate care setting; and (d) to implement evolving protocols related to the dispatch of EMS for COVID-19 suspected patients, and EMS response in general. Awardees should coordinate with their Federal Field Project Officer (FPO) for further guidance.

CDC Public Health Emergency Preparedness Program

The Centers for Disease Control and Prevention (CDC)'s Public Health Emergency Preparedness (PHEP) program supports a broad range of preparedness activities. In particular, PHEP funds could be used to support data submission and exchange aspects of MOCC functions. Awardees should coordinate with their designated CDC field staff or request assistance through On-TRAC (Online Technical Resources and Assistance Center). Public health agencies and health care systems should be aware of disaster-specific federal funds and regulatory relief that may affect MOCC operations and leverage these as required to augment their MOCC during a disaster.

CDC Crisis Response Cooperative Agreement

If activated, the CDC Cooperative Agreement for Emergency Response recipients may utilize funding to support MOCC operations. Importantly, recipients may use funding to actively monitor health care system capacity and to develop mitigation strategies to preserve health care system resources. Recipients may also use funding to activate the jurisdiction's EOC at the appropriate level by undertaking, for example, the following actions: (a) staff the EOC with the appropriate numbers and skills to support the response, (b) ensure worker safety and continually monitor absenteeism; (c) use established systems to ensure continuity of operations (COOP); and (d) to implement COOP plans as needed.

FEMA Public Assistance Program

FEMA Public Assistance (PA) is authorized for all presidential emergency and major disaster declarations under the Robert T. Stafford Disaster Relief and Emergency Assistance Act (Stafford Act), as amended. Emergency protective measures must be necessary to eliminate or lessen immediate threats to lives, public health, or safety (see 44 CFR § 206.225). Establishment and operation of a MOCC *within an EOC by a SLTT government* to facilitate patient movement and resource allocation may be an eligible emergency protective measure under the PA Program. Eligible applicants should work with their respective state, territory, or tribe on specific eligibility. Additional information on the FEMA PA Program is available at https://www.fema.gov/public-assistance-policy-and-guidance. Stakeholders may also contact their regional FEMA representatives for assistance.

FEMA Mission Assignment Program – Direct Federal Assistance

IMOCCs may be established and operated within FEMA Regional Response Coordination Centers (RRCCs) if needed. Federal interagency staffing to support regional operations may be coordinated through a Federal Operations Support (FOS) mission assignment (MA) and eligible costs include overtime and travel, as required. FOS MAs are fully funded and not applicable to non-federal participation.

Federal staffing for SMOCCs and RMOCCs may be coordinated via a Direct Federal Assistance (DFA) MA issued by FEMA in response to a validated state request. SLTT governments may augment current staffing through technical assistance based on the eligibility criteria in Chapter 6:XII *Direct Federal Assistance* of the Public Assistance Program and Policy Guide, V.4. The recipient may request DFA through FEMA to support MOCCs. This DFA support is subject to the prevailing cost share for the declaration. All requests for DFA should be coordinated through the state, territory, or tribe acting as the recipient. FEMA will determine eligibility based on the request and in coordination with the recipient.

Additional information on the FEMA Mission Assignment Policy FP-104-010-2 is available at: https://www.fema.gov/sites/default/files/2020-04/MA_Policy_aug172018.pdf. Stakeholders may also contact their regional FEMA representative. Appendix E: MOCC Mission Assignment Template contains an example MA statement of work.

RMOCC, SMOCC, AND IMOCC CONSIDERATIONS

Depending on the number of hospitals and specialty care resources in a state, the nature of patient referral patterns, and geographic considerations, a MOCC may serve a sub-state, state, or inter-state region. Regardless of the location of the MOCC, integration with local Emergency Support Function #8, Public Health and Medical Services (ESF-8) activities and incident command structure is critical. The integration of the MOCC with the ESF-8 lead may be established in multiple ways. Examples include assigning a public health or HCC liaison to the MOCC to assist with the coordination of medical resource requests or establishing the MOCC within the jurisdictional EOC as the Medical Operations Branch of the incident command structure.

RMOCC

A local, sub-state RMOCC is a key component of ESF-8 activities, bringing the **medical** aspect of ESF-8 into EOCs or other designated locations to guide the appropriate movement of patients along the care continuum and maximizing the use of area resources.

Note that an RMOCC is most helpful when a sub-state region is affected by a local incident and has multiple hospitals across which load-balancing may occur (e.g., major disaster in a metropolitan area). Triggers for initiating a RMOCC and how it will coordinate its functions with a SMOCC are important to document in policy.

RMOCCs are important because the number of hospitals involved in a SMOCC may make it difficult to broker patients during load-balancing and discuss and adopt consistent contingency strategies to address the surge. Dynamic calibration of the types of patients cared for in each hospital may be necessary as events may require hospitals that do not usually provide services (e.g., burn, pediatric, critical care) to do so, but with monitoring and patient movement to ensure that those patients at highest risk receive the more specialized resources. An example of this is a medically stable teenager with pneumonia or a patient with 25% torso second degree burns being hospitalized in a community, rather than a specialty pediatric or burn hospital, respectively. This degree of balancing is not possible at most SMOCCs and even less likely at an IMOCC unless that IMOCC is in a frontier area or otherwise manages few hospitals.

One of the limiting factors of RMOCCs is that legal protections, authorities, and other state powers may not be available to the regional entity.

RMOCCs likely optimally function in areas that routinely use some MOCC functions to distribute trauma patients or manage EMS communications in a patient referral area that is one of multiple within state borders. In some cases, these already exist as state entities (e.g., regional trauma program) with legal protections and authorities. In other cases, they exist due to voluntary regional agreements that can be leveraged for additional responsibilities and authorities during a surge incident.

SMOCC

A SMOCC was the most common MOCC format used during the COVID-19 pandemic and is easiest to integrate into ESF-8 activities. Some of these were located in the State Emergency Operations Center itself, while others were developed or delegated by the State during the COVID-19 pandemic to have MOCC responsibilities.

SMOCCs benefit from a direct tie between a state response and the MOCC operations. This improves the liability protections and ties MOCC operations to a policy structure and authorities that can drive responsibilities and a timeframe to operations that might not otherwise be possible. The caveat is that when MOCC operations are required during a surge that is *not* related to a specific, declared disaster there is often no EOC activation and no declarations or authorities that support the MOCC. Thus, plans that specify operations at the State EOC and only during disasters will limit the utility of an SMOCC.

Ideally, an SMOCC may operate out of an existing coordination center and is officially supported by the state (both from a financial and policy standpoint – sometimes as a state operation and sometimes with delegated

responsibilities) but does not depend on a state disaster declaration for its initiation or for its authorities or legal protections.

The hospital resources in the state should determine the responsibilities at the SMOCC. For example, in some states, where there is *no* inpatient specialty care for burns or pediatrics and critical care is limited to a few facilities there may not be a role for an SMOCC. In many states, an SMOCC can appropriately manage the hospitals and major healthcare systems and will be the sole MOCC structure, accounting for the entire state jurisdiction. In some states that have several major referral areas that are contained within the state borders, the use of RMOCCs should be strongly considered, with the SMOCC serving to monitor the RMOCC data and help provide inter-regional transfer assistance/support and direct EMS and other resources to sub-state regions that are disproportionately affected.

IMOCC

Conceptualized during the COVID-19 pandemic and discussed in the original MOCC toolkit, a true IMOCC (or FMOCC – Federal MOCC as described in v1 of the toolkit) was discussed in one FEMA region but did not become operational. However, the potential utility of an interstate MOCC – whether federal or state-based but representing multiple states – is clear.

IMOCCs may be most useful in two major settings. If a state has limited critical care or specialty hospitals and usually refers to another state or must load-balance into an adjacent state (e.g., many frontier states), an IMOCC may be used to substitute for SMOCCs. In states that routinely transfer across borders as part of normal patient referral networks/daily operations, an IMOCC is also likely to be helpful (e.g., National Capital Region, Kansas City metropolitan area).

When a single IMOCC is managing the hospital resources for more than one state, the IMOCC may operate very similar to an SMOCC. The MOCC may be located as per SMOCC recommendations. States should have agreements in place regarding liability protections and authorities to support common policy. Pre-existing agreements should be in place noting the interstate plan, the location and policies for the IMOCC, and any commitments by the states to support the MOCC operations (personnel, funding, etc.). The IMOCC may be an operation of a RDHRS or be independent of it. In some cases, operating this IMOCC from the FEMA RRCC may be advisable depending on the nature of the incident.

An IMOCC serving a metropolitan area whose patient catchment/referral patterns cross state lines is more complex when each of those states has significant hospital resources outside that specific metro area. In this case, the IMOCC may be limited to the metropolitan area and its normal referral patterns, with close coordination with the respective SMOCC. The IMOCC is really acting as an RMOCC with interstate

> IMOCC functions should be distinguished from the 65 Department of Veterans Affairs or Department of Defense Federal Coordinating Centers (FCC) that manage National Disaster Medical System (NDMS) patient movement to or from their geographic area should that be necessary during a disaster. These centers support patient movement via federal assets out of a disaster-affected area to hospitals that have agreements with NDMS in other regions of the United States. NDMS can be a complementary but very different (larger scale movement of patients to another area of the nation) method of unloading disaster-affected health care systems that is managed by HHS ASPR. (For more information refer to NDMS FCC Guide.)

information sharing agreements. Differences in state policy, liability protections, and regulations can be problematic and require careful delineation prior to an incident. Fortunately, in many of these geographies existing structures recognize and address some of the interstate needs and may serve as a nexus for IMOCC operations.

During protracted incidents such as the COVID-19 pandemic with sustained hospital capacity issues or when specialty patients need to be moved over large distances between states (e.g., major regional burn incident), an IMOCC can also be helpful. Operating this IMOCC from the FEMA RRCC may be a viable, if not preferred, strategy. In this case, the IMOCC will coordinate efforts with the SMOCCs. IMOCCs can help align assumptions about which patients are priority for the limited specialty beds. SMOCCs will coordinate patient information and transfer requests and will manage the local care of those who are not highest priority for transfer. IMOCCs can also help arrange or manage interstate transportation assets. Additionally, an RRCC-centered IMOCC can provide critical visibility of clinical challenges and impact to the RRCC at large that can inform deployment of federal resources. An IMOCC established at the RRCC can be funded and supported by a federal mission assignment (refer to Appendix E) subject to approvals. Using federal personnel and the RRCC resources can help further ensure inter-state coordination and information flow as well as maintain a non-jurisdictional/apolitical approach to interstate demand monitoring and balancing. Key personnel to liaison with when planning and operating an IMOCC include ASPR Regional Administrators or Regional Emergency Coordinators (RECs) as well as HPP FPOs.

Interface of data between state and federal systems may pose challenges. Personnel with access to state-based systems may be required in the RRCC to assist until an interface can be created. Optimally, interoperable systems will be a priority during the planning phase for state and federal programs. The federal government has different rules on patient privacy data and only the necessary information without personally identifiable information or sensitive personally identifiable information should be provided by the SMOCC to facilitate the patient transfer. If the information is collected by federal agencies, a Privacy Threshold Assessment may be required.

Staffing of a Federal IMOCC may be different than a RMOCC or SMOCC including:

- Personnel may include permanent personnel from the federal offices within the region or those on temporary assignment from local or state EMS, public health, or hospital programs.
- Clinicians from the affected region may be deployed to the IMOCC. A variety of funding options for this type of deployment are available, which may include FEMA PA funding depending on how and where the MOCC is established.
- Personnel are preferably from the region of the IMOCC they are supporting and are therefore familiar with local health care systems and referral patterns.
- Alternative resourcing of clinicians to support regional IMOCC operations could include the following personnel:
  - U.S. Public Health Service (USPHS) Commissioned Corps – preferably physicians with field experience during a disaster or public health emergency, including working as chief medical officers or operations leads with Incident Management Teams and/or deployed operations, such as rapid deployment teams.

- NDMS senior medical officers with field experience, including working as chief medical officers or operations leads with Incident Management Teams and/or deployed disaster medical assistance teams.
- Title 10 medical officers with critical care experience and familiarity with civilian health care systems; ideally Reservist or National Guard medical officers from within the federal region, who also have civilian health care experience.
- Clinicians should be trained and oriented to the RRCC's operations and should be particularly familiar with other SMOCC and IMOCC personnel.

MOCC OPERATIONS

This section presents an overview of key operations considerations for MOCCs that may be used as a template if desired.

Objectives and Priorities for MOCCs

Objective: The MOCC makes data and partner-informed decisions to balance patient load and ensure high-quality care. MOCC decisions may direct the movement of patients (and potentially other resources) from one facility to another or redirect referrals that would usually go to an overwhelmed facility or system to one with capacity.

The **priorities** of the MOCC include the following activities:

1. **Collecting, analyzing, and disseminating hospital-capacity information**: One of the primary roles of the MOCC is to collect and analyze the information provided by each partner (e.g., EMS, state, region, health care facilities). The MOCC analyzes and disseminates data to support comprehensive situational awareness of available resources across the region. This does not replace broader EOC-based information/intelligence functions.

2. **Establishing protocols, systems, and triggers**: The MOCC facilitates the collection and reporting of health care-specific data elements; informs operational planning and stakeholder communications; and initiates regional transfer decision-making. The MOCC will work with partners to determine triggers for load-balancing and equitable processes for managing destination decisions when no capacity is available.

3. **Acting as a single point of contact (POC) for referral requests and life-saving resources:** The MOCC provides a single POC for health care facilities seeking assistance with patient transfers and for health care system partners in the region that have resources that can help decompress the load in overwhelmed facilities.

The MOCC **achieves its objectives and priorities** primarily by the following activities:

- **Adding clinical staff** (virtually and/or physically) to existing EOCs or a designated operations center (e.g., a health care system call center, EMS communications hub) if not co-located in the EOC. Clinical staff support transfer prioritization and care-in-place consultation as required when a referral bed cannot be located.

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- **Establishing agreements** that allow for collecting data regarding the current capacity of the region's health system, synthesizing the data to understand the needs of the system, and determining areas of the system that may be overwhelmed.
- **Establishing policies** that describe the authorities and operating procedures for the MOCC including how the MOCC receives information, connects patients to beds (including any "forcing function" that may be needed when all hospitals are at capacity for ICU beds or critical interventions), and load-balances hospitals when needed. Other functions may also be included such as staff or supply management or managing information on long-term care center capacity.

Roles and Responsibilities

The MOCC relies upon a range of partners to provide the personnel and data needed: (a) to understand current capacity and gaps in the region's health care system, and (b) to facilitate load-balancing and management of patient transfers to optimize use of available resources. Key partners include health care facilities, EMS, and supporting state and local government agencies.

The MOCC operates on a foundation of partners both public and private with varying missions, priorities, and capabilities. Common principles and clear roles and responsibilities will help define roles in and contributions to the initiative and will help ensure effective participation and, thus, patient distribution.

The following are sample agreements for MOCC partners:

- Agree to submit data to support situational awareness and must agree to respond in a timely manner to requests for data.
- Agree to fully cooperate and communicate with each other and the MOCC to effectively respond to the disaster or public health emergency, including the authorities of the MOCC to place patients via rotation or other means when capacity is not available but a patient is in need of critical care interventions or services in a facility that does not offer them.
- Agree to provide (virtual) POCs who can communicate with the MOCC and with their organizations on a continuous basis, if required. Particularly during situations when specialty beds are in demand (e.g., pediatric or burn) inter-hospital dialogue and compromise is critical to ensuring that patients are in a facility that can best meet their needs based on incident demand.
- Agree to review and process MOCC-adjudicated patient-movement requests to ensure that the level of care needed for patients is available.
- Agree to provide medical consultation and technical assistance and support to regional and local ESF-8 decision makers per MOCC policy regarding statewide bed availability, patient movement capabilities, and other resources that can be employed to coordinate patient care.
- Agree to accept a proportional number of patients from an overwhelmed facility subject to established triggers and distribution plans.
- MOCC agrees to share data with partners and relevant others (RMOCC, SMOCC, IMOCC with overlapping responsibilities) to support situational awareness and to respond in a timely manner to requests for data.

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Hospitals

In coordination with the jurisdictional ESF-8 Lead Agency, MOCC staff may engage and collaborate with stand-alone hospitals (e.g., acute care, specialty, and critical access hospitals), hospital networks, and corporate health systems. Hospital networks and corporate health systems comprise multiple hospitals that may coordinate health care delivery as a group. HCCs may be a key asset in managing MOCC policy development and operations with hospitals.

To enable effective patient distribution, hospitals may perform the following activities:

- Determine how their facility or health care system capacity coordination centers/transfer centers interface with the MOCC.
- Fulfill data requests from the MOCC.
- Define protocols and channels for communication with hospital leadership; identify POCs.
- During all incidents, determine based on regional impact what patients require transfer and which may be safely cared for in-place.
- Request assistance from the MOCC per policies for load-balancing and patient transfers (or logistics support if part of MOCC responsibilities).

Long-term Care Facilities

In coordination with the jurisdictional ESF-8 Lead Agency, MOCC staff *may* engage and collaborate with long-term care (LTC) facilities, including nursing homes, skilled nursing facilities, and assisted living facilities to maximize use of LTC beds if appropriate to MOCC policies and resources.

To enable effective patient distribution, LTC facilities may perform the following activities:

- Fulfill data requests from the MOCC.
- Define protocols and channels for communication with facility leadership and across facility personnel; identify POCs for the MOCC.
- Understand the process for EMS transport to hospitals and the potential for alternate receiving hospitals if the usual referral hospitals are overwhelmed.
- Understand and agree to maximize any additional surge capacity for low-acuity patients or residents.

Emergency Management

In coordination with the jurisdictional ESF-8 Lead Agency, MOCC staff should engage and collaborate with jurisdictional emergency managers to support development of operational plans and provide operational support, as needed.

To enable effective patient distribution, emergency managers may perform the following activities:

- Engage and liaise with 911/PSAPs, EMS and other emergency services.

- Identify and/or support the establishment of systems or dashboards for centralized reporting, data collection, communications, health care stakeholder triage requests, and other operational functions.
- Develop and define protocols, systems, and triggers for activation of complementary emergency support functions.
- Ensure the jurisdiction is providing or working with the state to ensure legal protections and regulatory relief for necessary MOCC and surge capacity adaptations by the health care facilities.

EMS

In coordination with the jurisdictional ESF-8 Lead Agency, MOCC staff should engage and collaborate with EMS agencies (911 and non-911 system agencies) in the region, while recognizing many in the overwhelmed area may not be able to provide transfer assistance.

To enable effective patient distribution, EMS may perform the following activities:

- Fulfill data requests from the MOCC.
- Refine processes and protocols for 911 emergency transport balanced to available resources.
- Assist with identifying ground and aeromedical transport assets to support patient transfers as required.
- Obtain a standard data set for required patient support (e.g., oxygen, intravenous drips, cardiac monitoring, other personnel accompanying).
- Establish liaison with the MOCC to broker requests for specialty (e.g., critical care, pediatric) transportation and to determine potential options when transfer distances are longer than usual (or too long to be reasonably executed).
- Establish clear, reliable modes of communication and governance/decision structures for determining patient transport locations. For example, EMS should honor in-system transfer requests, when possible, based on availability and should have a mechanism for prioritizing transfers with the MOCC.

Governmental Partners

In coordination with the jurisdictional ESF-8 Lead Agency, MOCC staff may engage and collaborate with other SLTT governments. SLTT departments and programs that may support MOCC operations include the following examples:

- State Department of Public Health
- State Department or Division of Public Safety
- State Department or Division of Emergency Management
- State Department or Division of Human Services
- State Office of EMS (or equivalent)
- Governor's Office
- National Guard
- Medical Reserve Corps
- Governmental Mutual Aid or Emergency Management Assistance Compact (EMAC) Partners

- FEMA
- ASPR

Other Coordinating Partners

Other organizations within the jurisdiction may assist with a wide variety of tasks based on their capabilities, including those within the private sector (e.g., hospital associations, HCCs, vendors, and suppliers), non-governmental organizations (e.g., American Red Cross), and volunteer agencies, as needed or requested.

MOCC Staffing

MOCC staff and experts are critical to its operations. MOCC staffing should come from the local health care delivery system, as the load-balancing responsibilities of the MOCC require a high degree of medical and hospital operational expertise and familiarity.

Successful MOCCs have deployed five key types of staff:

1. **MOCC Manager** – Serves as the unit manager and oversees MOCC operations. MOCC Managers may work rotating call schedules to ensure leadership presence.
   Experience: Health care operations and patient placement, and health care system emergency response.

2. **Medical Director** – Oversees the medical team, support personnel, and clinical resource allocation. Responsibilities include, but are not limited to, the following activities that may be delegated to Medical Officers working rotating call schedules:
   - Evaluate the clinical acuity of potential transfers.
   - Evaluate the impact of transfer on clinical operations.
   - Evaluate the potential need for transfer, risks, and benefits.
   - Provide emergency medical consultation via phone to referring facilities, particularly smaller community hospitals that may have to manage a critically ill patient awaiting transfer for much longer than usual.
   - Plan/activate specialty consultation (e.g., burn, pediatrics) when necessary to assist with prioritization and care-in-place recommendations.

   Experience: Physician with experience in emergency care, critical care, trauma, and/or mass casualty with ability to consult with burn, pediatric, and poison control specialists.

3. **Call Takers** – Manages incoming calls to the MOCC and ensures requests are entered in the appropriate platform by the requestor.
   Experience: Administrative staff, ideally with a background in nursing, EMS, or public safety.

4. **Transfer Coordinator** – Matches the referral hospital and receiving hospital appropriate for the patient's acuity. Links the referring physician with the admitting physician at the receiving hospital, including needed clinical documentation for physician review to determine appropriateness of transfer. **Experience**: Charge nurse, nurse manager, or other hospital clinical staff with background in patient access and flow/throughput. Pediatric experience is helpful.

5. **Transport Coordinator** – Coordinates the transportation of patients between the facilities as required. **Experience:** Paramedic supervisor (preferred) or paramedic or emergency medical technician with strong knowledge of regional systems and incident management.

MOCC Operations

During MOCC operations, it will be staffed at a minimum by a MOCC Manager, Medical Officer, Call Taker(s), and Transfer Coordinator. Depending on the call volumes, some of these staff may be virtual, particularly off-hours. As mentioned, MOCCs that have some functions in the region on a daily basis are most likely to be successful during a disaster. Though all of the roles and responsibilities below are applicable, there may be different titles, staffing, and roles required depending on how, where, and when the MOCC operates.

The MOCC Manager will perform the following activities:

- Determine the location of the MOCC (if not already determined) and if staff will report on-site or virtually.
- Decide the number and type of additional staff needed.
- Distribute the MOCC contact number through local public health, emergency management, and member facility Incident Action Plans and Communication Plans.
- Determine additional logistical/equipment needs of the MOCC and address them through the jurisdiction and the health care system.
- Establish robust and secure channels of communications between stakeholders, the MOCC (and other interfacing MOCCs if activated), and the EOC.
- Establish an operational framework that summarizes expectations and processes and can be used by all stakeholders to build a shared understanding of the MOCC's work.

Once operational, all MOCC stakeholders agree to the following activities:

- Submit data to support situational awareness and respond in a timely manner to requests for data.
- Fully cooperate and communicate with each other and the MOCC to effectively respond to the disaster, including agreeing on the policies for patient transfers and load-balancing.
- Provide (virtual) POCs who can communicate with the MOCC and with their organizations on a continuous basis, if required.

Information Sharing/Situational Awareness

Effective MOCC coordination relies on a common operating picture made up of information from a range of sources.

The MOCC receives and shares real-time emergency response information on the current status of the health care delivery system. The MOCC may also collect information from other partners to help local ESF-8 partners assess their resource requests and assist in their management processes (e.g., from an HCC cache, partner mutual aid, or from deployed state or federal resources). The MOCC must have certain information to operate, including knowledge of the services provided at each hospital in the region as well as the availability of beds and resources. Web-based information systems are critical to that effort. Currently, no state has integration of all information directly from the EHR; this is a goal that needs to be actively pursued so that the information system reflects:

Baseline facility information:
- Demographics – name of facility, location, phone number, total operating beds.
- Point of contact for facility – ideally a nurse manager/patient placement as well as a medical director.
- Referral center phone number (if applicable).
- Beds by type and number (ensure that common definitions are used) – floor, monitored, intermediate/step-down, ICU.
- Do the ICU services include mechanical ventilation, dialysis, ECMO, or other specialty services?
- Specialty designations such as trauma center level, burn center capability, stroke center designation, etc.
- Surge beds for each bed type that can be made available in addition to usual beds if staffed.
- For community hospitals, determine if there is in-house physician/hospitalist coverage 24/7 and whether this includes adults, pediatrics, or both.
- For community hospitals that do not provide comprehensive critical care, determine comfort level managing certain conditions (e.g., sepsis requiring pressors, respiratory distress requiring non-invasive respiratory support, mild DKA, CHF exacerbation).

Once activated, the MOCC must determine the essential elements of information (EEIs) for the incident, the method for sharing EEIs, and the reporting time intervals. All member health care facilities (acute, non-acute, and alternate care sites) within the MOCC boundary will report their EEIs at the request of the MOCC. The information will be updated at an interval defined by the MOCC, which may be adjusted during the incident. The following are sample health care facility EEIs that may be reported to the MOCC:

Essential elements of information – current situation information (as real-time as possible):
- General status of the facility
- Available beds by category (depending on MOCC functions this may involve only ICU beds or all bed types; pediatric beds should be included in totals but also listed as a subset)
- Occupied beds by category (ideally by % of usual maximum capacity, e.g., 90% vs. 125%, so that direct comparisons between facilities can be made)
- Staffing contingencies used (e.g., adjusted staffing ratios, use of non-traditional staff in units)
- Number of admits boarding in the ED awaiting inpatient bed/transfer

- Non-emergency procedure status – unrestricted, case-by-case, no procedures that will generate inpatient bed need, no non-emergency procedures (or other similar stratification that uses common language)
- Markers for inpatient critical care – ventilators in use, ideally adding other interventions such as patients on vasopressors or other respiratory interventions (e.g., BiPAP)
- Available resources as required by the incident (e.g., ventilators)
- Critical care contingencies in use (e.g., boarding ICU patients in step-down or other units)
- Surgical capability, blood supply
- Surge beds in use including in temporary care areas

Definitions are important. Available beds may not mean the same thing (staffed versus potential to be staffed, staff not available) between facilities. EHRs may have difficulty distinguishing surge beds versus usually operated beds or may not be able to register them on the system at all. Data validation is critical, particularly if new systems of data submission are being used. Having baseline capacity data collected over time helps greatly to understand how far above baseline the facility and region is and also helps demonstrate capacity that exists when a no-notice incident begins (i.e., a system that is two standard deviations above usual capacity when a mass casualty incident occurs is much more likely to require inter-regional assistance than one that is much lower than average).

Additionally, incident specific data may also be required, and the data systems should be flexible to accommodate those. Qualitative data can also be extremely important and the MOCC, ESF-8 Lead Agency, or HCC should ensure facility and provider information exchange to support situational awareness and foster consistent practices. This may take the form of conference calls, use of an interactive web-based platform, or multiple methods.

If multiple levels of MOCCs are used or interstate SMOCC coordination is needed, MOCC staff will establish the method and frequency for SMOCCs to report EEIs, ideally in alignment with the SMOCC's operational reporting periods. These communications will optimally occur at least twice daily. In addition to data exchange, coordination calls in the form of a morning stand-up and an evening closing call, or as otherwise specified by the RMOCC/IMOCCs should occur between the MOCCs. These calls present an opportunity to share clinical challenges and resource issues with the other states and with federal partners and to identify coordination opportunities and action items.

EMS Agency Reporting of EEIs

All member EMS agencies within the MOCC boundary may need to report data to the MOCC via a specified mechanism/platform. The information will be updated at an interval defined by the MOCC, which may be adjusted during the incident.

The following are sample EMS agency EEIs that they *may* be asked to report:

- General status of the EMS agency
- Total number of staffed Critical Care Transport ambulances
- Total number of staffed ALS ambulances
- Total number of staffed BLS ambulances

- Total number of paratransit vehicles
- Total number of staffed air medical transport assets
- Additional resource availability, such as ambulance buses and non-medical transport vehicles, as applicable

Patient Movement Request

The primary purpose of patient movement and tracking within the MOCC is to decompress overwhelmed health care facilities through an equitable distribution of patients as well as ensure timely transfers of patients to definitive care. The MOCC will coordinate the inter-facility transfer of patients (including to alternate care sites, if activated, and the SMOCC/IMOCC is unable to find appropriate care resources within a reasonable distance).

The MOCC does *not* replace 911 operations for pre-hospital transport of patients originating outside of the health care system. Depending on its policies, local MOCCs may or may not direct EMS which hospitals to transport 911 patients to. The MOCC is primarily designed to manage inter-hospital referrals. It also does not replace usual referral mechanisms and *supplements* load-balancing activities that occur within health care systems themselves. (Refer to Appendix F for a sample MOCC Patient Transfer Workflow.)

1. **Referring Facility Communicates Request**

The request for patient movement can be made by the Referring Facility by calling the MOCC at the designated number.

The Referring Facility will provide the following information:

- The number of patients requiring transfer.
- Each patient's age, gender, acuity, language and/or effective communication needs and level of care needed.
- Additional pertinent clinical information, including diagnosis, current interventions, and requirements for transfer (e.g., oxygen, intravenous medications/drips, cardiac monitoring, other special equipment, weight for aeromedical transfers, and advanced directives as applicable).

A Referring Facility may also contact the MOCC if they are acutely overwhelmed by multiple patients or facing an evacuation, in which case the MOCC will determine the loads, needs, and initiate a regional load-balancing strategy as appropriate (for emergent patients and evacuations, this may involve an allocation/rotation; for non-emergent patients this may involve a conference call brokering multiple transfers to multiple hospitals).

2. **MOCC Facilitates Patient Placement**

The MOCC will determine based on available data an appropriate Receiving Facility on the basis of resources available, services needed, and geography/transport time and requirements. The MOCC or the Referring Facility contacts the Receiving Facility(ies) to notify them of the transfer.

If resources are not available or the patient requires prioritization (i.e., multiple pending transfer requests) the MOCC Medical Officer or specialty consultant will contact the Referring Facility for information and to provide clinical advice if required.

Once a Receiving Facility has been identified and confirms acceptance of the patient(s), the MOCC Transfer Coordinator may coordinate a clinical provider call between the Referring Facility and Receiving Facility, assist with obtaining appropriate transportation assets, or simply provide contact information to the Referring Facility as per local policy.

The MOCC database should reflect the information above. Depending on MOCC policy, time of arrival at the Receiving Facility may be tracked, or this may be left to EMS. Regardless, a mechanism should exist for the MOCC to be made aware of delays or other quality issues generated by the transfer so that quality improvement mechanisms can include those considerations.

If the MOCC is not able to find an available bed in the area, or if they are prioritizing transfers *and* there is an SMOCC or IMOCC operating in coordination (either inter-state or supporting sub-state regions), the MOCCs should urgently coordinate data and information to see if resources exist at the next level of service.

3. **MOCC May Support Repatriation or Transfer to a Lower Level of Care**

The Receiving Facility will use its normal discharge planning process once a patient is able to be discharged. The MOCC *may* assist depending on its policies and resources with the repatriation of patients to Referring Facilities, other hospitals, long-term care, to their homes if they are recipients of home health care or home and community-based services (HCBS) or to alternate care sites/convalescent centers.

In some cases, the MOCC may coordinate transfer of patients to community hospitals from tertiary centers to help load-balance when their condition has stabilized sufficiently. This is an under-utilized strategy for capacity generation, in part due to additional demands it places on EMS and difficulties with obtaining reimbursement for either the transport or care. Agreements with payors, disaster funding, and executive orders can all be helpful in facilitating this strategy.[7]

Medical Resource Sharing

MOCC coordination makes possible rapid sharing of lifesaving and life-sustaining medical resources, particularly those required for individuals or a handful of patients. The scope of resource coordination activities will vary depending on the resources and governance of the MOCC. Most MOCCs established for the COVID-19 pandemic did *not* include resource coordination activities and though the patient transfer functions do not fit well with brokering of staff and resources, the vision of the MOCC as a more "complete" center for operations decision-making should include at least consideration of these functions as the data streams and personnel available to the MOCC help inform logistical support as well as patient transfer support.

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[7] For example: https://www.colorado.gov/governor/sites/default/files/inline-files/D%202020%20260%20Hospital%20Transfer.pdf

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Resource coordination within the MOCC does not replace normal supply chain processes or existing ESF-8 resource request processes. The MOCC simply expedites local sharing of medical resources and can serve both an operational and policy function to allocate scarce resources when demand exceeds supply (something traditional ESF functions are not well equipped to do, particularly when clinical expertise is required).

The process for sharing medical resources including staff, pharmaceuticals, supplies, and equipment is described in the next sub-section and may be implemented based on regional needs and resources. Not all jurisdictions will have the agreements to coordinate these requests. If the MOCC is *not* the nexus for these decisions, the process for managing them should be described and that authority and responsibility should be assigned within the ESF-8 structure (e.g., to HCC or other entity).

Generally, health care systems should manage these requests within their system *first* before requesting help from the MOCC. Existing HCC or other mutual aid agreements may already have been exhausted prior to engaging the MOCC or the MOCC may serve as a gateway to activate these processes.

Health Care Staffing Request

Initiation of health care staffing includes the following steps:

1. **Requesting Facility Communicates Request**

The request for health care staffing can be made by calling the MOCC.

A verbal request must be followed by written documentation through an agreed upon platform as soon as reasonably possible and include the following information:

- The type and number of health care staff requested.
- How they will be used by the Requesting Facility.
- Staffing contingencies being used at current time (if not already submitted via usual MOCC processes).
- An estimated date when health care staff are requested to report for duty.
- The location where the health care staff are to report for duty.
- An estimate of how long the health care staff will be needed.

The written request should ideally occur before health care staff arrive at the Requesting Facility.

2. **MOCC Identifies Staff**

The MOCC will contact potential Assisting Facilities, based on EEI reporting and pre-existing agreements, to identify health care staffing resources. The SMOCC may also have access to additional staffing resources (for example, during the COVID-19 pandemic, one state obtained contract nursing staff and then allocated them centrally).

3. Health Care Staff and Requesting Facility Fulfill Documentation Requirements

Upon arrival at the Requesting Facility, health care staff from the Assisting Facility will be required to present proper identification from the Assisting Facility at a location designated by the Requesting Facility's Command Center.

The Requesting Facility will be responsible for the following activities:

- Meeting the health care staff as they arrive (usually assigned to the Requesting Facility's Security Department or designated employee).
- Confirming the proper identification by comparing an ID badge with the list of personnel provided by the Assisting Facility.
- Providing additional identification (if deemed necessary), e.g., ID badging, to the arriving personnel.

The Requesting Facility will accept the professional credentialing determination of the Assisting Facility, but only for those services for which the health care staff are credentialed at the Assisting Facility, or the roles for which they were requested.

Facilities should agree that only staff in good standing should be shared. In addition, policies related to liability, workers' compensation, and pay should be agreed to ahead of time.

4. Requesting Facility Provides Supervision

The Requesting Facility's Senior Administrator or designee (the Hospital Command Center) identifies where and to whom the health care staff are to report and which professional staff of the Requesting Facility supervise the assisting personnel.

The supervisor or designee will meet the health care staff at the point of entry of the facility and brief the assisting personnel of the situation and their assignments. If appropriate, the "emergency staffing" rules of the Requesting Facility will govern assigned shifts. The health care staff's shift, however, should not be longer than the customary duration practiced at the Assisting Facility.

All onboarding is the responsibility of the Requesting Facility and the Requesting Facility is responsible for ensuring facility-based privileging is completed per its bylaws.

5. Requesting Facility Leads Demobilization Procedures

The Requesting Facility will provide and coordinate any necessary demobilization procedures and post-incident stress support. The Requesting Facility is responsible for providing transportation necessary for health care staff's return to the Assisting Facility.

Pharmaceutical, Supplies, or Equipment Request

The steps for requesting pharmaceuticals, supplies, or equipment include the following activities:

1. Requesting Facility Communicates Request

The request for the transfer of pharmaceuticals, supplies, or equipment initially can be made by calling the MOCC. Existing HCC or other mutual aid agreements may already have been exhausted prior to engaging the MOCC or the MOCC may serve as a gateway to activate these processes.

A verbal request must be followed by a written resource request, through the electronic process defined by the MOCC.

The Requesting Facility will identify the following information in the request:

- The quantity and exact type of requested items.
- An estimate of how quickly the request is needed.
- Time period for which the supplies will be needed.
- Location to which the supplies should be delivered.

The written request should ideally occur before the receipt of any material resources at the Requesting Facility.

The Assisting Facility will identify how long it will take them to fulfill the request and pass the information to the MOCC. This can be accomplished and tracked via an electronic resource request process.

2. MOCC Identifies Resources

The MOCC will contact potential Assisting Facilities, based on baseline information, EEI reporting, and queries, to identify resources.

3. Requesting and Assisting Facilities Fulfill Documentation Requirements

The Requesting Facility will honor the Assisting Facility's standard order requisition form as documentation of the request and receipt of the materials. The Requesting Facility's security office or designee will confirm the receipt of the material resources.

The documentation will detail the following information:

- The items involved.
- The condition of the equipment prior to the loan (if applicable).
- The responsible parties for the borrowed material.

The Assisting Facility is responsible for tracking the borrowed inventory through their standard requisition forms.

Upon the return of the equipment, the original invoice will be co-signed by the senior administrator or designee of the Requesting Facility recording the condition of the borrowed equipment.

4. Requesting Facility and MOCC Coordinate the Transport of Pharmaceuticals, Supplies, or Equipment

The Requesting Facility, in coordination with the MOCC, is responsible for coordinating the transportation of materials both to and from the Assisting Facility. This coordination may involve government and/or private entities, and the Assisting Facility may also offer transport.

Upon request, the Requesting Facility must pay the transportation fees for returning or replacing all borrowed material.

5. Requesting Facility Supervises Borrowed Resources

The Requesting Facility is responsible for appropriate use and maintenance of all borrowed pharmaceuticals, supplies, or equipment.

6. Requesting Facility Leads Demobilization Procedures

The Requesting Facility is responsible for the rehabilitation and prompt return of the borrowed equipment to the Assisting Facility. Any consumed resources, such as pharmaceuticals and supplies, must be filled through the Requesting Facility's normal supply chain process and resupplied to the Assisting Facility.

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APPENDIX A: ACRONYMS

ASPR   Administration for Strategic Preparedness and Response

CDC   Centers for Disease Control and Prevention

CHECC   Community Health Emergency Coordination Center

COOP   Continuity of operations plan

DFA   Direct Federal Assistance

ECMO   Extracorporeal membrane oxygenation

EEI   Essential elements of information

EHR   Electronic health record

EMAC   Emergency Management Assistance Compact

EMS   Emergency medical services

EMTALA   Emergency Medical Treatment and Labor Act

EOC   Emergency operations center

ESF   Emergency Support Function

FCC   Federal Coordinating Center

FEMA   Federal Emergency Management Agency

FOS   Federal Operations Support

FPO   Field Project Officer

HCBS   Home and community-based services

HCC   Health care coalition

HHS   Health and Human Services

HPP   Hospital Preparedness Program

IMOCC   Interstate medical operations coordination center

LTC	Long-term care
MA	Mission Assignment
MATO	Mission Assignment Task Order
MEOC	Medical Emergency Operations Center
MICU	Medical intensive care unit
MIEMSS	Maryland Institute for Emergency Medical Services Systems
MOCC	Medical operations coordination center
MRC	Medical Reserve Corps
NDMS	National Disaster Medical System
NICU	Neonatal intensive care unit
NRCC	National Response Coordination Center
On-TRAC	Online Technical Resources and Assistance Center
PA	Public Assistance
PHEP	Public Health Emergency Preparedness
PICU	Pediatric intensive care unit
POC	Point of contact
PSAP	Public safety answering point
PSMA	Pre-scripted mission assignment
RDHRS	Regional Disaster Health Response System
REC	Regional Emergency Coordinator
RMOCC	Regional medical operations coordination center
RRCC	Regional Response Coordination Center
RSV	Respiratory syncytial virus
SLTT	State, local, tribal, and territorial

SME   Subject matter expert

SMOCC   State medical operations coordination center

STRAC   Southeast Texas Regional Advisory Council

USPHS   U.S. Public Health Service

WMCC   Washington Medical Coordination Center

APPENDIX B: PATIENT TRANSFER CHECKLIST

This information is suggested for MOCC call-taker collection. Depending on local needs this can be modified accordingly. Optimally, this information is entered into a database rather than recorded in a hard copy.

- ☐ Patient name
- ☐ Age and Date of Birth
- ☐ Gender
- ☐ Referring facility
- ☐ Facility address and phone number
- ☐ Patient emergency contact name and contact phone number
- ☐ Referring physician and contact phone number
- ☐ Diagnosis
- ☐ Allergies
- ☐ Is this an emergency transfer? (immediate threat to life)
- ☐ Reason for referral/specific services requested (e.g., critical care, dialysis, surgical intervention)
- ☐ Is the patient currently stable OR receiving pressor medications or blood products to maintain stability?
- ☐ Current vital signs
- ☐ Is the patient receiving oxygen or other ventilatory support and, if so, by what mode and flow rate?
- ☐ Any other information you wish to share about the patient's care needs?
- ☐ Translation or disability services required? (If so, what?)
- ☐ Patient height and weight (particularly for air transport)
- ☐ Requirements for transfer
    - o Oxygen
    - o Intravenous drip medications
    - o Cardiac monitor
    - o Other special equipment
    - o Special needs/risks for transport? (e.g., PPE, behavioral health issues)

Items to send with the patient at the time of transfer to Receiving Facility:

- ☐ Copies of completed Patient Acceptance Questionnaire, Patient Transfer Checklist, and Discharge Planning and Transfer Back Agreement
- ☐ Hospital face sheet
- ☐ Reason for transfer (physician progress note or order)
- ☐ History and physical examination
- ☐ Daily progress notes
- ☐ Consultation reports
- ☐ Ancillary services notes (PT, OT, Respiratory Therapy, Case Management, etc.)
- ☐ Results of all relevant diagnostic tests, X-ray images (CD), and reports
- ☐ Medication administration record
- ☐ Advance directive
- ☐ Documentation of transfer consent

APPENDIX C: PEDIATRIC CONSIDERATIONS FOR MOCCS

Pediatric hospital beds are limited across the U.S., and thus any increase in demand may require placement coordination and potentially prioritization of pediatric patients for transfer to available specialty beds and/or the movement of young patients from pediatric centers to other hospitals that can safely provide care to make room for prioritized pediatric patients. The incident may predominately affect children (e.g., respiratory syncytial virus [RSV]) or children may require prioritization as a subset of patients during a larger incident (e.g., a pandemic, mass casualty incident). In these unique situations (e.g., mass burn incidents) pediatric patients will need to be cared for in hospitals that do not usually provide inpatient pediatric care. These hospitals will require support via telehealth and other mechanisms to appropriately care for these patients. For this and other operational reasons, pediatric expertise and data collection should be integrated into a MOCC (instead of creating a stand-alone pediatric MOCC) to ensure the resources of the larger health care system remain balanced. Some jurisdictions have incorporated a formalized consultative, advisory, or leadership position within their existing MOCC infrastructure for pediatric specialty considerations. Integrating pediatric expertise does not require physical co-location with other MOCC activities if a pediatric hospital is acting as a regional "hub" for telemedicine and prioritization of pediatric transfers but it does require an integrated regional response. Hospitals that do not usually provide pediatric inpatient care should have the resources available and a mechanism for pediatric specialty information-sharing and consultation to allow them to focus on younger patients' specific clinical needs when transfers are not possible due to capacity or other factors. The following summarizes pediatric considerations gathered during various MOCC operations over the past several years.

Related Resources

- ASPR TRACIE Pediatric Surge Resource Page
- Managing a Pediatric Tripledemic: Lessons Learned from 2022
- MOCC Adaptations during a Pediatric Surge (Speaker Series Recording)
- Lessons Learned from the Pediatric Tripledemic-Systems, Staff, Space, and Supplies (Webinar)
- WRAP-EM Pediatric Surge Playbook
- Improving Hospital Pediatric Surge Tip Sheet
- Improving Regional Pediatric Surge Tip Sheet
- Developing a Healthcare Coalition Pediatric Surge Annex (Speaker Series Recording)
- Healthcare Pediatric Surge Annex: Leveraging Templates for Operational Impact (Speaker Series Recording)
- Healthcare Coalition Pediatric Surge Annex Template
- Step by Step Guide to Implementing the Pediatric Surge Annex TTX Template

MOCC System Functions

- The host entity for the MOCC should have a contact list of pediatric providers including pediatric critical care and emergency medicine/trauma who can be called upon to provide just-in-time input. Additionally, the ability to contact specialty providers is advantageous for decision-making depending on the situation and case including burn, orthopedic, toxicology, neonatology, neurosurgery, cardiac, and infectious disease.
- Based on referral patterns in an area, one or several pediatric "hubs" may serve several states. These hubs should be active participants in all aspects of pediatric preparedness and response

including the integration with the MOCC. These hubs/referral centers will also likely be the source of telehealth consultation and prioritization of inpatient beds.

- The MOCC should have awareness of pediatric capable ground and air transport resources and collaborate with those entities and their medical directors to support inter-facility transport.
- During an incident involving pediatric patients when beds are at or over capacity, an experienced pediatric provider should be available on-call to the MOCC to support triage decisions regarding the level of care required and the priority to transfer for each request with the goal of maximal use of regional resources.
- At scheduled periods of the response, the MOCC should coordinate with hospitals to determine whether load-balancing transfers *from* the pediatric specialty care facilities to non-pediatric community hospitals with general in-patient pediatric capabilities are possible/warranted to off-load young patients whose care can safely be provided in other facilities, to allow pediatric specialty care facilities to manage the more complex, higher acuity pediatric patients. This may include relocation to a patient's hometown area once their condition stabilizes. Note that transfers to lower levels of care may not be covered by insurance and that agreements with payors and/or executive orders may be needed to facilitate these actions.

The MOCC data gathering process should include pediatric-specific data and qualitative information based on the event (e.g., number of available high-flow nasal cannula devices, current coping strategies for space/staffing issues) in consultation with local hospitals and the pediatric specialty consultants.

MOCC Information Sharing

- A mechanism for sharing pediatric-specific situational awareness should be established by the regional health care coalition or already established MOCC, or the lead pediatric hub, depending on the construct in the area. This may involve facilities across one or multiple states and, because of the limited number of pediatric specialty hospitals across the country, is likely to cover a broader geographic planning area than for adult trauma patients.
- Near real-time information sharing platforms can also highlight qualitative information about the surge situation, including coping and treatment strategies being used, that can improve consistency of approach across the region.
- Additional information may be shared on partner calls that is not reflected in the MOCC data stream, such as best practices or innovative solutions to manage the current surge (e.g., staffing strategies with pediatric-trained staff mentoring staff with little to no pediatric training, just-in-time training resources, and new or novel treatment protocols).
- Depending on the event, partners may wish to create illness-/injury-specific standard work and/or training materials for use in community and referral centers (for example, training materials about using high-flow oxygen on RSV patients). This is incident specific information as all hospitals should have (or be provided) the resources and education to address usual pediatric emergency care.

Data Requirements, Sharing, and Collection Processes

- MOCC leaders must determine an agreed upon schedule and staff responsible for collecting, analyzing, and sharing data.
- An electronic directory should list each hospital in the region served and baseline capabilities, and specify what pediatric services are available at each facility (e.g., pediatric extracorporeal membrane oxygenation [ECMO], dialysis, types of ventilation support provided [if any]).
- This directory should specify the current number and type of available pediatric-capable beds at both specialty and general hospitals. Ideally this should be integrated into daily data feeds to the MOCC rather than being collected at the time of need.
- Data sharing should also include information about acuity (e.g., number of intubated patients/patients receiving high-intensity respiratory support such as high-flow nasal cannula) to better compare acuity of care needs rather than relying on occupancy data alone.
- Depending on the facility configuration and/or nature of the incident, the MOCC may manage patients with behavioral health issues, in which case data on available related pediatric-specific resources will be required.
- Data sharing should include pediatric-specific strain data (e.g., number of pediatric ED boarding patients and how many in a given age group are awaiting placement).

Consultation and Transfer Prioritization

- MOCCs should staff a central call line that all health care facilities can access when they have a pediatric patient needing bed placement. This should be a common phone number regardless of incident or patient type. The information taken and consultation obtained will be dependent on the patient/event type.
- Optimally, call takers will have broad pediatric health system awareness and clinical experience. However, call takers may be detailed from other specialties/clinics and have limited pediatric experience. Information-gathering processes and just-in-time training should be developed to help screeners (e.g., RNs, other clinical staff) make initial determinations about priority.
- All MOCCs managing pediatric transfer prioritization or load-balancing should have pediatric consultants available to review information on requested transfers, contacting the referring facility to obtain additional information as needed.
- Emphasis should be on transferring the youngest, sickest patients—particularly those with complex or congenital problems—to the specialty centers.
- Transport capability is an important component of decision-making. The MOCC should integrate operations with ground and air transport providers so that prioritization and assignment of transport units with appropriate pediatric capabilities (or supplementation of those units with hospital-based nursing or respiratory therapy staff) can be matched to the patients in need. This integration may be virtual or physical and the staffing/coordination may depend on the organization of EMS in the area.
- Hospitals should be encouraged and assisted in providing definitive care to older children (e.g., teenagers) rather than refer them to a specialty center unless there are unique care needs.
- Adult trauma centers may be leveraged to support pediatric trauma care.

- Consultation to support pediatric care-in-place when transfers are not possible is a key function of a successful MOCC. Support may be provided by experts in the MOCC, an academic medical center, or another entity until transfer can be arranged/the patient stabilizes. Telemedicine that includes full chart and video access is optimal, but even telephonic support can be very helpful.

Authorities and Legal Protections

- If the pediatric consultant determines the patient must be urgently/emergency transferred to a higher level of care, the MOCC should have the authority to compel the most appropriate hospital to accept the transfer. When multiple (and relatively equidistant) facilities can provide pediatric care that is not available at the current facility, a rotation or other equitable system of distribution should be used. This rotation may be different than the system used for adult patients.
- The MOCC and those providing advice and support for transfer decisions and in-place care (e.g., telemedicine support) should be provided liability protection by the state for these actions. This includes periods of strain that do *not* result in disaster declarations. Broader statutory or other workforce protections are needed beyond emergency language or executive orders.
- Providers working beyond their usual scope (e.g., nurses providing inpatient care to pediatric patients that do not have those privileges) may require both hospital and state protections for delivering this type of care.

Care Expansion and Increasing Staff Capabilities

- MOCC success depends on proportional care expansion within and among other facilities and can include:
    - The use of Neonatal Intensive Care Units (NICU) for infants who need to be readmitted— including creating a safe environment for all NICU patients by partitioning re-admitted infected infants from others.
    - Creating a "Pediatric Intensive Care Unit (PICU) in the Medical Intensive Care Unit (MICU)." Expanding the range of pediatric ages and conditions that can be cared for in adult ICUs (e.g., 8-15 years old with the support of pediatric care nurses and on-site or remote hospitalists) during a pediatric surge – including the ability to refer pediatric patients to these hospitals—can free up space in pediatric centers for sicker and more complex pediatric patients. The thresholds will likely be dynamic over the course of the event and should be calibrated to the need. Coordination meetings can provide all hospitals with the opportunity to tailor these thresholds.
    - Expanding the categories of pediatric patients that can be cared for in community hospitals using just-in-time training, standard work, and telehealth/virtual consultation and clinical support. For example, in a community facility that does not usually manage high-flow nasal cannula devices, providing training and support to allow these patients to stay in community settings off-loads pediatric specialty centers.
- Temporarily adjust staffing models including shift length, patient ratios, and staff supervision. Providers may be forced to work beyond their traditional scope of practice. If the event is truly limited to pediatric patients, consider sharing staff from adult facilities with pediatric facilities.

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- Train additional staff in pediatric care techniques relevant to the incident. This should supplement baseline training in pediatric care based on the expected provider role during daily and disaster response.
- Conduct regular partner calls to leverage sharing of resources and expertise across disciplines and provide intelligence for shared decision making. This may involve broadening some calls to involve a wide range of hospitals and participants depending on the scope and duration of the event.

Contributors and reviewers of Appendix C are listed alphabetically and include:

Patricia Frost, RN, PHN, MS, PNP, Vice Chair, National Pediatric Disaster Coalition; Melissa Harvey, RN, BSN, MSPH, Assistant Vice President, Enterprise Emergency Operations & Medical Transport, HCA Healthcare; John Hick, MD, HHS ASPR and Hennepin Healthcare; Steven Mitchell, MD, FACEP, Medical Director, Washington Medical Coordination Center; Associate Professor of Emergency Medicine, University of Washington School of Medicine; Christopher Newton, MD, Professor of Surgery, LUCSF, Chair, Department of Surgery, UCSF Benioff Children's Hospital Oakland, Principal Investigator, Western Regional Alliance for Pediatric Emergency Management (WRAP-EM), and Co-PI, Pediatric Pandemic Network; Representatives from the California EMS Authority; Representatives from the Region V for Kids Pediatric Center of Disaster Excellence; and Vicki Sakata, MD, FAAEM, FAAP, Senior Medical Advisor, Northwest Healthcare Response Network.

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APPENDIX D: FUTURE APPENDIX ON BURN CONSIDERATIONS FOR MOCCS

[Appendix to be developed]

APPENDIX E: MOCC PRE-SCRIPTED MISSION ASSIGNMENT (PSMA) TEMPLATE

Title

Federal Interstate Medical Operations Coordination Center (IMOCC)

Requested Assistance

Request the U.S. Department of Health and Human Services (HHS) activate and staff a federal IMOCC to support interstate patient transfer in support of federal operations.

Statement of Work

As directed by and in coordination with FEMA, HHS will provide appropriate personnel to the RRCC to establish an IMOCC that will facilitate intrastate and interstate patient transfer planning from overwhelmed hospital systems. IMOCC will work in coordination with existing RRCC operations when facilitating interstate patient transfer. IMOCC scope is limited to monitoring state bed status, connecting bed requirements and available hospital resources, and facilitating the interstate process through establishment of host state agreements and tracking of patients until receipt at destination.

Standard language (included in all statements of work of all mission assignments):
- Mission Assignment task orders (MATOs) may be issued by FEMA for specific requirements, personnel, location(s), date(s), and duration of assignment(s).
- Agencies may be reimbursed for all eligible expenses pursuant to 44 CFR Pt. 206. Supporting documentation is required for reimbursement.
- All equipment and supply purchases must be coordinated with FEMA. If approved, documentation is necessary to ensure reimbursement.
- Activation of agency command center(s), if required, must be coordinated with FEMA as a separate MA.
- The mission-assigned agency is responsible for ensuring that all activity is properly authorized, goods are received, services are provided, and that costs are reasonable and supported by documentation maintained by the respective agency.
- MAs shall be considered for closure after 180 days with no financial activity in accordance with FEMA CFO Bulletin #157. For MAs still operationally open, requests for additional obligations may be withheld if no invoicing, ULO Validation, or additional justification has been provided.

Total Cost Estimate

$65,000

>   ** NOTE: Total estimated costs are for planning purposes only and are subject to change.
>   The cost estimate does not represent all eligible costs, which could be reimbursed. **

Cost Based On

Initial cost estimate includes three (5) MOCC staff for 30 days.

MOCC cost per team member, for 30-day operation: $13,000.

Costs will include:

- Overtime: up to 44 hours per week, 12 hours/7 days, less regular 40-hour week

- Lodging and per diem at _____per day for _____ days

- Travel: $ _____per person

- Transportation at Duty Station: $_____

Supporting Info/Notes

Disclaimer: Costs estimated early 2020. Total estimated costs are for planning purposes only and are subject to change based on MOCC operational requirements, inflation, and other factors.

APPENDIX F: MOCC PATIENT TRANSFER WORKFLOW

Referring Facility contacts MOCC & provides:
- Number of patients requiring transfer
- Patients' age, gender, acuity, communication needs, & level of care needed
- Additional pertinent clinical information

↓

MOCC determines appropriate Receiving Facility based on resources available, services needed, & geography/transport time & requirements

→ no availability →

If MOCC covering a larger regional area (i.e., SMOCC/IMOCC) is activated, submit transfer request per regional policies

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MOCC determines the priority of the transfer when beds become available & facilitates care-in-place support. When necessary, an emergent transfer may be required based on a rotational or other agreed upon mechanism to ensure access to necessary services at a Receiving Facility.

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MOCC confirms availability/assignment with Receiving Facility

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Receiving Facility confirms acceptance of patient(s) with MOCC

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MOCC Transfer Coordinator facilitates communication between the Referring & Receiving Facilities' Transfer Coordinators

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MOCC or Referring Facility arranges EMS transport

↓

MOCC or EMS conducts patient tracking

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Receiving Facility initiates patient discharge through its normal discharge planning process; MOCC may assist with repatriation to Referring Facility or lower level of care

Modified from original figures created by the NRCC Healthcare Resilience Task Force for the First Edition of the MOCC Toolkit.

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HEALTHCARE EMERGENCY PREPAREDNESS
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