**Appendix 1. Information Extracted from Included Studies.**

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| **Ref** | **Operationalization / conceptualization** | **Operationalization component** |
| (7) | The three critical components of catastrophic disaster preparedness are (1) development of crisis standard of care, (2) development of a systems-approach that ensures integration among key stakeholders and (3) meaningful engagement between health care professionals and the public. | 7,10 |
| (8) | Education and training are the cornerstones of disaster preparedness. The development of a healthcare workforce capable of meeting the challenges inherent in these threats. | 3 |
| (32) | Safety and security, continuity, communication, volunteer management, resource management, surge, support of external entities, incident management, planning. | 2,4,5,8,9,10 |
| (33) | Building the technical and managerial capacities to cope with incidents through the development of disaster management plans; emergency exercises and training; early warning systems; emergency communication systems; emergency personnel/contact lists; mutual aid agreements; public information and education. | 1,3,5,7,9,10 |
| (34) | Preparedness activities (planning, caching of supplies) increase the capacity of the system to provide conventional and contingency care, increasing the volume of patients who can be accommodated before shifting to crisis care, a shift that may compromise patient outcomes.  | 1,2 |
| (35) | Command and control, contact lists, engagement with the public, communication, mutual aid agreements, continuity strategies, education of the public, safety procedures, decontamination unit, surge capacity, plans | 1,2,4,5,7,8,9,10 |
| (36) | Preparedness assessments should include: (1) elements of disaster planning; (2) emergency coordination; (3) communication; (4) training; (5) expansion of hospital surge capacity; (6) personnel; (7) availability of equipment; (8) stockpiles of medical supplies; and (9) expansion of laboratory capacities. The preparedness pyramid identifies: (1) planning and policies; (2) equipment and infrastructure; (3) knowledge and capabilities of staff; and (4) training and drills as the major components of maintaining a high level of preparedness.  | 1,2,3,4,5,6 |
| (37) | Operational capability improvement; (2) expert and fullystaffed workforce; (3) infrastructure, equipment, and othersupplies; and (4) plans and management. | 1,2,3,4,6 |
| (38) | Inpatient surge capacity, the ability to generate staffed and ready inpatient beds in the event of an unanticipated surge in demand for inpatient healthcare services due to events such as mass-casualty incidents or pandemics, is an essential component of public health preparedness. | 2,6 |
| (39) | HEAT: Factors found to contribute to effective hospital emergency response include (1) use of the hospital incident command system; (2) antidote and emergency drug caches;(3) physical security and facility lockdown procedures; and (4) basic health care professional knowledge of chemical, biological, radiologic, nuclear, and high-yield explosive emergency response. | 2,3,4,8 |
| (14) | Risk assessment, legal climate, assign roles, command system, public engagement, epidemiology functions, laboratory functions, mitigation strategies, mass surge, public information, expert and fully trained staff. | 1,2,3,4,7,10 |
| (40) | The six mission areas are: program management; incident management; safety and security; resilience and continuity; medical surge; support to external requirements. | 1,2,4,8,9 |
| (41) | Emergency leadership; community cooperation and communication; disaster plans; disaster stockpiles and logistics management; emergency staff; emergency training and drills. | 1,2,3,4,5,7,6 |
| (42) | Preparedness encompasses planning, training, equipping and exercises. | 1,2,3 |
| (43) | SOPs\*, training and drills, knowledge of staff, infrastructure and equipment. | 1,2,3 |
| (17) | Planning and organization, safety and security, SOP, communication, resources, decontamination, medical management | 1,2,5,8,10 |
| (44) | Preparedness/Planning/Readiness: • Agency staff includes an Emergency Response Coordinator.• Strategic emergency preparedness planning is a part of agency activities.• Emergency plan is in place; emergency staffing plan for 24/7 coverage.• Job descriptions for emergency; written plans include roles and responsibilities.• Emergency contact directory accessible 24/7; updated at least annually.• Key personnel/external partner test: acknowledges contact within 30 minutes.• Emergency plans tested through an exercise or real event.• A local Strategic National Stockpile plan in place. | 1,2,3,4,6 |
| (45) | Hospital’s preparedness for terrorist related HMCI comprises organizational infrastructure, staff training, manpower and equipment | 1,3,6 |
| (24) | From EPIQ-tool: command and control, emergency plan, drills, communication | 1,3,4,5 |
| (46) | Command, control, communication, coordination, continuity of operations, community infrastructure. Crisis capacity—Adaptive spaces, staff, and supplies are not consistent with usual standards of care but provide sufficiency of care in the setting of a catastrophic disaster (i.e., provide the best possible care to patients given the circumstances and resources available). | 1,2,5,7,6,9 |
| (47) | Eight domains: 1. Emergency command, communication and cooperation system. 2. Disaster plans 3. Disaster stockpiles and management 4. Emergency staff. 5. Emergency training and drills 6. Emergency services and surge capacity. 7. Hospital safety standard and procedures. 8. Recovery and adaptation strategies.  | 1,2,3,4,5,8,6,9 |
| (25) | Nine key domains including command and control, communication, safety and security, triage, surge capacity, conjunction of essential services, human resources, logistics and supply management, and post-disaster recovery. | 2,3,4,5,6,10 |

\*Standard Operating Procedures.