1. Trained Emergency Manager or Chief Preparedness Officer designated as lead for COVID-19 preparedness and response, fully integrated with community emergency preparedness, public health and resource managers.

		EM National	Federal Gov.	State & Local Gov	State & Local PH	ED	Hosp.
Act	ion:						
a.	Designate an in-house position, or new hire (NIMS certified, HICS trained); National Incident Management System (NIMS) Hospital Incident Command System (HICS)						
b.	Establish authority to carry out responsibilities;						•
C.	Execute/implement ASPR Influenza Surge Preparedness Assessment as appropriate https://www.acep.org/globalassets/uploads/uploaded-files/acep/clinical-and-practice-management/resources/publichealth/h1n1/aspr-influenzasu rgepreparednessassesment.pdf					•	•
d.	For institutions that are part of a hospital system, establish/strengthen connections amongst the different emergency managers and hospital leaders						•
e.	Review National Guidance for Healthcare System Preparedness https://www.phe.gov/preparedness/planning/hpp/reports/documents/capabilities.pdf					•	•
f.	Review/implement AHRQ Mass Medical Care with Scarce Resources: A Community Planning Guide as appropriate https://web.mhanet.com/AHRQ_mass_care_guide11.06.pdf					•	•
g.	Maintain awareness of status or threat of COVID-19 in US, state, and region as reported by CDC and state, keeping hospital in posture of preparedness prior to initiation of any emergency operations						
	Review Crisis Standards of Care and its implications for the institution https://asprtracie.hhs.gov/technical-resources/63/crisis-standards-of- care						
	Allocating Scarce Resources in Disasters: Emergency Department Principles Hick, John L. et al. <i>Annals of Emergency Medicine</i> , Volume 59, Issue 3, 177 - 187	•	•	•	•	•	•
	WHO https://www.who.int/docs/default-source/coronaviruse/situation-reports/20200228-sitrep-39-covid-19.pdf?sfvrsn=aa1b80a7_2						
	CDC https://www.cdc.gov/coronavirus/2019-ncov/locations-confirmed-cases. html#map						

2. Seamless connectivity with local/state governmental emergency management, public health, other hospital Chief Preparedness Officers, and any other support organizations

		EM National	Federal Gov.	State & Local Gov	State & Local PH	ED	Hosp.
Act	ion:						
a.	Agree on modalities, nodes, thresholds and frequency for multi-directional information flow/communication during emergency operations such as EOC dash boards.			•	•	•	
b.	Agree on and establish common language and formats for data sharing during emergency operations		•	•	•	•	•
C.	Agree on types, degrees (and limitations) of participation in regionalized response to the public health emergency			•	•	•	•
d.	Confirm that emergency management/public health authorities have coordinated with clinics, private medical practices, extended care facilities, local medical societies, health care coalitions re: response plan			•	•		
e.	Subscribe to the CDC and your state HAN network or other state department of health communication modality	•			•		•
f.	Confirm connectivity of key subject matter experts (SMEs) and authorities within hospital with their outside counterparts (e.g. hospital laboratories with state labs and Laboratory Response Network facilities) and reporting relationships in-house for common operating picture						•

3. Emergency operations plan for COVID-19

		EM National	Federal Gov.	State & Local Gov	State & Local PH	ED	Hosp.
Act	ion:						
a.	Appoint a hospital COVID-19 planning group						
b.	Review the hospital's emergency operation plan (EOP) for applicability to COVID-19				•		•
C.	Utilize Web resources to identify and disseminate model EOPs for COVID-19	•	•	•	•		
d.	Review the best plans and adapt to your institution for e.g. Hospital Disaster Preparedness Self-Assessment Tool https://www.acep.org/globalassets/uploads/uploaded-files/acep/clinical- and-practice-management/ems-and-disaster-preparedness/hospital- disaster-preparedness-self-assessment-tool.doc					•	•
e.	Assess your COVID-19 EOP using a table-top exercise with hospital staff including physicians, administrators and logistics experts present to ensure that the plan is workable and will maintain operations under anticipated circumstances.					•	•

5. HICS and NIMS knowledge and compliance

		EM National	Federal Gov.	State & Local Gov	State & Local PH	ED	Hosp.
Act	ion:						
a.	Provide HICS/NIMS training for all hospital staff appropriate to their assigned positions https://www.calhospitalprepare.org/hicshttps://training.fema.gov/nims/						•
b.	Ensure that those managing an incident have appropriate levels of NIMS certification: Incident management leadership - NIMS IS 700 Individuals responsible for the emergency plan - NIMS IS 800 Personnel who have a direct role in middle management and/or emergency response - IS 100. and 200. https://training.fema.gov/nims/			•	•		•

6. Functional Hospital Command Center

		EM National	Federal Gov.	State & Local Gov	State & Local PH	ED	Hosp.
	tion:						
a.	Review and customize hospital command centers (HCC) functions in HICS for your institution https://emsa.ca.gov/disaster-medical-services-division-hospital-incident-command-system-resources/						•
b.	Establish authority and criteria to activate the HCC						•

7. Training and exercise program for all involved personnel

		EM National	Federal Gov.	State & Local Gov	State & Local PH	ED	Hosp.
Act	ion:						
a.	Create and execute a training program based upon your emergency operations plan			•			•
b.	Develop a template for a COVID-19 exercise program	•					
C.	Execute an exercise to test training and plan validity						
d.	Use results of the exercise to further improve the emergency operation plan, and then re-exercise						•
e.	Design and implement special training for public affairs in existence of plan to care for all who need it during COVID-19 emergency, changes to normal daily operations that could occur during pandemic, where and how they will get information						•
f.	Discuss with hospital public affairs and public health authorities when and how to inform the public as to when and how to access information and care during an outbreak.				•		•

8. Appropriate PPE for health care staff

		EM National	Federal Gov.	State & Local Gov	State & Local PH	ED	Hosp.
Act	ion:						
a.	Consult national guidance for recommended PPE use for patients with confirmed or under investigation for COVOD-19 in healthcare settings https://www.cdc.gov/coronavirus/2019-ncov/infection-control/control-recommendations.html?CDC_AA_refVal=https%3A%2F%2Fwww.cdc.gov%2Fcoronavirus%2F2019-ncov%2Fhcp%2Finfection-control.html					•	•
b.	When indicated by the CDC, estimate PPE needs for multiple waves of COVID-19.					•	•
C.	Stockpile appropriate quantities of PPE prior to outbreak. Developing a range of respirator conservation strategies, including strategies to make supplies last longer (such as using alternative products like reusable respirators) and extending the use of disposable respirators. Strategies for Optimizing the Supply of N95 Respirators https://www.cdc.gov/coronavirus/2019-ncov/hcp/respirator-supply-strategies.html						•
d.	Train/update medical personnel in use of PPE (including fit testing of N95 or other appropriate respirator)						•

9. Capability to screen staff for illness

		EM National	Federal Gov.	State & Local Gov	State & Local PH	ED	Hosp.
Act	ion:						
a.	Develop protocol for staff screening including criteria for dismissal from work when symptomatic.						•
b.	Consider furlough or reassignment of staff at high-risk for COVID-19 complications						•
C.	Develop criteria and process for return to work						•

10. Enhanced facility security and crowd management

		EM National	Federal Gov.	State & Local Gov	State & Local PH	ED	Hosp.
Act	ion:						
a.	Develop plan and criteria for implementation for enhanced facility security and crowd management including facility lockdown					•	
b.	Establish infected (or potentially infected0 patient flow paths through the institution to avoid contact with uninfected individuals.					•	•
C.	Ensure signage at all entry access points with instructions for appropriate triage/treatment areas based on symptoms. Provide appropriate PPE.					•	
d.	Develop plan and criteria for implementation of visitor limitation					•	•
e.	Establish a memorandum of understanding (MOU) with law enforcement or other sources for increased institutional security						

11. Administrative and legal support

		EM National	Federal Gov.	State & Local Gov	State & Local PH	ED	Hosp.
Act	ion:						
a.	Review and incorporate, as appropriate, guidelines from the American Health Lawyers Association https://www.healthlawyers.org/hlresources/PI/Documents/PI14PFP-eP.pdf#search=flu%20guidelines%20checklist				•	•	•
b.	Incorporate provisions of anticipated or actual federal declarations of public health emergency into regional and hospital emergency operations: e.g. possible time-limited waiver of EMTALA, emergency use authorizations (EUAs) for pharmaceuticals			•	•	•	•
C.	Establish protocols for rapid credentialing and pre-event credentialing of surge resource personnel						•
d.	Incorporate provisions of anticipated or actual state declarations of public health emergency into regional and hospital emergency operations: e.g. possible suspension of destination and diversion policies for EMS providers					•	•
e.	Establish legal protocols for human resources to manage attendance of designated mission-critical personnel						•
f.	Work with labor and/or staff representatives to develop policies for maintaining staffing, morale, discipline, and safety during emergency operations						•
g.	Discuss with legal and medical staff the implementation of "scarce resources allocation" procedures						•
h.	Establishment and maintenance of Finance/Administration branch of HICS with assigned functions according to standard protocols and hospital EOPs FEMA rules for reimbursement during an outbreak pandemic – hospital finances http://www.hhs.gov/disasters/discussion/planners/playbook/panflu/subtask.html						•
i.	Review legislative authorities of relevance for panflu (e.g. HIPAA, EMTALA, Expanded Scope of Practice, Allocation of Scare Resources. Medical Liability)	•		•		•	•

12. Antiviral prophylaxis and vaccine availability for staff if and when specified by the CDC.

		EM National	Federal Gov.	State & Local Gov	State & Local PH	ED	Hosp.
Act	ion:						
a.	Perform resource requirement assessment based on the size of your staff and CDC recommendations					•	
b.	Considering federal and state guidance, develop a plan for prioritization and administration of antiviral prophylaxis and vaccine to your staff					•	•
C.	Do a resource assessment of what is available in hospital pharmacy, local retail pharmacies and state stockpiles.			•	•		•
d.	Develop plans for addressing the gap between estimated requirement and what is expected to be available, including agreements with supply sources			•	•		

13. Interoperable communications system (fire, law enforcement, EMS, emergency management, receiving hospitals, local/regional public health, local EOC)

		EM National	Federal Gov.	State & Local Gov	State & Local PH	ED	Hosp.
Ac	tion:						
a.	Ensure effective two-way communication among these agencies during an emergency.			•	•		•
b.	Ensure that dash boards and communications are networked, tested, organized under Incident Command hierarchy, and overseen by a designated regional authority			•	•	•	•

14. Maintaining EMS operations during an outbreak

		EM National	Federal Gov.	State & Local Gov	State & Local PH	ED	Hosp.
Act	ion:						
a.	Review and incorporate, as appropriate, plans and protocols in guidelines for EMS in COVID-19 https://www.ems.gov/ https://icsw.nhtsa.gov/people/injury/ems/PandemicInfluenzaGuidelines https://files.asprtracie.hhs.gov/documents/aspr-tracie-transport-playbook-508.pdf			•		•	
b.	Develop plan to provide for augmentation of staff during an event using additional personnel (volunteer and paid)			•		•	
C.	Develop plan for PPE (EMS personnel and patients) acquisition and training			•		•	
d.	When recommended by the CDC follow federal and state guidance, develop a plan for prioritization and administration of antiviral prophylaxis to EMS staff and their families			•	•		
e.	Establish protocols for alternate patient transport and destinations for non-emergent patients			•	•	•	•
f.	Develop protocols for pre-transport patient screening Healthcare Professional Preparedness Checklist For Transport and Arrival of Patients With Confirmed or Possible COVID-19 https://www.cdc.gov/coronavirus/2019-ncov/downloads/hcp- preparedness-checklist.pdf	•	•	•			
g.	Develop policies and procedures for rapid ambulance decontamination	•	•	•			

15. Laboratory testing protocols

		EM National	Federal Gov.	State & Local Gov	State & Local PH	ED	Hosp.
Act	ion:						
a.	Disseminate guidance to practitioners based on CDC and state health department recommendations and put a system in place to update this information as new data become available.		•	•	•		•
b.	Work with your clinical laboratory and public health officials to determine indications for and availability of COVID-19 test kits CDC Tests for COVID-19 https://www.cdc.gov/coronavirus/2019-ncov/about/testing.html				•	•	•
C.	Work with hospital leadership to develop appropriate inpatient admission testing and patient placement protocols					•	

16. Alternate locations and staffing for triage and medical screening exams (e.g. mobile units, tents, off-site facility, telemedicine etc.)

		EM National	Federal Gov.	State & Local Gov	State & Local PH	ED	Hosp.
Act	ion:						
a.	Select one or more alternate locations for triage and/or medical screening exams during a pandemic event.			•			•
b.	Develop a staffing plan for the alternate location(s)						
C.	Develop criteria for initiation of use of the alternate location(s)						•
d.	Ensure that any alternate site is designated by the hospital as the appropriate site for a medical screening exam						•
e.	Consult Federal Alternate Site guidance https://asprtracie.hhs.gov/technical-resources/48/alternate-care-sites- including-shelter-medical-care/47		•				

17. Off-Site vaccine administration when recommended by the CDC.

		EM National	Federal Gov.	State & Local Gov	State & Local PH	ED	Hosp.
Ac	tion:						
a.	Work with public health and emergency management to ensure adequate sites and staffing for vaccine administration to the public			•	•		•

18. Health information call centers

		EM National	Federal Gov.	State & Local Gov	State & Local PH	ED	Hosp.
Act	ion:						
a.	Develop enhanced protocols for COVID-19 telephone triage.				•		•
b.	Develop protocols for call screening and management at public service answering points (PSAP)				•	•	•
C.	Work with local public health to establish social media and telephone center resources to dispense accurate and timely information regarding COVID-19 treatment, home care, criteria for emergency care. https://archive.ahrq.gov/prep/callcenters/				•		
d.	Utilize existing resources such as poison centers or nurse help lines for this purpose				•		•

19. Configuration of ED waiting rooms for distancing

		EM National	Federal Gov.	State & Local Gov	State & Local PH	ED	Hosp.
Act	ion:						
a.	Configure waiting areas to separate patients with respiratory symptoms from other patients. Ensure signage at all entry access points with instructions for appropriate triage/treatment areas based on symptoms. Provide appropriate PPE.					•	•
b.	Maximize distance between individuals with respiratory symptoms up to six feet					•	•
C.	Establish protocols for those accompanying patients in the waiting area						

20. Protocols for those visiting patients with fever and respiratory symptoms

	EM National	Federal Gov.	State & Local Gov	State & Local PH	ED	Hosp.
Action:						
a. Establish protocols for visitors in treatment areas and inpatient areas					•	•

21. Environmental decontamination capability

		EM National	Federal Gov.	State & Local Gov	State & Local PH	ED	Hosp.
A	ction:						
a	Establish policies and procedures for rapid decontamination of patient treatment areas (including radiology, if necessary)		•				•

22. Off-site mass screening capability

		EM National	Federal Gov.	State & Local Gov	State & Local PH	ED	Hosp.
Act	ion:						
a.	Establish local health department sponsorship and staffing plans for mass screening sites				•		
b.	Use CDC sanctioned criteria for the self-assessment protocol If you are sick with COVID-19 or suspect you are infected with the virus that causes COVID-19, follow the steps below to help prevent the disease from spreading to people in your home and community. https://www.cdc.gov/coronavirus/2019-ncov/downloads/sick-with-2019-nCoV-fact-sheet.pdf		•		•		

23. Adequate inpatient surge capacity

		EM National	Federal Gov.	State & Local Gov	State & Local PH	ED	Hosp.
Act	ion:						
a.	Devise protocols for use of alternate care facilities to decompress inpatient units https://asprtracie.hhs.gov/technical-resources/48/alternate-care-sites-including-shelter-medical-care/47						•
b.	Establish requirements and investigate process to revise patient staffing ratios						•
C.	Identify physical space requirements and capacity (opening unused areas, patient cohorting, doubling up inpatient rooms, canceling elective admits and procedures, and using areas such as post-op recovery for extra critical care space.) Ensure accurate patient tracking.						•
d.	Develop alternate staffing and training protocols for ventilator management Project XTREME https://archive.org/details/gov.hhs.ahrq.07-0017-mw.1						•

24. Trained and credentialed volunteers

		EM National	Federal Gov.	State & Local Gov	State & Local PH	ED	Hosp.
Act	ion:						
a.	Assess the requirements (type and quantity) of medical and non-medical volunteers needed during an outbreak				•	•	
b.	Develop a process for rapid credentialing and just in time training for provider volunteers						•

25. Awareness of SNS surge supplies and capability to receive those supplies

		EM National	Federal Gov.	State & Local Gov	State & Local PH	ED	Hosp.
Act	ion:						
a.	Work with state and local public health to establish type and quantity of supplies and resources available to mitigate shortages during a pandemic, for example: • Ventilators (including unique operational characteristics) • Antivirals (If/when recommended by the CDC) • PPE • Antibiotic for secondary infection • Vaccine (if/when available) • COVID-19 test kits			•	•	•	•
b.	Establish agreements with suppliers to ensure availability (MOU)						•

26. Accurate and coordinated public information dissemination

		EM National	Federal Gov.	State & Local Gov	State & Local PH	ED	Hosp.
a.	Establish protocols for the use of your local/regional/state joint information center that utilizes coordinated health information dispensed by public health officials.			•	•		•
b.	Ensure that all personnel adhere to the information dissemination protocols			•			•

27. Augmented post-mortem management and mortuary services

		EM National	Federal Gov.	State & Local Gov	State & Local PH	ED	Hosp.	
Action:								
a.	Establish plans and protocols to augment hospital morgue capacity							
b.	Work with local emergency management and local mortuary services providers to expedite handling of victims			•			•	
C.	Interim Guidance for Collection and Submission of Postmortem Specimens from Deceased Persons Under Investigation (PUI) for COVID-19, February 2020 https://www.cdc.gov/coronavirus/2019-ncov/hcp/guidance-postmortem- specimens.html			•	•		•	