

Supplemental Online Content

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This supplemental material has been provided by the authors to give readers additional information about their work.

eTable 1. Summary of Pandemic Preparedness Plans and Categorization

| State | Met Inclusion Criteria? | List Type ^a | Prognostication beyond hospital discharge | Resource allocated in triage | Link to access |
|-------------|--|--------------------------|---|------------------------------|---|
| Alabama | Excluded -- no written triage guidelines | n/a | n/a | n/a | https://www.alabamapublichealth.gov/cep/assets/alabamacsguidelines2020.pdf |
| Alaska | Included | Deprioritization/Example | 2 yr | Specific resource | https://dhss.alaska.gov/dph/Epi/id/SiteAssets/Pages/HumanCoV/SOA_DHSS_CrisisStandardsOfCare.pdf |
| Arizona | Included | No list | No | Critical Care | https://www.azdhs.gov/documents/preparedness/emergency-preparedness/response-plans/azcsc-plan.pdf |
| Arkansas | Included | Deprioritization/Example | 2 yr | Specific resource | https://www.healthy.arkansas.gov/images/uploads/pdf/ARCOVID-19_Crisis_Standards_of_Care.pdf |
| California | Included | Tiebreaker/Example | near-term | Critical Care | https://www.cdph.ca.gov/Programs/CID/DCDC/CDPH%20Document%20Library/COVID-19/California%20SARS-CoV-2%20Crisis%20Care%20Guidelines%20-June%208%202020.pdf |
| Colorado | Included | No list | No | Critical Care | https://drive.google.com/file/d/1SKT49ps1dpxPsByPr3z0QilSwmqVTUGM/view |
| Connecticut | Excluded -- no written triage guidelines | n/a | n/a | n/a | https://portal.ct.gov/-/media/Departments-and-Agencies/DPH/dph/legal/StandardsOfCarefinalpdf.pdf |
| Delaware | Included | No list | No | Critical care | https://www.centerforpublicrep.org/wp-content/uploads/2020/05/DE-CSC-ConOps-Final-4-29-20.pdf |
| Florida | Excluded -- no endorsement | n/a | n/a | n/a | https://fhn.miami.edu/_assets/pdf/resources/covid-19-resources/csc-fbn-6.pdf |
| Georgia | Excluded -- not found | n/a | n/a | n/a | n/a |
| Hawaii | Excluded -- no longer publicly available | n/a | n/a | n/a | n/a |
| Idaho | Included | Exclusion/Example | No | Critical care | https://coronavirus.idaho.gov/wp-content/uploads/2022/02/2022_ID_CSC_Standards_20220210.pdf |

| State | Met Inclusion Criteria? | List Type ^a | Prognostication beyond hospital discharge | Resource allocated in triage | Link to access |
|---------------|--|--|---|------------------------------|---|
| Illinois | Excluded -- no written triage guidelines | n/a | n/a | n/a | https://dph.illinois.gov/covid19/community-guidance/emergency-preparedness-hospitals.html |
| Indiana | Included | Exclusion/Example | 6 mo | Specific resource | https://drive.google.com/file/d/12cdA1VRK27HhDLHsVJvTKKpE9-47txKV/view |
| Iowa | Excluded -- no written triage guidelines | n/a | n/a | n/a | http://publications.iowa.gov/17889/1/panflu_ethical_guidelines_manual.pdf |
| Kansas | Included | Exclusion/Prescriptive Kansas also listed deprioritizing conditions in their Chronic Advanced Organ Dysfunction Score | No | Critical Care | https://www.kdhe.ks.gov/DocumentCenter/View/29192/Kansas-Crisis-Standards-of-Care-Guidance-KCSOG-for-Hospitals-PDF |
| Kentucky | Included | Exclusion/Example | 1 yr | Hospital Admission | https://www.kyha.com/assets/docs/COVID19/Update/CrisisStandardsOfCareFinal.pdf |
| Louisiana | Included | Exclusion/Prescriptive | No | Hospital Admission | https://lsu.edu/ethics/files/crisis-standards-of-care-2019-protected.pdf |
| Maine | Excluded -- no written triage guidelines | n/a | n/a | n/a | http://themha.org/policy-advocacy/Issues/Novel-Coronavirus-(2019-nCoV)/Maine-Crisis-Standards-of-Care-Plan-0050317-v27-19.aspx |
| Maryland | Excluded -- not found | n/a | n/a | n/a | n/a |
| Massachusetts | Included | No list | 1 yr | Critical care | https://www.centerforpublicrep.org/wp-content/uploads/crisis-standards-of-care-guidance-10-20-2020.pdf |
| Michigan | Included | Deprioritization/Example | 2 yr | Specific resource | https://www.michigan.gov/-/media/Project/Websites/coronavirus/Folder2/MDHHS_Ethical_Guidelines_-_November_30_2021_FINAL_12-6-21.pdf?rev=1166ed3704944b6994bef3e188225dcf |
| Minnesota | Included | Deprioritization/Example | 1 yr | Specific resource | https://www.health.state.mn.us/communities/ep/surge/crisis/standards.pdf |
| Mississippi | Excluded -- no written triage guidelines | n/a | n/a | n/a | https://msdh.ms.gov/msdhsite/index.cfm/44,8575,397,pdf/COVID-19_SOC_Plan_FY2022.pdf |

| State | Met Inclusion Criteria? | List Type ^a | Prognostication beyond hospital discharge | Resource allocated in triage | Link to access |
|----------------|---|-------------------------------|---|------------------------------|---|
| Missouri | Excluded -- no endorsement | n/a | n/a | n/a | n/a |
| Montana | Included | Deprioritization/Example | long-term | Critical care | https://www.mthcc.org/assets/montana-crisis-care-guidance-final.pdf |
| Nebraska | Included | No list | 1 yr | Critical care | https://dhhs.ne.gov/Documents/NE-Crisis-Protocol.pdf |
| Nevada | Included | Exclusion/Example | 6 mo | Critical care | https://nvhealthresponse.nv.gov/wp-content/uploads/2020/07/NV_DHHS_DPBH_CSCReco mmendations_COVID-19_071520_ADA.pdf |
| New Hampshire | Included | No list | 1 yr | Specific Resource | https://www.dhhs.nh.gov/sites/g/files/ehbemt476/files/documents2/nh-crisis-standards-of-care-guidance.pdf |
| New Jersey | Included | No list | 5 yr | Critical care | https://nj.gov/health/legal/covid19/AllocationMemo Revised.pdf |
| New Mexico | Included | Deprioritization/Prescriptive | 1 yr | Specific resource | https://cv.nmhealth.org/wp-content/uploads/2021/11/Appendix-E.-Update-Triage-Protocol.pdf |
| New York | Included | Exclusion/Example | No | Specific resource | https://www.health.ny.gov/regulations/task_force/reports_publications/docs/ventilator_guidelines.pdf |
| North Carolina | Excluded – no longer publically available | n/a | n/a | n/a | n/a |
| North Dakota | Excluded -- no written triage guidelines | n/a | n/a | n/a | https://www.hhs.nd.gov/sites/www/files/documents/DOH%20Legacy/_nd-pandemic-influenza-plan-annex-to-the-state-public-health-plan.pdf |
| Ohio | Excluded -- no endorsement | n/a | n/a | n/a | https://ohiohospitals.org/OHA/media/OHA-Media/Documents/Patient%20Safety%20and%20Quality/COVID19/Ohio-Guidelines-for-Allocation-of-Scarce-Medical-Resources-CLEAN-FINAL.pdf |
| Oklahoma | Included | Deprioritization/Example | long-term | Specific resource | https://www.ok.gov/health2/documents/Hospital%20Crisis%20Standards%20of%20Care.pdf |
| Oregon | Included | No list | No | Critical care | https://sharedsystems.dhsoha.state.or.us/DHSForms/Served/le4019c.pdf |

| State | Met Inclusion Criteria? | List Type ^a | Prognostication beyond hospital discharge | Resource allocated in triage | Link to access |
|------------------|-------------------------|--------------------------|---|------------------------------|---|
| Pennsylvania | Included | No list | 5 yr | Critical care | https://www.health.pa.gov/topics/Documents/Diseases%20and%20Conditions/COVID-19%20Interim%20Crisis%20Standards%20of%20Care.pdf |
| Puerto Rico | Excluded -- not found | n/a | n/a | n/a | n/a |
| Rhode Island | Included | Exclusion/Example | No | Critical care | https://health.ri.gov/publications/guidelines/crisis-standards-of-care.pdf |
| South Carolina | Included | Exclusion/Example | short-term | Critical care | https://scdhec.gov/sites/default/files/Library/CR-009538.pdf |
| South Dakota | Included | No list | short-term | Hospital Admission | https://sdaho.org/wp-content/uploads/2021/12/SD-Crisis-Standards-of-Care-FINAL_120921.pdf |
| Tennessee | Included | No list | No | Hospital Admission | https://www.tn.gov/content/dam/tn/health/documents/cedep/ep/Guidance for the Ethical Allocation of Scarce Resources.pdf |
| Texas | Excluded -- not found | n/a | n/a | n/a | n/a |
| Utah | Included | Exclusion/Prescriptive | short-term | Critical care | https://www.utahhospitals.org/images/pdfs-doc/Utah_Crisis_Standards_of_Care_Guidelines_v9_1_2142020.pdf |
| Vermont | Included | Exclusion/Example | No | Specific resource | https://www.healthvermont.gov/sites/default/files/documents/pdf/Vermont-Crisis-Standards-of-Care-Plan-2021.pdf |
| Virginia | Included | No list | 6 mo | Critical care | https://www.vdh.virginia.gov/content/uploads/sites/182/2021/01/Resource-Allocation-under-Crisis-Standards-of-Care-for-COVID.-FINAL.pdf |
| Washington | Included | Deprioritization/Example | 6 mo | Specific resource | https://doh.wa.gov/sites/default/files/2022-02/821-151-CSC-TT-guidebook.PDF |
| Washington, D.C. | Excluded -- not found | n/a | n/a | n/a | n/a |
| West Virginia | Excluded -- not found | n/a | n/a | n/a | n/a |
| Wisconsin | Excluded -- not found | n/a | n/a | n/a | n/a |
| Wyoming | Excluded -- not found | n/a | n/a | n/a | n/a |

^a Example refers to lists of conditions that explicitly grant triage officers permission to exercise clinical judgement and consider additional conditions of similar severity. Prescriptive refers to lists of conditions that do not explicitly permit the consideration of additional conditions. Kansas listed exclusion and deprioritizing conditions; no other states had multiple lists serving different functions within triage.

eTable 2. Complete Tabulation of Chronic Conditions Used for Triage in State Pandemic Preparedness Plans

| Organ System | Condition | Number of states | State (function within triage ^a) | Proposed Severity Assessment |
|----------------|--|------------------|---|--|
| Neurologic | Chronic disorder of consciousness | 4 | CA (T), KS (D), NV (E), WA (D) | Persistent vegetative state; Modified Rankin Score ≥ 5 , |
| | Neurologic injury or event | 9 | IN (E), KS (E), LA (E), NV (E), SC (E), WA (D), ID (E), NY (E), RI (E) | No motor response to painful stimulus; high expected mortality; persistent coma (>72 hrs); GCS < 6; neurospecialist assessment of minimal chance of recovery; irreversible; low chance of survival; CT evidence of herniation; massive MCA or brainstem stroke |
| | Alzheimer's disease and dementia | 7 | LA (E), KS (D), MT (D), NV (E), NM (D), OK (D), VT (E) | limited speech ability; no independent ambulatory ability; cannot sit up without assistance; loss of ability to smile; loss of ability to hold up head independently; hospice eligible; FAST ≥ 7 ; Moderate; with poor prior prognosis |
| | Neurodegenerative disease (e.g. ALS, MS, SMA, Parkinson's) | 4 | KS (D), KY (E), LA (E), NM (D) | Advanced, progressive; requiring assistance with ADLs or requiring chronic ventilator support |
| Cardiovascular | Heart failure | 13 | AR (D), CA (T), IN (E), KS (D), LA (E), MI (D), MN (D), MT(D), NM (D), OK (D), SC (E), VT (E), WA (D) | EF <30%; persistent ischemia unresponsive to therapy; non-reversible ischemia with pulmonary therapy; ACC/AHA Stage D; NYHA Class III, NYHA IV, NYHA II; evidence of frailty; with poor prior prognosis; EF 21-40%; LVAD; chronic inotrope utilization |
| | Pulmonary hypertension | 4 | CA (T), LA (E), KS (D), NM (D) | WHO Class IV; WHO Class III; moderate RV dysfunction |
| | Cardiac arrest | 9 | IN (E), KS (E), LA (E), NV (E), SC (E), VT (E), ID (E), NY (E), RI (E) | Unwitnessed arrest; recurrent arrest; arrest unresponsive to standard measures; trauma related arrest |
| | Coronary artery disease | 5 | MT (D), NM (D), OK (D), VT (E), WA (D) | Severe multivessel; symptomatic; not amenable to treatment; multiple stents placed and/or CABG |
| | Hypotension | 2 | NV (E), NY (E) | Unresponsive to fluid resuscitation and vasopressors |
| Respiratory | Chronic Lung Disease | 12 | AK (D), AR (D), CA (T), IN (E), KS (D), MI (D), MN (D), MT (D), OK (D), SC (E), VT (E), WA (D) | Home oxygen dependent; FEV1<20%; moderately severe; FEV1<25%, with poor prior prognosis; on NIPPV; frailty |
| | Cystic Fibrosis | 4 | AR (D), LA (E), MI (D), MN (D) | Home oxygen dependent |
| | Restrictive lung disease / pulmonary fibrosis | 7 | AR (D), LA (E), MI (D), MN (D), MT (D), NM (E), OK (D) | Home oxygen dependent; FVC <35%, moderately severe; total lung capacity < 60% predicted; PaO2 <55 mm Hg |
| | Obstructive lung disease/ COPD | 7 | AR (D), LA (E), MI (D), MN (D), MT (D), NM (E), OK (D) | Home oxygen dependent; moderately severe; FEV1 <25%; severe secondary pulmonary hypertension; FEV1 <20% |

| Organ System | Condition | Number of states | State (function within triage ^a) | Proposed Severity Assessment |
|--------------------------|---|------------------|--|--|
| Gastrointestinal/Hepatic | Cirrhosis | 13 | AR (D), CA (T), IN (E), KS (D), LA (E), MI (D), MN (D), MT (D), NM (D), OK (D), SC (E), VT (E), WA (D) | Ascites; history of variceal bleeding; fixed coagulopathy; encephalopathy; MELD ≥ 20 ; history of decompensation; Pugh > 9 , Child Pugh's class C; Ineligible for treatment' with poor prior prognosis; MELD > 15 |
| | Acute hepatic failure | 2 | AR (D), MN (D) | Hyperammonemia |
| Renal | End stage renal disease | 10 | AK (D), AR (D), IN (E), KS (D), LA (E), MI (D), MT (D), OK (D), SC (E), WA (D) | Dialysis dependent; patients < 75 ; eGFR <15 |
| Endocrine | Diabetes | 1 | KS (D) | Type I or II with serious complications, e.g., amputation, myocardial infarction, or stroke. |
| Neoplastic | Solid Organ malignancy | 3 | AR (D), MI (D), MN (D) | Poor prognosis for recovery |
| | Hematologic malignancy | 4 | AR (D), CA (T), MI (D), MN (D) | Poor prognosis for recovery; resistant or progressive despite conventional initial therapy |
| | Metastatic malignancy | 7 | CA (T), KS (D), LA (E), NV (E), NM (D), VT (E), WA (D) | Expected survival ≤ 6 months; incurable; poor expected response to therapy |
| | Malignancy | 5 | MT (D), NM (D), OK (D), SC (E), WA (D) | Expected survival < 10 years; ECOG ≥ 3 ; palliative treatment only; advanced cancer; unresponsive to interventions |
| | Sum of the above, all states including malignancy | 13 | AR (D), CA (T), MI (D), MN (D), LA (E), NV (E), NM (D), VT (E), WA (D), OK (D), SC (E) | |
| Injury | Severe burns | 8 | IN (E), LA (E), NV (E), SC (E), VT (E), WA (D), ID (E), NY (E) | Predicted survival $\leq 10\%$; BSA $> 40\%$; inhalational injury; age $> 60^*$; $< 50\%$ survival on triage for burn victims assessment; burn center assessment of minimal chance of survival; low chance of survival based on American Burn Association guide |
| | Trauma | 5 | LA (E), NV (E), VT (E), ID (E), UT (E) | RTS < 2 ; with poor expected outcome |
| General | End stage organ failure | 2 | KY (E), VT (E) | poor prior prognosis |
| | Hospice eligible | 4 | AR (D), IN (E), LA (E), NV (E) | |
| | Immunosuppression | 1 | SC (E) | High short-term mortality |
| | Neonatal | 1 | MT (E) | Newborn with gestational age < 24 weeks; bilateral grade 4 intraventricular hemorrhage; total bowel loss due to necrotizing enterocolitis; birthweight < 500 grams |

^a Function within triage refers to role of the state's list within triage, either Exclusion (E), Deprioritization (D), or Tiebreaker (T). Kansas listed exclusion and deprioritizing conditions; no other states had multiple lists serving different functions within triage.

Abbreviations:

GCS=Glasgow Coma Scale; CT=computed tomography; MCA=middle cerebral artery; ALS= amyotrophic lateral sclerosis; MS=multiple sclerosis; SMA=spinal muscular atrophy; FAST=Functional Assessment Scale Tool; ADLs=activities of daily living; EF=ejection fraction; ACC/AHA=American College of Cardiology/American Heart Association; NYHA=New York Heart Association; LVAD=left ventricular assist device; WHO=World Health Organization; RV=right ventricle; CABG=coronary artery bypass graft; FEV1= forced expiratory volume; NIPPV=non-invasive positive pressure ventilation; FVC=forced vital capacity; TLC=total lung capacity; COPD=chronic obstructive pulmonary disease; MELD=Model for End Stage Liver Disease; eGFR=estimated glomerular filtration rate; ECOG=Eastern Cooperative Oncology Group; BSA=body surface area; RTS=Revised Trauma Score

eFigure. Continuum of Resources Allocated in Triage

