Boston Medical Center
HEALTH SYSTEM

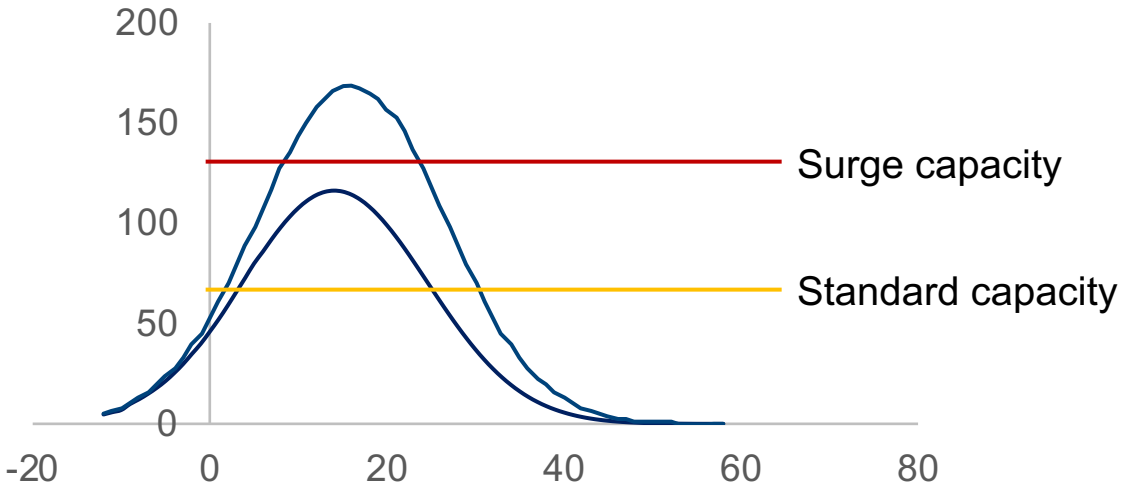
COVID-19 Crisis Standards of Care

April 2020

We expect to face a shortage of critical care resources in the near future

Est. of BMC COVID-19 cases over next 60 days

ICU cases



- **BMC will take all available options to expand capacity** and distribute burden among other hospitals
- We remain in **communication with medical centers in Boston and statewide**
- There is need for an internal resource **allocation framework aligned with state guidance and consistent with other hospitals**

BMC may reach a point where "crisis standards of care" justify significant rationing of lifesaving interventions

Crisis Standard: Shift from focusing on the individual autonomy of patients to the overall public good is warranted

- Move to **maximizing survival at community/societal level**
- DPH may make **official declaration**

Incident demand/resource imbalance increases →
Risk of morbidity/mortality to patient increases →
← Recovery

	Conventional	Contingency	Crisis
Space	Usual patient care space fully utilized	Patient care areas repurposed (PACU, monitored units for ICU-level care)	Facility damaged/unsafe or non-patient care areas (classrooms, etc.) used for patient care
Staff	Usual staff called in and utilized	Staff extension (brief deferrals of non-emergent service, supervision of broader group of patients, change in responsibilities, documentation, etc.)	Trained staff unavailable or unable to adequately care for volume of patients even with extension techniques
Supplies	Cached and usual supplies used	Conservation, adaptation, and substitution of supplies with occasional reuse of select supplies	Critical supplies lacking, possible reallocation of life-sustaining resources
Standard of care	Usual care	Functionally equivalent care	Crisis standards of care[a]

Usual operating conditions

Indicator: potential for crisis standards[b]

Trigger: crisis standards of care[c]

Austere operating conditions

We anticipate several stages of institutional response as resource shortages become increasingly severe

We are here

	Stage 1 Prepare for surge	Stage 2a Manage surge	Stage 2b Avoid crisis standards care	Stage 3 Manage crisis standards care	Stage 4 Exhausted capacity
	▪Bed escalation plan ▪Centralized staffing oversight ▪Preserve vents ▪Proactive advanced directive outreach ▪Staff Pandemic Triage officer	▪Surge expansion: –Staff –Beds –Vents –Supplies ▪Activating critical care triage –Communication approach –Triggers for stage 3 ▪Staff Appeals Officer	▪Leverage regional resources: –Vents –Supplies ▪Manage demand across orgs –Close trauma –Divert EMS ▪Extend State advocacy on resources	▪Implement crisis standards of care –Pandemic triage team 24/7 –Begin priority scoring ▪External –State CSOC –Citywide/State prioritization	▪Simplified triage protocol ▪Consider unorthodox approached (e.g., split vents, short-term vents for long term use) ▪More frequent reassessment
Goal	Ready to treat as many patients as possible at BMC	Organized expansion of capacity and prepare for surge	Avoid crisis standards of care anywhere until truly needed regionally	Make ethical decisions, alleviate provider burden	
Triggers	Fewer than 6 conventional vents	Beyond normal ICU/vent/staff	Dynamic in response to resource constraints	<3 vents Market capacity tapped out	Scale of demand makes existing triage protocols impractical

Broadly accepted guiding principles have informed the approach we will take over the course of the pandemic

Three core tenants should underlie any decisions...

1. **Duty to care** — Commitment to treat patients, not to abandon them - even in the face of some risk
2. **Fairness in providing care** — Benefits and burdens imposed are shared uniformly and fairly
3. **Duty to steward resources** — Certain resources may be preferentially directed to slow spread of the disaster

Must be balanced against duty to care and attention to equity

And the process itself should be…

1. **Transparent** — Clear and open communication to stakeholders
2. **Consistent** — Treating all patient groups alike; nondiscrimination
3. **Proportional** — Burdens should serve important hospital/patient/community need
4. **Accountable** — Decision makers should be accountable for utilizing best evidence

Our crisis standards of care guidelines are evidence-based and aligned with what we anticipate the State will approve and recommend

Ethical Goal: Do the greatest good for the greatest number, based on two considerations a) saving the most lives and b) saving the most life-years

1 **Non-heroic Interventions**	▪ Strong emphasis of non pursuit of heroic interventions (normal standard of care but emphasized now) in patients with low survival likelihood (e.g., unwitnessed cardiac arrest)
2 **Priority Score**	▪ Patients assigned score based on prognosis for short-term and long term survival (*additional details following*)
3 **Priority Group**	▪ Patients raw priority score places them into 3 priority groups (Red – highest, Orange – intermediate, Yellow – lowest)
4 **Tiebreakers**	▪ 'Tiebreaker' criteria determine order within priority group – first by age (lower higher priority) then random lottery
5 **Reassessment**	▪ Primary/triage team will use clinical judgment to determine if continued benefit at 72 hours and every 48 hours thereafter*

*Review times may change based on accrued data about clinical course of COVID-19

The priority score uses an objective set of clinical indicators to evaluate patients and guide overall resource allocation

Priority Score* = Sum of A+B

Specification	Point System			
	1	**2**	**3**	**4**
(A) Prognosis for short-term survival	SOFA** score (</=8)	SOFA score (9-11)	SOFA score (12-14)	SOFA score (>14)
(B) Prognosis for long-term survival (medical assessment of comorbid conditions)		Major comorbid conditions with substantial impact on long-term survival		Severely life-limiting conditions; death likely within 1 year

Major Comorbidities

- Moderate dementia
- Malignancy with a < 10 year expected survival
- NYHA Class III heart failure
- Moderately severe chronic lung disease (e.g., COPD, IPF)
- ESRD in patients < 75
- Severe multi-vessel CAD
- Cirrhosis with history of decompensation

Life Limiting Comorbidities

- Severe dementia
- Cancer tx w/ palliative intent
- NYHA Class IV heart failure OR Severe chronic lung disease with evidence of frailty
- Cirrhosis with MELD score ≥20, ineligible for transplant
- ESRD in patients older than 75

*Lower score indicated better survival and therefore increased access to resources
** SOFA includes: Pa02/FiO2 ratio, creatinine, platelets, bilirubin, GCS and MAP

A pandemic triage response structure will make resource allocation decisions and support frontline teams

Pandemic Triage Committee

- Communication to stakeholders and incident command
- Oversight and staffing of pandemic triage teams

Pandemic Triage Team
(Pager: 8888)

- Apply triage algorithm to make individual allocation decisions
- Work directly with clinical teams to apply crisis standards of care
- 24/7 availability of senior MD/RN dyads

Appeals Officer
(Pager: 5075)

- Hear appeals from clinical teams in real-time
- Make appeal decisions on technical criteria only
- Senior Physician Leader (rotating)

The Pandemic Triage Response Teams will continually review and reassess critical care resource allocation

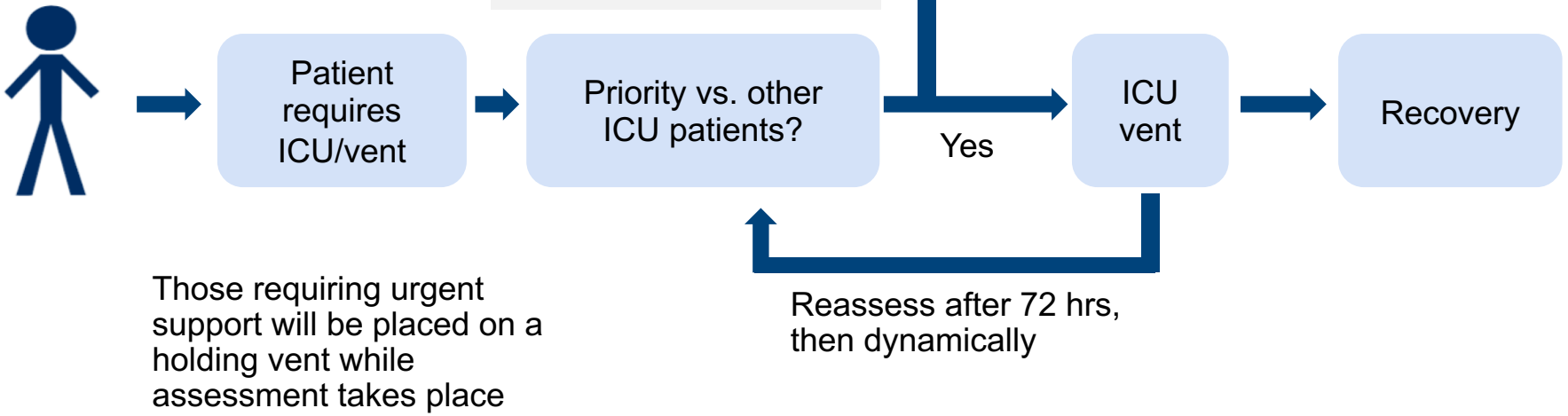
Prioritization

Prioritization performed by pandemic triage officer/team

Patient 1	Criteria	Explanation
Patient 2	Criteria	Explanation
Patient 3	Criteria	Explanation
Patient 4	Criteria	Explanation
Patient 5	Criteria	Explanation
Patient 6	Criteria	Explanation
Patient 7	Criteria	Explanation
Patient 8	Criteria	Explanation
Patient 9	Criteria	Explanation

For pending withdrawal:

- Notify primary team
- Notify family
- List for palliative care



During this time we will deploy enhanced patient and employee supports

Palliative Care Enhanced Support

Dedicated ED Support

- *In situ* ED palliative care team
- BMC Pocket Card for symptom management

Clinical Resources

- EPIC Comfort Measures COVID19 Order Set
- COVID19 Palliative Care Toolkit
- Virtual consultation and coaching

ICU/Inpatient

- Code status/goals of care for high risk inpatients
- MD consultation to support ICU workflows
- Continued GIP services

Outpatient

- Primary care patient outreach per MOLST form
- Telemedicine COVID script

Employee Support

- 24/7 real-time or scheduled **Psychological First Aid Support** (12 volunteer clinicians supporting 2 already existing on-call clinicians)
- **BMC Chaplains service** is now available 24/7 by phone
- **BH clinicians rounding** and meeting with frontline teams (in-person & virtually)
- **Employee Assistance Program** (EAP) and EAP Clinician (Beth Milaszewski, Izzy Berenbaum)
- **Doctor on Demand** (no co-pays for employees during Pandemic)

During this incredibly difficult time, BMC will be guided in all decisions by our core values

- This is **unlike any time in any of our careers**
- It will be **incredibly difficult and painful** and we will not be able deliver care in the way that we want to
- We have to believe that **we are doing the best we can**
- We will be **guided by the values of this organization** that have been **our foundation for over 160 years**
- **<u>Thank you for all you are doing</u>** for our patients as we get through this unprecedented time