THE ARIZONA SURGE LINE

Background

Triage Levels

Arizona Surge Line Structure

Arizona Surge Line Workflow
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Triage levels

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Arizona Surge Line workflow
Background

Arizona is preparing for a significant hospital surge due to COVID-19. The hospital systems and facilities in Arizona are collaborating in an unprecedented way in order to efficiently transfer, transport, offload and clinically manage patients.

The Arizona Surge Line is meant to facilitate the interfacility transfer of patients throughout the pandemic, with protocols that will change as Triage Levels themselves change over time.
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Triage levels

Arizona Surge Line Structure

Arizona Surge Line workflow
Overview of Pandemic Triage Levels
Based on Utah and AZ Crisis Standards of Care Plans

<table>
<thead>
<tr>
<th>Triage Level 1</th>
<th>Triage Level 2</th>
<th>Triage Level 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Early in the pandemic</td>
<td>Worsening pandemic</td>
<td>Worst-case scenario</td>
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<tr>
<td>- Hospitals recognize the need to surge bed capacities.</td>
<td>- Hospitals have surged to maximum bed capacity, and emergency departments are overwhelmed.</td>
<td>- Hospitals have already implemented altered standards of care regarding nurse/patient ratios and have already expanded capacity by adding patients to already occupied hospital rooms.</td>
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<tr>
<td>- Emergency departments are experiencing increased numbers.</td>
<td>- There are not enough beds to accommodate all patients needing hospital admission, and not enough ventilators to accommodate all patients with respiratory failure.</td>
<td>- Hospital staff absenteeism is 30% to 40%.</td>
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<tr>
<td>- Note: In the event of a severe and rapidly progressing pandemic, start with Triage Level 2.</td>
<td>- Hospital staff absenteeism is 20% to 30%.</td>
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</table>
Triage Levels – Level 1

Normal operating procedures with heightened awareness and planning for:

- Preserving Bed Capacity
- Building capacity for ICU beds
- Controlling infection by limiting access to hospitals
Triage Levels – Level 2

Hospitals surged to maximum capacity
Insufficient number of beds and/or ventilators
Staff absenteeism 20%-30%
Altered nurse-patient staffing ratios
Patient admissions triaged into Low, Intermediate & High priority
Challenges with normal transport services as they become overwhelmed
Triage Levels – Level 3

Facilities significantly overwhelmed
Some ventilated patients triaged to non-ICU settings
Modified nurse-patient staffing ratios
Staff absenteeism >30%
Heightened palliative care
Potential lack of conventional transport as transport services become overwhelmed
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Mission of the Surge Line

The mission of the call line is to do the following, with efficiency, consistency and ethical consideration:

- Expedite transfer to a higher level of care, when indicated and bed availability exists
- Expedite discharges from the hospital, in order to efficiently utilize bed space at all facilities
- Equalize and optimize patient “load” across hospital facilities
- Optimize clinician time spent doing patient care
- Support clinicians managing COVID-19 and end-of-life care
Scope of the Surge Line

The surge line is a 24/7 toll-free call line that acts as a “doorway” for clinicians to other facility transfer centers and independent critical care consultants.

The surge line will a) facilitate COVID bed placement to higher levels of care by maintaining surveillance on bed capacity and connecting with hospital transfer centers b) facilitate COVID bed placement to lower levels of care by maintaining surveillance on bed capacity and connecting with facility transfer centers c) centralize transport between facilities by maintaining surveillance view of available transport (ambulance, stretcher van, National Guard) and d) provide real time critical care and palliative care consultation services to providers managing COVID-19 patients.

The surge line is a free service to hospital providers and systems. It will be facilitated by the Arizona Department of Health Services, protocolized by the input from hospital facilities and systems in Arizona. For this emergency, it will be used for COVID patients only. It will be in use for the duration of the COVID-19 outbreak but could be used for other future emergencies involving hospital surge.
Four key components of Surge Line

- **Expedite transfer to a higher level of care** (higher relative capacity, e.g. med/surg, ICU, vent)
- **Expedite transfer to a low acuity of care**
  - E.g. hospital bed step down (e.g. PIMC, stepdown alternate care sites like Fiesta Mall, etc)
- **Facilitate interfacility transport**
  - Preference: transfer centers manage this
  - As transport capacity becomes strained, acts as a safety net for federal and private agencies
- **Provide critical care consultation + palliative care consultation**
  - Staffed by critical care + palliative care physicians (retired, quarantined, etc.)
  - Consultation will be granted if: a) patient cannot be transferred and/or transported b) time until patient transport will be >60 minutes.

*Note: if a patient is being transferred to a destination facility, the right of first refusal for consultation goes to the destination accepting physician*
DATA source for resource surveillance

- **PHASE 1:** EMResource (updated Q4hrs)

- **PHASE 2:** Electronically update a basic bed board through a single vendor (updated real time)
  
  OR

  Manually update EMResource Q4hr (Level 1); Q2hr (Level 2); Q1h Level 3 -- via the EMResource phone app or EMResource computer platform. Note: HIE also being explored.
The five fields to be monitored via EMResource/Central Vendor

1. **Adult ICU Bed Availability**: Number of Adult ICU beds available (i.e. currently not in use and could be supported by staff). These can support critically ill or injured patients, including ventilator support.

2. **Non-ICU Bed Availability**: Number of med/surg beds available (i.e. currently not in use and could be supported by staff). These are also thought of as ward beds.

3. **PEDS Availability**: Number of PEDS beds available (i.e. currently not in use and could be supported by staff). These are ward beds for patients 17 years and younger.

4. **PICU Availability**: Number of PICU beds available (i.e. currently not in use and could be supported by staff). These can support critically ill/injured patients, including ventilator support for patients 17 years and younger.

5. **Ventilators Available**: The number of ventilators available in the facility (i.e. currently not in use and could be supported by available staff).
Principles of structure

ADHS will fund, organize, and stand up the Arizona Surge Line.

Healthcare facilities will voluntarily choose to participate in the surge line, and doing so is free, non-legally binding, and in the spirit of collaboration.

With the exception of federal facilities (who have differing exceptions) participating hospitals agree to send and accept patients as appropriate, and maintain the data collection structure.

Staffing of the surge line will be EMCTs or RNS; the critical care and palliative care consultant will be staffed by clinicians.
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Arizona Surge Line Workflow
Overall process flow

Originating facility / doctor calls Arizona Surge Line

Surge Line Transfer Agent performs minimum clinical intake → Surge Line Transfer Agent determines appropriate destination system → Surge Line Transfer Agent patches call to determined receiving destination transfer center

Destination transfer center does intake, MD approval, bed placement, transport*

*Depending on level of triage, transport options may also be available through the Arizona ONE Call Line.
Initial intake scripting

“Arizona Surge Line for COVID-19, this is ________. Is your patient presumed or confirmed to have COVID-19?”

- If **YES**, proceed to Minimum Clinical Intake.
- If **NO**, advise originating facility/provider to follow normal transfer protocols.
Minimum Clinical Intake

Demographics (name, DOB, preferred gender)
Referring facility, provider and phone number
Diagnosis (presumptive or confirmed COVID-19)
Code status
COVID screening questions
Reason for transfer (capacity, higher level of care)
Level of Care (Adult or Peds: ICU, Tele, Medical, Obs)
Organization Selection Guiding Principles

Goal is to equitably distribute COVID-19 patients in a way to not overwhelm any one organization or facility and to ultimately delay progression into Level 2 or Level 3 triage protocols.

- Comparative *total* beds
  - Service line total bed count
- *Comparative available beds*
  - Service line availability
- *Most recent 10 patient transfer destinations*
- *Closest to sending location [Level 1 only]*
- Appropriateness of facility
  - Native population, Veteran population, Stepdown unit, etc.
- Daily capacity huddle with all organizations + AZ Surge line transfer activity over past 24h (20 min QAM)
- Equipment considerations
- Level 1 - continuity of care and patient/physician preference taken into consideration
Hand-off Scripting (to destination facility)

“Hello, this is _______ from the Arizona Surge Line for COVID-19. I have Dr. _______ on the phone from ____________ Hospital. He/She has a _____________ (presumptive or confirmed) COVID-19 transfer that requires a ____________ (med/surg, Tele, ICU, vent, or other) service. Can I give you the patient demographics? Then I’ll connect the doctor for any additional information you may need.”
Call Line Staffing

Options to be considered:

1. RNs from various state transfer centers if they’re able to spare them and unable to assist at the organizations bedside.
2. Medical students (UofA)
3. EMCTs
4. RNs (outpatient setting no longer working)
Call Line Consultations

All consults will be patched through real-time to the consulting physicians. Consults will only be patched through if transport/transfer is not feasible or is severely delayed.

- Consultants can discuss best practice management of patients with COVID-19 with a referring provider via telephone or approved synchronous audiovisual communication modality.
- All communication with consultants must occur through the call center.
- Documentation of consultation TBD
Overall process flow for Level 1

1. Originating facility / doctor calls Arizona Surge Line
2. Surge Line Transfer Agent performs minimum clinical intake
3. Surge Line Transfer Agent determines appropriate destination organization
4. Surge Line Transfer Agent patches call to determined receiving destination Transfer Center
5. Destination transfer center does intake, MD approval, bed placement, transport*

*Depending on level of triage, transport options may also be available through the Arizona ONE Call Line.
Overall process flow for Level 2/3

**Originating facility / doctor**
calls Arizona Surge Line

**Surge Line Transfer Agent**
performs minimum clinical intake

**Surge Line Transfer Agent**
determines appropriate destination organization

**Surge Line Transfer Agent**
determines a **DIFFERENT** appropriate destination organization transfer center

**Surge Line Transfer Agent**
patches call to determined receiving destination

**Destination transfer center #1**
does intake, MD approval, bed placement, transport*

**Destination transfer center #2**
does intake, MD approval(?), bed placement, transport

If denied transfer due to triage protocol, can do an appeal process and recall the Surge Line

If denied transfer due to triage protocol

**OFFER CRIT CARE OR PALLIATIVE CONSULT; no further transfers offered.**
Overall process flow for Level 2/3

Discussion:

- There would be no clinical decision making by the Surge Line.
- This is a process that includes an appeal.
  - The Surge Line would patch through to one healthcare system and if that system declines the transfer due to triage protocol, the originating clinician can restart the process and be patched through to a second, DIFFERENT healthcare system, to be determined by the surge line.
  - If the second healthcare system declines the transfer due to triage protocols, there’s no further action that can be offered to the sending physician
- Requirement of all COVID transfers be sent through the Surge Line

- There will be continued work and discussion to determine if triage can be completed at the state level.
Documentation Protocols for transfer staff

- Patient Demographics
- Diagnosis (presumed or confirmed COVID+)
- Reason for transfer (capacity not available, higher level of care, lower level of care)
- Sending facility and physician name
- Accepting organization
- Name of person at accepting transfer center
- Final case status of consult: relayed, cancelled and reasons for cancellation, time to completion
- Time stamps – when handed to accepting facility
- Rationale for which organization was chosen [closest, provider preference, transport availability, bed availability, equalizing patient distribution]
Midnight protocol

Between the hours of 12AM-4AM, Surge Line staff will contact the transfer centers for each organization where patients had been sent to discuss patients referred to them that day. Documentation will be updated to show:

1. Final Outcome (accepted, cancelled, declined, etc)
2. Time of final outcome (cycle time)
3. Receiving facility, if appropriate
Waitlist

No waitlist in Level 1

Level 2 & 3:

Facilities are overwhelmed and at capacity across the state

Patients will continue to be called into the AZ Surge Line

- Surge line will adjust decision making point priority to reflect hospital capacity constraints
- Organizations are expected to place patient within 4 hours of referral from AZ Surge line
Transfer Scope

1. In order for this to be successful, all COVID transfers must be called into the centralized referral center.
   a. If an organization’s transfer center gets a direct call for a COVID related transfer, that should be redirected to the Arizona Surge Line for load leveling purposes.
   b. EXCEPTION: Intra-organization COVID transfers should not be called to the Arizona Surge Line. Those transfers will be handled internally.
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