



ALTERED (ADAPTIVE, MODIFIED) STANDARDS OF CARE

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The Required Goals/Objectives

- To increase ones understanding of modified care provided in austere or resource constrained environments by:
 - Defining standards of care, resource constrained environment, and medical surge.
 - Demonstrating the various types of medical surge and how the medical system may or may not need to implement modified standards
 - Provide examples of incidents where modified standards have been used
 - Present the current Oklahoma Modified standards, the approach, and what still needs to be accomplished.

Clarification

“We” refers to a group of individuals that has spent a lot of time and effort over the last 5 years working on the modified standards of care



I sometimes will slip up and use an acronym—call me on it



What is a Standard of Care?

- “The degree of care a reasonable person would take to prevent an injury to another”
- The accepted medical standard of care can be thought of as the sum of medical knowledge that has been accumulated over hundreds of years of medical and scientific study and discovery, and how that knowledge has become the tools with which doctors can treat patients and make them well when ill or injured.”

First, a Few Concepts.....

- Resource Constrained Environment
- CHE and CHE Task Force
- Medical Surge

“Resource Constrained Environment”

- Medical Care is dictated by acceptable “standards” and the resources to provide the care:

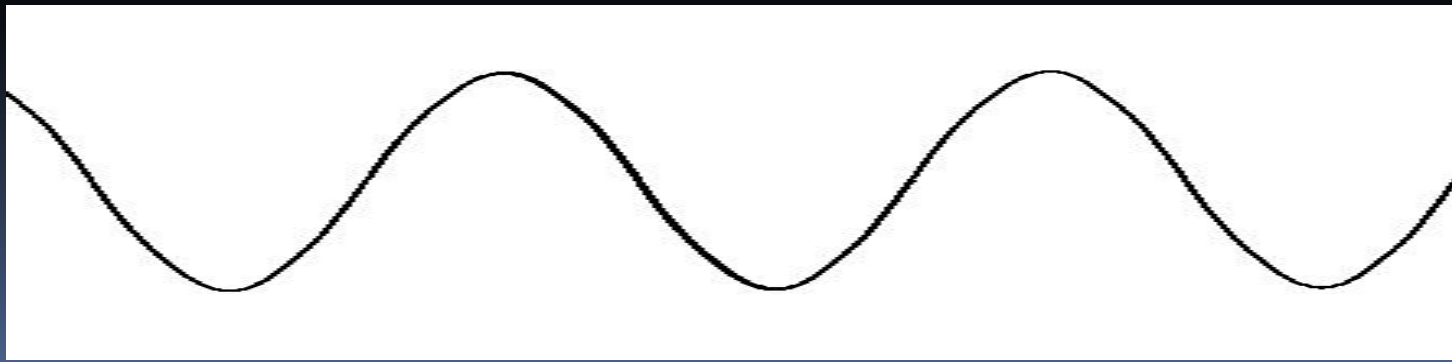
STAFF	SERVICES	EQUIPMENT
SUPPLIES	SPACE	MONEY
TIME		

- Certain incidents may curtail or eliminate these resources and affect the level and type of care available

“Resource Constrained Environment”

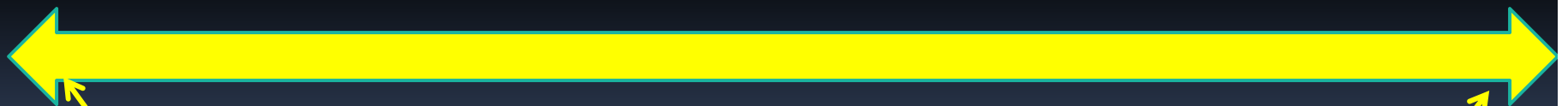
- The resource availability will often fluctuate over time.
- The level and type of Medical Care provided may also need to fluctuate.

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“Resource Constrained Environment”

- The resources available and the consequent Medical Care available may also be along a continuum



“Normal” care environment

Armageddon

“Resource Constrained Environment”

- Each year we “modify” care to some extent during influenza outbreaks



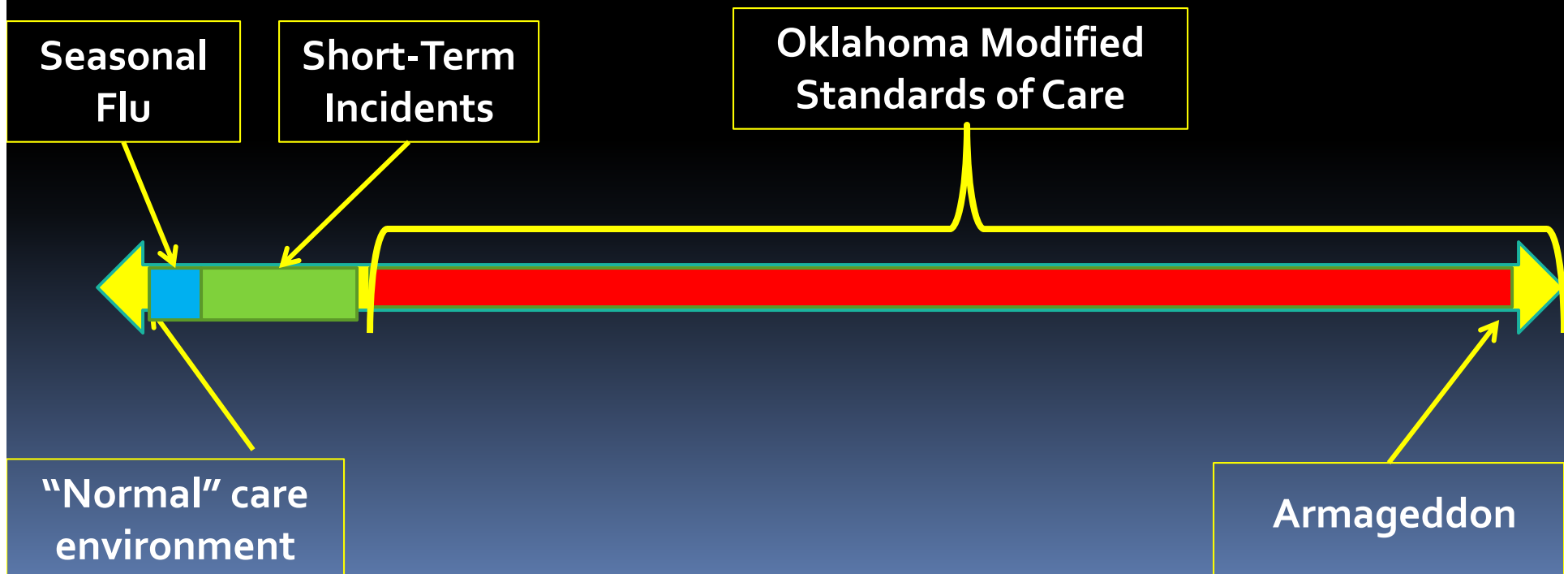
“Resource Constrained Environment”

- We occasionally experience short-term incidents that require a very temporary modifications of the standards of care



“Resource Constrained Environment”

- The Oklahoma Modified Standards of Care were created to address the incident that creates *a sustained* resource constrained environment



Catastrophic Health Emergency (CHE) Act

- Enacted in 2003/2004 (OS:63:6101)
- Defines CHE as any incident that can create:
 - Large number of deaths
 - Large number of long-term disabilities
 - Actual or future exposure to bio or toxin
- Grants the Commissioner of Health broad powers to address the incident
- Requested by the Governor and eventually approved by the legislature

Catastrophic Health Emergency (CHE) Task Force

- Group of individuals appointed by the Governor to study the legal and operational needs during a catastrophic pandemic event and create/update a plan to meet those needs.
- CHE plan developed in 2009
- Task Force meets at least annually to update plan with any needed additions and modifications
- Task Force approved the Oklahoma Modified Standards of Care for use in a CHE
- CHE Plan:
http://www.ok.gov/health/Disease_Prevention_Preparedness/Emergency_Preparedness_and_Response/Catastrophic_Health_Emergency/index.html

Catastrophic Health Emergency (CHE)

- The standard for a CHE declaration is exceptionally high. It is likely that some modification to care will be required prior to any declaration



The Ubiquitous “Medical Surge”

- Many different definitions to many different people
- Most tend to think of a sudden or *overwhelming* influx of patients
- The *overwhelming* will be determined by resources and will likely fluctuate

Medical Surge Definition

- Medical surge is defined as the ability to provide adequate medical evaluation and care during events that exceed the limits of the normal medical infrastructure of an affected community. It encompasses the ability of the continuum of healthcare systems to respond to an incident, and maintain or rapidly recover operations that were compromised

Daily Surge

THE DIVERT WARS



Seasonal Surge

**STACKED
EMERGENCY
DEPARTMENTS**



Evacuee/Shelter Surge



Mass Casualty Surge—System Intact



<i>Hospital</i>	<i>Distance From Impact Area</i>	<i>Number of Patients</i>	<i>Number of Admitted Patients</i>
<i>Hillcrest Hospital</i>	5 miles north	149	37
<i>Southwest Medical Center</i>	6 miles north	145	19
<i>Midwest City Regional Medical Center</i>	5 miles north	114	21
<i>Norman Hospital</i>	10 miles south	80	10
<i>Presbyterian Hospital</i>	8 miles north	42	8
<i>Baptist Medical Center</i>	14 miles north	41	6
<i>Saint Anthony's Hospital</i>	8 miles north	38	8
<i>Children's Hospital</i>	8 miles north	25	9
<i>Tinker AFB Medical Facility</i>	2 miles	39	0
<i>Grady Memorial</i>	South of Bridge Creek	21	7
<i>Deaconess Hospital</i>	14 miles north	15	4
<i>University Hospital</i>	8 miles north	12	8
<i>Mercy Hospital</i>	20 miles	8	0

Disposition of the patients from the May 3rd Tornado Strike in Oklahoma City.

Surge: Mild Pandemic



Surge: System Compromised

PMAC—Katrina 2005



Japan—Tsunami 2011



Surge: Pandemic with High Mortality and Morbidity



The Oklahoma Modified Standards of Care

- Over five years in the making
- Numerous Providers involved in providing input
- Based on the following tenets:
 - **Minimal care levels regardless of situation (philosophical/ethical stance)**
 - **Equipment Supply Caches**
 - **Guidelines for the clinical care providers, and facility management**
 - **A supportive legal environment**
 - **Consensus with the professional community**
 - **Education for awareness, access, and reduction of fear/concern**

The Oklahoma Modified Standards of Care

▣ Minimal Ethical and Care Standards

- Each patient will be seen by a medical provider
- Each patient will be treated with compassion and dignity
- Respect for life



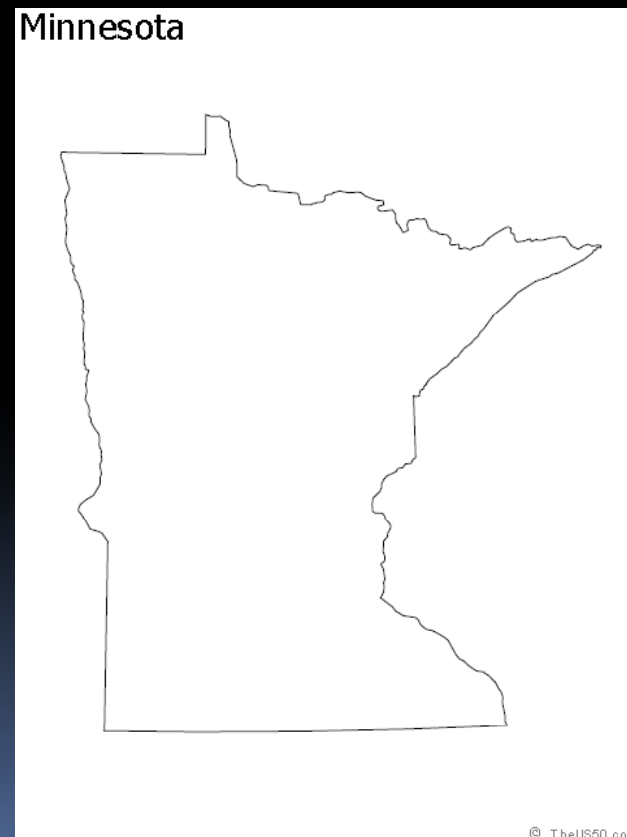
The Oklahoma Modified Standards of Care

- **Equipment and Supply Caches**
 - Beds, Wheelchairs, Patient Care Items, Oxygen, Shelters, Masks, Gloves etc.
 - Regional caches throughout the state
 - Although a lot of material is in these caches, it will be quickly used up during a severe incident



The Oklahoma Modified Standards of Care

“Borrowed” heavily from the guidelines developed by Hennepin medical center for the state of Minnesota (with their permission)



The Oklahoma Modified Standards of Care

Guidelines for Operating in a Resource Constrained Environment

Guidelines—not proscriptive
Based upon anticipated resource challenges

MEDICATION UTILIZATION STRATEGIES FOR SCARCE RESOURCE SITUATIONS															
	POTENTIAL TRIGGER EVENTS	STRATEGY*	RECOMMENDATIONS												
Oxygen	MASS CASUALTY EVENT	PREPARE	1. Cache / Increase Supply Levels for Common Medications <ul style="list-style-type: none"> Patients should have at least 30 days supply of home medications and obtain 90 day supply if pandemic imminent. Examine formulary to determine commonly-used medications and classes that will be in immediate / high demand. Increase supply levels or cache critical medications - particularly for low-cost items and analgesics. Key classes include: <table border="1"> <tr> <td>Analgnesia</td> <td>morphine, other narcotic and non-narcotic (non-steroidal, acetaminophen) class - injectable and oral (narcotic conversion tool at http://www.globalph.com/narcotconv.htm)</td> </tr> <tr> <td>Sedation</td> <td>particularly benzodiazepine (lorazepam, midazolam, diazepam) injectables</td> </tr> <tr> <td>Anti-infectives</td> <td>narrow and broad spectrum antibiotics for pneumonia, skin infections, open fracture care, sepsis (cephalosporins, fluoroquinolones, doxycycline, gentamicin, clindamycin, metronidazole), select antivirals</td> </tr> <tr> <td>Pulmonary</td> <td>metered dose inhalers (albuterol, inhaled steroids), oral steroids (dexamethasone, prednisone)</td> </tr> <tr> <td>Behavioral Health</td> <td>haloperidol, other injectable and oral anti-psychotics, common anti-depressants, anxiolytics</td> </tr> <tr> <td>Other</td> <td>sodium bicarbonate, paralytics, induction agents (etomidate, propofol), proparacaine / tetracaine, atropine, pralidoxime, epinephrine, local anesthetics, antiemetics, insulin, common oral anti-hypertensive and diabetes medications</td> </tr> </table> 	Analgnesia	morphine, other narcotic and non-narcotic (non-steroidal, acetaminophen) class - injectable and oral (narcotic conversion tool at http://www.globalph.com/narcotconv.htm)	Sedation	particularly benzodiazepine (lorazepam, midazolam, diazepam) injectables	Anti-infectives	narrow and broad spectrum antibiotics for pneumonia, skin infections, open fracture care, sepsis (cephalosporins, fluoroquinolones, doxycycline, gentamicin, clindamycin, metronidazole), select antivirals	Pulmonary	metered dose inhalers (albuterol, inhaled steroids), oral steroids (dexamethasone, prednisone)	Behavioral Health	haloperidol, other injectable and oral anti-psychotics, common anti-depressants, anxiolytics	Other	sodium bicarbonate, paralytics, induction agents (etomidate, propofol), proparacaine / tetracaine, atropine, pralidoxime, epinephrine, local anesthetics, antiemetics, insulin, common oral anti-hypertensive and diabetes medications
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Medication Administration	INFRASTRUCTURE DAMAGE OR LOSS	PREPARE													
Support and IV	INTERRUPTION IN SUPPLY CHAIN														
Hemodynamic	PANDEMIC INFLUENZA OR OTHER EPIDEMIC														
Mechanical															
Nutrition															
Staffing															
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	Medication Administration (Page 1 of 2 - cont. on next page)														

*See Patient Care Strategies for Scarce Resource Situations for strategy definitions.

The Oklahoma Modified Standards of Care

Guidelines for Operating in a Resource Constrained Environment

Resource Areas:

- Oxygen
- Medication
- Hemodynamic Support
- Mechanical Ventilation
- Nutrition
- Staffing

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The Oklahoma Modified Standards of Care

Guidelines for Operating in a Resource Constrained Environment

Action Areas:

- Prepare
- Conserve
- Reuse
- Adapt
- Reallocate
- Substitute

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Staffing															

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The Oklahoma Modified Standards of Care

- **A Legal Environment to Facilitate Use**
- There will be a real reluctance to utilize the modified standards until absolutely needed without some liability coverage
- CHE and OSDH submitted legislation



The Oklahoma Modified Standards of Care

- **Consensus**
- There needs to be consensus among the professional bodies that these are the standards to be used.
 - Professional Organizations
 - Administrative Rules
 - Law



The Oklahoma Modified Standards of Care

- **Education for Awareness, Access, and a Paradigm Shift**
- Medical staff needs to know what may happen ahead of time so they can mentally prepare for the event



The Oklahoma Modified Standards of Care

- **Where Are We?**
 - Ethical stance and Guidelines: complete
 - Cache continues to grow
 - Legal—part of the CHE plan. Additional legislation on-going
 - Consensus—on-going
 - Education—just starting

Summary

- The standard of care is often dictated by the amount of resources available.
- The resources available may fluctuate over time—flexibility needed.
- Medical Surge varies in cause and effect
- Ethics must be considered all circumstances—some care will be provided to all
- Guidelines currently exist
- Consensus, education, and a positive legal/regulatory environment are all critical for successful implementation of the Guidelines

Questions?

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