

TRAFFIC PROTOCOL Partnership:

Monitoring The Medical Product Supply Chain

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TRAFFIC PROTOCOL Partnership: Monitoring The Medical Product Supply Chain

(Green/Yellow/Red Playbook For Ramping Up & Down)

EXECUTIVE SUMMARY

Medical product distributor and manufacturer executives identified an opportunity at the Health Industry Distributors Association's (HIDA) 2022 Pandemic Preparedness Summit to better coordinate how and when to Ramp Up and Ramp Down for a more cohesive response in the future. It was also discussed that part of an effective Ramp Up and Ramp Down includes a robust communication plan as well as traffic protocol (Green/Yellow/ Red) to jointly monitor the supply chain as public and private sector partners to flag and respond to potential disruptions.

This collaborative monitoring effort would be accomplished through a regular meeting cadence of federal partners and medical product supply chain leaders. Monitoring activities will build an understanding of current conditions relating to the three phases of supply chain health:

- Green: Normal/Standard Operations
- Yellow: Strained Operations
- Red: Critical Conditions that severely disrupt operations

The collaborated process outlined in this playbook recommends:

- The key activities of the partnership;
- The roles of each partner;
- The triggers for moving to a different phase in the process;
- The decision options/actions to mitigate the supply chain disruption; and
- How to rebalance as supply chain health returns to normal operations.

This playbook's intended audience is federal, state, tribal, local, and territorial public health and emergency planners as well as commercial market medical product distributors and manufacturers. It provides insight and guidance for public and private supply chain partners on collaborative planning strategies and supports the <u>National Preparedness Response Framework</u>. Additional audiences include healthcare providers, first responders, academia, and other supply chain stakeholders to inform their preparedness planning and response activities. Furthermore, the playbook will serve to inform training and tabletop exercises for public and private sectors. This playbook is a "living" document, is considered to be non-exhaustive and feedback and input from all audiences is always welcome to help inform future iterations of the playbook and add additional appendices.

Additionally, the partners involved in this playbook agree it is an opportunity to reference and "bolt on" additional efforts to build supply chain resilience so this playbook becomes a living document. For this edition, two examples of collaborative work are provided in the appendix that offer deeper insight and quick reference into needed medical products for specific public health responses, which include:

- 1. *Appendix A –Anthrax*: This fact sheet, based on collaboration between industry and the Strategic National Stockpile (SNS), provides information on anthrax, federal response protocols, and identifies medical products needed to treat patients.
- Appendix B DASH tool: The Disaster Available Supplies in Hospitals (DASH) is an interactive tool developed by ASPR TRACIE and industry that can help hospitals and supply chain staff estimate supplies that may need to be immediately available during various mass casualty incidents and infectious disease emergencies.

OVERVIEW

Defining A Healthy Medical Product Supply Chain: In order to effectively monitor the supply chain and understand what events and situations could cause a significant disruption, it is important to define the key attributes of a healthy medical supply chain. Public and private sector partners agreed that a healthy commercial medical product supply chain needs to be reliable and resilient as well as coordinated and transparent with partners.

Figure 1: ATTRIBUTES OF A RESILIENT MEDICAL PRODUCT SUPPLY CHAIN

Reliable	Supply chain has reliable demand, supply, labor, transportation, & cost/capital investment
Resilient	Supply chain can anticipate and resist disruptions and then react. Flexibility & redundancy are key
Coordinated	Supply chain is efficient and works with experienced partners to educate, monitor, & collaborate established relationships & system connectivity all in place; eliminate the inefficiency
Transparent	Sharing of meaningful and actionable information between public & private partners

Defining The Traffic Protocol Process: The public and private sector partners defined the process to monitor the supply chain and the key activities that are the focus of each step. (See Figure 2, Pg 3)

- *Green:* **Normal** Standard Operations Focus: Meet regularly to monitor the supply chain, maintain relationships, and innovate
- Yellow: **Strained** Operations Focus: Determine the root cause of potential disruption and work to mitigate
- *Red*: *Critical* Conditions that severely disrupt operations Focus: Federal government may lead and utilize statutory authorities to source other suppliers, adjust policy, and direct resources

Communicating The Plan: The worst time to develop relationships and find a point of contact is in a crisis. Predetermining cadence and focus of engagement is critical to success as outlined below. However, a separate and more detailed communications playbook may be warranted that addresses the role of other stakeholders— both in the public sector (state and local public health) and private sector (providers across the care continuum). At a minimum, federal participation should include the Strategic National Stockpile (SNS), Food and Drug Administration (FDA), and the Office of Industrial Base Management and Supply Chain (IBMSC) representatives alongside those affected commercial supply chain partners such as medical manufacturers, distributors, and healthcare providers. (*See Figure 3, Pg 4*)

Figure 2: RAMP UP/DOWN OVERVIEW: STAGES OF SUPPLY CHAIN HEALTH



Figure 3: COMMUNICATION STRATEGY: KEY ENGAGEMENT AND CONVERSATION



GREEN: NORMAL/STANDARD OPERATIONS

Triggers and Conditions:

- Non-constrained supply chain and commercial standard operating procedures in play
 - Recommended Definition: less than 7 days of product on allocation, no service disruptions of elective procedures or surgeries, supply chain control tower product availability exceeding 85% PAR level
- Remain in Green during normal operating conditions
- Ramp Down to green when supply chain stabilizes to a healthy level

Focus:

- Monitor supply chain health
- Assess and test new ideas
- Maintain relationships
- Institutionalize work and learnings from previous public health responses
- Assess critical data elements of a healthy supply chain, share intelligence, assess planning and response through a regular cadence of meetings for building and maintaining relationships. Key criteria to monitor and information to compile includes:
 - Global shipping/transportation disruptions
 - Days of supply on hand
 - Percent of product on allocation
 - Lead time
 - General safety stock
 - Demand spikes
 - Geopolitical
 - Major weather
 - Global illness/disease trends and progression
 - Online orders: When local providers run into local shortages of product, they start searching online, this creates price increases, hoarding, and market speculators (similar to price gougers in the secondary market for concert tickets)
 - Detect and alert: monitoring infection rates, raw material shortages
 - Raw material dependency
 - Control tower recommendation backorder alerts to the how do you create transparency without
- Pressure test plans and explore new models
- Develop source of truth alert and communication plan
- Engage in crisis deployment exercises for improvement and evaluation feedback loop
- Assess and understand raw material vulnerabilities (i.e., from a potentially compromised country)
- Strive to understand the effects of product availability on providers, procedures, and use of suitable substitutions
- Explore how to pre-screen vendors to avoid fraudulent actors during a crisis

Role Of Commercial Market: The role of the commercial market is to meet the demand of the nation's first responder and healthcare provider communities. During periods of normal activity (green), it is imperative that product flow, order fulfillment meet obligations, and routine communication between all supply chain partners remain consistent. As a part of this communication and monitoring process, the source of disruptions (political or material) should be identified as early as possible and shared across all sectors.

Role Of Federal Partners: The role and functions of the federal government during periods of normal activity include planning, training, and exercising response scenarios, identifying best practices, and sustaining a mutually supportive dialogue with industry partners. The desired goal is to have matured and sustainable relationships with exercised response activities that will meet the need of any challenge or risks where the supply chain is exposed to risk. The federal government may also provide medical supply chain intelligence, a mutually agreed upon communication strategy, and work to understand how best to support commercial activities during periods of high demand or shortages.

Other Key Partners: Other key partners include state, tribal, local, territorial, and federal governments, regulatory agencies, international governments, coordination bodies (such as the Food & Drug Administration (FDA), Centers for Disease Control and Prevention (CDC), or the Federal Emergency Management Agency (FEMA)), international suppliers and manufacturers, and transportation brokers/agencies to name a few. During periods of normal activity (green), efforts will continue to focus on pursuing and fostering relationships that enable a higher level of efficiency, developing working relationships before a disaster or emergency strikes, and fully understanding the unique challenges and opportunities of all key stakeholders.

Other Key Work: Additional efforts across associations, partners, and government can support this activity. For example, Strategic Marketplace Initiative (SMI) is working closely with hospital associations, a large healthcare center, and healthcare coalitions to better integrate supply chain managers with local public health and emergency management agencies. These types of complimentary projects (referred to as "bolt on" projects) will provide additional avenues of coordination, efficiency, and understanding of the needs of our last mile partners all the way to our raw material suppliers.



Triggers and Conditions:

- Potential supply chain disruption identified, and supply chain is showing signs of constraint
 - Recommended Definition: 21 or more days of product allocation, limited disruption of elective procedures or surgeries, supply chain control tower product availability showing regional shortages, full transition to suitable substitutions where available, timing of resolution uncertain
- Ramp Up to Yellow when potential disruption is identified
- Ramp down to Yellow when demand is drastically reduced and manageable under Normal Operations

Focus:

- During Ramp Up, determine cause of strain and discuss and execute mitigations
- During Ramp Down, prepare to return to a healthy supply chain

Key Actions:

- During Ramp Up:
 - Increased cadence of meetings (routine and relevant)
 - Subject matter experts (SMEs) from public and private sectors convene when issue is identified. Participants of discussion will depend on cause of disruption. Group to identify cause of disruption/strain, formalize recommendations, and execute decisions related to (1) what strain industry can handle, (2) if/ when federal agency action and intervention is needed (3) when government signals a need to respond, (4) when the SNS releases product or the FDA medical product shortage team is activated. Specific mitigation strategies include:
 - » Industry management is sufficient
 - » Government signals need to increase manufacturing

- » FDA medical product shortages team activates
- » Regulatory agencies (i.e., FDA support manufacturers) support through policy or other mechanisms
- » SNS releases product or identifies priority effort such as tiering of priority provider communities (e.g., prioritizing and tiering of Special Pathogen Treatment Centers in 2014-2015 Ebola response)
- Emergency Use Authorization (EUA) to legalize/authorize the use of previously non-approved devices or medication to stem the spread of disease or improve care outcomes
- During Ramp Down:
 - Ready for further discussion on sunsetting federal declarations and collaborative discussions on rebalancing supply

Role Of Commercial Market: The role of the commercial market is to utilize all available processes and tools to meet demand. This may include identifying acceptable product substitutions, seeking additional products outside of normal supply chain stream, and establishing routine communication with government and industry partners to prevent the situation from worsening and escalation to red.

Role Of Federal Partners: Federal partners will participate in routine update calls and provide regulatory, logistics, and materiel support where available/appropriate. The intent and goal is to prevent worsening of the situation to where a national response led by the federal government is required (red). The federal government may be able to assist through reducing regulatory burdens, providing logistics and materiel support, or engaging in discussions with global partners in support of containing a pandemic or other global threat, where and as appropriate. Federal partners also offer monitoring tools, staff support, or other resources to help identify and mitigate risks. Lastly, the federal government can act as a convening authority in support of regional or territorial product shortages affecting population centers or communities.

Other Key Partners: Other key partners such as governors and state and local public health officials are key. The primary focus of collaborating with additional stakeholders is to expand the communication channels from industry to healthcare, across government, and to affected communities. In some instances, additional associations or federal agencies and programs like the Hospital Preparedness Program (HPP) will be able to facilitate an extensive reach and serve as an established communication channel where one currently does not exist.

Other Key Work: Consistent messaging and communication will be crucial for an effective public health emergency response. Previous responses have shown that switching lead agencies during an active emergency response confuses processes, authorities, and methodologies. None of which should occur during a period of crisis. Thus, an established communication channel and trusted source of information will be determined. Some options include communication through HIDA, SNS, or the Critical Infrastructure Program (CIP) and/or it's Supply Chain Resiliency Workgroup (SCRWG) and need to be determined in an official communication plan. These agreed upon "trusted sources" will support decision making and act as the unifying common operating picture for industry and government decision making.

RED: CRITICAL CONDITIONS THAT SEVERELY DISRUPT OPERATIONS

Triggers and Conditions:

- Mitigation strategies identified and implemented during YELLOW are not successful
- Large scale supply chain disruption
- Demand and supply are not aligned
- Federal government activates emergency operation center(s) and assumes coordination and leadership role to mitigate risk

Focus:

- Large scale allocation and scarcity of product
- Demand far outpaces supply

Key Actions:

- Federal partners and commercial market stakeholders are meeting daily until issue is resolved
- Federal government leads and may utilize the following authorities to provide relief:
 - Defense Production Act (DPA) to prioritize raw material, product, or manufacturing goals
 - EUAs or other regulatory mechanisms to legalize/authorize the use of previously uncleared/unapproved devices or medications, or unapproved indications of approved/cleared medications or devices to stem the spread of disease or improve care outcomes
 - Contracting with national and global distributors, vendors, manufacturers, and resellers to maximize product availability within the United States

Role Of Commercial Market: The commercial market has a critical role to support federal response activities in the "red" phase. Commercial partners are more efficient, have more reach, and can maximize their established community relationships to support those in need. In certain circumstances the commercial market may be asked to distribute on behalf of the federal government as contract support. The goal in a "red" scenario will be speed, reach, and containment. Thus, all stakeholders must prepare to act in a holistic coordinated effort on behalf of all communities in need.

Role Of Federal Partners: ASPR leads the nation's medical and public health preparedness for, response to, and recovery from disasters and other public health emergencies. As such, ASPR will utilize authorities, contracting power, scale, and the medical countermeasure (MCM) support functions (i.e., Biomedical Advanced Research and Development Authority (BARDA), IBMSC, H-CORE, and the SNS) to provide a buffer for medical manufacturing and the supply chain to ramp up capacity. All tools from legal authorities to flooding the commercial market with government stored material will be used to provide relief. Likewise, the federal government may hold daily communication calls with industry partners to ensure a coordinated and unified response that meets the needs of those most affected.

Other Key Partners: Numerous other partners and experts will be engaged to model, study, and make recommendations on courses of action or appropriate strategies. These strategies may include more than just distribution. Experts from academia, political representatives, ethics advisors, communications professionals messaging experts, as well as medical advisors, to name a few, will all be critical partners to engage for a successful response.

Other Key Work: During this level of coordinated response, the federal government can identify a coordinating body such as FDA, FEMA, HHS, CDC, or ASPR to effectively coordinate, communicate, and prioritize response efforts. Likewise, commercial supply chain partners should be prepared to make recommendations and respond to changes in national policy, executive orders, or prioritization of effort mandated through political action, implementation of EUAs or other regulatory mechanisms, or in some cases direction and prioritization as set forth in the use of the DPA.

The following appendices are provided as an example of additional (bolt on) products that may provide more context, quick reference, or specific examples in support of government and industry collaboration around medical supply chain challenges.

APPENDIX A

Anthrax Information Sheet

Disease Overview: Bacillus anthracis, is the spore-forming bacteria that causes anthrax. There are four ways that a person can become infected with anthrax: cutaneous, gastrointestinal, inhalation, and injection. The Centers for Disease Control and Prevention (CDC) <u>states</u> that if a bioterrorist attack were to occur, anthrax is one of the most likely biological agents to be used because:

- Anthrax spores are easily found in nature, can be produced in a lab, and can persist for a long period of time in the environment.
- Anthrax makes a good weapon because it can be easily aerosolized and released quietly over a large area. Likewise, the microscopic spores could be mixed in powders, food, and water remaining tasteless, odorless, and invisible without microscopic examination.

Detection And Decision-Making: Monitoring systems set up nationwide may detect anthrax after it has been released or, it may go unnoticed until doctors begin to see unusual patterns of illness among patients in emergency rooms. At that point, healthcare providers may suspect anthrax and order lab tests to confirm a diagnosis. It could take days for labs to confirm anthrax in early samples but with enough evidence, CDC and other health agencies would not need to wait for lab confirmation before taking action.¹ Experts emphasize that the use of post-exposure prophylaxis (PEP) countermeasures in the first 48 hours following an anthrax incident is crucial to saving lives.

The CDC Lab And ASPR SNS May Respectively Take Proactive Actions By:

- Sending samples through the Laboratory Response Network
- Continuing to test samples to learn more about the strain of anthrax
- Deploying field staff to talk to patients and learn more about how they were exposed
- Shipping medicine and supplies from the Strategic National Stockpile (SNS) to state Receipt, Stage and Store (RSS) sites
- Providing guidance to clinicians, health departments, and other partners on how to respond
- Communicating life-saving information to the public

Commercial Partners May Consider The Following Proactive Steps:

- Establish initial contact with the SNS to increase understanding of response operations to include point of care facilities that are treating patients during the laboratory confirmation period²
- Organize an internal team to support response operations; some examples include sales, logistics, transportation, medical, and finance
- Notify sales team of potential for speculative purchasing of high demand medical supplies contained in this playbook
- Ensure that hospitals treating patients have priority for the purchasing of high demand medical supplies

¹ https://www.cdc.gov/anthrax/bioterrorism/detect-respond.html

² Future collaboration will determine means for communicating with partners; some options could include email, teleconferences, website, and SharePoint

Primary SNS MCMs For Anthrax*:

For anthrax PEP, CDC recommends antimicrobials in conjunction with anthrax vaccine.³ The following SNS MCM general list may be used to support a large scale anthrax incident. Further details regarding treatment of anthrax patients may be found at: <u>Use of Anthrax Vaccine in the United States: Recommendations of the Advisory</u> <u>Committee on Immunization Practices, 2019 | MMWR (cdc.gov)</u>:

- Oral antimicrobial drugs (tablets/capsules)
- Oral antimicrobial drugs (suspension)
- Intravenous (IV) antimicrobial drugs
- Vaccine
- IV antitoxins
- Oral dosing syringes
- Safety syringes and needles: 3ml syringe with 25 gauge x 5/8 inch needle, 3ml syringe with 25 gauge x 1 inch needle

Secondary SNS MCMs For Anthrax*:

The SNS has taken steps to acquire and *maintain limited quantities* of MCM for the purpose of assisting states in the treatment of symptomatic patients exposed to anthrax. These items only represent a *small bridging capability* and *would be insufficient for a large-scale response*. The following SNS MCM could be used to support an anthrax incident:

- Ventilators (Models can be found at <u>SNS-Held Ventilator Resources | SNS Ventilators | HHS/ASPR</u> including model-specific circuit tubing and associated ancillary supplies)
- IV administration supplies: IV administration sets, IV catheters, IV site transparent dressings, heparin locks, plastic syringe cannulas, syringes with blunt needles (for medication withdrawal and reconstitution), tourniquets, antiseptic wipes or swabs, alcohol pads, and tape
- Respiratory and general medical supplies: Gloves, oral airways, endotracheal tubes and stylets, laryngoscope blades and handles, manual pulmonary resuscitators, suction catheters and yankauers, aerosol and oxygen masks, and nasal cannulas.
- 3 <u>Use of Anthrax Vaccine in the United States: Recommendations of the Advisory Committee on Immunization Practices,</u> 2019 | MMWR (cdc.gov)

*amounts on hand will vary

APPENDIX B

DASH Toolkit And PPE Commodity Quick Reference

Disaster Available Supplies In Hospitals (DASH): Disaster Available Supplies in Hospitals (DASH) is an interactive tool that can help hospital emergency planners and supply chain staff estimate supplies that may need to be immediately available during various mass casualty incidents (MCI) and infectious disease emergencies based on hospital characteristics. For more information and updated list of PPE please visit https://dashtool.org

Infectious Disease: The DASH Infectious Disease Module is intended to help hospitals estimate supplies needed to care for infectious disease.

Infectious Diseases			
Pandemic	Hemorrhagic Fever	Respiratory	
 Gloves Gowns, Fluid Resistant N95 Face Shield 	 Gloves (Extended) Gloves (Inner) Boot or Knee High Shoe Cover Apron Gown Coverall (Impermeable) PAPR PAPR Hood PAPR Battery PAPR Filter PAPR Tubing N95 Head Cover (Fluid Impermeable) Face Shield Supportive care fluids (IV and dialysis) 	 Gloves (Long Cuff) Knee High Shoe Cover Gown (Fluid Resistant) PAPR PAPR Hood PAPR Battery PAPR Filter PAPR Tubing N95 Head Cover (Fluid Impermeable) Face Shield Supportive care fluids (IV and dialysis) HFNC Ventilators Sterile injectable analgesics, sedatives and paralytics Medical grade O2 supply 	

Burn/Blast: The DASH Burn Supply Module (BSM) is intended to help hospitals plan for a large number of burn patients presenting to their facility following a mass casualty incident.

Burn/Blast (Topicals, Dressings And Other Burn-Specific Items)			
 Gauze Sponges 4x4 Laparotomy Pad 4x18 Laparotomy Pad 8x36 Laparotomy pad 12x12 Laparotomy pad 18x18 Fluff roll/kerlix/stretchable roller gauze Tubular elastic net bandages Bacitracin Mafenide Acetate Cream Silver Sulfadiazine (50g, 85g, 400g, 1000g) Adaptic Petrolatum 	 Burn dressing gauze (8 ply or thicker) Silver Impregnated Burn Dressings Xeroform Burn Debridement/Escharotomy Tray Dopplers for Pulse in Extremity Plastic Wrap Rolls Sterile Sheets/Burn Sheets Surgical Caps Tape (cloth/silk/paper mix) Thermal Head Cover 		

Trauma: The DASH Trauma Supply Module (TSM) is intended to help hospitals estimate supplies needed to care for seriously injured trauma patients in the first 48 hours following a mass casualty incident.

Trauma (Airway / Respiratory Supplies)		
 Bag Valve Mask (Infant, Child, Adult) Connecting Tube 02 Connecting Tube Suction ET Securing Device ET Securing Device (Pediatric) ET Tubes (Sizes 3–8) Gum Elastic Bougie Gum Elastic Bougie (Pediatric) Heat Moisture Exchanger with HEPA Filter Laryngeal Mask/ iGel (Sizes 1–5) Laryngoscope Blade Mac (Sizes 2–4) Laryngoscope Blade Miller (Sizes 1–4) Laryngoscope Handle Standard Magill Forceps (Adult & Child) Monitor CO2 Disposable Probe/ Colorimetric Nasopharyngeal Airway (6 & 8) 	Nebulizer Mask & Tubing (Adult & Child) Needle Chest Decompression – Cook, Spear, Other OPA (Sizes 0–6) Oxygen Mask Non-Rebreather (Adult and Peds) Oxygen Mask Simple Oxygen Nasal Cannula Stylet Stylet – Small Suction Canister Suction Catheters 8F Suction Catheters 8F Suction Catheters soft Suction Catheters Yankauer Suction Handheld Manual Twill Tape 1/2" Wide Roll Ventilator Portable Ventilator Portable – Circuits Video Laryngoscope with multiple Blades for Adults &	

Т	ra	m	na

(Intravenous Access/ Medication Administration Supplies)		
 3 Way Tap & Extension Tube (IO/IV) 3cc 22G Safety Syringes 1.5" 3cc 23G Safety Syringes 1" 18G Safety Needles 1" 20G Safety Needles 1" 25G Needles for Injection 1.5" ABG Kit Arm Board Infant Arm Board Long Army Board Short Arterial Line Kit Arterial Line Tubing Blood Admin Tubing Blunt Plastic Cannula Buretrol Tubing 60 Drops Butterfly 23GA Butterfly 25GA Chlorhexidine Antiseptic Prep Pad Disaster Lab Kit – Blood (Typenex) number, Vacutainer tubes, temporary bands) 	 Disposable IV Pressure Bag Disposable Latex Free Tourniquet IV Access EZ IO Drill EZ IO Needles (Bariatric, Pediatric, and Standard) Filter Needles Intraosseous Needles Introducer/ Rapid Volume Central Line IV Catheter (Sizes: 14, 16, 18, 20, 22, 24) IV Filters 0.2 micron IV Saline Lock Loop Connector IV Site Dressing Transparent IV Start Kits/ Supplies Luer Lock Syringes (20cc & 60cc) Pediatric Central Line Kit Pediatric Double Lumen Central Line Rapid Volume Infuser and Warmer/ Level 1 Volume Infuser Tubing Saline Flush 10 mL Stopcock Syringes (1cc, 3cc, 5cc, 10cc) 	
	Triple Lumen Central Line	

Trauma

(Wound Care/ Hemorrhage Control Supplies)

- ABD Pads/Trauma Dressings
- Adhesive/ First Aid Tape 2"
- Adhesive Bandage (Small & Large)
- Dressings/Sponges, Sterile 4x4
- Fox Eye Shield
- Foam Tape 3"
- Gauze Ribbon

- Laparotomy Pad (e.g. 4x18 inch)
- Nasal Tampons
- Paper Tape 1"
- Self-Adhering Dressing (Tegaderm) 4x4 or similar
- Steri-strips ¹/₄ inch
- Tourniquet Arterial
- Transpore/microspore Tape

Trauma (Surgical Supplies)

- Cautery Electrocautery Unit • Scalpels, plastic with #11 blade • Cautery – Pad/Probe • Scalpels, plastic with large blade (10,20,25) • Chest one-way Valve/Chest Seal Skin Stapler • Sterile Basin (Small & Large) • Chest Tube Pigtail – Catheter over wire • Chest Tubes (Sizes: 8F, 10F, 12F, 16F, 20F, • Sterile Towels/Sterile Drape Small 24F. 28F. 32F) • Surgical Airway Tray (cric/trach) Surgical Pack (Laparotomy/Major Procedure) • Chest/thoracic Drainage Kit & Sets • Chlorhexidine (e.g. Hibiclens) Bottle 4oz • Surgical Tray – Thoracic Cranial Burr Hole Tray Surgical Tray – Vascular • Emergency/perimortem C-Section Pack • Suture Ethilon (monofilament) 3-0 • Forceps Adson • Suture Ethilon (monofilament) 5-0 • Forceps Kelly Curved Medium Suture Prolene 0 • Forceps Curved Small (3 inch) • Suture Removal Kit (iris scissors/adson forceps) • Forceps Straight Small (3 inch) • Suture Set/ tray Suture Silk 0 • Irrigation Sets (Zerowet, Canyon System, etc) Needle Driver • Suture Vicryl (or similar) 4-0 Normal Saline Irrigation Solution 1000mL Svringe 60mL • Peritoneal Lavage Tray Thoracostomy Tray Precip Delivery Pack (for peri-mortem delivery) • Thoracotomy Tray infant care)
- Povidone/Iodine or Chlorhexidine Swab Sticks
- Traction Pin Insertion Tray

Trauma (Gastrointestinal/Genitourinary Supplies)

 Cath tip syringe 60mL Foley Catheters & Urometers Adult Set • Feeding Tubes (5F, 8F) Lubricating Jelly • Foley Catheters (12F, 8F, 10F, 14F) • Nasogastric Tube (10F, 12F, 14F, 16F)

Trauma (Musculoskeletal Inventory)		
 Ankle Immobilizers Backboard/Straps Bandage Scissors Bandage Triangular Cervical Collars (Child, Small, Medium, Large) Crutches Small Crutches Standard (Adult) Head Hugger with straps Knee Immobilizers Small Knee Immobilizers Standard (Adult) Pelvic Binder Roller Bandages Elastic (ACE) 4" & 6" 	 Slings (Small, Medium, Large) Splints fiberglass, pre-padded 3"roll (15ft) Splints fiberglass, pre-padded 4"roll (15ft) Splints fiberglass, pre-padded 5"roll (15ft) Splints Plaster 5x30" Sheet (box 50) Splints Plaster Impregnated 4"roll (5yd) Splints Plaster Impregnated 5"roll (5yd) Traction Splint Trauma Shears Walking Boot – Cam Boot Webril 2 inch Webril 4 inch 	



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