

FOR CRUISE LINE CMOs, VESSEL MASTERS, OFFSHORE INSTALLATION MANAGERS, RIG MEDICS & MARITIME SECURITY DETAILS

MARITIME & OFFSHORE MASS CASUALTY INCIDENT PROTOCOL

Shipboard trauma readiness, confined-space extrication and prolonged marine casualty care for vessels, passenger ships, offshore installations and yachts operating beyond shoreside EMS.

"Doctrine Before Gear. Competency Before Equipment. Accountability Always."

VESSEL IDENTIFICATION BLOCK · SHIPBOARD SAFETY BINDER COPY

One copy per vessel or installation · file with the SMS

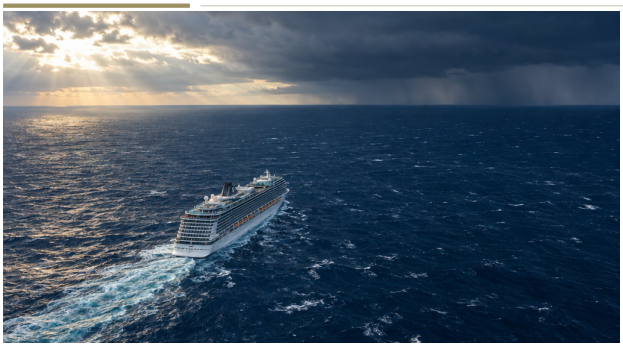
VESSEL NAME / HULL NUMBER	IMO / MMSI NUMBER
OPERATING COMPANY / FLEET LINE	FLAG STATE & PORT OF REGISTRY
VESSEL CLASS (CRUISE / CARGO / OFFSHORE PLATFORM / YACHT)	MAXIMUM PERSONS ON BOARD (CREW + PASSENGERS)
DESIGNATED SHIPBOARD MEDICAL OFFICER / SAFETY LEAD	ANNUAL VERIFICATION DATE & SOURCING BINDER ID

Developed under the clinical direction of Marco R. Torres, MD, NRP — physician and medical educator, U.S. Navy veteran, founder of MED-TAC International and ALKEONHealth.com

Medical SME Veteran-Led · Evidence-based prehospital trauma standards · MARCH · NFPA 3000 · OSHA 29 CFR 1910.151 / 1910.146 · IMO / SOLAS
Service-Disabled Veteran-Owned Small Business (SDVOSB) | SAM Registered | CAGE: 9VFL3 | UEI: YU3ZMJ44REA5 | Kits Assembled in the USA

EXECUTIVE SUMMARY

Shoreside EMS models fail at sea. Plan for the crew to be the EMS.



Beyond the helicopter horizon there is no ambulance, only the vessel, the crew, and what they staged.

Every shoreside trauma system assumes the same thing: a paramedic in fifteen minutes and a trauma center within the hour. Two hundred miles offshore, none of that exists. The first responder is a watchstander, a galley hand, or a security officer; the trauma bay is the ship's infirmary or a rig medic's treatment room; and the ambulance is a helicopter that may be hours away, at the edge of its range, or grounded by weather. This standard rebuilds the chain for that reality: bleeding control in the first two minutes by whoever is closest, extrication through the ship's own architecture, and a holding plan that runs for hours or days, not minutes.

The medevac horizon

U.S. Coast Guard rotary-wing assets work at operating radii on the order of 150 to 300 nautical miles from an air station depending on airframe, and a launch, transit, hoist and return takes hours even when the weather allows it. Foreign SAR coverage varies from excellent to nonexistent. Beyond the helicopter horizon, evacuation means a course change toward a port with a hospital, a ship-to-ship transfer, or fixed-wing from the nearest airfield after the vessel gets there. Sea state and visibility can ground every rotary asset in the region for 24 to 72 hours.

90–180 s	**60 s**	**6–72 h**	**3 tiers**
planning window from an uncontrolled arterial extremity wound to loss of consciousness	maximum reach to a staged trauma kit from any working compartment on a high-risk deck	the prolonged casualty care window this standard plans for when evacuation is delayed	watchstander pouch, compartment bag, MCI vault — one ladder across the fleet

Prolonged casualty care doctrine

Military prolonged casualty care guidance exists for exactly this problem: a team far from a surgeon that must sustain, reassess and document the first hour's interventions for many more. Hemorrhage remains the leading cause of potentially survivable death in trauma — roughly nine in ten in the landmark military analysis — and a transected femoral or brachial artery can bleed to unconsciousness in a few minutes. This standard plans on **90 to 180 seconds** as the working window, puts a tourniquet within sixty seconds of every high-risk workspace, and then holds the casualty under telemedical direction until sea, weather and range allow evacuation.

THE SHIPBOARD REALITY

No one is coming in the first hour. The vessel's medical outcome is decided by what is staged within sixty seconds of the injury, whether the nearest crew member can use it, and whether the ship can hold the casualty for the hours or days until evacuation is possible.

Scope. Passenger ships, cargo and tanker vessels, offshore installations and support vessels, yachts and expedition vessels, maritime security details, and tug, barge, pilot-boat and fishing fleets operating beyond shoreside paramedic response. Where the flag state, class, company SMS, ship physician or telemedical service is stricter, the stricter rule governs.

THE 60-SECOND COMPARTMENT REACH

Shipboard ergonomics and compartment zonal access



Positive-retention bracket on a passageway bulkhead: red pack, black pull tab, clear of the watertight door.

A ship is a steel building laid on its side and moving. Kits are staged by zone, on bulkheads, at the point where the hazard lives, and they are reachable within sixty seconds from any working compartment on a high-risk deck without a key, a code, or a trip to the infirmary. The zone map below is the minimum; the vessel's own hazard assessment adds to it.

Bulkhead mounting standard. Positive mechanical retention — a steel or reinforced-polymer bracket with a quick-release strap or latch — rated for pitch, roll, slamming and emergency maneuvers. The ambulance equipment-mount standard (SAE J3043, crash pulses up to 26 G) is the reference logic. Friction fit and hook-and-loop alone are prohibited. Nothing is mounted where it blocks a watertight door, a fire station, an escape route, or a lifeboat release.

ZONE	SPACE	HAZARD PROFILE	STAGED RESPONSE
1	Bridge and navigation deck	Low environmental hazard; command and control; the space that calls for help	Tier 1 grab-and-go pouch in a console bracket; the MCI vault at the bridge muster station on passenger vessels
2	Engine room and machinery spaces	Extreme heat, high-pressure fluid and steam, rotating shafts, switchgear, crush hazards, confined atmospheres	Tier 2 bag in the engine control room; burn and tourniquet station on a pillar in the main space
3	Galley and food preparation decks	Deep lacerations, boiling-liquid scalds, wet-deck falls, slicer and band-saw amputations	Burn and laceration kit at the galley office; hemostatic dressings and compression wraps within reach of the line
4	Passenger decks, atriums, theaters	Occupant density, crowd surge, structural failure in heavy weather, hostile events	Public-access bleeding-control cabinets beside every AED; multiple rapid-deployment tourniquets per cabinet
5	Weather decks and mooring stations	Salt spray, wind chill, snap-back line amputation, man-overboard hypothermia	Waterproof sealed cache (IP67 case or roll-top dry bag) at each mooring station and tender platform

The reach test

Stand at the furthest working position in each zone, start a watch, and walk to the kit. Sixty seconds or less, with the doors and hatches in their normal underway state, or the kit moves. Repeat with the space blacked out. Record the time on the inspection grid (page 13) and re-test after any change to compartment layout or stores stowage.

SALT, HUMIDITY, HEAT

The harsh marine environment and material degradation



Spray on the deck, dry inside the case: the outer barrier is the shelf life.

Three things attack medical consumables at sea, all at once: salt fog that crystallizes in fasteners and corrodes blades, relative humidity that lives between 85 and 100 percent, and thermal cycling that runs from a chilled infirmary to an engine space above 120°F. None of the packaging on a commercial trauma kit was designed for that combination. The vessel makes up the difference with the outer barrier and the rotation schedule.

The watertight standard. Trauma gear staged outside climate-controlled spaces rides in an IP67-rated hard case with an automatic pressure-relief valve, or in a 500D–1000D welded-tarpaulin roll-top dry bag for weather decks and tenders. Inner items keep their sealed blister or vacuum packaging until the moment of use. Tourniquets ride in sealed protective sleeves so salt never reaches the hook-and-loop.

CONSUMABLE	WHAT THE MARINE ENVIRONMENT DOES TO IT	STANDARD
Hydrogel chest seals	Humidity and heat soften the gel and reduce tack; a degraded seal peels on wet skin	Foil packaging stays sealed until application; stored below 120°F; rotated every 12 months in unconditioned spaces
Hemostatic gauze	The agent tolerates heat better than its package; laminate delaminates or pinholes with thermal cycling. The leading kaolin gauze IFU says store at 77°F or below	Stored away from engine heat and steam lines; vacuum packaging checked brick-hard at every inspection
Tourniquets	Salt crystals in hook-and-loop reduce shear strength; UV and ozone embrittle polymer windlass rods and clips	Sealed sleeve; no exposure on weather decks; replaced at any sign of salt in the fastener
Nitrile gloves	Heat and ozone cause micro-fissuring; gloves tear on donning	Heavier-mil, ASTM D6978 chemotherapy-permeation tested; stored in a climate-controlled locker; rotated annually
Trauma shears, cutters	Salt corrosion at the pivot and edge	Stainless or coated blades; wiped and inspected quarterly; edge verified on a heavy strap
Drugs and fluids	Labeled storage ranges exceeded in machinery spaces	Infirmary or medical locker only; never in a compartment cache

ROTATION STANDARD

Hydrogel seals and nitrile gloves in unconditioned compartments are replaced every 12 months regardless of printed expiration. Every Tier 2 and Tier 3 container carries a temperature and humidity indicator read at the quarterly inspection; a tripped indicator triggers a contents inspection, not a note.

The cheapest protection is location: the Tier 2 bag lives in the engine control room, not on the main-space grating; the galley kit lives in the galley office, not over the range. The second cheapest is the case. Everything else is rotation.

ARCHITECTURE

The universal 3-tier maritime medical ladder



The ladder on a teak deck: belt pouch, compartment backpack, MCI vault.

Three tiers, staged by zone, identical across sister ships. The same architecture MED-TAC uses for fleet vehicles and law-enforcement agencies, scaled for a vessel that carries its own casualties for days: more tourniquets per tier, burn capability at every tier, and a container that survives a wet deck.

A multinational crew learns the ladder once. Every kit is the same color, in the same style of bracket, with the same symbol-driven labels, so a deckhand who joined in Manila and an officer who trained in Rotterdam reach for the same thing in the same place.

TIER	ROLE	TARGET	LOCATION
1 · Watchstander IFAK	Point-of-injury self-aid and buddy aid	One casualty	Duty belt of watchstanders and security; console bracket on the bridge and in machinery control
2 · Compartment response bag	Department MARCH loadout with burn capability	Two to four casualties	Engine control room, galley office, security locker, lifeboat muster, infirmary satellite
3 · Shipboard MCI vault	Bulk reserve for collision, fire, grounding, hostile event	Four to twelve casualties	Medical center, damage control central, bridge muster station on passenger vessels

The five staging rules

Standardized placement across sister vessels. Same bulkhead, same bracket, same deck position, so a crew member transferred between hulls does not have to learn a new ship to find a tourniquet.

Zero lockouts. No trauma kit is behind a padlock, a keyed drawer, or a controlled-drug cabinet while underway. Tamper seals, not locks; the seal is checked every watch.

Redundant tourniquets. Minimum 2 per Tier 1, 4 per Tier 2, 8 per Tier 3. Winch, mooring-line and machinery injuries are high-energy amputations that routinely need two devices on one limb.

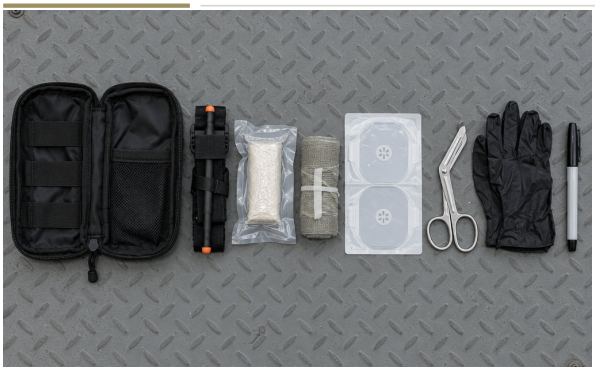
Waterproof outer barrier, sealed inner packaging. The case or dry bag keeps the sea out; the blister keeps the item sterile and dry until it is opened at the casualty.

Symbol-driven, bilingual labeling. Pictograms and color coding on every kit and compartment, text in the working language of the ship and English, so the labels work for the whole crew under stress.

Volume scales with persons on board and distance from help. A 4,000-passenger ship staffs several Tier 3 vaults across muster stations; a 12-crew offshore supply vessel carries one. The ladder is fixed; the count per rung is written in the vessel binder and the safety management system.

TIER 1 SPECIFICATION

Watchstander and deck officer trauma pouch



Tier 1 flat lay on a deck plate: tourniquet, hemostatic gauze, pressure dressing, chest seal pair, shears, gloves, marker.

One pouch, seven items, blind reach. Tier 1 is the belt pouch of the watchstander, the security officer and the mooring party leader, and the console pouch on the bridge and in machinery control. It exists for the first two minutes after a wound, before anyone has reached the compartment bag.

Every item in it is a hemorrhage or exposure item, sealed against salt, and openable with one hand in gloves. Tier 1 is never cannibalized to restock a compartment bag; it is replaced from the infirmary cache.

#	ITEM	QTY	TECHNICAL CRITERIA
1	**Windlass tourniquet**	2	Proven windlass limb tourniquet (C-A-T Gen 7, SOF-T Wide, or SAM XT class). Authentic: purchased from the manufacturer or an authorized distributor with lot traceability. Staged in a sealed sleeve, pre-threaded per manufacturer instruction. Two per pouch (rule 3)
2	**Hemostatic gauze**	1	Kaolin-impregnated or blood-activated matrix, Z-fold, vacuum-sealed
3	**Pressure dressing**	1	4 in. emergency trauma dressing with integrated pressure bar or closure
4	**Vented chest seals**	1 pair	High-adhesion hydrogel vented occlusive dressing for wet or sweating skin, two per pack
5	**Trauma shears**	1	Heavy-duty stainless or coated blade, saltwater-resistant
6	**Nitrile gloves**	1 pair	Heavier-mil, ASTM D6978 chemotherapy-permeation tested
7	**Marker**	1	Industrial-tip permanent marker that writes on wet skin and tape

Mounting and deployment

Tear-away platform. The pouch rides on a hook-and-loop tear-away panel that is itself locked into a MOLLE/PALS bulkhead bracket or a duty belt; the tear-away is for deployment, not for retention.

Pull direction. Tab faces the user; the pull is toward the body. Tested with wet gloves.

Blind reach. The tourniquet is the first item presented when the pouch opens.

Time and narration. Tourniquet time written on the strap and the casualty card and logged in the deck log; the medical officer takes over the record on arrival.

Salt check. The sealed sleeve is inspected quarterly; any salt in the hook-and-loop retires the tourniquet to training.

TIER 2 SPECIFICATION

Department apparatus and compartment trauma bag



Tier 2 open on an engine-room grating: MARCH compartments, burn dressings in front.

Tier 2 is the bag a department carries to its own casualty: the engineer to the machinery space, the galley supervisor to the line, the security officer to the atrium. It is compartmentalized in MARCH order with a burn pack in front, because at sea the burn is as likely as the bleed.

Construction. High-visibility red or maritime blue, 1000D ballistic nylon or welded tarpaulin, water-resistant zippers, SOLAS-grade retroreflective tape, and a clamshell opening so the whole bag reads at a glance on a grating. Staged in the engine control room, galley office, security locker, lifeboat muster and infirmary satellite.

MARCH	CONTENTS	NOTES
M Massive hemorrhage	4 windlass tourniquets · 2 hemostatic gauze · 2 × 6 in. modular pressure bandages · 1 abdominal / junctional elastic wrap	Red tab, opens first; four tourniquets per rule 3
A Airway	2 nasopharyngeal airways with lubricant · 1 manual suction device	Position the casualty first; NPA only under standing orders from the ship medical officer or telemedical service
R Respiration	3 vented chest seal twin packs (6 seals) · 1 roll hypoallergenic tape	Vented seals only; a non-vented seal is not carried
C Circulation	2 compressed gauze · 1 elastic support wrap · 1 trauma shears	Wound packing when hemostatic gauze is exhausted; splinting from Tier 3
H Hypothermia / head	2 heat-reflective survival blankets · 1 active-warming hypothermia wrap · 1 head dressing · 1 rigid eye shield	Every trauma casualty at sea is a hypothermia casualty
+ Marine burn pack	2 hydrogel burn dressings (8 × 8 in. and face-conforming) · 1 sterile burn sheet	Cooling and covering that limits further tissue injury without large-area water cooling and its hypothermia risk

Staging and scope

Deployment target: under 30 seconds from the department's normal working position to the bag open at the casualty.

Inventory card in the lid pocket, pictogram-labeled; the quarterly inspection counts against it.

Indicator: a temperature/humidity indicator inside the bag, read quarterly.

Scope: airway adjuncts and any medication exist in Tier 2 only where the medical officer has written the standing order and the crew training record backs it.

Variants: the galley bag carries a second burn pack and extra hemostatic gauze; the mooring-station cache carries a third and fourth tourniquet pair and a hypothermia wrap. Variants are written in the vessel binder; the compartment order never changes.

TIER 3 SPECIFICATION

Shipboard MCI hard vault cache



Tier 3 open on deck: eight tourniquets, bulk dressings, burn sheets, splints, blankets, the drag litter in the lid.

Tier 3 is the bulk reserve for the incidents that make the news: collision, fire, grounding, a structural failure in heavy weather, a hostile event on a passenger deck. It treats eight to twelve casualties from one case and it is staged where the ship musters: the medical center, damage control central, and on passenger vessels the bridge muster station.

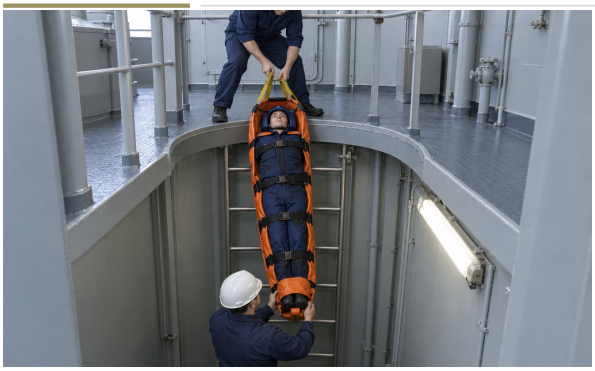
Enclosure. Crushproof, dustproof, watertight hard case, IP67, buoyant when latched (verify with the manufacturer), automatic pressure-relief valve, custom closed-cell polyethylene foam. A high-visibility medical pictogram on the exterior so a crew member who has never opened it can find it in smoke.

ITEM	QTY	SPECIFICATION
Windlass tourniquets	8	Same model as Tier 1; individually staged in rapid-deployment sleeves
Hemostatic gauze	6	Z-fold, vacuum-sealed
Pressure bandages	6	6 in. emergency trauma dressings
Abdominal / large-wound bandages	4	Modular, for blast, crush and burn coverage
Vented chest seals	6 twin packs	12 seals; stored in the lid, above any floor moisture
Hydrogel burn dressings	4	8 × 8 in. and face-conforming
Sterile burn sheets	2	60 × 96 in.
Malleable splints	4	36 in. aluminum-core moldable splints
Elastic / self-adherent wraps	8	For splint retention and dressing security
Hypothermia blankets	8	Heat-reflective, waterproof
Poleless drag litter	1	10-handle heavy-duty ripstop nylon, rated 600 lb
Triage tags	12	Waterproof synthetic paper, START-compatible
Trauma shears	4	Saltwater-resistant
Nitrile gloves	10 pairs	Large and XL, heavier-mil, ASTM D6978
Casualty trackers	2	Waterproof grease-pencil slates for the tourniquet-time and triage record

Every Tier 3 case carries a printed contents list inside the lid, a temperature/humidity indicator, and a tamper seal checked every watch. Deployment is logged (page 14) and the case is not returned to its bracket below 100 percent.

THE SHIP IS THE OBSTACLE

Confined-space extrication and vertical hoisting protocol



Vertical hoist through a deck scuttle: hauler above on the harness, tender below on the ladder well.

Steep vertical companionways, watertight doors with 18-inch sills, 28-inch scuttle rings, double-bottom bilges and engine-room gratings: the architecture that keeps a ship afloat defeats every rigid backboard and basket stretcher on the market. Shipboard extrication uses a flexible wrap-around litter that rolls into a tube, a vertical haul harness, and two trained crew.

Airway and neck in the vertical. A casualty hoisted head-up on a flexible litter is packaged with the chest and thigh straps tight, the head restrained in line with the spine, and the airway checked before the lift and at every landing. Vomiting during a vertical lift is an airway emergency; the lift stops and the casualty is turned.

STEP	ACTION	STANDARD
1 · Control the bleed first	Tourniquet 2–3 in. above the wound (high and tight if unseen), junction packed, chest sealed, before any movement	A casualty who bleeds out on the ladder well was moved too soon
2 · Package	Roll the casualty onto the flexible litter, secure chest, hip and thigh straps, restrain the head	Straps tight enough for a vertical lift; check the tourniquet is not under a strap
3 · Rig the haul	Head-end vertical haul harness clipped to the litter's lifting points; tag line at the foot	Rated hardware only; no improvised knots on lifting points
4 · Lift through the scuttle	Primary hauler on the upper deck; tender below guides the foot end and keeps the litter off the ladder rungs	Hauler and tender are two people; a third controls the hatch and the passageway
5 · Transfer	At the main passageway, transfer to a flat transit litter or the ship's stretcher for the run to the infirmary	Reassess tourniquet, airway and warmth at the transfer

Drills

Every department rehearses the sequence quarterly with a weighted mannequin through the actual scuttles and ladder wells on its route to the infirmary, timed, and the time goes in the inspection record. Confined-space entry for rescue follows the vessel's permit system and OSHA 29 CFR 1910.146 logic: atmosphere tested, rescuer on air, attendant outside.

MACHINERY SPACES

Engine room trauma, high-pressure injuries and thermal burns



Burn and trauma station on a machinery-space pillar, in reach of the main engine flat.

The machinery space produces the injuries a shoreside medic rarely sees: high-pressure injection, superheated steam, rotating-machinery amputation, and toxic atmospheres in the bilge. The kit station on the pillar exists because the engineer will not reach the infirmary in time, and because three of the four injuries below are wrong to treat the way they look.

Rescuer first. A machinery-space casualty is approached only after the space is made safe: rotating equipment stopped and locked out, steam and hydraulic lines isolated, atmosphere tested. Two casualties are worse than one.

HAZARD	WHAT IT LOOKS LIKE	WHAT THE CREW DOES
High-pressure fluid injection hydraulic lines (3,000+ psi), fuel rails, grease guns	A pinhole on a finger or hand, little pain at first, minimal bleeding. It is never minor: the fluid tracks along tendon sheaths and destroys tissue within hours	Do not squeeze, soak, or dismiss. Splint, elevate, mark the time and the fluid, and treat as a surgical emergency: telemedical consult now, diversion to the nearest port with a hand surgeon
Superheated steam invisible leaks from steam lines	Deep thermal burns, often to the face and hands, from a leak no one saw	Isolate the line first. Cool with running water at least 10 min, ideally 20; then hydrogel and the burn sheet; airway watch for facial and inhalation burns; keep warm
Winch, shaft and rotating machinery	Traumatic amputation, degloving, crush	Lock out. Two tourniquets side by side, 2–3 in. above the wound, never over a joint; pack what a tourniquet can't reach; save the part sealed, on ice, not in water
Confined atmospheres CO, refrigerants, hydrogen sulfide in bilges, tanks and voids	A crew member down in a tank or void with no obvious injury	No entry without SCBA and the permit system. The first rescuer without air becomes the second casualty. Ventilate, test, then enter on air with a tended line

The station on the pillar carries a Tier 2 bag with the galley-style burn pack doubled, a lock-out tag set, and a laminated pictogram card for the four hazards above. The engine control room carries the department's primary Tier 2 in a bracket by the door.

PASSENGER DECKS

Passenger MCI and public-access bleeding control stations



Bleeding-control cabinet beside the AED on a passenger promenade: the same pairing that works ashore.

A cruise atrium at sailaway holds more people per square meter than most city blocks. Structural failure in heavy weather, a rogue-wave impact that throws passengers across a lounge, a crowd surge on a stairway, or a hostile event produces casualties in the dozens before a medical team can cross the ship. The answer is the same one that works in airports and stadiums ashore: bleeding-control cabinets next to the AEDs, and crew who can run a triage line.

Public-access bleeding control (PABC) cabinets. Surface-mounted, alarmed, pictogram-labeled cabinets beside every AED on every public deck, holding drop-down tear-away IFAKs (tourniquet, hemostatic gauze, pressure dressing, gloves, instruction card) sized to the deck's occupancy. Guest-services and security crew are trained to open and use them; passengers can too.

Rapid triage: START on a passenger deck

CATEGORY	CRITERIA	ACTION
IMMEDIATE — red	Breathing only after airway repositioning, or respirations over 30/min, or no radial pulse / capillary refill over 2 s, or cannot follow simple commands	Life-saving interventions now: tourniquet, packing, chest seal, airway position; first to the medical team
DELAYED — yellow	Breathing, perfusing, follows commands, but cannot walk	Treated after the reds; moved by litter
MINOR — green	Walking wounded	Directed to a collection point by crew; re-triaged as time allows
EXPECTANT — black	Not breathing after airway repositioning	Tagged; resources go to the living

Crowd control and the casualty collection point

Announce and direct. The bridge takes the PA; crew move the walking wounded and the uninjured away from the scene toward a pre-designated collection point on the same deck so the medical team has room to work.

Stage the vault. The nearest Tier 3 vault comes to the collection point, not to the scene, unless the scene is safe.

Count and tag. Every casualty gets a tag and a tourniquet time before they move; the slate travels with the group.

Security. In a hostile event, bleeding control begins only when the security team declares the area controlled; the cabinets are placed so they are reachable from cover.

THE EVACUATION GAP

Prolonged field care and shipboard holding, 6 to 72 hours

When the helicopter is not coming, the ship becomes the hospital for a day or three. The interventions of the first hour have to be sustained, reassessed and documented, and the decisions that a trauma surgeon would make ashore are made by the medical officer with a telemedical physician on the line. Satellite links (Inmarsat, Iridium, Starlink) make that consult possible from anywhere; the maritime telemedical assistance services (TMAS, CIRM, the flag state's designated service) and the U.S. Coast Guard flight surgeon are the shoreside end of it. Establish the link before the casualty needs it.

HOLDING PROTOCOL	STANDARD	DOCUMENT
Tourniquet reassessment and conversion	Reassess every tourniquet within 2 hours of application. Where evacuation will exceed 2 hours and the criteria are met — no shock, the wound can be seen and monitored, bleeding is controllable with hemostatic packing and a pressure dressing, not an amputation — attempt conversion under telemedical physician direction. A tourniquet that has been in place 6 hours or more is not released outside a facility that can manage the consequences	Application time, reassessment times, conversion decision and who authorized it
Hemorrhagic shock and fluids	Whole blood and plasma are the answer ashore and are rarely aboard. Without them: permissive hypotension (a palpable radial pulse and normal mentation as the target, not a normal blood pressure), oral rehydration for the conscious casualty who can drink, titrated IV crystalloid only under direction, and tranexamic acid as soon as possible, no later than 3 hours after injury, where the formulary carries it and the medical officer is authorized	Vital signs and mentation every 15 minutes, then hourly; every fluid volume and time
Hypothermia prevention	Wet clothing off, vapor barrier on, active torso warming, the infirmary warm. Hypothermia, acidosis and coagulopathy feed each other; a cold trauma casualty stops clotting	Core temperature trend; warming measures and times
Wound care and infection prophylaxis	Open fractures and deep marine wounds are irrigated, dressed and splinted; antibiotics per the ship formulary and telemedical direction, started early when evacuation will exceed a few hours	Wound photographs for the telemedical consult; drug, dose and time
Pain, nutrition, nursing	Analgesia per formulary and standing orders; turning, pressure care and hydration for a casualty held on a litter for a day; a nursing rota so the medical officer sleeps	A single casualty flow sheet from injury to handover; it goes with the casualty

THE DECISION THAT MATTERS MOST

The master's diversion decision is a medical intervention. A course change toward the nearest port with a hospital, made in the first hour on the medical officer's and the telemedical physician's advice, does more for a trauma casualty than anything in the kit after hemorrhage control.

This page is a holding framework, not a drug protocol. Doses, drug choices and fluid volumes belong to the ship's standing medical orders, the formulary, and the telemedical physician on the line.

PRINTABLE TOOL

Quarterly maritime medical inspection audit grid

One sheet per compartment or locker per quarter. The medical officer or safety lead inspects and initials; the master or offshore installation manager countersigns; the sheet is filed with the safety management system. Any FAIL or any tripped indicator triggers a same-watch replacement from the infirmary cache and an entry in the restock log (page 14).

Vessel / installation _____ **Compartment / locker** _____ **Quarter** _____ **Date** _____

#	ITEM	LOCATION	EXPIRES	PASS	FAIL	INDIC.	INIT.
1	Windlass tourniquets — sleeve sealed, hook-and-loop free of salt, windlass and clip undamaged, count per tier	All tiers		☐	☐		
2	Hemostatic gauze — vacuum packaging brick-hard with zero air leakage, date valid	Tier 1 / 2 / 3		☐	☐		
3	Chest seals — foil sealed, hydrogel blister flat, no fluid leakage	Tier 1 / 2 / 3		☐	☐		
4	Pressure trauma dressings — moisture-barrier packaging sealed, elastic verified	Tier 1 / 2 / 3		☐	☐		
5	Burn dressings and burn sheets — gel saturated, foil unpunctured, date within cycle	Tier 2 / 3		☐	☐		
6	Nitrile gloves — box dry, gloves supple, no tackiness or embrittlement	All tiers		☐	☐		
7	Tier 3 vault — O-ring clean and lubricated, latches positive, purge valve operates, tamper seal intact	Tier 3		☐	☐		
8	Extrication litter and haul harness — straps and buckles intact, no fraying, hardware rated	Tier 3 / DC locker		☐	☐		
9	Trauma shears and cutters — rust-free, pivot tight, edge verified on heavy strap	All tiers		☐	☐		
10	Triage tags, slates, markers — dry, legible, functional; reach test time recorded in remarks	Tier 3 / PABC		☐	☐		

Indicator codes: OK — temperature/humidity indicator within range · TRIPPED — indicator exceeded; contents inspected item by item and replaced as needed. **Any FAIL or TRIPPED:** same-watch replacement from the infirmary cache; restock log entry.

REMARKS · REACH TEST TIMES · DRILL TIMES · ITEMS REPLACED · LOT NUMBERS

Inspected by (print, rank) _____ **Master / OIM / medical officer** _____ **Next due** _____

SUSTAINMENT

Watchstander shift-change walkaround and damage control log

The quarterly inspection finds the slow failures. The watch-change walkaround finds the fast ones: the kit opened at 0300 and not reported, the vault that rode ashore with the tender, the cabinet blocked by a provisions pallet. Sixty seconds at every relief keeps the ladder honest, and the oncoming watch owns what it accepts.

The 60-second shift-change walkaround

- ☐ Bridge Tier 1 trauma IFAK present in its bulkhead bracket, tamper seal intact
- ☐ Engine control room Tier 2 trauma bag in its rack, indicator and inspection tag in date
- ☐ Galley burn and laceration kit accessible, sealed, not blocked by provisions or equipment
- ☐ Public-access bleeding-control cabinets on passenger decks illuminated, alarms armed, no missing units
- ☐ Tier 3 MCI vault latched in damage control central / muster station, tamper seal intact, fully stocked

Vessel _____ **Oncoming watch officer** _____ **Date / watch** _____

Post-incident restock protocol

Report on deployment. Any kit opened is reported to the medical officer before the end of the watch, with the compartment, the casualty, and the items used.

No partial kits underway. A compartment bag or vault below its contents list is restocked from the infirmary cache before the next watch; Tier 1 pouches are swapped, not topped up.

Infirmary cache. Sized to the vessel: at minimum two complete Tier 1 pouches per ten watchstanders and a full Tier 2 refill set; the cache itself is on the quarterly grid.

Lot traceability. The restock log records the item, lot number and compartment; it is the record that proves authentic sourcing when a device is questioned by class, flag, insurer or counsel.

Port resupply. The restock order is placed by satellite the same day and met at the next port; the ship does not sail a second leg short.

Emergency restock and incident log

DATE	INCIDENT / COMPARTMENT	ITEMS EXPENDED (LOT #)	RESTOCK ORDER PLACED	MASTER / OIM INIT.

Standardization in one sentence: if a relieving officer can walk any deck on any hull in the fleet and put a hand on the nearest tourniquet in sixty seconds, the program is working. The walkaround and the grid will tell you which compartment broke the rule and when.

PROCUREMENT

How fleets, operators and installations source shipboard trauma systems

The standard on the preceding pages is a bill of materials by zone and tier times the number of hulls. MED-TAC International Corp. builds it as line-item quotes with the sourcing documentation a flag-state inspector, class surveyor, P&I insurer or company auditor asks for: manufacturer of record, lot traceability, and a contents list per container.

CHANNEL	WHO	HOW IT WORKS
Micro-purchase and fleet card	Any operator buying under a card or micro-purchase threshold	Card order against a quote; orders over $200 ship free within CONUS; APO/FPO military orders ship free with no minimum
Net 30 account	Verified government agencies and public authorities only	Purchase order against a written quote; quotes valid 45 days; all other buyers pay in full at order
Institutional fleet logistics RFQ	Cruise lines, offshore operators, fleet managers with a BOM or a hull count	Upload the BOM or this standard's tier list with the hull and POB count; the quote returns as line items by zone, tier and vessel, with custom kitting and compartment labeling
Test & Evaluation	Medical departments, safety superintendents, fleet committees	Evaluation units for bracket and stowage trials before a fleet order

SUBMIT A MARITIME FLEET RFQ: INSTITUTIONAL LOGISTICS AND KITTING
tactical-medicine.com/pages/medical-logistics-rfq-services ›

EXPLORE INSTITUTIONAL PROCUREMENT
tactical-medicine.com/pages/institutional-procurement ›



The medical officer's view: one standard, one vault, one sheet per compartment.

Sourcing declarations

Service-Disabled Veteran-Owned Small Business (SDVOSB) Certified; SAM.gov Registered & Active; CAGE 9VFL3; UEI YU3ZMJ44REA5. Not on a GSA Schedule; direct procurement by purchase order, government purchase card, and micro-purchase.

Custom trauma kits assembled in the USA from components purchased from the manufacturer or an authorized distributor, with lot numbers recorded on the packing list.

Payment: government purchase cards, commercial credit cards, purchase orders, ACH/wire.

No lead-time estimate is printed here; lead time is quoted per order against current stock.

Standards referenced: evidence-based prehospital trauma standards; MARCH; NFPA 3000; OSHA 29 CFR 1910.151 and 1910.146; IMO/WHO International Medical Guide for Ships and flag-state medicine-chest requirements; MLC 2006 Regulation 4.1; USCG 46 CFR first-aid and lifesaving equipment requirements by vessel class; SAE J3043 (reference mounting logic). Evidence: Eastridge 2012 (potentially survivable death); Kragh 2009 (tourniquet survival); military prolonged casualty care guidelines (tourniquet conversion, permissive hypotension, TXA, hypothermia); manufacturer IFUs (storage ranges); START triage.

NO EMS IS COMING.
THE CREW IS THE EMS.

AUTHORITY & CLINICAL DOCTRINE

Founded, owned, and operated by medical, public safety, and military professionals. Clinical leadership directed by Marco R. Torres, MD, NRP — a physician and medical educator with fifteen years in tactical medicine as a flight medic, as a paramedic, and in high-threat protection operations, and seven years teaching EMS. A U.S. Navy veteran, he founded MED-TAC International and ALKEONHealth.com. Doctrine: DOCTRINE BEFORE GEAR. Medical SME Veteran-Led shipboard trauma systems engineered to evidence-based clinical standards, with the sourcing documentation a flag-state, class, or insurer audit asks for.

SUBMIT A MARITIME FLEET RFQ: INSTITUTIONAL LOGISTICS AND KITTING ›

https://tactical-medicine.com/pages/medical-logistics-rfq-services

GOVERNMENT CONTRACTING AND PROCUREMENT SOLUTIONS ›

https://tactical-medicine.com/pages/government-procurement-solutions

LEGAL DISCLAIMER

This document is an educational operational standard for maritime and offshore leaders. It is not legal advice, a medical protocol, or a substitute for the vessel's standing medical orders, the ship physician or telemedical service, the flag state, class society, P&I insurer, or the company safety management system. Interventions listed for non-medical crew require standing orders and training. Prolonged-care drug and fluid decisions belong to the medical officer under telemedical direction. Standards cited were current when published and change; verify them before relying on them. No government endorsement is implied. © 2026 MED-TAC International Corp. Free to share unmodified within your fleet; not for resale.

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GOVERNMENT CONTRACTING