Access speaker bios here: https://files.asprtracie.hhs.gov/documents/dash-webinar-speaker-bios.pdf

Access the recording here: https://attendee.gotowebinar.com/recording/7878817075750706957

Access the FAQs here: https://files.asprtracie.hhs.gov/documents/dash-tool-faqs.pdf



Introduction to the Disaster Available Supplies in Hospitals (DASH) Tool

August 15, 2022



The opinions expressed in this presentation and on the following slides by non-federal government employees are solely those of the presenter and not necessarily those of the U.S. Government. The accuracy or reliability of the information provided is the opinion of the individual organization or presenter represented.





Shayne Brannman, MA, MS Program Director, ASPR TRACIE



ASPR Key Priorities

To meet the nation's health/medical needs, ASPR is focused on three key priorities:

Extend capabilities to respond well and emerge from the COVID-19 pandemic better

Restore resources and capabilities diminished during the pandemic

Prepare for future emergencies whether natural or man-made



ASPR TRACIE: Three Domains



- Self-service collection of audience-tailored materials
- Subject-specific, SME-reviewed "Topic Collections"
- Unpublished and SME peer-reviewed materials highlighting real-life tools and experiences





- Personalized support and responses to requests for information and technical assistance
- Accessible by toll-free number (1844-5-TRACIE), email (askasprtracie@hhs.gov), or web form (ASPRtracie.hhs.gov)





- Area for password-protected discussion among vetted users in near real-time
- Ability to support chats and the peer-to-peer exchange of user-developed templates, plans, and other materials







Meg Sullivan, MD, MPH Chief Medical Officer, ASPR



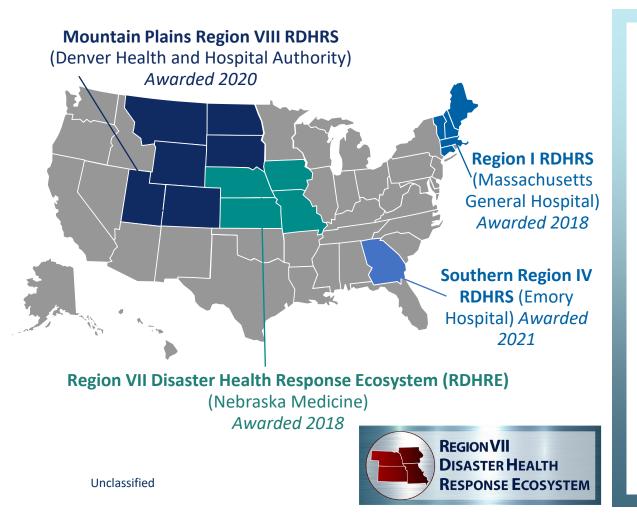


Shelly Schwedhelm, MSN, RN, NEA-BC
Executive Director, Emergency Management & Biopreparedness,
Nebraska Medicine and Executive Director, Emergency Management &
Clinical Operations, Global Center for Health Security



Regional Disaster Health Response System

ASPR awarded four disaster response sites to address health care preparedness challenges, establish promising practices for improving disaster readiness across the health care delivery system, demonstrate the potential effectiveness of an RDHRS, and make progress toward building a national system for readiness built on regional collaboration.



Building health response systems that exhibit the following capabilities:

- Improve statewide and regional situational awareness
- Develop readiness metrics and conduct an exercise to test capabilities
- Build a partnership for disaster health response
- Align plans, policies, procedures related to clinical excellence in disasters
- Increase statewide and regional medical surge capacity

The DASH TOOL – "Our Healthcare Why?"

- DASH Tool = Mitigation & Preparedness
- Nationally accessible tool that uses hospital characteristics and scenarios to help provide visibility on the supplies needed during various types of incidents.
- ☑ The DASH Tool provides an opportunity to help mitigate facility supply shortages by identifying estimates during the preparedness process to help save lives during response.



Hospital Pharmacy Module

Estimates supplies of medications a hospital should have in its pharmacy to meet seriously injured patient needs for 48 hours following an MCI.

USE THE MODULE

Personal Protective Equipment Module

Estimates minimum personal protective equipment (PPE) needed by hospital personnel managing patients suspected or known to be infected with a special pathogen.

USE THE MODULE

Burn Supply Module

Estimates supplies needed to care for critical burn patients with an average 40% burn surface area for the first 48 hours after a burn incident.

USE THE MODULE

Trauma Supply Module

Estimates supplies needed to care for seriously injured trauma patients for the first 48 hours after an MCI.

USE THE MODULE



The DASH TOOL – Key Points



Four modules complement each other.



Intended to be used for *PRE*-incident planning and not during an incident.



The module outputs may be used to determine reasonable stock levels for facilities to have available.



DASH does not address staff, space, systems, or education.

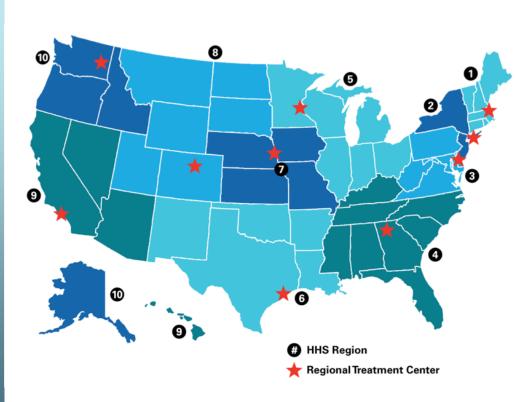


To Save Your Results: Download (save/print) or Share URL.



NETEC & Regional Special Pathogen Treatment Centers

PPE Module Input



Regional Treatment Centers

- 1: Massachusetts General Hospital
- 2: NYC Health + Hospitals Bellevue
- 3: Johns Hopkins Hospital
- **4:** Emory University Hospital and Children's Healthcare of Atlanta-Egleston Hospital
- 5: University of Minnesota Medical Center
- **6:** University of Texas Medical Branch at Galveston
- 7: University of Nebraska Medical Center/ Nebraska Medicine
- 8: Denver Health Medical Center
- 9: Cedars-Sinai
- **10:** Providence Sacred Heart Medical Center and Children's Hospital



PPE Supply Module

- The PPE DASH module was developed by experts in Emergency Preparedness and Infectious Disease to provide a means for all facilities to have an informed estimate on how much inventory is needed
- Three scenario-based events in this module: 1) Airborne & Droplet special pathogen (e.g., MERS), 2) Contact special pathogen (e.g., VHF), 3) Pandemic

The PPE DASH module will assist:

Health Systems:

- Inform facilities on items needed to prepare for a special pathogen or a pandemic type event.
- Assist facilities to be prepared with adequate inventory for the fall surge in COVID.

Coalitions:

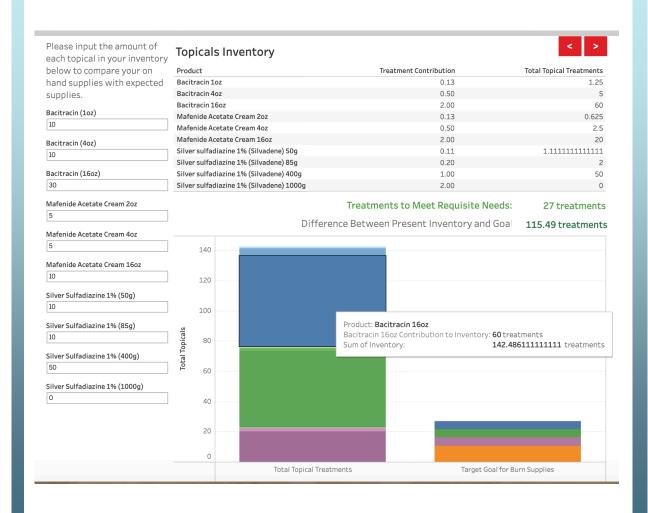
- Collate information on how much the health systems need aggregately to better inform coalition response.
- Conduct similar strategy to inform region response.
- Identify gaps where the Strategic National Stockpile might be requested.



Burn Supply Module

Estimates supplies needed for:

- Initial dressings
- Topical treatments
- Patient care





Burn Care Assumptions

Patient Considerations

- •Note that patients are assumed for dressing purposes to be 75kg and have a 40% burn surface area (BSA) burn for inpatients and 5% BSA burn for outpatients. Thus, each outpatient "counts" as 1/8 inpatient dressing supply needs.
- •Note that calculation of analgesia requirements, airway management, and number of urinary catheters, etc. needed has been validated against the number of trauma patients receiving those interventions to ensure adequate projected supply.
- The assumptions for number of burn patients are:

Hospital Trauma Level Burn Center Level 1 and Level 2 Level 3, Level 4, Level 5, and Not Designated Hospitals Default Number of Patients 25 inpatients and 75 outpatients 15 inpatients and 45 outpatients 5 inpatient/stabilization patients and 20 Outpatients

Pharmacy Module



The Pharmacy Module is a unique planning tool to assist hospitals with assessing the number of pharmaceuticals by category that would be needed to treat patients for up to 48 hours following mass casualty incidents.



The Hospital Pharmacy Module Methodology (PDF) document contains a "Further Medications for Consideration" section, which provides a helpful overview of additional pharmaceuticals that hospitals may want to consider stocking or having available within their health care coalitions.

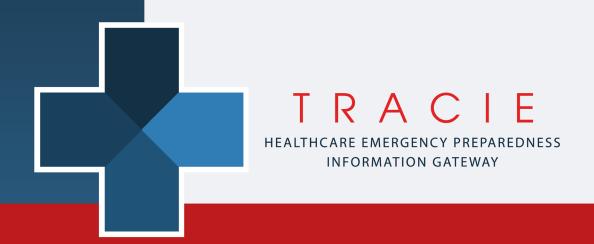


Trauma Module

In consultation with subject matter experts and review of mass trauma incidents (with a focus on penetrating trauma that generates a higher degree of severe injuries and surgical volumes compared to "conventional" mass casualty incidents), the following assumptions for seriously injured casualties (i.e., Injury Severity Score 15 or higher) are applied:

Hospital Trauma Level	Default Number of Patients
Level 1 and Level 2	50 seriously injured patients
Level 3	20 seriously injured patients
Level 4, Level 5, and Not Designated Hospitals	10 seriously injured patients





Linda Rouse O'Neill Vice President of Supply Chain Policy and Executive Branch Relations, Health Industry Distributors Association (HIDA)





Advancing the value of distribution in healthcare

- 119 Distributor Members
- 76 Million Sq. Ft of Warehouse Space
- 650 Million Orders Annually
- Delivering to 560,000
 Healthcare Provider
 Locations



Continuously improving the healthcare supply channel

- 137 Members
 - 134 Manufacturers
- Distributors Carry 550,000 FDA-Approved Products from 5,500 Medical Manufacturers





Diverse Distributor Membership







































Leading Manufacturers Across Categories

Medtronic

Engineering the extraordinary



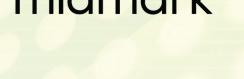






























Response to COVID-19 Includes



Vetted and onboarded new suppliers



Expedited shipping and delivery to hotspots to all healthcare provider settings



Coordinated with current suppliers to ramp up production



Identified appropriate product substitutions



Helped healthcare providers determine supply availability and delivery dates



Partnerships Help Navigate Beyond The Pandemic

- HIDA has ongoing public/private partnership with federal agencies
- HIDA Member Councils and Work Groups Provide Subject Matter Expertise:
 - PPE Council: Manufacturers and Distributors who make and distribute
 PPE across all markets
 - Acute Care Council: Distributors and Manufacturers with core competency in serving hospitals





DASH Tool and Supply Chain Partners

Hospital Pharmacy Module + Personal Protective Equipment Module + Burn Supply Module + Trauma Supply Module =

More informed discussions with supply chain
Opportunities to discuss product availability as well as options for substitutions and alternatives

Improved scenario planning and coordination with supply chain







Ryan Dadmun Technical Specialist, Healthcare Ready

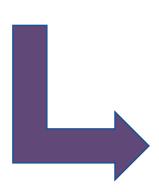


Healthcare Ready focuses on health preparedness and response, serving as a linkage point for the health sector and government partners at the federal, state, and local governments. Our goal is to facilitate the planning and response coordination that improves our ability to respond to threats that disrupt patient access to healthcare during crises.



DASH Evolution

Goal:	can then adequate	vorksheet generates overall planning numbers by category of drug that nen be compared to the numbers on the Disaster Inventory to assure uate on hand. The inventory may be modified by the hospital to suit its practices and vendors. The calculations are for seriously injured nts only.				
	Step 1:	Enter the number of emergency department beds	20			
	Step 2:	Enter trauma level	3			
	Step 3:	Do all major trauma patients get transferred to another facility?	Yes			
	Step 4:	Enter the value of designated burn beds	5			
	Step 5:	ls this hospital at high risk to receive disproportionate number of casualties?	No			
	Step 6:	Is the hospital at risk to be isolated by natural disaster / disrupted infrastructure?	No			



Please input the number of available pharmaceuticals below: (Pharmaceuticals marked with * are controlled	1.2 Opioid Analge	esia Oral Invento	Dry Dose Equivalency Value	Return to Index < > Narcotic Analgesia Oral Inventory (tal
substances)	Drug		Dose Equivalency value	equivalency)
Hydrocodone/Acetaminophen 5/325 mg*	Hydrocodone/Acetaminophe		1	400
400	Hydrocodone/Acetaminophe	en 5/333mg elixir 10ml	1	0
S DE NO DE NO DE NO DE MONOCOURS CHEMINE DE LA	Hydrocodone/Acetaminophe	en 7.5/325mg tab	1	0
Hydrocodone/Acetaminophen 5/333mg elixir 10ml*	Hydrocodone/Acetaminophe	en 10/325mg tab	1	0
0	Hydromorphone 4mg tab		1	0
Hydrocodone/Acetaminophen 7.5/325mg tab*	Morphine 10mg/5mL elixir 5mL		1	120
0	Morphine 10mg/5mL elixir 1	.00mL	20	0
<u> </u>	Morphine 10mg/5mL elixir 5	600mL	100	1,200
Hydrocodone/Acetaminophen 10/325mg tab*	Oxycodone 5mg tablets		1	0
0	Oxycodone 5mg/5ml elixir 5		1	0
Hydromorphone 4mg tab	Oxycodone 5mg/ml elixir 50	0 ml	500	0
O	Grand Total			1,720
Morphine 10mg/5mL elixir 5mL	Grand	Total To Meet Requis	site Needs: 3,000	tabs (or tab equivalency
120	Difference Betwe	en Present Inventor	y and Goal: -1,280	tabs (or tab equivalency
120	Difference Betwe	en Present Inventor	y and Goal: -1,280	tabs (or tab equivalency
120	- 1304.000 AND	en Present Inventor	y and Goal: -1,280	tabs (or tab equivalency
120 Morphine 10mg/5mL elixir 100mL	3000	en Present Inventor	y and Goal: -1,280	tabs (or tab equivalency
120 Morphine 10mg/5mL elixir 100mL	- 1304.000 AND	en Present Inventor	y and Goal: -1,280	tabs (or tab equivalency
120 Morphine 10mg/5mL elixir 100mL 0 Morphine 10mg/5mL elixir 500mL	2500	en Present Inventor	y and Goal: -1,280	tabs (or tab equivalency
120 Morphine 10mg/5mL elixir 100mL 0 Morphine 10mg/5mL elixir 500mL	2500	en Present Inventor	y and Goal: -1,280	tabs (or tab equivalency
120 Morphine 10mg/5mL elixir 100mL 0 Morphine 10mg/5mL elixir 500mL 12 Oxycodone 5mg tablets*	2500	en Present Inventor	y and Goal: -1,280	tabs (or tab equivalency
120 Morphine 10mg/5mL elixir 100mL 0 Morphine 10mg/5mL elixir 500mL 12 Oxycodone 5mg tablets*	2500	en Present Inventor	y and Goal: -1,280	tabs (or tab equivalency
Morphine 10mg/5mL elixir 100mL Morphine 10mg/5mL elixir 500mL 12 Oxycodone 5mg tablets* Oxycodone 5mg/5ml UD cup 5ml*	3000 2500 2500 2000	en Present Inventor	y and Goal: -1,280	tabs (or tab equivalency
120 Morphine 10mg/5mL elixir 100mL 0 Morphine 10mg/5mL elixir 500mL 12 0xycodone 5mg tablets* 0 0xycodone 5mg/5ml UD cup 5ml* 0	2500	en Present Inventor	y and Goal: -1,280	tabs (or tab equivalency
120 Morphine 10mg/5mL elixir 100mL 0 Morphine 10mg/5mL elixir 500mL 12 Oxycodone 5mg tablets* 0 Oxycodone 5mg/5ml UD cup 5ml* 0 Oxycodone 5mg/ml Oral Solution 500ml*	3000 2500 2500 2000 1500	en Present Inventor	y and Goal: -1,280	tabs (or tab equivalency
120 Morphine 10mg/5mL elixir 100mL 0 Morphine 10mg/5mL elixir 500mL 12 0 Oxycodone 5mg tablets* 0 Oxycodone 5mg/5ml UD cup 5ml* 0 Oxycodone 5mg/ml Oral Solution 500ml*	2500 Aedication Available 5000 1500 1500	en Present Inventor	y and Goal: -1,280	tabs (or tab equivalency



26

DASH Tooltip – Clear Communication

1.3 Non-opioid Analgesia C	ral Inventory	Return to Index < >
Drug	Dose Equivalency Value	Non-narcotic Analgesia Oral Inventory (tabs or tab equivalency)
Acetaminophen 160mg/5mL elixir 120 ml	4	400
Acetaminophen 325mg tab	0.33	^
Acetaminophen 500mg tab	0.5	Acetaminophen 160mg/5mL elixir 120 ml
lbuprofen 100mg/5ml elixir 120 ml	6	Drug/category: Non-narcotic analgesia oral
lbuprofen 200mg tab	0.5	Dose Equivalency Value: 4 tabs per pharmaceutical Current Available Supplies: 400 tabs
Ibuprofen 400mg tab	1	Current Available Supplies. 400 tabs
lbuprofen 600mg tab	1	Current Available Supplies were calculated by multiplying the
Ibuprofen 800mg tab	1	number of pharmaceuticals on hand by the Dose Equivalency Value
Ketorolac 10mg tab	1	0
Naproxen 375mg tablet	1	1,200
Naproxen 500mg tablet	1	0

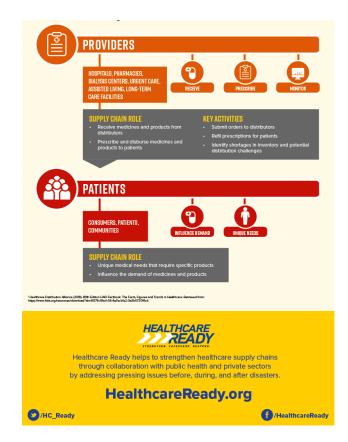


Healthcare Supply Chain



Healthcare Supply Chain







More information on the medical supply chain can be found at https://healthcareready.org/healthcare-supply-chain/



Preparedness vs Response











John Hick, MD Hennepin Healthcare and ASPR TRACIE Senior Editor



DASH Website (dashtool.org)







HOSPITAL PHARMACY

PERSONAL PROTECTIVE EQUIPMENT

BURN SUPPLY

TRAUMA SUPPLY

Welcome to the Disaster Available Supplies in Hospitals (DASH) Tool

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. DASH recommends average par levels for specific supplies that acute care hospitals may need to have on hand to respond to a disaster in their community until resupplied. Recommendations are based on user inputs about the size of the hospital, risks in the community, regional role/designation of the hospital, and other factors.

DASH is comprised of several modules which, taken together, can provide hospitals a holistic view of the supplies needed to address various types of incidents. Each module also incorporates pediatric sizes and specific medication



Four Modules

Hospital Pharmacy Module

Estimates supplies of medications a hospital should have in its pharmacy to meet seriously injured patient needs for 48 hours following an MCI.

USE THE MODULE

Personal Protective Equipment Module

Estimates minimum personal protective equipment (PPE) needed by hospital personnel managing patients suspected or known to be infected with a special pathogen.

USE THE MODULE

Burn Supply Module

Estimates supplies needed to care for critical burn patients with an average 40% burn surface area for the first 48 hours after a burn incident.

USE THE MODULE

Trauma Supply Module

Estimates supplies needed to care for seriously injured trauma patients for the first 48 hours after an MCI.

33

USE THE MODULE



Landing Page for Each Module

Hospital Pharmacy Module (HPM)

The DASH Hospital Pharmacy Module (HPM) is intended to provide estimates of pharmaceuticals and intravenous fluids that may be required at a facility for the first 48 hours after a mass casualty incident occurs. The HPM should be completed to complement both the Burn and Trauma Modules. Based on hospital characteristics, the module will offer baseline inventories for categories (e.g., analgesia, antibiotic). The user will input inventory information for common drug formulations in stock within these categories and see immediately whether the hospital has adequate or inadequate stocks of medications in that category. Dosing is based on adult (i.e., higher) requirements, though pediatric formulations are included where available.

The DASH HPM is not proscriptive nor definitive. It is intended as a starting point for facility planners to estimate the minimum quantities that may be needed based upon the role the hospital has in the community. The module is meant to be considered in conjunction with other planning tools, resources, information, and facility and community-wide preparedness efforts. It is not intended as a clinical tool and should be used for pre-incident planning and NOT during an incident.

For detailed information on the purpose of the DASH HPM Module, related planning considerations, and additional resources, click on the "HPM Methodology (PDF)" button. For detailed instructions, click on the "HPM Instructions (PDF)" button. Most users will find it helpful to have the HPM Instructions open in a separate browser window to follow along as they navigate through the module.

HPM Instructions (PDF)

HPM Methodology (PDF)



User Inputs About Hospital Characteristics

Begin by entering your hospital's characteristics on the Initial Assessment screen below. Then click on the "Go to Index" button to navigate to any Individual Drug Category where you will enter your inventory.

Please fill out all the boxes below with information regarding your facility.	Initial Assessment The graph below displays the amount per drug category to h	Go to Index have on hand in the event of an emergency:		Begin by selecting your pathogen of interest on
	Drug Category	la.		your hospital's characteristics. Once your outpu
Trauma Level	2.2 Sedative oral	0		different pathogen.
None Selected ▼	2.3 Agitation control / Antipsychotic Injectable 2.4 Agitation control / Antipsychotic oral	0		amoroni patriogeni.
Emergency Department Beds / Rooms	3.1 Antibiotic narrow spectrum injectable	0		
0	3.2 Antibiotic narrow spectrum oral	0		Viral Hemorrha
How many beds are routinely used	3.3 Antibiotic expanded spectrum injectable	0		***************************************
for inpatient burn care?	3.4 Antibiotic expanded spectrum oral	10		Respond to the questions to the right about your hospital's
Are your major trauma patient	Please answer the fo	llowing questions about y	our hospital'	characteristics and the types of PPE most commonly used who a known or suspected viral hemorrhagic fever (VHF) patient. F
routinely transferred to higher	click on the "G	o to Topicals" button to co	ontinuo throi	to the PPE Module Instructions for detailed directions.
levels of care?	Click off the G	o to Topicals" button to co	ontinue tirot	1. Adjust the slider to the number of days of PPE use for which you are plant Recommendations:
Is this the only hospital in the are otherwise at risk for a disproport share of burn or trauma patients?	What is your Hospital Trauma Level?			Regional Ebola and Other Special Pathogen Treatment Center (RESP Jurisdiction Special Pathogen Treatment Center (State Treatment Center) = 7
No	1			b. Assessment Hospital = 4 c. Frontline Hospital = 2
Are natural disasters likely to i	Emergency Department Beds / Rooms	5		2. Enter the number of isolation rooms you plan to staff at one time. Recomm
the hospital for days or longer No	0			 a. RESPTC = 2 b. State Treatment Center, Assessment Hospital, or Frontline Hospital =
	Does your hospital routinely provide	inpatient burn care (regardless of any for	mal designation)?	3. Select whether your hospital primarily uses disposable gowns or coveralls.
	No			A Color of the col
	Is your hospital the primary regional	receiving center for burn patients?		 Select whether your hospital primarily uses PAPRs or N95s for VHF patie If you selected PAPRs, select yes if the associated hoods, tubing, and single use only or no if they are not.
	No	seeming content of sampation of		b. If you selected PAPRs, enter the number of PAPR filters per unit.
				5. Click on the forward arrow in the bottom right hand corner to proceed to the

Are natural disasters likely to isolate the hospital for days or longer?

egin by selecting your pathogen of interest on the Index page below. You will then answer questions about our hospital's characteristics. Once your outputs are displayed, you can return to the Index page to select a fferent pathogen.

Viral Hemorrhagic Fever Predictor

Respond to the questions to the right about your hospital's	For how many days of PPE are you planning?
characteristics and the types of PPE most commonly used when managing	1
a known or suspected viral hemorrhagic fever (VHF) patient. Please refer	0
to the PPE Module Instructions for detailed directions.	How many isolation rooms are you capable of staffing
1. Adjust the slider to the number of days of PPE use for which you are planning.	at one time?
Recommendations:	1
a. Regional Ebola and Other Special Pathogen Treatment Center (RESPTC) or State or	Does the hospital primarily use disposable gowns or coveralls?
Jurisdiction Special Pathogen Treatment Center (State Treatment Center) = 7	Gowns
b. Assessment Hospital = 4	
c. Frontline Hospital = 2	Does the hospital primarily plan to use PAPR or N95 respirators
2 Ft4	for providers?
2. Enter the number of isolation rooms you plan to staff at one time. Recommendations:	N95

b. State Treatment Center, Assessment Hospital, or Frontline Hospital = 1

4.	Select whether your hospital primarily uses PAPRs or N95s for VHF patient care.
	a. If you selected PAPRs, select yes if the associated hoods, tubing, and filters ar
_:.	

ngle use only or no if they are not. b. If you selected PAPRs, enter the number of PAPR filters per unit.

Click on the forward arrow in the bottom right hand corner to proceed to the next screen.

35

Does the hospita	al primarily plan to use PAPR or N95 respirators
for providers?	
N95	.
If you select	ted PAPR, are the following 3 components single use only?
Hoods?	
No	▼
Tubing?	
Tubing? No	•
	•

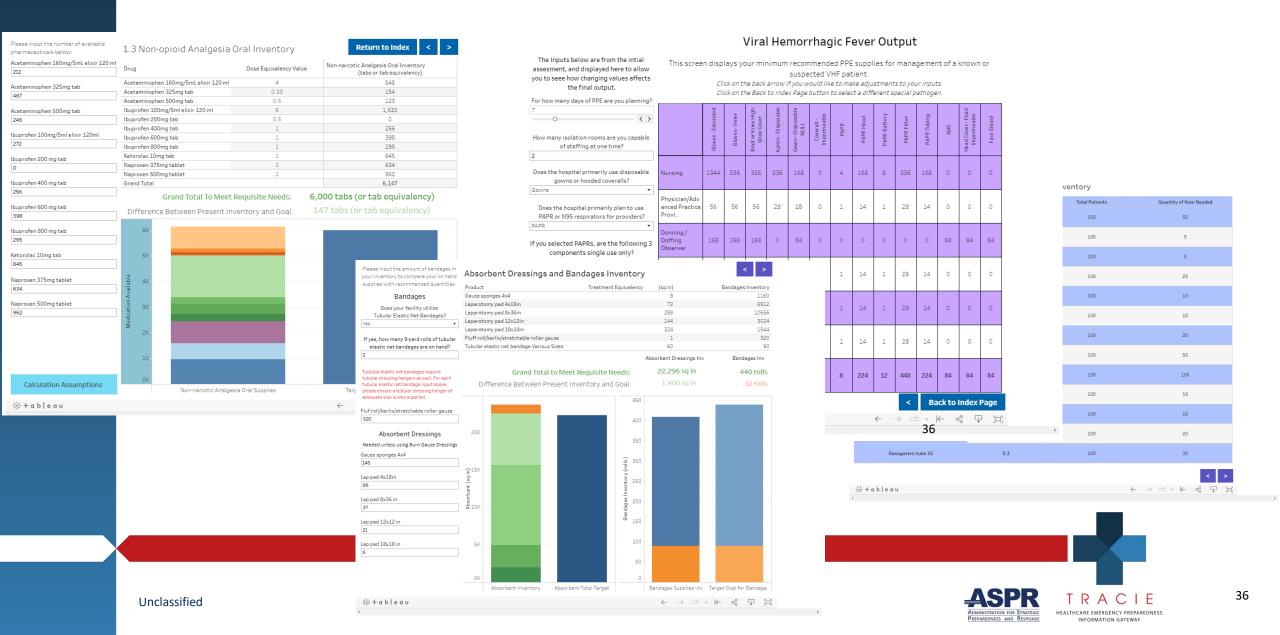
For how many days of PPE are you planning?

Based on your inputs, the BSM is preparing your hospital for 15 burn inpatients and 45 burn outpatients.



No

Recommended Quantities of Supplies



Question & Answer



Contact ASPR TRACIE







asprtracie.hhs.gov 1-844-5-TRACIE

askasprtracie@hhs.gov