

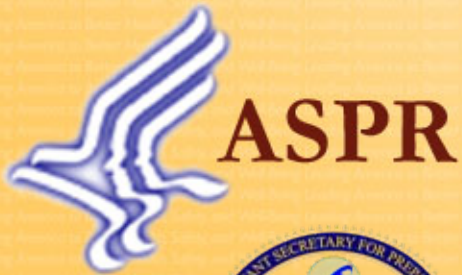
# **Improving Public Health and Medical Mutual Aid**

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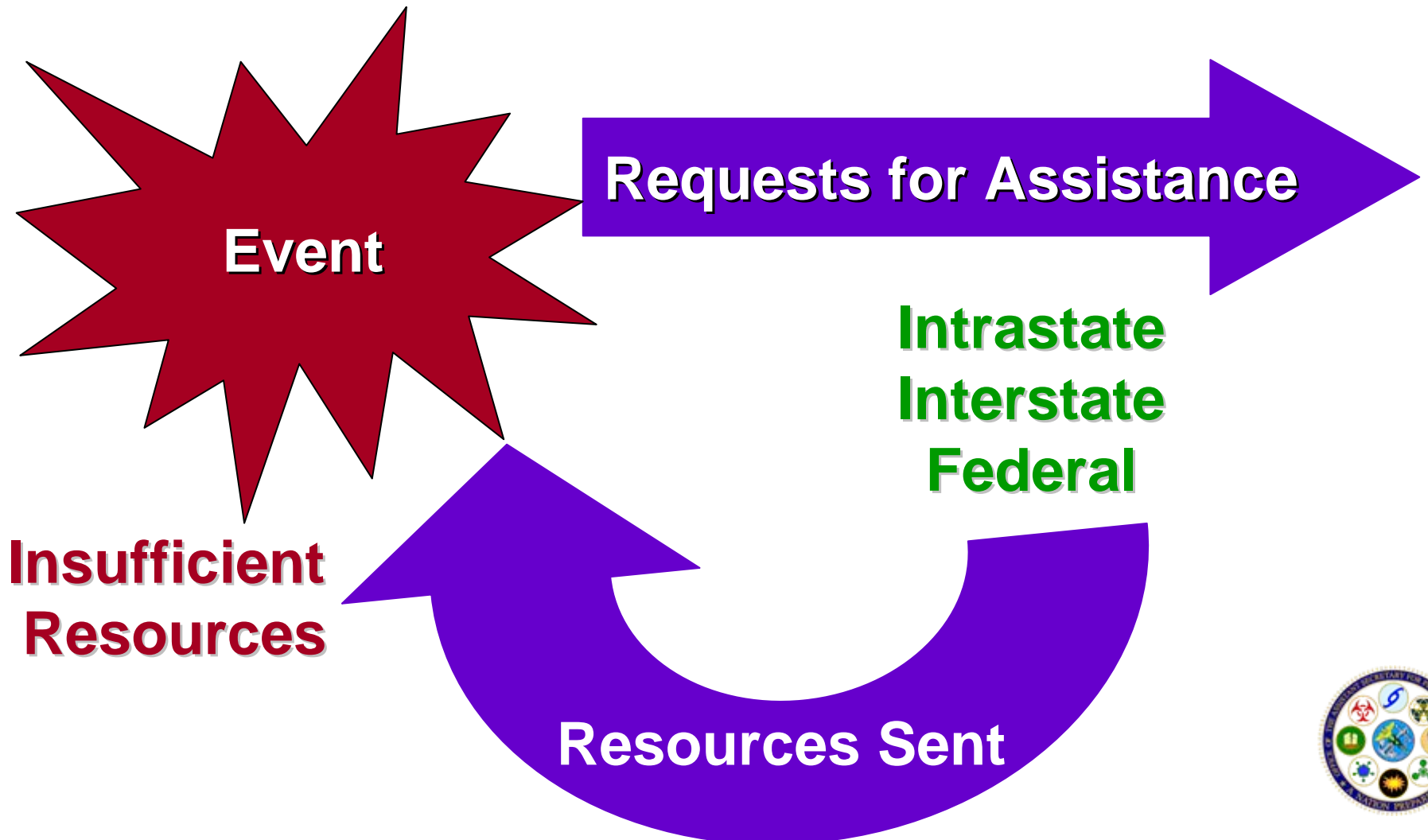
# Mutual Aid and Resource Management System

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HHS

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Preparedness and Response

# Mutual Aid



# Writing the Catalogue

## Identify what items go in the catalogue

- Resource typing is the categorization and description of response resources that are commonly exchanged in disasters through mutual aid agreements.

## Identify the “product” specifications

- A national credentialing system can document minimum professional qualifications, certifications, training and education requirements that define baseline criteria expected of emergency response professionals and volunteers for deployment as mutual aid to disasters.



# Public Health and Medical Resource Typing & Credentialing Initiative

- The FEMA National Integration Center (NIC) is tasked with producing the catalogues for all emergency response assets.
- The initial 120 resource types FEMA developed included public health and medical teams, but focus was on NDMS teams
- Because of the inherent expertise within HHS FEMA asked HHS to lead the effort to build on the initial resource types to build the catalogue for additional resource types at the state level
- Goal- build on state/local resource-typing efforts
- NIC Incident Management Systems Division provided funding and support for HHS to bring together experts from a broad range of fields in public health and medical to conduct public health and medical resource typing



# Public Health Working Group



# Medical Working Group



# Catalogue Development

- Evaluate the typical public health and medical missions
- Identify teams that currently exist or can be easily “packaged” by an agency or institution.
- Capable of being ordered through a standard system such as intrastate mutual aid agreements or interstate mutual aid (EMAC)
- Capable of being identified/inventoried for inclusion in the “catalogue” for response operations.
- Could not resource type everything at this point; focus on sharing of teams for mutual aid



# Progress to Date

- October 2006 - Brought together subject matter experts for initial meeting
- Divided into public health and medical subgroups to resource type teams to be included in the catalogue
- Discovered that
  - Few public health and medical teams exist
  - SMEs have identified “virtual” teams that could be created
- April – May 2007 Stakeholder review of the identified resource types and made edits (> 1000 comments)
- May – November 2007 SMEs identified credentials for the positions on the resource typed teams
- December 2007 – stakeholder review of the position credentials (>300 comments)
- January 2008 – Meeting of SMEs to finalize resource types and credentials



# Resourced Typed Teams

- 5 Public Health Teams
  - Epidemiology (surveillance and investigation)
  - Isolation and Quarantine
  - Environmental Health
  - Mass Dispensing Consultant
  - Receiving, Staging, and Storing (RSS) Task Force



# Resourced Typed Teams

- 5 Medical Teams with Subtypes
  - Mobile Field Medical Team
    - ❖ Core Team
    - ❖ Acute/Urgent Care
    - ❖ Primary Care
    - ❖ Dental Care
  - Emergency/Critical Care Team
    - ❖ Core Team
    - ❖ Emergency Care
    - ❖ Adult Critical Care
    - ❖ Adult Critical Care- Pulmonary/Infectious Disease
    - ❖ Critical Care Burn
    - ❖ Pediatric Critical Care
    - ❖ Neonatal



# Resourced Typed Teams

- 5 Medical Teams with Subtypes (cont'd)
  - Ancillary Support Team
    - ❖ Core Team
    - ❖ Laboratory
    - ❖ Pharmacy
    - ❖ Radiology
  - Specialty Care
    - ❖ Core Team
    - ❖ Medical/Surgical (adult and pediatrics)
    - ❖ Surgical (Trauma resuscitation, OR, Post anesthesia recovery)
    - ❖ Dialysis
    - ❖ Obstetrics (L & D, Recovery and Post partum)
  - Palliative Care/Hospice Team



# Resourced Typed Teams

- 2 Combined Public Health and Medical Teams
  - Public Health and Medical Team in a Shelter
  - Public Health and Medical Health System Assessment Team



# Credentialed Positions

- Identified the positions (job titles) for each team
  - Included 44 titles
- Some positions were included on more than one team
- Included required and recommended criteria
  - Education
  - Training
  - Experience
  - Certification
  - Licensing







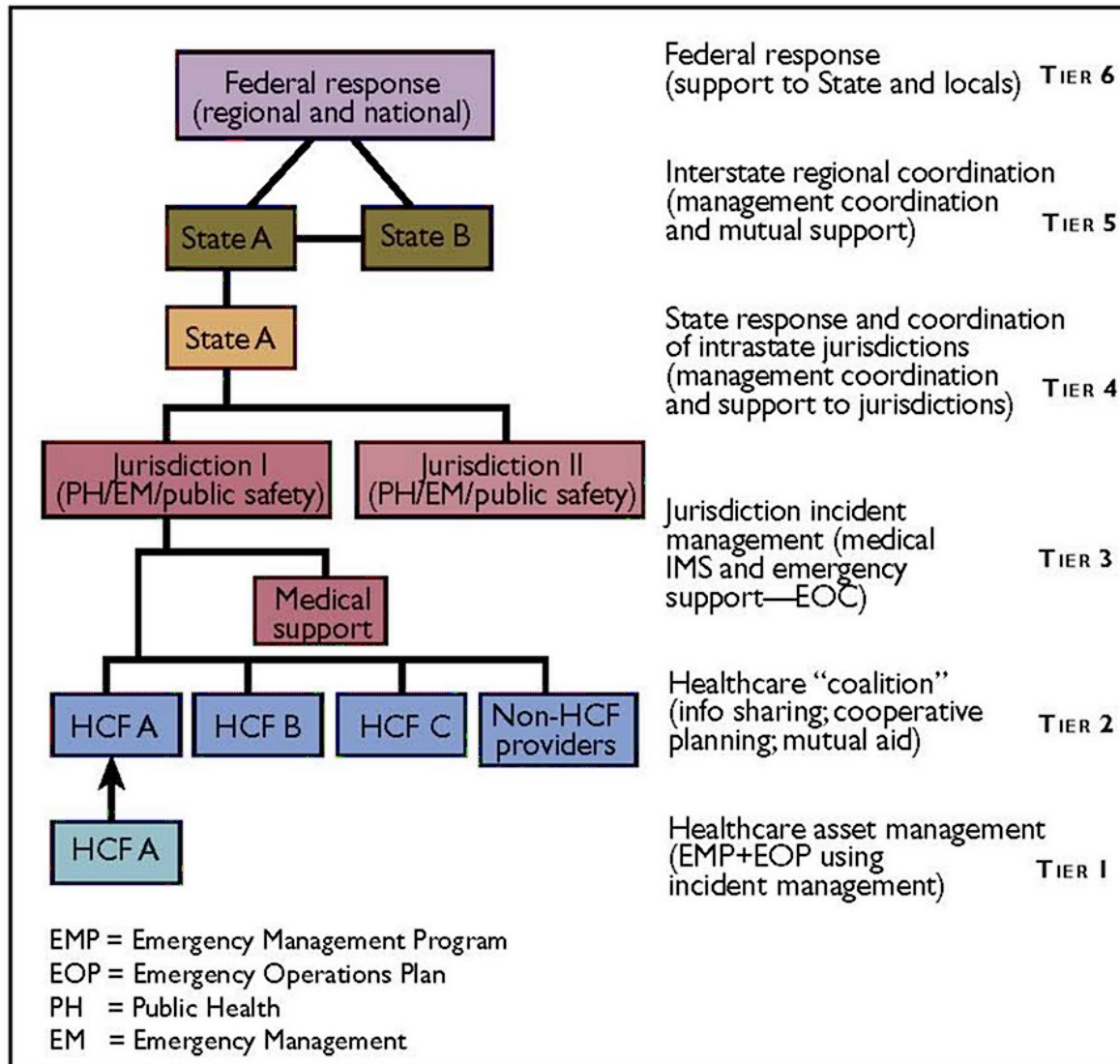
NATIONAL INCIDENT MANAGEMENT SYSTEM

# NIMS IRIS

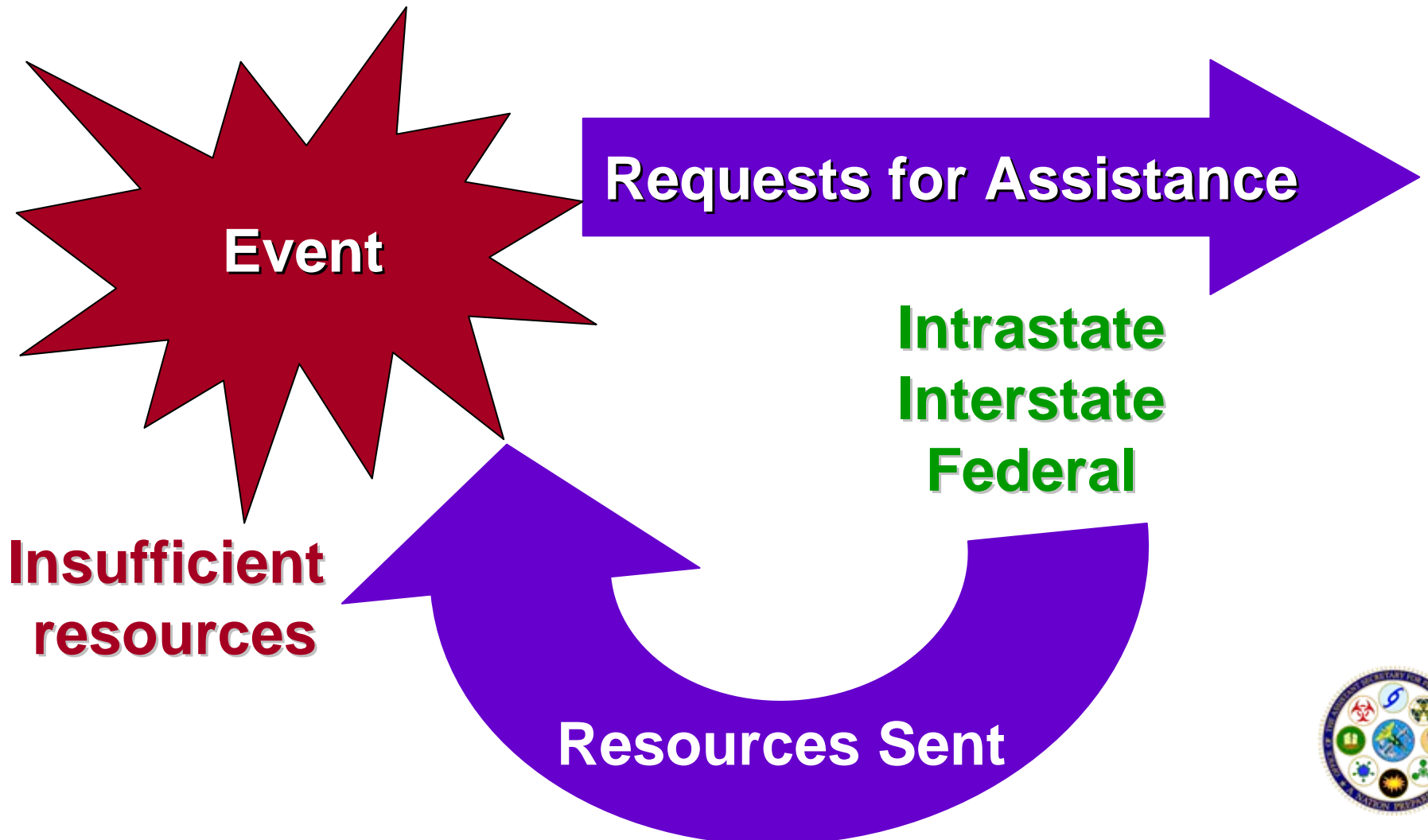
INCIDENT RESOURCE INVENTORY SYSTEM



# Integration Across Tiers of Response



# Mutual Aid



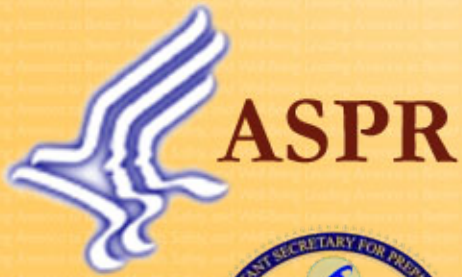
# Next Steps

- Final edits and submit to FEMA
- Post on the FEMA website
- Publish NIMS alert
- States conduct inventory
- Training for states
- Re-visit resource typing of initial NDMS teams and broaden to include all Federal ESF #8 teams (e.g. PHS CC teams)
- Evaluation of teams that are used for response
- Additional state-based teams



# A Nation Prepared





# Resource Typing and Credentialing Medical Teams

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Department of Public Health

# Medical Teams

- Five Different Core Medical Teams
  1. Ancillary Support Services
  2. Emergency Critical Care
  3. Mobile Field Medical
  4. Specialty Services
  5. Supportive Palliative Care
- Within each of the five teams are specific types
  1. Ancillary Support: Laboratory, Pharmacy & Radiology (3 types).
  2. Emergency Critical Care: Emergency-adult, pediatric or adult/pediatric, Critical Care (CC) -adult CC, adult CC Pulmonary/Infectious Disease, adult CC Burn, Pediatric CC, and Neonatal (8 types)



## Medical Teams (2)

3. Mobile Field Medical: Acute/Urgent Care, Primary Care, and Dental Care (3 types)
4. Specialty Services: Medical Surgical (MS) adult & pediatric, Surgical, Trauma Resuscitation, Post Anesthesia care, Dialysis, and Obstetrics – Labor & delivery, Recovery, & Post-partum (9 types)
5. Supportive Palliative Care: comfort care and palliative care for the chronic and terminally ill in the following settings – hospice, home-care, and hospital setting (1 type).

### Combined Public Health & Medical Teams (2)

6. Public Health and Medical Team in a Shelter: a team to support basic public health and medical needs during congregate shelter operations.
7. Public Health and Medical Disaster Assessment Team: conducts initial and ongoing system-level assessment of medical and public health resources and infrastructure in a disaster affected community.



# Caveats for all Medical Teams

- All of the five teams are either Type I or Type II.
  - Type I teams come as self-contained teams with their own supplies and equipment, so they are in essence staff, equipment, and supply capable.
  - Type II teams have their equipment and supplies provided by the requesting jurisdiction, so they are staff augmentation where specialties/personnel are requested to provide medical support.
- Requests for assistance (or “Req A”) must specify the clinical area and an accurate mission assignment to ensure staff is qualified to care for patient mix and should include the anticipated length of deployment.
- Individuals responding with teams are expected to possess the clinical knowledge and skill capability to function in the clinical/specialty area for which they are requested.



# Additional Caveats

- Requesting state should determine # of teams needed based on patient care needs/acuity. As a general guideline, if the case load is expected to exceed 25 patients per team per 12 hour shift or the acuity of patients is exceptionally high, such as OR, dialysis or obstetrical patient populations, additional teams should be requested.
- Recommend additional staff to ensure the ongoing availability of resources required to safely and effectively support the mission assignment (e.g., administrative, logistics, communications, supply, clerical, and/or security staff). A Medical Logistics Support Team, capable of providing coordinating support and general support functions to a medical team on a mission assignment is currently in development.



# Ancillary Support Services Team

Overall Function: Capable of providing defined laboratory, pharmacy or radiology services to support existing hospital or outpatient facility.

Team Composition:

- Laboratory: Team experienced in performing basic chemistry, hematology, coagulation, urine, and microbiology testing. Core Team includes: 1 Medical Unit Team Leader, 3 Clinical Laboratory Technologists or Technicians, and 2 Phlebotomists
- Pharmacy: Team experienced in providing both inpatient Pharmacy services for 50 patients per 12 hour shift, and outpatient Pharmacy services for 400 patients per 12 hour shift. Core Team includes: 1 Medical Unit Team Leader, 1 Pharmacist, and 1 Pharmacy Technician.



# Ancillary Support Services Team (2)

- Radiology: Team experienced in providing basic radiographic services and/or specialized radiographic services (Computerized tomography, magnetic resonance imaging, or nuclear medicine studies) in an existing hospital or outpatient facility. Core Team includes: 1 Medical Unit Team Leader, 1 Physician (Radiologist), and 2 Radiologic Technologists.





# Emergency Critical Care Team

Overall Function: Capable of providing advanced level of care to high acuity patients in an emergency department or ICU setting in an existing hospital facility.

Team Composition: Core Team includes: 1 Medical Unit Team Leader, 1 Physician, 1 Physician Assistant or Advanced Practice Nurse, 13 Registered Nurses, and 2 Patient Care Technicians/Certified Nursing Assistants.

1. Emergency Care-Team experienced and actively involved in the care of ED patients. Three different types of Emergency Care Teams: 1. Adult, 2. Pediatrics, and 3. Combined adult and pediatric. Team members consist of Core Team (i.e. medical unit team leader, emergency physician, emergency nurse practitioner or PA, emergency nurses, ED techs) plus 1 Respiratory Therapist, 1 Radiology Technician, and 1 Pharmacist.



# Emergency Critical Care Team (2)

2. Adult Critical Care-Team experienced and actively involved in the care of adult critical care patients. Team members consist of Core Team (i.e. medical unit team leader, intensivist and/or surgeon, critical care nurse practitioner or PA, critical care nurses, critical care techs) plus 1 Respiratory Therapist, 1 Radiology Technician, and 1 Pharmacist.
3. Adult Critical Care Pulmonary/Infectious Disease-Team experienced and actively involved in the care of pulmonary infectious disease (ID) patients. Team members consist of Core Team (i.e. medical unit team leader, intensivist and/or pulmonologist or ID specialist, critical care nurse practitioner or PA, critical care nurses, critical care techs) plus 3 Respiratory Therapists, 1 Radiology Technician, and 1 Pharmacist.
4. Critical Care Burn-- Team experienced and actively involved in the care of burn patients. Team members consist of Core Team (i.e. medical unit team leader, intensivist and/or surgeon, critical care nurse practitioner or PA, critical care nurses, critical care techs) plus 1 Respiratory Therapist, 1 Radiology Technician, and 1 Pharmacist.



# Emergency Critical Care Team (3)

5. Pediatric Critical Care-Team experienced and actively involved in the care of pediatric critical care patients. Team members consist of Core Team (medical unit team leader, pediatric intensivist, pediatric nurse practitioner or PA, pediatric critical care nurses and techs) plus 1 Respiratory Therapist, 1 Radiology Technician, and 1 Pharmacist.
6. Neonatal- Team experienced and actively involved in the care of neonatal patients. Team members consist of Core Team (medical unit team leader, neonatologist, neonatal nurse practitioner or PA, neonatal nurses and techs) plus 1 Respiratory Therapist, 1 Radiology Technician, and 1 Pharmacist.



# Mobile Medical Field Team

Overall Function: Capable of providing a range of clinical services in an out-of-hospital setting.

Team Composition: Core Team includes: 1 Medical Unit Team Leader, 1 Physician, 1 Physician Assistant or Advanced Practice Nurse, 6 Registered Nurses, 1 Respiratory Therapist, 2 EMTs and 2 Paramedics (preferred), or 4 Patient Care Technicians/Certified Nursing Assistants.

1. Acute/Urgent Care- Team experienced in the care of emergency/urgent care patients. Team consists of Core Team (medical unit team leader, emergency physician, emergency nurse practitioner or PA, emergency nurses, emergency care technicians), plus 2 Behavioral Health Specialists
2. Primary Care - Team experienced in the management of patients with chronic conditions and multi-functional needs.



# Mobile Medical Field Team (2)

Team consists of Core Team (medical unit team leader, family practice, general internal medicine, and/or pediatric practitioners) plus 2 Behavioral Health Specialists, and 2 Social Workers.

3. Dental Care –Team experienced in the provision of emergency dental care. Core Team consists of 1 Medical Unit Team Leader, 2 Dentists, and 4 Dental Assistants.

As a general guideline, if the case load is expected to exceed 100 patients per team per 12 hour shift or the acuity or volume of patients is exceptionally high, such as patients needing urgent care or dental services, additional teams should be requested.



# Specialty Services Team

Overall Function: Capable of providing inpatient general and specialty services in an existing hospital facility.

Team Composition:

- 1. Medical/Surgical-Team experienced in the care of general medical and post-operative surgical patients. Request should specify: adult, or pediatric. Core Medical/Surgical Team, includes: 1 Medical Unit Team Leader, 1 -2 Physicians, 1 Physician Assistant or Advanced Practice Registered Nurse, 6 Registered Nurses, 2 Patient Care Technicians. For pediatric Med/Surg team the core team members MUST be experienced in the care of pediatric patients.
- 2. Surgical- Operating Room (OR) -Team experienced in operating room procedures and the care of surgical patients. Request should specify: Specialty OR Services requested- may include but not limited to trauma resuscitation, or neurosurgical, orthopedic, ENT, cardiothoracic,



## Specialty Services Team (2)

vascular, and pediatrics), and Post-Anesthesia Care- Team experienced in post-operative recovery procedures and the care of surgical patients. Core Surgical Team, includes: 1 Medical Unit Team Leader, 2 surgeons, 1 anesthesiologist, 1 Certified Registered Nurse Anesthetist, 6 surgical and/or peri-anesthesia nurses, 2 surgical technicians).

3. Dialysis- Team experienced in the care of patients requiring acute and chronic dialysis. Core team includes: 1 Medical Unit Team Leader, 1 Physician, 6 Registered Nurses, 6 Dialysis Technicians.



# Supportive Palliative Care Team

Overall Function: Capable of providing comfort care and palliative medicine for the chronic and terminally ill in a hospice, home care and hospital setting.

- Team Composition: Core Team, which includes: 1 Medical Unit Team Leader, 1 Physician, 6 Registered Nurses, 1 Pharmacist, 1 Nutritionist/Dietician, 1 Social Worker, 1 Behavioral Health Specialist, 4 Patient Care Technicians/Certified Nursing Assistants.



# Public Health and Medical Team in a Shelter

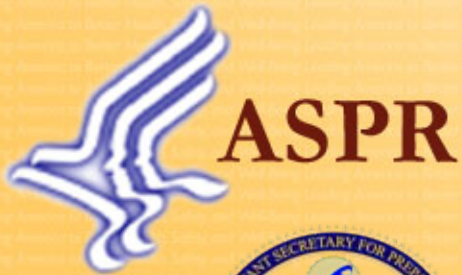
- Overall Function: Capable of providing basic medical services and public health protection in a congregate facility for a displaced population.
- Team Composition: 1 Shelter Team Leader, 1 Physician, 4 Registered Nurses (2 with acute medical care experience, and 2 with public health experience), 2 Behavioral Health Professionals, 1 Environmental Health Specialist, and 1 Epidemiology Data Specialist
- Expected performance capacity for 12-hour operational period: 500 persons per shift.



# Medical/Public Health System Assessment Team

- Overall Function: Capable of providing immediate and ongoing assessment of public health and medical system of a disaster affected community.
- Team Composition: 1 Assessment Team Leader, 1 Medical System Expert, and 1 Public Health Disaster Assessor.
- An individual to handle documentation and data entry may be included as part of team composition if requested by authority having jurisdiction.





# Public Health Teams

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**Elizabeth Standish Gill Professor of Nursing  
Director, Center for Health Policy Columbia  
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# Overall goal of public health teams

- Teams that represent priority areas of public health concern in an emergency event for which a state or local jurisdiction might need assistance



# Disaster assessment team

- Description
  - Provides immediate and ongoing assessment of public health and medical system in a disaster-affected community
- Capacity
  - ‘wise heads’ or ‘old hands’ who can quickly assess the situation and recommend key activities



# Disaster assessment team (2)

- Composition (per 12 hour shift)
  - Assessment team leader
  - Medical system assessor
  - Public health disaster assessor
- Other notes
  - This is the most experienced and most flexible of the teams



- Description
  - Identifies, monitors & investigates conditions of public health importance
- Capacity
  - Type I manages
    - ❖ Surveillance and detection
    - ❖ Epidemiologic investigation
    - ❖ Monitor containment
  - Type II conducts above under local management



# Epidemiology Surveillance and Investigation Team (2)

- Composition (for 24 hour coverage)
  - Epidemiology team leader (Type I only)
    - ❖ Tier 2 epidemiologist with supervisory and emergency experience
  - Epidemiology Information Tech Specialist
  - 3 epidemiology investigators (Can scale up)
    - ❖ Could be PHN, PA, Environmental health
  - 1 epidemiology data entry (can scale up)
- Other notes



# Epidemiology Isolation and Quarantine Team

- Description
  - Supports local disease control activities in a communicable disease outbreak
- Capacity
  - Type I manages I&Q tactical operations
    - ❖ Develop procedures
    - ❖ Activate I & Q
    - ❖ Implement travel restrictions
    - ❖ Implement voluntary or mandatory I & Q
  - Type II performs these functions under local manager



# Epidemiology Isolation and Quarantine Team (2)

- Composition (per 12 hour shift), Type I
  - Epidemiology Team Leader
  - 4 Registered Nurses (Public Health Nurses)
  - 3 Clinicians (Physician, PA, NP or RN)
  - 1 Behavioral Health Professional (licensed or unlicensed)
  - 1 Epidemiology Data entry staff
- Other notes
  - Type II team is technically trained to augment leadership assigned by authority having jurisdiction
  - Epidemiologist, 4 PHN's, 1 Behavioral health spec, 1 epi information tech



# Environmental Health Team

- Description
  - Identifies and reduced environmental threats to human health from water, food, waste and air (indoor and out)
- Capacity
  - Type I manages EH Tactical Operations
    - ❖ Develop EH procedures/systems
    - ❖ Activates EH
    - ❖ Assess and monitor environment
    - ❖ Provides vector control
  - Type II technically trained to perform EH work under leadership provided by the Authority Having Jurisdiction



# Environmental Health Team (2)

- Composition (for 12 hour shift), Type I
  - Environmental Health Team Leader
  - 5 environmental health generalists
  - 2 public health information tech staff
- Other notes
  - Type II includes only generalists and info tech staff
  - An Environmental Health Specialist in the relevant area may be requested as an additional member of either team
  - For some risk reduction activities, public health nurses may also be requested



# Mass Dispensing Site Support Team

- Description
  - Direction and support to set up large dispensing sites
- Capacity
  - Type I: Set up 1-2 mass dispensing sites within a defined area and train locally-provided staff on ongoing command/control/ operations
  - Type II: staff site



# Mass Dispensing Site Support Team (2)

- Composition (per 12 hour shift) Type I
  - Mass dispensing team leader
  - Pharmacist
  - Operations team consultant
  - Patient intake/ line flow consultant
  - Public information consultant
  - Mass dispensing consultant
  - Exit team consultant
- Other notes
  - Type II
    - ❖ Mass dispensing team consultant, pharmacist, 9 dispenser/ vaccinators



# Receiving, Staging and Sorting Team

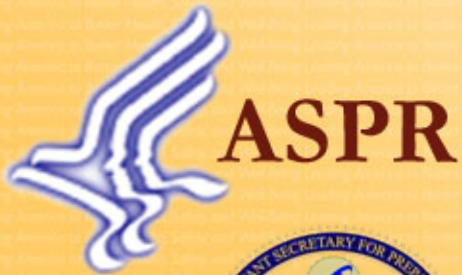
- Description
  - Expert in the process of accepting, storing and locally organizing large amounts of medication needed via the SNS and Vendor-Managed Inventories
- Capacity
  - After delivery of medical assets to warehouse, can repack and distribute, activate plan to recover unused resources, reconstitute to return to stockpile
  - Provide on-the-job education to local jurisdiction for sustained operations



## RSS Team (2)

- Composition (per 12 hour shift)
  - Task Force Leader
  - Operations team leader
  - Logistics team leader
  - Finance/administrative team leader
  - Tactical communications leader
- Other notes
  - Safety officer and warehouse staff must be supplied by AHJ





# Using the Public Health and Medical Resource Types

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# Next Steps for Each State

- Use the resource types developed to promote the sharing of assets, both at the Intrastate and Interstate level.
- Develop an Inventory of these teams at the state level. Prior to this project very few public health and medical teams were already in existence. Because of this we identified “virtual teams” of individuals that could be created for use in a response. Put these individuals together to develop the defined teams.
- Create common communication systems and standard operating procedures for both requesting and sending teams.





# Doing Public Health & Medical Resource Inventories

- Use the State-based Electronic System for the Advanced Registration of Volunteer Healthcare Personnel (ESAR-VHP) volunteer registries as a starting point. Many of the medical job titles that were credentialed during this project are requirements of these current systems.
- Although public health job titles are not currently identified within the system requirements sent from the ESAR-VHP National Program this does not preclude the states including them in their state-based systems.
- In many states the qualified individual public health volunteers or already established teams may be part of other existing volunteer registries, such as the local health emergency response teams, medical reserve corps (MRC) units to name a few.



# Doing Public Health & Medical Resource Inventories (2)

- For each job title required and recommended criteria was identified.
- The required criteria included: Education, Training, Experience, Certification and License. The system requirements for the State-based ESAR-VHP Systems does not currently require training and experience to be documented for each volunteer. This will be additional information the systems will either need to capture, or be able to readily have available, such as from a learning management system.
- Recommended criteria are those elements that would be very beneficial for the volunteer to possess, such as specialized training, certification or additional experience, that would better prepare them for the mission.



# Doing Public Health & Medical Resource Inventories (3)

- First, inventory “teams of individuals” that currently exist, or can be easily packaged by an agency or institution.
- If teams do not currently exist, and you actually are identifying “virtual teams” encourage the actual formation of these teams, whether it be for training and exercise purposes, or for intrastate mutual aid response purposes. This will make the teams better prepared for mission assignments that may arise.
- The finalizing of this initial phase of Public Health and Medical Resource Typing is a good time to evaluate the volunteers currently pre-identified and credentialed in your state-based system. If the state does not have all the designated job titles needed to staff these teams in their registry this is a great opportunity to start up a focused volunteer recruitment effort. This will not only enhance the system for state to state mutual aid, but will also make you better prepared for any intrastate responses that may be needed.



# Requesting Public Health and Medical Assets

- All the Public Health and Medical Teams must be capable of being ordered through a standard system as authorized by interstate mutual aid agreements or compacts, i.e. EMAC (Emergency Management Assistance Compact).
- Is highly recommended that Agencies within states should develop intrastate mutual aid agreements within their state before the event occurs. This will allow resources to be shared quickly and efficiently. Currently, of the 53 EMAC member states 36 have intrastate mutual aid agreements, and 5 have proposed intrastate legislation.



# Requesting Public Health and Medical Assets (2)

Understand how EMAC works in your state

Prior to Event:

- Develop a strong working relationship with your state Emergency Management Agency.
- Be familiar with the EMAC form REQ-A, & what must be provided. Know state's laws & authorities
- Develop a working relationship with your state's EMAC Authorized Representative (AR).
- Educate volunteers (ESAR-VHP/MRC/other)
- Develop, and exercise standard operating procedures (SOPs) for the activation & deployment of these personnel assets.



# Requesting Public Health and Medical Assets (3)

- If possible, pre-arrange personnel deployment logistics with your Emergency Management Agency (EMA) (travel, transportation, lodging)
- Transportation for other assets, such as critical public health and medical equipment/materiel should also be pre-arranged with your EMA and other partners.

## During the Event:

- Utilize mobilization and post-deployment checklists (state contact & volunteer) that have been developed
- All resources shared through EMAC should be requested and obtained through the REQ-A process. Be familiar with this form, and how to fill it out.



# Requesting Public Health and Medical Assets (4)

- Be very specific in your requests. The REQ-A requires exact numbers and types of personnel or teams, and reasonable cost estimates, and these cost estimates must be itemized (personnel, travel, etc).
- When requesting a specific type of team the Req A should specify the specialty services needed, and the Mission assignment must reflect clinical area where support is needed, for example: Emergency/Critical Care Team, clinical area Pediatric Emergency Care.
- Strong interstate collaboration is the key. In order to perform effective public health and medical missions all states should collaborate closely with one another both prior to and during an incident.



- **Questions?**

