2011 Year in Review

RITN®

RADIATION INJURY TREATMENT NETWORK

Program Manager, RITN

January 3, 2012

Purpose & Objectives

- Purpose:
  - –Provide an annual review of RITN activities and set the stage for the upcoming year.
- Objectives:
  - –Participants will be able to describe key accomplishments of RITN during 2011.
  - –Participants will be able to explain new RITN developments during 2011.
  - –Participants will be describe the 2012 RITN tasks.
  - –Participants will be able to explain 2012 projects.

Agenda

- RITN 101 (for new members)
- 2011 Activity
- 2012 Plan
- 2012 Tasks
- 2011 Capacity Survey Overview
- Questions

Why do we do what we do?

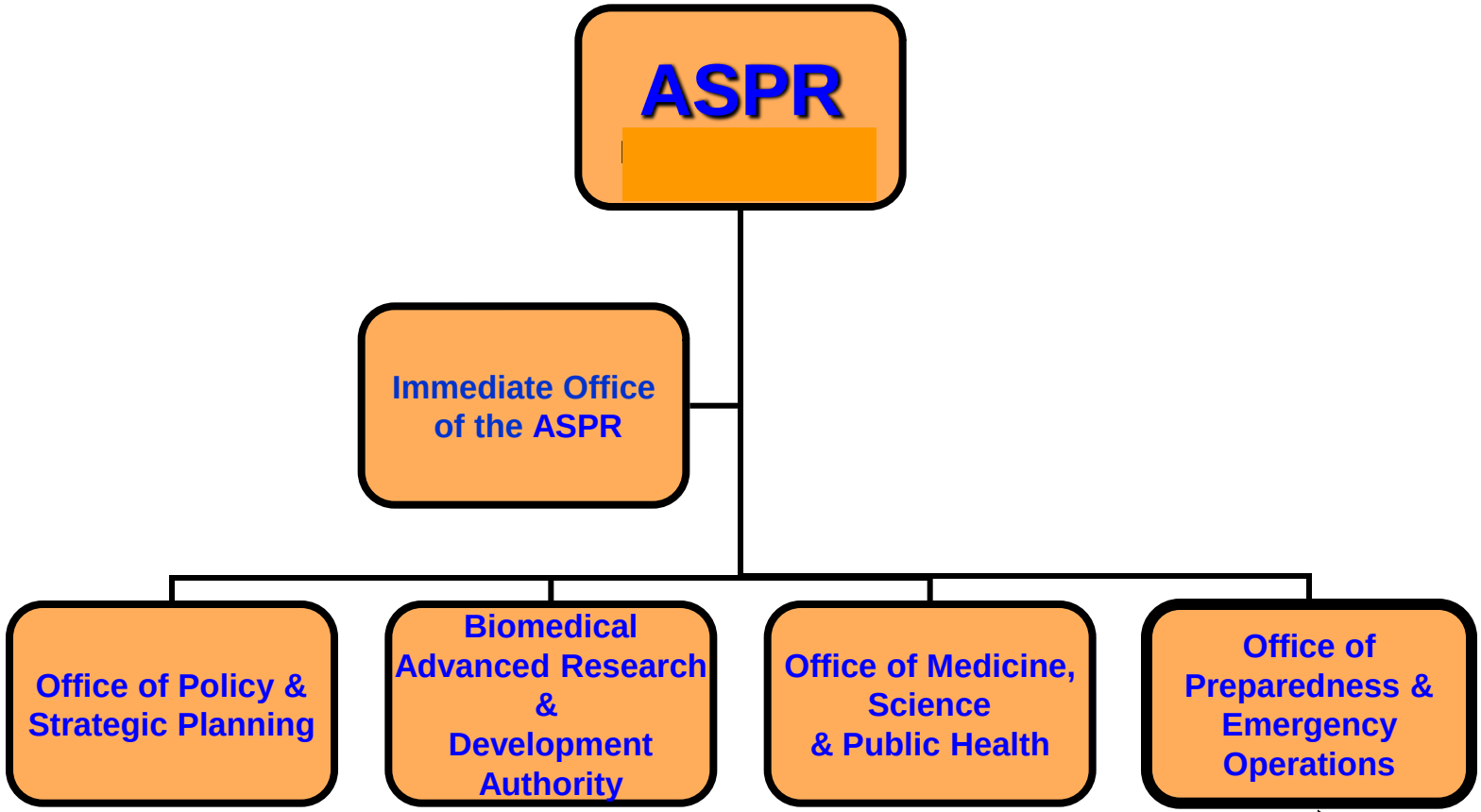
Prevailing opinion of experts is not if, but when

"Two decades after the end of the Cold War, we face a cruel irony of history. The risk of a nuclear confrontation between nations has gone down, but the risk of nuclear attack has gone up." *-President Obama 4/13/2010*

RITN 101:
How would it work, really?

Wikipedia, June 2011

Office of Assistant Secretary for Preparedness and Response

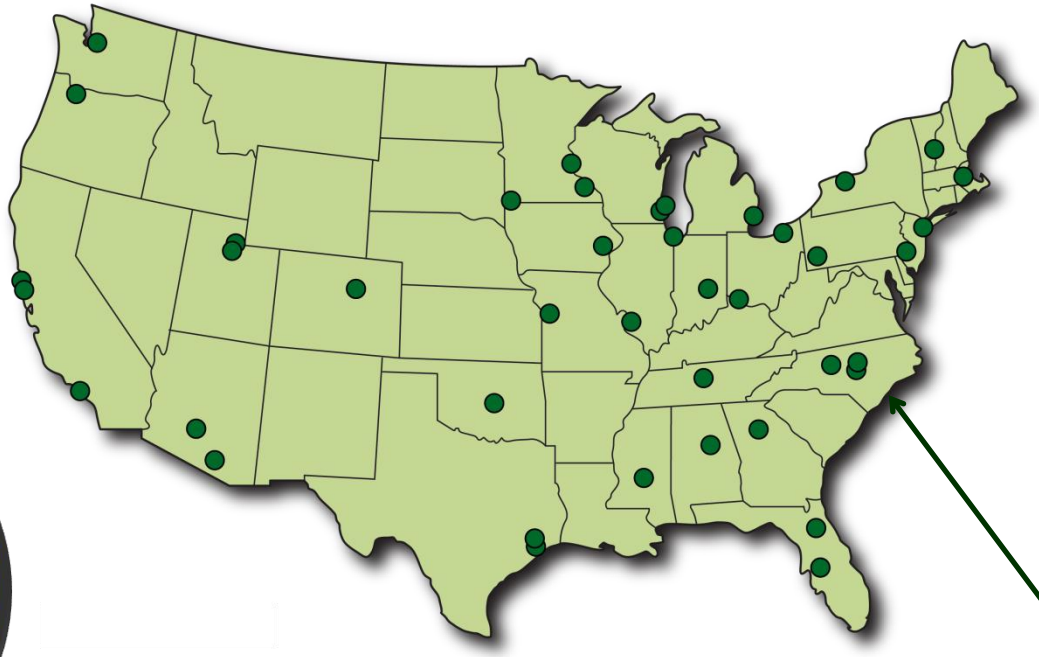


http://www.hhs.gov/aspr/

Reality will not be as orderly as any plan…


Casualty collection point
Casualty collection point
Casualty collection point
Casualty collection point
Casualty collection point
Casualty collection point
Casualty collection point
SCHOOL
RADIATION INJURY TREATMENT NETWORK

Victims still have a long way to go after arrive at a casualty collection point…



Nuclear incident

Casualty collection points

-Triage

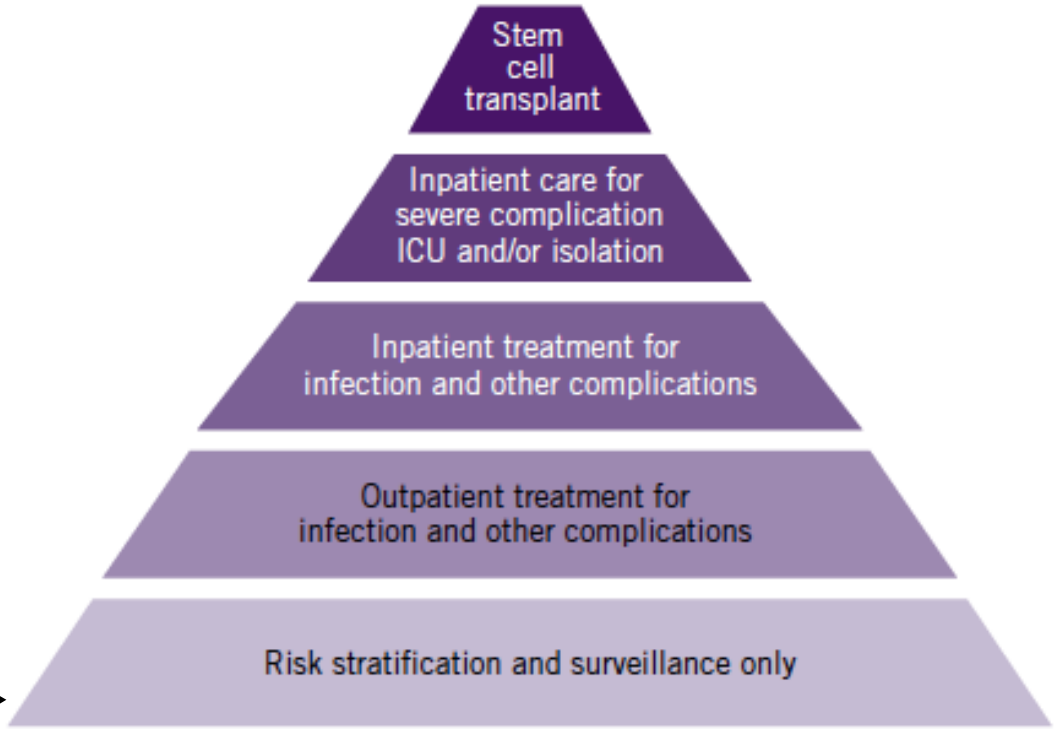
-Gross Decontamination

Evaluation

- RITN transplant centers
- Trauma centers
- Specialty care

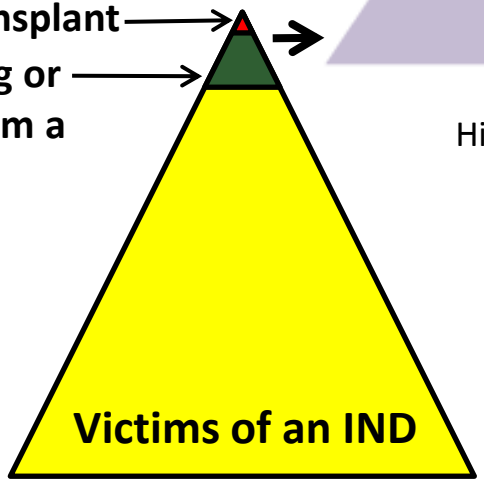
~ >95% of contamination removed

Victim Profile



Few will require marrow transplant

Many will require monitoring or intensive supportive care from a Hematologist/Oncologist



Hick JL, Weinstock DM et al. *Disaster Med Health Prep* 2011

2011 Activity

Organization

- Two centers left RITN during 2011:
  - Banner, AZ
  - Iowa Donor Center (actually in 2012)
- Eight centers joined RITN during 2011:
  - Shand's, FL (rejoined)
  - Temple University, PA
  - Medical University of SC
  - Roger Williams Medical Center, RI
  - The Children's Mercy Hospital, MO
  - University of Miami, FL
  - Cleveland Clinic, OH
  - Children's of Philadelphia, PA

Radiation Injury Treatment Network

Transplant Centers			
AL - University of Alabama at Birmingham	P/A	NDMS	HPP
AZ - University Medical Center	P/A	NDMS	HPP
CA - UCSF Medical Center	P/A		
CA - City of Hope National Medical Center	P/A	NDMS	HPP
CA - Stanford Hospital and Clinics	P/A	NDMS	HPP
CO - Presbyterian/St. Lukes Medical Center		NDMS	HPP
FL - H. Lee Moffitt Cancer Center	P/A	NDMS	
FL - Shands Hospital at the University of Florida	P/A		HPP
FL - University of Miami		NDMS	HPP
GA - Northside Hospital		NDMS	HPP
IA - University of Iowa Hospitals and Clinics	P/A	NDMS	HPP
IL - Rush University Medical Center			
IN - St. Francis Hospital and Health Centers		NDMS	HPP
KS - University of Kansas Medical Center		NDMS	HPP
MA - Dana Farber/Partners Cancer Care	P/A		HPP
MI - Barbara AnnKarmanos Cancer Center			
MN - Mayo Clinic Rochester	P/A	NDMS	HPP
MN - University of Minnesota BMT Program	P/A	NDMS	
MO - Barnes-Jewish Hospital at Washington			HPP
MO - The Children's Mercy Hospital	Ped	NDMS	
MS - University of Mississippi Medical Center	P/A	NDMS	HPP
NC - UNC Hospitals	P/A	NDMS	HPP
NC - Wake Forest Univ Baptist Medical Center			HPP
NC - Duke University Medical Center	P/A	NDMS	HPP
NH - Dartmouth-Hitchcock Medical Center			
NY - Strong Memorial Hospital	P/A	NDMS	
NY - Memorial Sloan-Kettering Cancer Center	P/A		HPP
OH - Cincinnati Children's Hospital Medical Center	Ped		
OH - Cleveland Clinic Foundation		NDMS	HPP
OH - University Hospitals of Case Medical Center		NDMS	HPP
OK - Oklahoma Univ. Medical Center & Childrens Hospital	P/A	NDMS	
OR - Oregon Health & Science University	P/A	NDMS	HPP
PA - Children's Hospital of Philadelphia	Ped	NDMS	HPP

Transplant Centers			
PA - Temple University		NDMS	HPP
PA - University of Pennsylvania Medical Center		NDMS	HPP
PA - Western Pennsylvania Cancer Institute		NDMS	
RI - Roger Williams Medical Center		NDMS	HPP
SC - Medical University of South Carolina		NDMS	HPP
SD - Avera McKennan Transplant Institute			HPP
TN - Vanderbilt University Medical Center		NDMS	HPP
TX - M.D. Anderson Cancer Center	P/A		HPP
TX - Texas Children's Hospital	Ped	NDMS	HPP
UT - LDS Hospital		NDMS	
UT - University of Utah	P/A	NDMS	HPP
WA - Seattle Cancer Care Alliance	P/A		
WI - Children's Hosp of WI & Midwest Children's CC	Ped	NDMS	HPP
WI - Froedtert Memorial Lutheran Hospital		NDMS	

Donor Centers
CA - City of Hope National Medical Center
CO - Colorado Marrow Donor Program
MD - C.W. Bill Young Marrow Donor Center
MI - NMDP operated donor center
WA - Puget Sound Blood Center
TN - Blood Assurance

Cord Blood Banks
CA - StemCyte International Cord Blood Center
IL - ITxM Cord Blood Services
MO – St. Louis Cord Blood Bank
NC - Carolinas Cord Blood Bank
WA - Puget Sound Blood Center
CO- University of Colorado
TX - MD Anderson

Ped = Pediatric patient only facility
P/A = Pediatric and adult capable facility
NDMS = National Disaster Medical System Center
If no capability is annotaed the facility is adult only

As of 03 JAN 2012

- Composition:
  - 60 total
    - 47 TCs
    - 6 DC
    - 7 CBB
- Changes this year:
  - One center – terminated
  - One center – resigned
  - Eight joined

TC	47
DC	6
CBB	7
Total	60
Total NDMS Centers	34
% TCs that are NDMS	72%
Total HPP Centers	33
% TCs that are HPP	70%

RITN
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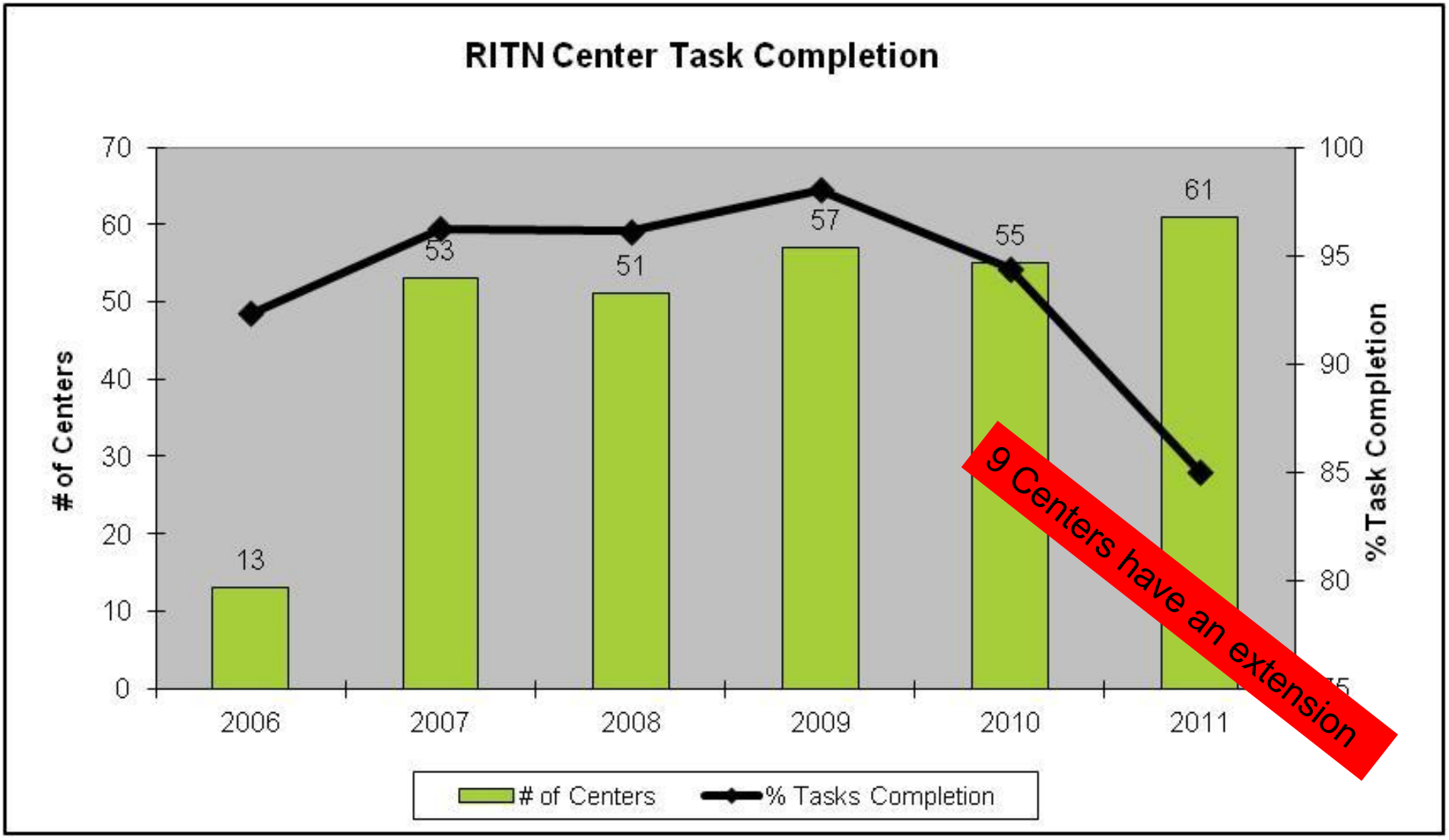
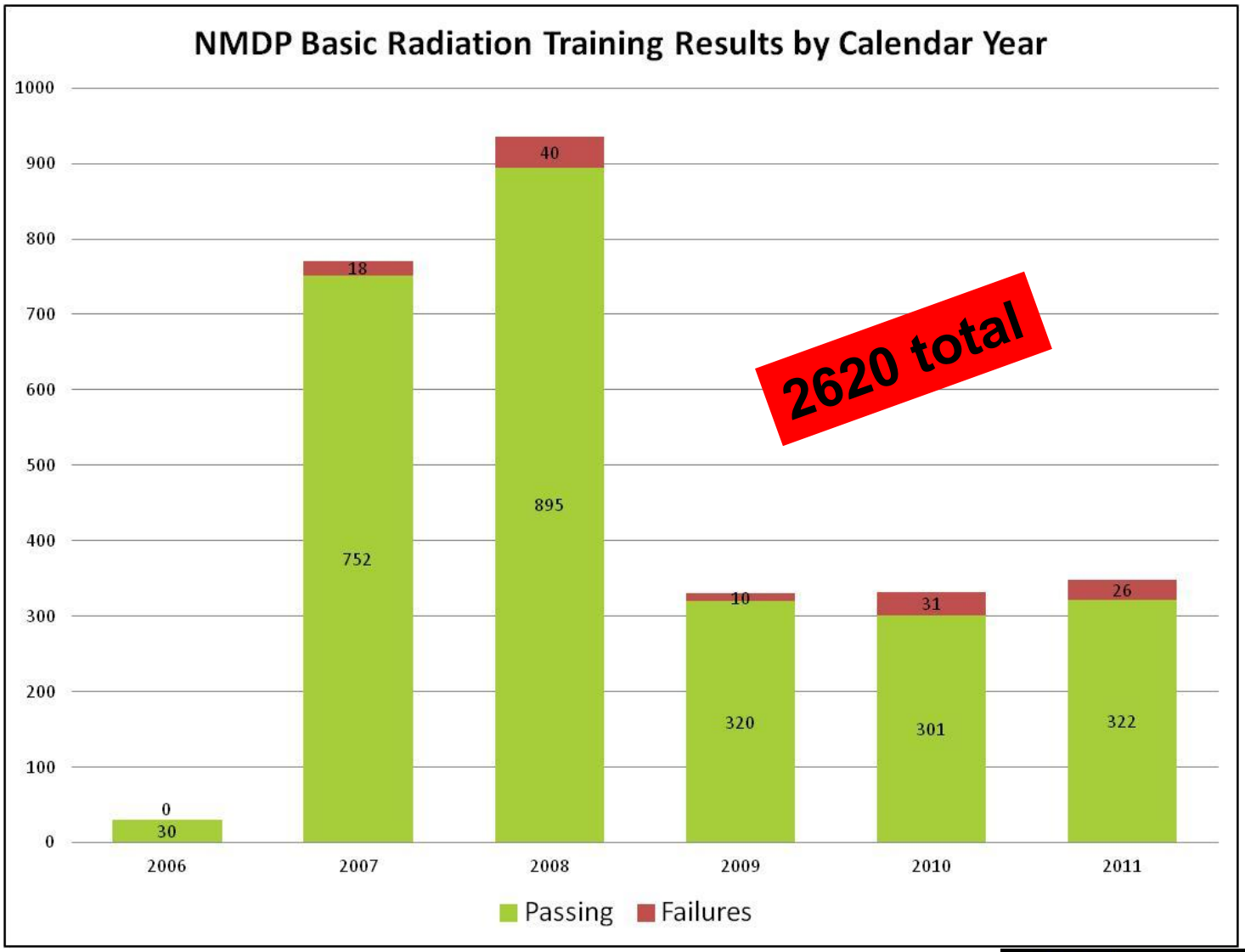
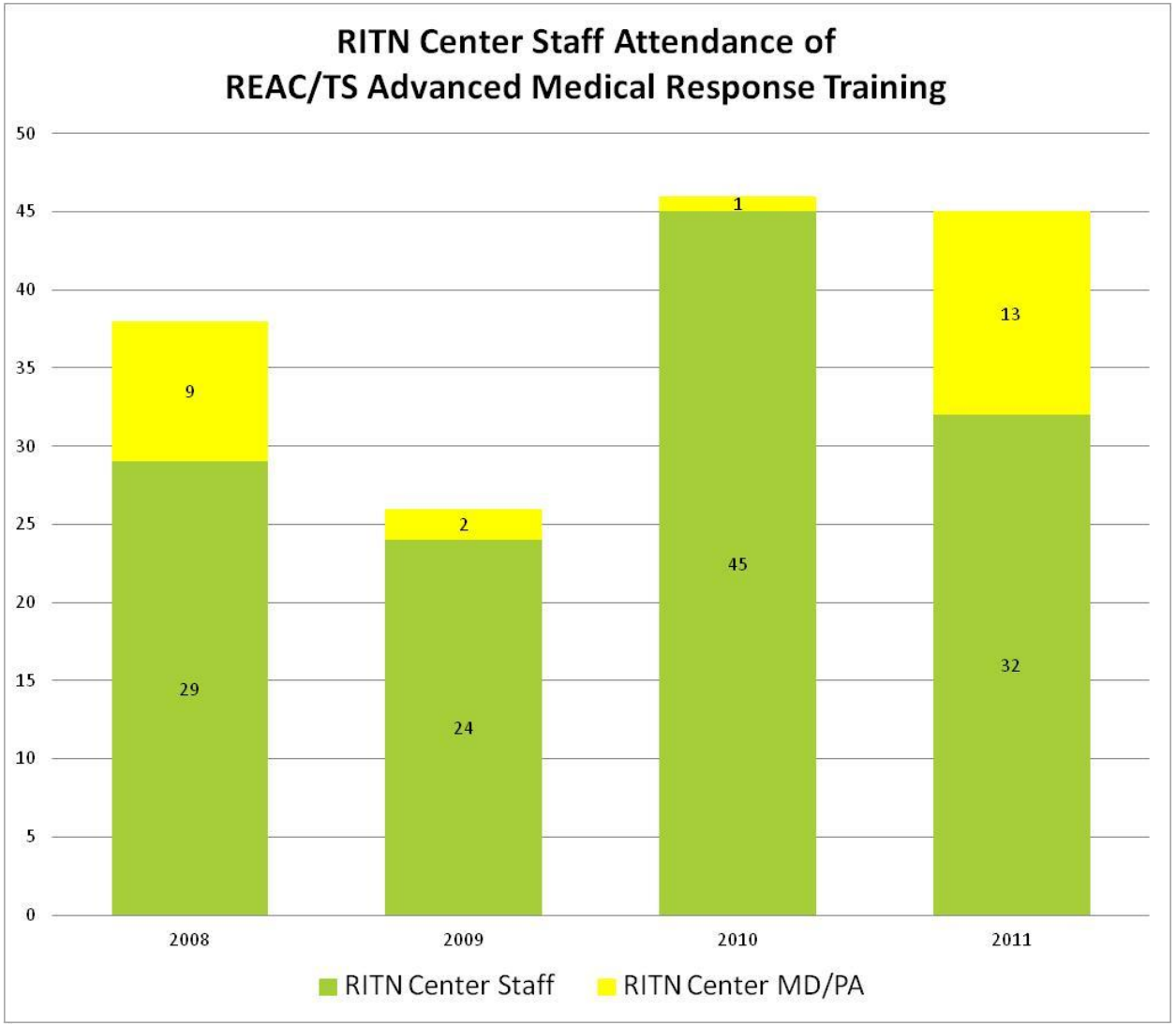

RITN Center Task Completion
# of Centers
% Task Completion
70
60
50
40
30
20
10
0
100
95
90
85
80
13
53
51
57
55
61
2006
2007
2008
2009
2010
2011
9 Centers have an extension
# of Centers
% Tasks Completion

Training of RITN Center Staff



And More Training



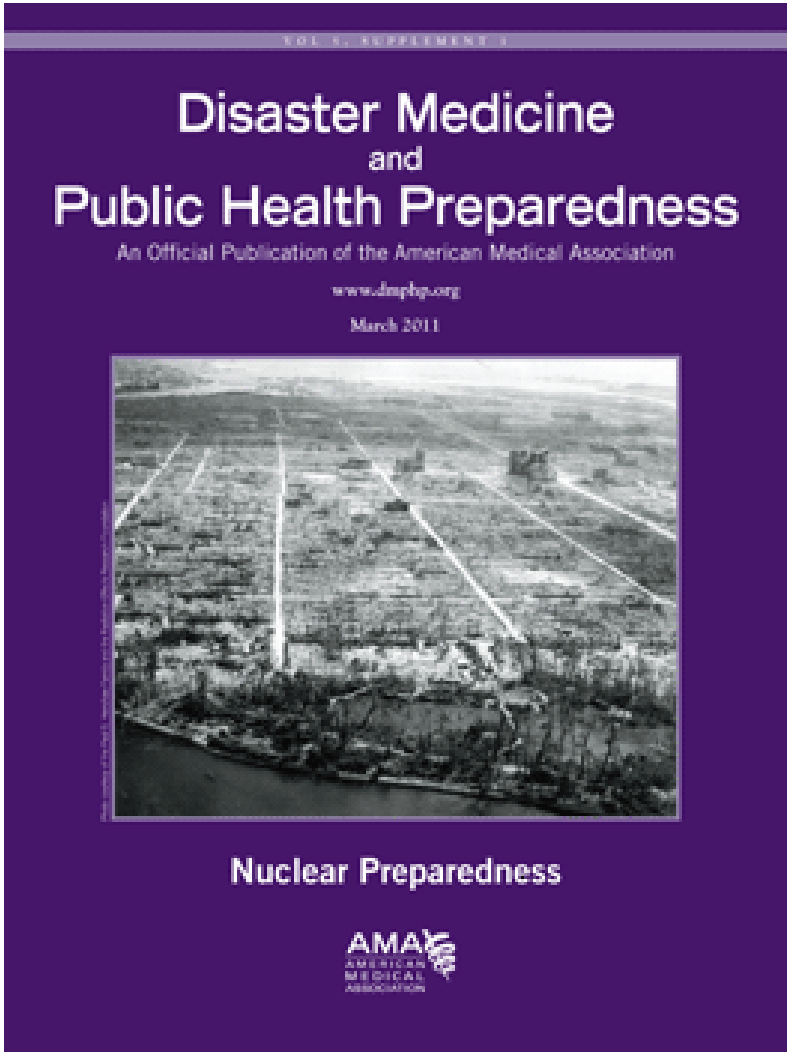
2011 Activity

- Monitoring of Fukushima-Daiichi Nuclear Power Plant
- Educational Conference in Chicago
  - 2011 – State of the Science Workshop: Radiation Exposure, Medical Countermeasures and Treatment (125 attendees)
  - 2009 – Medical and Organizational Challenges Resulting from a Radiological/Nuclear Emergency (130 attendees)
  - 2007 - Nuclear Terrorism: Preparedness and Response for Hematology/Oncology Centers (100 attendees)
- New formal Partner:
  - EBMT-Nuclear Accident Committee

2011 Activity

- Site Assessments (11 completed)
- Implementation of HealthCare Standard software
- 2011 capacity survey
- RITN Emergency Manager contact tracking (optional)
- RITN General Number tracking (mandatory)
- Update of SOP Template
- New RITN fax number: see the new SOP template
- Update of Basic Radiation Training
- RITN Medical Advisor co-authored 8 articles in Disaster Medicine and Public Health Preparedness manuscript on Nuclear Preparedness

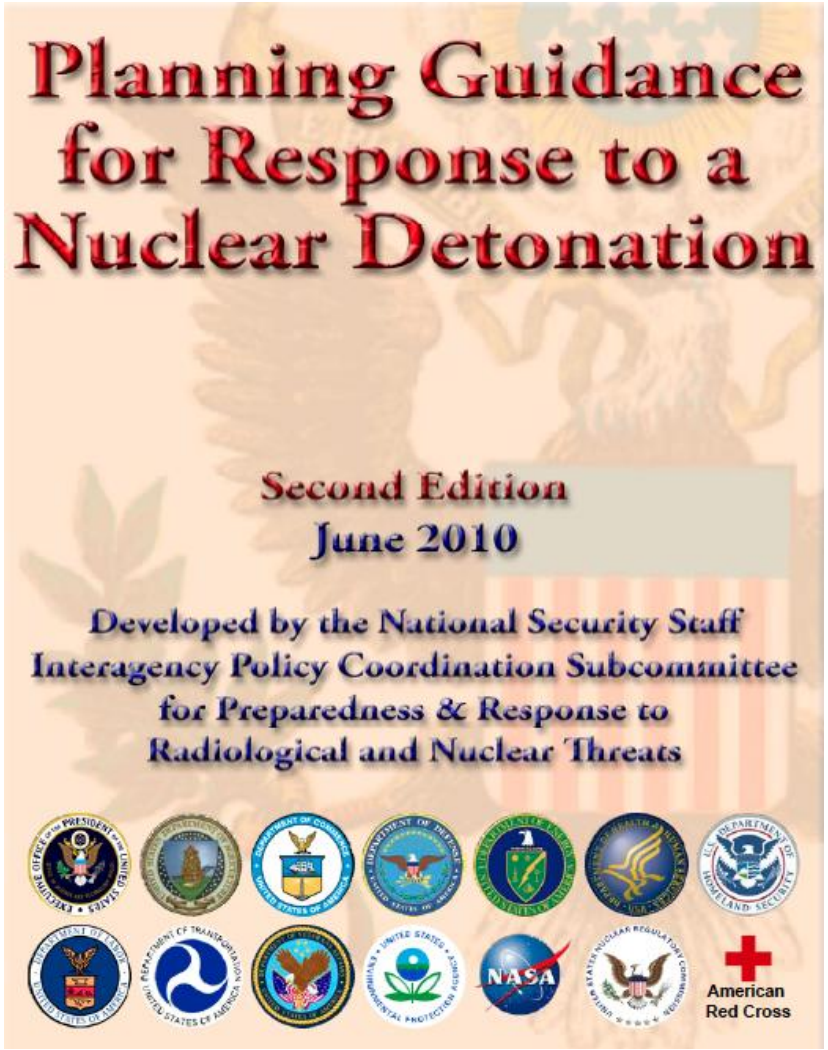
Fantastic resource RITN collaborated on at a price you can't beat



- Nuclear Preparedness - DMPHP Manuscript
(http://www.dmphp.org/content/vol5/Supplement_1/)

- RITN Medical Advisor co-authored 8 of 14 articles

More fantastic and free resources with RITN referenced…



- Planning Guidance for Response to a Nuclear Detonation
  (http://www.remm.nlm.gov/PlanningGuidanceNuclearDetonation.pdf)

- Radiological Dispersal Device Playbook
  (http://www.phe.gov/Preparedness/planning/playbooks/rdd/Pages/default.aspx)

- State and Local Planners Playbook For Medical Response to a Nuclear Detonation
  (http://www.phe.gov/Preparedness/planning/playbooks/stateandlocal/nuclear/Pages/default.aspx)

2012 Plan & Tasks

2012 Projects

- New:
  - Addition of five (5) transplant centers
  - Referral center patient review guidelines
  - Publish lessons learned from site assessments
  - 2012 member survey
  - Radiation awareness training for non-medical staff (housekeeping, security, etc..)
  - 2013 functional exercise planning
- Ongoing:
  - RITN Concept of Operations
  - Special Needs Treatment Guidelines development
  - Update of medical grand rounds presentation

2012 Tasks (Jan – Sep 2012)

TASK SUMMARY TABLE:

	Task 1	Task 2	Task 3	Task 4	Task 5	Payment
	Communications	SOP	Refresher Training	Educate	Exercise	
TC	Yes	Yes - Revamp	Yes	Yes	Yes	$8,000
DC	Yes	Yes - Update	Yes	No	No	$2,000
CBB	Yes	Yes - Update	Yes	No	No	$2,000

2011 Capacity Survey

2011 Capacity Survey

#	Question
1	How many patients could you receive in your existing BMT unit with no changes (e.g., no early discharges/transfers, no delayed admissions, no addition of beds, etc…)?
2	How many patients could you receive now in your existing BMT unit with modest changes (e.g., early discharges/transfers, a few delayed admissions, addition of beds from Hem/Onc service, etc…)?
3	How many patients could you receive now in your existing BMT unit with aggressive changes (e.g., aggressive discharges/transfers, many delayed admissions)?
4	How many patients could you receive now with spill-over into other areas of your hospital (Hem/Onc, med/surg, ICU), assuming no alterations in standards of care?
5	How many patients could you receive now in your existing BMT unit with aggressive changes and spill-over into other areas of your hospital (Hem/Onc, med/surg, ICU), assuming some alterations in standards of care?
6	How many patients could you receive now with the above and utilizing additional hospitals in your community?
7	How many patients could you receive now with the above and incorporating large austere emergency treatment facilities that have been previously planned for (e.g. pre-defined: dormitories, gymnasiums, domed stadiums, and assuming major alterations in standards of care)?

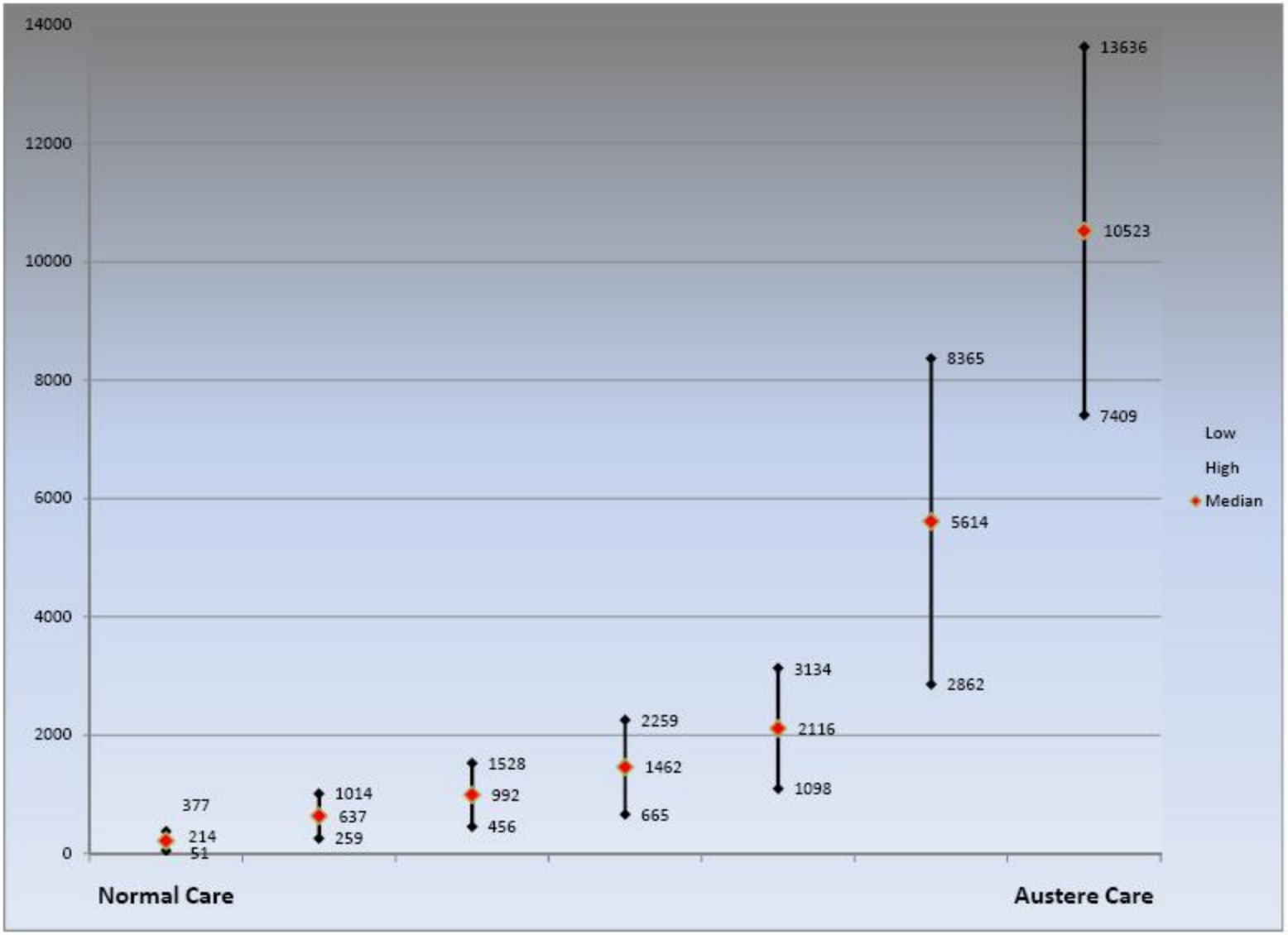
Answer Options

1-10
11-50
51-100
101-499
>500

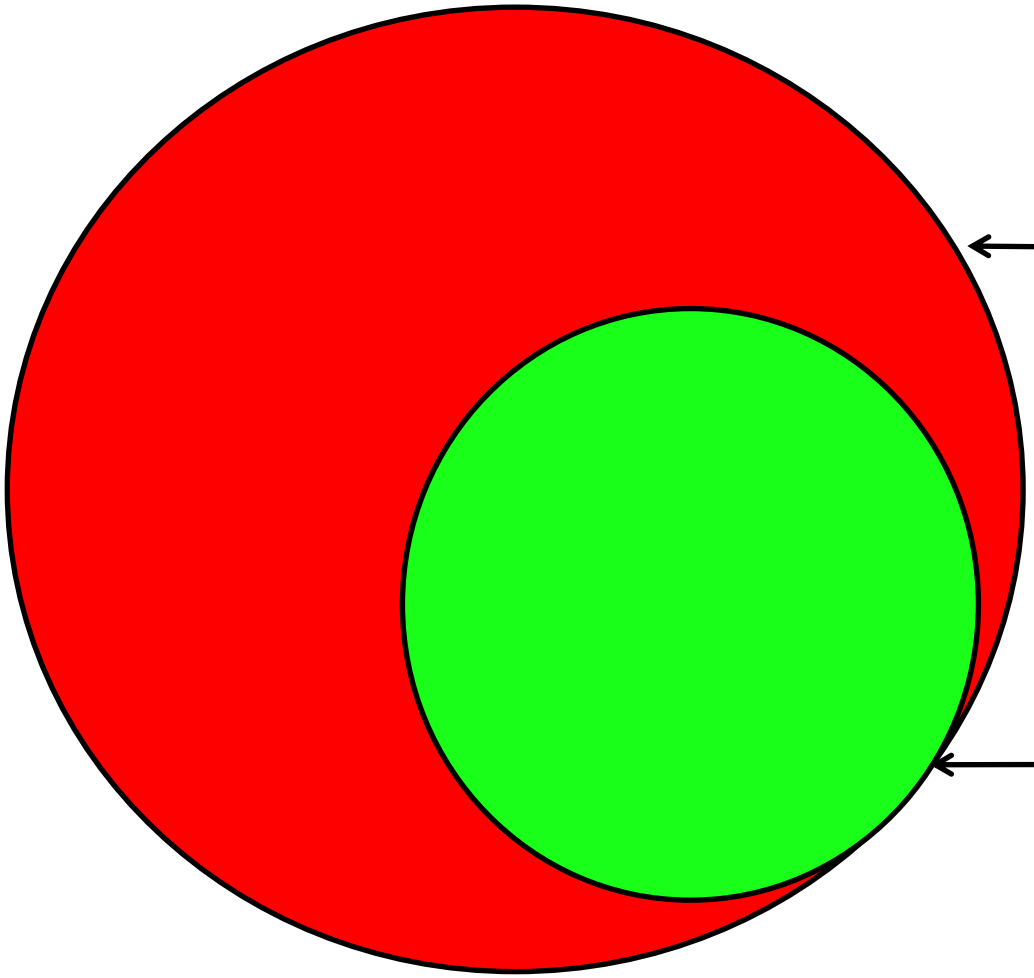
2011 Capacity Survey

#	Question	Low Estimate	High Estimate
1	How many patients could you receive in your existing BMT unit with no changes (e.g., no early discharges/transfers, no delayed admissions, no addition of beds, etc…)?	51	377
2	How many patients could you receive now in your existing BMT unit with modest changes (e.g., early discharges/transfers, a few delayed admissions, addition of beds from Hem/Onc service, etc…)?	259	1,014
3	How many patients could you receive now in your existing BMT unit with aggressive changes (e.g., aggressive discharges/transfers, many delayed admissions)?	456	1,528
4	How many patients could you receive now with spill-over into other areas of your hospital (Hem/Onc, med/surg, ICU), assuming no alterations in standards of care?	665	2,259
5	How many patients could you receive now in your existing BMT unit with aggressive changes and spill-over into other areas of your hospital (Hem/Onc, med/surg, ICU), assuming some alterations in standards of care?	1,098	3,134
6	How many patients could you receive now with the above and utilizing additional hospitals in your community?	2,862	8,365
7	How many patients could you receive now with the above and incorporating large austere emergency treatment facilities that have been previously planned for (e.g. pre-defined: dormitories, gymnasiums, domed stadiums, and assuming major alterations in standards of care)?	7,409	13,636

2011 Capacity Survey



Still have more to do…



Estimated need of 30,000 for monitoring, intensive supportive care and possible transplant (30K)

Estimated maximum capacity of RITN (13K)

BOX 2
Conventional, Contingency, and Crisis Capacity

Conventional capacity—The spaces, staff, and supplies used are consistent with daily practices within the institution. These spaces and practices are used during a major mass casualty incident that triggers activation of the facility emergency operations plan.

Contingency capacity—The spaces, staff, and supplies used are not consistent with daily practices, but provide care that is *functionally equivalent* to usual patient care practices. These spaces or practices may be used temporarily during a major mass casualty incident or on a more sustained basis during a disaster (when the demands of the incident exceed community resources).

Crisis capacity—Adaptive spaces, staff, and supplies are not consistent with usual standards of care, but provide sufficiency of care in the setting of a catastrophic disaster (i.e., provide the best possible care to patients given the circumstances and resources available). Crisis capacity activation constitutes a *significant* adjustment to standards of care (Hick et al., 2009).

NOTES: Definitions of conventional, contingency and crisis capacity. For further details, see Hick et al. Disaster Med Public Health Prep 2009;3:S52-7. (http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Citation&list_uids=19349868)

Incident demand / resource imbalance increases →
Risk of morbidity / mortality to patient increases →
← Recovery

	Conventional	Contingency	Crisis
Space	Usual patient care space fully utilized	Patient care areas re-purposed (PACU, monitored units for ICU-level care)	Facility damaged / unsafe or non-patient care areas (classrooms, etc) used for patient care
Staff	Usual staff called in and utilized	Staff extension (brief deferrals of non-emergent service, supervision of broader group of patients, change in responsibilities, documentation, etc)	Trained staff unavailable or unable to adequately cae for volume of patients even with extension techniques
Supplies	Cached and usual supplies used	Conservation, adaptation, and substitution of supplies with occasional re-use of select supplies	Critical supplies lacking, possible re-allocation of life-sustaining resources
Standard of care	Usual care	Functionally equivalent care	Crisis standards of care[1]

Usual operating conditions

Indicator: potential for crisis standards[2]

Trigger: crisis standards of care[3]

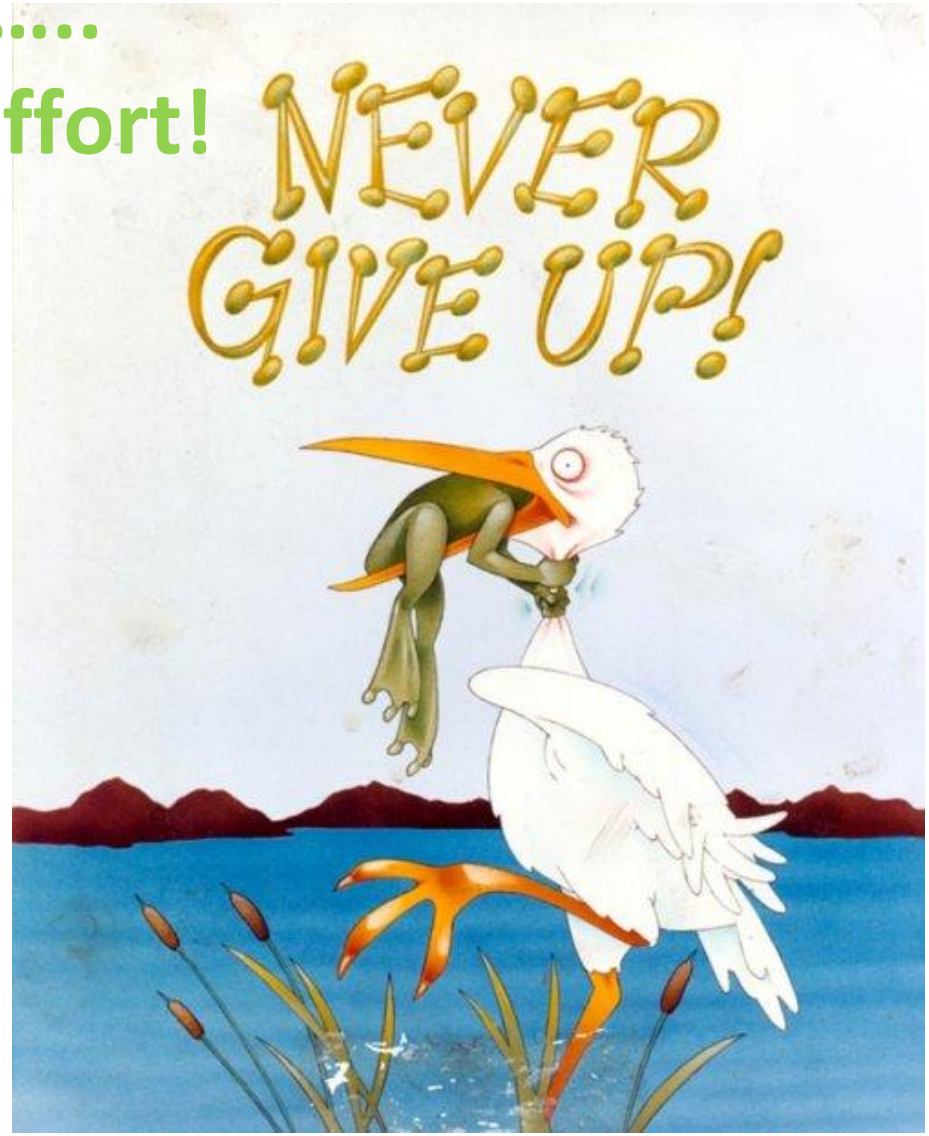
Austere operating conditions

1) Unless temporary, requires state empowerment, clinical guidance, and protection for triage decisions and authorization for alternate care sites / techniques. Once situational awareness achieved, triage decisions should be as systematic and integrated into institutional process, review, and documentation as possible.
2) Institutions consider impact on the community of resource utilization (consider 'greatest good' vs. individual patient needs – for example, conserve resources when possible) but patient-centered decision-making is still the focus
3) Institutions (and providers) must make triage decisions balancing the availability of resources to others and the individual patient's needs – shift to community-centered decision-making

IOM Letter Report, September 2009

It is not the Cold War…..

It is not a futile effort!



http://Apctechnology.com.au accesses 6/8/2011

Partners

- American Society for Blood and Marrow Transplantation
- Department of Defense - Office of Naval Research
- Health Resources and Services Administration
- Dept. Health & Human Services - Asst. Secretary of Preparedness and Response
- AABB-Disasters Task Force (formerly American Assoc. of Blood Banks)
- New England Center for Emergency Preparedness
- European Group for Blood and Marrow Transplantation-Nuclear Accident Committee
- Center for International Blood and Marrow Transplant Research
- Radiation Emergency Assistance Center/Training Site
- Radiation Emergency Medical Management website: www.remm.nlm.gov

REMM Website Updated Jan 2012

Questions