2013 Year in Review

Program Manager, RITN

December 3, 2013

Questions: RITN@nmdp.org
Agenda

- **RITN 101 in 5 min** (for those new to RITN)
- Updated Scenario Information
- 2013 Highlights
- 2014 Projects & Tasks
- Questions
RITN in 5 Min
RITN Center Staff are Cancer Specialists

- RITN Centers are not 1st Responders or trauma care specialists
- In the aftermath of a marrow toxic incident, RITN centers may:
  - Accept patient transfers to their institutions
  - Provide intensive supportive care to victims
  - Provide treatment expertise to practitioners caring for victims at other locations
  - Travel to other centers to provide medical expertise
  - Provide data on victims treated at their centers
  - Facilitate marrow transplant for those who require it
Possible Incidents & Planned NDMS Movement

- Military grade nuclear weapon
- Improvised Nuclear Device (IND)
- Radiological exposure device (RED)
- Radiological Dispersal Device (RDD)
- Industrial/nuclear power plant accident
Conceptual Flow of Victims to a RITN Center

*** This model does not account for victims with trauma or no injuries.
Timeline of RITN Response

Day 1
RITN Centers - review capabilities & prepare to receive casualties

Day 3
Earliest casualties arrive at RITN Centers near incident
Daily/Periodic CBCs

Day 7
Expected initial surge of casualties for RITN Centers

Day 30
Discharge and return to home region

Alert and Notification
Early Symptoms – e.g., nausea and vomiting

Initiate G-CSF as soon as possible when indicated

Patient collection and transport to FCCs
Clinical management

RITN – 2013 Year in Review
12/3/2013
Key things to stress about RITN

1. Not 1st Responders or trauma care
2. Expect to see surge 7-10 days after incident
3. If incident is local: the local RITN centers focus is on incident response not RITN
4. Casualties should not be significantly contaminated when they arrive at a RITN center
5. Affiliated with National Disaster Medical System:
   a) Casualty distribution is through NDMS
   b) Reimbursement is through NDMS
Updated Scenario Information
“the possibility of a group making a weapon using highly enriched uranium is very plausibly within capabilities of a sophisticated terrorist group.”
Matthew Bunn (Harvard Belfer Center) 3/22/2012

“Making a simple “gun-type” bomb, the easiest for terrorists to build, requires at least 50 kilograms of HEU enriched to 90% U-235.”
From “Consolidation: Thwarting Nuclear Theft” Harvard Belfer Center, March 2012

As of 31 December 2012 there were a total of 2331 confirmed radiological theft or misuse incidents reported by participating States; of these 419 involved unauthorized possession and related criminal activities, 615 incidents involved reported theft or loss and 1244 incidents involved other unauthorized activities and events.
Paraphrased from IAEA INCIDENT AND TRAFFICKING DATABASE (ITDB) highlights 1993-2012

From 1993-2012 there were 16 incidents where unauthorized possession of HEU or plutonium were reported. Some involving attempts to sell or traffic these materials across international borders. Most were gram sized amounts however some were kilogram quantities of weapons grade material.
Paraphrased from IAEA INCIDENT AND TRAFFICKING DATABASE (ITDB) highlights 1993-2012
IAEA Reported Incidents 1993-2012

16 incidents with HEU or Plutonium

This is only what is being reported

2331 reported incidents of theft or loss

Figure 1. Incidents reported to the ITDB involving unauthorized possession and related criminal activities, 1993–2012.

Figure 2. Incidents reported to the ITDB involving theft or loss, 1953–2012.
2013 Highlights
Growth

• Three centers were inactive during 2013:
  – Iowa, Froedtert, Children’s of WI

• Three centers joined RITN during 2013:
  – Boston Children’s (MA)
  – All Children’s (FL)
  – Thomas Jefferson (PA)

• One center left RITN during 2013:
  – Vanderbilt
RITN Center Locations

RITN Center Locations*

- Donor Centers
- Transplant Centers
- Cord Blood Centers

* Multiple centers of a single type located within close geographic proximity are represented by a single symbol.

September 2013
# Radiation Injury Treatment Network

## Transplant Centers

<table>
<thead>
<tr>
<th>State</th>
<th>Location</th>
<th>Program Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>AL</td>
<td>University of Alabama at Birmingham</td>
<td>P/A NDMS</td>
</tr>
<tr>
<td>AZ</td>
<td>University Medical Center</td>
<td>Ped NDMS HPP</td>
</tr>
<tr>
<td>CA</td>
<td>UCSF Medical Center</td>
<td>P/A NDMS</td>
</tr>
<tr>
<td>CA</td>
<td>City of Hope National Medical Center</td>
<td>P/A NDMS HPP</td>
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<td>CA</td>
<td>Stanford Hospital and Clinics</td>
<td>P/A NDMS HPP</td>
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<tr>
<td>CO</td>
<td>Presbyterian/St. Luke's Medical Center</td>
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<tr>
<td>FL</td>
<td>All Children's Hospital</td>
<td>P/A NDMS HPP</td>
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<tr>
<td>FL</td>
<td>H. Lee Moffitt Cancer Center</td>
<td>P/A NDMS HPP</td>
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<tr>
<td>FL</td>
<td>Shands Hospital at the University of Florida</td>
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<tr>
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<td>University of Iowa Hospitals and Clinics</td>
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<td>Rush University Medical Center</td>
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<td>MA</td>
<td>Dana Farber/Partners Cancer Care</td>
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<td>MA</td>
<td>Massachusetts General Hospital</td>
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<td>MI</td>
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<td>Mayo Clinic Rochester</td>
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<td>Memorial Sloan-Kettering Cancer Center</td>
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<td>Mount Sinai Hospital</td>
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<td>Westchester Medical Center</td>
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<tr>
<td>OH</td>
<td>University Hospitals of Case Medical Center</td>
<td>P/A NDMS HPP</td>
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</table>

**Ped = Pediatric patient only facility**  
**P/A = Pediatric and adult capable facility**  
**NDMS = National Disaster Medical System Center**  
**HPP = Hospital Preparedness Program**  

If no capability is annotated the facility is adult only.

As of 12 Sept 2013

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**Please report any corrections to this document to RITN@mdmp.org**
2013 Highlights

- Site Assessments
- Tabletop exercises attended
- Web based training released (https://nmdp.sumtotalsystems.com)
  1. Intro to RITN
  2. RITN Concept of Operations
  3. GETS 101
  4. Satellite telephone 101
  5. Basic Radiation Training
  6. Non-medical Radiation Awareness Training
- Mayo Full-scale Exercise
- 2 x Web based tabletop exercises
- Mobile REAC/TS held at Duke University
- 2 x resident REAC/TS courses
- New Partnership with CMCRs
- 4th biennial conference w/ 175 attendees
RITN Hospital Task Completion

2013* is the first year DC and CBB were not asked to complete tasks

*Does not include DC/CBB
Totals since 2006:
- 265 REAC/TS
- 2,981 GR
- 3,680 BRT
- 2,826 Overview
- 541 Conference

Summary of RITN Training & Education
2014 Projects and Tasks
2014 Projects

- Addition of 5+ transplant centers
- 2014 survey
- Release RITN Referral Guidelines early 2014
- Collect triage guidelines for release late 2014
- Regional collaboration meeting for NY-NYC
- G-CSF distribution project with ASTHO and CDC
  - Will seek 6 subject matter experts to attend workshop
- 2 x Mobile REAC/TS training sessions (Boston & Chicago)
  - Travel expenses for up to 20 physicians
- Review of updated REMM ARS guidelines
- Medical staff risk communications training development
- Exercises: Full-Scale Exercise, 3 x Web based TTX, Communications drill with DHHS-ASPR
2014 Tasks (Nov 1, 2013-Aug 31, 2014)

1. Administrative
   a) SOP update, contact update, GETS test, HCS, satellite phone, IRB of consents

2. Exercise
   a) Primary choice will be web based on 3 scheduled dates
   b) Can coordinate and host own if prefer

3. Training
   a) Options: 20 x BRT, MD to REAC/TS, Grandrounds, Overview to external preparedness group, submit triage guidelines or site assessment
References:

www.RITN.net

www.REMM.NLM.gov

REMMA Website Updated Aug 2013 Download the App!!
Questions?
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
Free Resources

- http://journals.cambridge.org/action/displayIssue?jid=DMP&volumeId=5&seriesId=0&issueId=S1
- http://www.ritn.net/About/