



**Totally Rad!**

## **Pinellas County Mass Casualty Drill**

**March 22, 2006**



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**After Action Report**

**Purpose**

The hospital response portion of this drill was designed to offer participants the opportunity to gain understanding of their hospital's ability to respond to a mass casualty event involving blast injuries as well as radiological identification, decontamination and treatment.

The on-scene response portion of this drill was designed to offer participants the opportunity to review current Standard Operating Procedures as well as allows them to test their ability to respond to a local Weapons of Mass Destruction Event.

**Objectives**

The following objectives were set forth to be addressed in the planning of this drill. Separate objectives were determined for the hospital response portion and the on-scene response portion.

*Hospital Response*

1. **Inter-Agency Communication.** Examine local interface between agencies during the conduct of crisis and consequence management activities.
2. **Hospital Decision-Making Process.** Assess the communication, coordination and effectiveness of the hospital command structure (HEICS).
3. **Decontamination Capabilities.** Test processes in place to set up decontamination equipment, manage contaminated patients and limit ER contamination.
4. **Hospital Planning.** Test the hospital's plan for Mitigation, Planning Response and Recovery for their Emergency Preparedness planning for and to identify improvements if necessary.
5. **Patient Tracking.** Assess the capabilities of the hospital to track a disaster victim from time of arrival at the hospital through disposition.

## *On-Scene Response*

1. **Response to an emergency call.** 911 operators must be able to triage and properly send response units to a chaotic scene of an explosion, when called in from multiple cell phones.
2. **Inter-Operable Communication.** Examine local interface between agencies during the conduct of crisis and consequence management activities.
3. **Detection Capabilities.** Conclude if local responders can detect radiological material at the scene of the explosion.
4. **Decontamination Capabilities.** Test processes in place to set up mass decontamination, manage contaminated patients and limit drive-a-ways.

The attached chart summarizes observations that were made during and after the drill by all available participants. The observations are classified into the following eight categories: Hospitals, Scene, Emergency Operations Center (EOC), Support Agencies, Radiation Control, St. Petersburg College (SPC), Pinellas County Schools (PCS), and Overall. Each observation is accompanied by a recommendation for improvement, which is assigned to a responsible agency and given a due date for its completion. Follow-up on addressing the recommendations for improvement by the due dates will be conducted by the Exercise Planning Committee periodically over the next year.

In addition, each recommendation that would help address one of the aforementioned objectives has been indicated by a two-letter code, referencing the portion of the drill and the objective number. For example, H1 would refer to objective 1 in the hospital response objectives, and S2 would refer to objective 2 of the on-scene response objectives.

## **Summary**

Overall, the Exercise Planning Committee was satisfied with the level of participation and opportunities for improvement and education that have come out of this drill. This year's expansion into on-scene activities in particular shows promise for continuing interagency collaboration in preparing our community for disasters. It is the hope of the committee that next year's exercise will continue to build on this theme of interagency collaboration by encouraging more agencies to participate, allowing us to further test Pinellas County's level of preparedness.

Category	Observation	Recommendation for Improvement	Responsible Party	Due Date	Complete
<b>Hospitals</b>	No coordination on time of start of drill at hospitals.	Controller should be assigned at each hospital to control progress of the drill, with access to a separate radio channel. Start of drill is then announced on controller radio channel.	Hospital Coordinators	Next exercise	
		Additional radio channel should be available and designated for controller use only.	Emergency Management	Next exercise	
	Intra-hospital communication was inconsistent, patchy.	Train assigned hospital staff on radio usage and protocols prior to day of drill. Expand monthly radio tests to include additional personnel (by next radio test). (H2)	Hospital Coordinators	Next exercise	
		Train further and exercise use of radios by school personnel prior to boarding buses.	PinCHD/EM Staff		
	Hospital staff unfamiliar with triage tags used.	Provide training to staff in use of triage tags. (H4)	Hospital Coordinators	Refresh WMD training by 12/31/06	
	Patients that had been deconned were transported with patients who had not be been deconned.	Transport deconned patients separately from those not deconned.	Transport Responders (SunStar, Largo Fire)	Refresh WMD training by 12/31/06	
	Individuals were not screened prior to decon.	Screening prior to decon will filter out "worried well" population who had no exposure and thus no need for decon. (H3)	Hospital Coordinators	Refresh WMD training by 12/31/06	

	Lack of planning for storage of contaminated clothing removed during decon. Lack of action on plan for contaminated individuals to maintain control of valuables.	Plan to mark clothing with personal identifiers and set aside in secure location for law enforcement. Train staff on and exercise existing plans on control of valuables. (H4)	Hospital Coordinators	Refresh WMD training by 12/31/06	
	Lack of plans/procedures for disposal/cleaning/reuse of contaminated PPE by hospital staff.	Develop plan for dealing with contaminated PPE, train staff, and exercise plan. (H4)	Hospital Coordinators	Refresh WMD training by 12/31/06	
	Lack of plans/procedures for internal contamination with radiological material	Develop plan for detection and treatment of internal contamination, train staff, and exercise plan. (H3/H4)	Hospital Coordinators/ Radiation Safety Officers	Review Radiological Plans by 12/31/06	
	Lack of dose monitoring devices for hospital response personnel	Provide dose monitoring devices for response personnel (i.e. ER staff) and train on their use. (H3)	Hospital Coordinators/ Radiation Safety Officers	Review Radiological Plans by 12/31/06	
<b>Scene</b>	Performance of smoke machine intermittent.	Test functionality of smoke machine prior to day of drill.	Largo Fire	Next drill (used again on 5/18/06) COMPLETED	
	Limited number of units available to respond/participate in drill.	Earlier communication with multiple jurisdictions and disciplines to enhance buy-in and increase participation. Combine multiple county drills into one large drill which would satisfy exercise requirements for multiple disciplines. Utilize mutual aid agreements.	PinCHD/EM	Enhance drill by next year. Initial contact by 9/1/06.	
	Same personnel used for structure assessment and clearance as for patient care. (Lack of personnel available to designate specific responsibilities.)				

		Plan/budget for backfill to allow more first responders to attend. (Shortage of personnel also artificiality of the drill.)			
	Lack of evacuation efforts in response to identification of secondary device (both for victims and fire personnel).	Reassess protocols for such situations and address with staff.	Largo Fire	Next drill	
	Lack of gross decon procedures. Setup of decon took longer than expected. Tents were set up end-to-end as opposed to side-by-side.	Reassess protocols for such situations and address with staff. Practice tent setup. (S4)	HAZMAT Team	9/1/06	
	Radiological detection missed source on first patient (found on second patient).	Reassess protocols and procedures for such situations and address with staff. (S3)	HAZMAT/ Largo Fire	9/1/06	
	Victims stopped play/dramatic acting after beginning of exercise.	Communicate importance of continued acting throughout exercise to test each level of response/patient care.	SPC and PCS Coordinators	Next exercise	
	Conflict of communication under unified command with Pinellas County Schools	Review ICS and Unified command protocols.	PCS & Responding Agencies	12/31/06	
	Communication interoperability was less than ideal. (Fire Dept. went to multiple channels, requested Police Dept. to change to Fire Dept. channel, but all personnel could not complete change.)	Practice interoperability.	All Responding Agencies	12/31/06	
	Good communication between Medical Control Office and hospitals	Keep up the good work! (H1)	MCO & Hospitals	N/A	
	Triage area located too close to	Reassess protocols for such situations	HAZMAT	9/1/06	

	decon area	and address with staff. (S4)	Team		
	SWAT team staged in front of Largo Fire Dept., where perpetrator supposedly located; also put on protection gear (noisy, hard to be stealthy).	Reassess protocols for such situations and address with staff.	SWAT Team	9/1/06	
	Triage tags filled out at scene with pens that smudged and were difficult to read.	Provide permanent markers (i.e. Sharpies).	Largo Fire	9/1/06	
	Lack of control of parents that arrived on scene.	Put out banners for parents (and media) to gather under sooner.	PCSB/Red Cross	9/1/06	
EOC	Two separate situations demanded simultaneous attention: 1) bussing of PCSB students to hospitals and 2) the actual drill	Designate a separate group with own radio call sign to deal with bussing reports and issues.	EM/EOC	Next drill	
	EOC not informed which radio frequency scene communications were on	Pre-designate frequencies prior to the drill and inform all relevant parties. (S2)	Largo Fire, Largo Police, HAZMAT, EM/EOC	Next drill	
	Lack of communication between hospitals, MCO, and EOC. EOC did not utilize 911 computers.	Provide training on use of 911 computers to EOC staff. (S2)	Dispatch/Communications	12/31/06	
	Lack of presence of responding agencies in EOC to aid with communication issues	Provide representatives from each responding agency to staff appropriate position in the EOC. (S2)	All Responding Agencies	Next drill	
	ReadyAlert only sent out to hospitals. Red Cross never received alert, nor was alerted by 911.	Send ReadyAlert out to hospitals as well as supporting agencies involved in drill/response.	EM	Next drill	
	Scene communications unclear in EOC (radios crackling). (Portable	Exercise use and interoperability of equipment prior to drill. (S2)	EM/ Largo Fire/	12/31/06	

	radio being used.)		HAZMAT		
<b>Support Agencies</b>	Victims' parents gathered on scene and were held there.	Identify location and provide transport (if needed) away from scene to send locally impacted families to provide mental health services.	Red Cross	Next drill	
	Red Cross participation may have been unrealistic (due to decon activities taking place), and used only as training too.	Clearly communicate restrictions on Red Cross participation to community partners as well as functions provided by Red Cross (patient tracking, mental health).	Red Cross	Next drill	
<b>Radiation Control</b>	Patients triaged with red tags sent through wet decon.	Medical needs should be evaluated prior to proceeding to decon. No patients with open wounds should be sent through wet decon with out treatment first. (80-90% of radiological contamination can be removed by removing clothing.) (S4)	HAZMAT/ Largo Fire	12/31/06	
	Frisking of victims was insufficient/incorrect.	Current protocols applicable to this situation should be reviewed and addressed with staff.	HAZMAT/ Largo Fire	12/31/06	
	No protection for open probe to prevent contamination. Probe used to detect radiation was out of calibration.	Provide plastic covers for open probes (portable and those located in decon tents). Calibrate probe on regular basis to ensure accurate readings.	HAZMAT/ Largo Fire	9/1/06	
	Lack of personal radiation detectors on all responders. Lack of knowledge of first responders regarding alarm set points of instruments and/or need for calibration.	Provide personal radiation detectors and appropriate training in their use for all responders on scene. (S3)	HAZMAT/ Largo Fire	9/1/06	

	Contaminated water from decon tents easily accessible to personnel and victims on scene.	Move water away from decon tent area to sanitary sewer and/or dilute to minimize exposure of personnel/victims on scene. (May not be necessary to contain water runoff from decon in radiological incident, per EPA, CRCPD, DOH Radiation Control.) (S4)	HAZMAT	9/1/06	
	Levels of contamination that necessitate further action were not identified. Possibility of internal contamination was not considered, considered; even when uninjured individual was deconned twice and still had detectable activity.	Provide training to responder personnel regarding actions taken and levels of contamination, including internal contamination. (Typically, twice background level is level at which decon may be attempted.) (S3/S4)	Largo Fire/HAZMAT	9/1/06	
	Student set-up carpools thwarted previous hospital assignments. Use of PSTA buses simplified student transport to hospitals and scene.	Provide PSTA bus transportation to all hospitals. OR Inform students ahead of time so they may work out transport in accordance with assignment. OR Assign numbers of students to each hospital instead of individual students.	SPC Coordinator	Next drill	
<b>St. Pete College (SPC)</b>	There was radio static and interference with radios being used inside the Incident Response Vehicle (IRV) and the PCS EOC.	Locate the source of the interference and correct problem (use alternative radio frequencies, new radios, use of external antennas, etc.).	PCS	Next drill	
<b>Pinellas County Schools (PCS)</b>	Communications issues included: confusion with call signs and transmission context, lengthy transmissions, unfamiliarity with	Provide training to personnel on radio and Nextel communications. An IT/Communications person should be located on the IRV and in the PCS EOC.	PCS	12/31/06	

	Nextel phones.				
	Parent/student reunification site was adjacent to scene of incident.	Site should be located at another school or predetermined alternate site, not at the scene.	PCS	12/31/06	
	Lack of accountability/tracking for students being transported away from scene.	Assign a Crisis Team member to Transportation Officer to keep separate list for accountability. Clear up any confusion about HIPAA regulations and their applicability to the school board.	PCS	9/1/06	
	No Incident Action Plan (IAP) was completed.	Utilize ICS form 201 for the written IAP. Further ICS training is needed.	PCS	9/1/06	
	There were issues in accessing necessary computer programs from the IRV.	Regularly testing of IRV equipment should be conducted to ensure connectivity and interoperability of equipment. One computer on the IRV should be outfitted with an air card.	PCS	9/1/06	
	Lack of trained staff in NIMS/ICS, response and safety, and IRV staffing procedures.	Increase training in these areas. Assign Risk Management responsibilities of Incident Management, in close coordination with Schools Police.	PCS	9/1/06	
	Communication on radios confusing, as individuals talking not always well-identified.	Each person carrying a radio should be assigned a call sign and trained on proper use of call sign and radio etiquette. (H1/S2))	EM	Next drill	
<b>Overall</b>	Radios available only one day prior to exercise.	Select an exercise day when radios can be checked out 1 week prior.	EM/Comm-unications	Next drill	
	Radios were turned off prior to end of entire exercise.	Radios should not be turned off until the "all clear" is given by the EOC. (H1/S2)	All	Next drill	

## Hospital Evaluation Summary

There were 15 participating hospitals and evaluations for 14 were received from the exercise evaluators. A brief summary of the evaluations appears below.

<b>All Children's Hospital</b>		<b>Comments</b>
Disaster Plan	3	<ul style="list-style-type: none"> <li>ER staff knowledgeable about media relations.</li> <li>Pagers worked well.</li> <li>No good method for patient tracking observed.</li> <li>No safety officer assigned to decon area; problems observed.</li> <li>Disaster cart just received from vendor.</li> <li>Decon backboards too flexible with weight; could be dangerous.</li> </ul>
Command and Control	3	
Response	2.75	
Patient Treatment	3	
Administrative Practices	N/A	
OVERALL SCORE	3	

<b>Bay Pines VA Medical Center</b>		<b>Comments</b>
Disaster Plan	4	<ul style="list-style-type: none"> <li>Excellent plan, well organized.</li> <li>Radio to green triage area from command center did not work - had to call using phone.</li> <li>Only 1 Geiger counter used to check patients, some went past without being checked.</li> <li>Not enough decon stretchers available.</li> <li>No social services in ER.</li> <li>No bagging of valuables, left unattended.</li> <li>A few victims were not accounted for - no record found.</li> </ul>
Command and Control	3.75	
Response	4	
Patient Treatment	4	
Administrative Practices	3	
OVERALL SCORE	3.75	

<b>Bayfront Medical Center</b>		<b>Comments</b>
Disaster Plan	4	<ul style="list-style-type: none"> <li>Lockdown quick; not tested.</li> <li>Staff knowledgeable on disaster plan.</li> <li>Decon staff needed better PPE.</li> <li>Triage and decon areas may not have been in the best locations for patient flow.</li> <li>No procedure demonstrated for collection of contaminated personal items.</li> <li>No color designation in triage observed (red, yellow, etc.)</li> <li>More patients needed to challenge hospital.</li> </ul>
Command and Control	4	
Response	3.5	
Patient Treatment	3.75	
Administrative Practices	3.5	
OVERALL SCORE	3.75	

<b>Edward White Hospital</b>		<b>Comments</b>
Disaster Plan	4	<ul style="list-style-type: none"> <li>Command staff had limited ICS training.</li> <li>Additional training on communications equipment is required.</li> <li>Stand alone facilities were not informed of the exercise.</li> <li>More communication with EOC needed.</li> <li>Bed status report not requested by EOC.</li> <li>Lockdown complete within minutes of notification.</li> <li>PPE not used by many staff.</li> <li>New decon unit needed.</li> </ul>
Command and Control	3	
Response	N/A	
Patient Treatment	N/A	
Administrative Practices	N/A	
OVERALL SCORE	3.5	

<b>Helen Ellis Hospital</b>		<b>Comments</b>
Disaster Plan	3.75	<ul style="list-style-type: none"> <li>• Rad plan does not address decon.</li> <li>• Work on patient tracking; could be more effective.</li> <li>• PPE worn = full PAPR.</li> <li>• More triage staff needed.</li> <li>• Standardize information from triage to command center.</li> <li>• EMS triage tags need to be integrated in hospital system.</li> </ul>
Command and Control	4	
Response	4	
Patient Treatment	4	
Administrative Practices	4	
OVERALL SCORE	4	

<b>Kindred Hospital</b>		<b>Comments</b>
Disaster Plan	N/A	<ul style="list-style-type: none"> <li>• Lockdown efficient.</li> <li>• PPE level not determined.</li> <li>• Rad specialist available.</li> <li>• Triage done indoors - no yellow or red patients received.</li> <li>• Patient flow became congested.</li> </ul>
Command and Control	4	
Response	3.5	
Patient Treatment	3.25	
Administrative Practices	N/A	
OVERALL SCORE	3.5	

<b>Largo Medical Center</b>		<b>Comments</b>
Disaster Plan	3.75	<ul style="list-style-type: none"> <li>• Decon tent set up in 8 minutes with 7 people.</li> <li>• Safety officer not assigned to decon area.</li> <li>• Tracking of patients efficient.</li> </ul>
Command and Control	4	
Response	4	
Patient Treatment	4	
Administrative Practices	4	
OVERALL SCORE	4	

<b>Mease Countryside</b>		<b>Comments</b>
Disaster Plan	4	<ul style="list-style-type: none"> <li>• Disaster plan on intranet.</li> <li>• AOD left county radio unattended.</li> <li>• IC needs to designate more tasks.</li> <li>• Command center needs more communications equipment.</li> <li>• Decon site too close to ER doors.</li> <li>• Excellent lockdown procedure.</li> </ul>
Command and Control	3.5	
Response	4	
Patient Treatment	3.75	
Administrative Practices	4	
OVERALL SCORE	3.75	

<b>Mease Dunedin</b>		<b>Comments</b>
Disaster Plan	4	<ul style="list-style-type: none"> <li>• 15 minute delay in finding extra radios.</li> <li>• AOD took charge of operations.</li> <li>• Rad specialist available in triage area.</li> </ul>
Command and Control	4	
Response	3.25	
Patient Treatment	3.25	
Administrative Practices	3.75	
OVERALL SCORE	3.5	

<b>Morton Plant Hospital</b>		<b>Comments</b>
Disaster Plan	3	<ul style="list-style-type: none"> <li>• Rad safety officer not easily identified.</li> </ul>
Command and Control	3	
Response	3.75	
Patient Treatment	3	
Administrative Practices	3	
OVERALL SCORE	3	

<b>Northside Hospital</b>		<b>Comments</b>
Disaster Plan	1.5	<ul style="list-style-type: none"> <li>• Disaster plan given to review only addressed biological incidents.</li> <li>• IC could not hear overhead speakers.</li> <li>• Patient tracking not apparent or effective.</li> <li>• No media liaison or rad safety officer available.</li> <li>• No lockdown.</li> <li>• Personnel did not know disaster duties.</li> <li>• Little to no PPE worn.</li> </ul>
Command and Control	1.5	
Response	1	
Patient Treatment	1	
Administrative Practices	1.75	
OVERALL SCORE	1.25	

<b>Palms of Pasadena</b>		<b>Comments</b>
Disaster Plan	3.75	<ul style="list-style-type: none"> <li>• Hot zone required obvious boundary with security posted.</li> <li>• Entrance crowded, no good flow of patients.</li> <li>• Post locations for level assignment.</li> <li>• Recommend folders with ability to assign numbers for each patient.</li> </ul>
Command and Control	3.75	
Response	3.75	
Patient Treatment	3.75	
Administrative Practices	3.5	
OVERALL SCORE	3.75	

<b>St. Anthony's Hospital</b>		<b>Comments</b>
Disaster Plan	3	<ul style="list-style-type: none"> <li>• Command staff were at scene, not control center</li> <li>• Radio system kept dropping out</li> <li>• Decon team very effective; showed commitment and training</li> <li>• Chaplain and social services at triage through discharge</li> <li>• Visitor who threatened exercise effectively dealt with by security staff</li> </ul>
Command and Control	3	
Response	3.5	
Patient Treatment	3.25	
Administrative Practices	3	
OVERALL SCORE	3	

<b>St. Petersburg General Hospital</b>		<b>Comments</b>
Disaster Plan	3.75	<ul style="list-style-type: none"> <li>• Plan organized, but needs TOC or index for materials to be easily located</li> <li>• During decon, personnel in hot zone not wearing respiratory protection</li> <li>• Social services concerns not addressed.</li> <li>• Rad detector on site in decon area.</li> </ul>
Command and Control	3.25	
Response	3.25	
Patient Treatment	3.25	
Administrative Practices	3.5	
OVERALL SCORE	3.25	

<b>Sun Coast Hospital</b>		<b>Comments</b>
Disaster Plan	2.5	<ul style="list-style-type: none"> <li>• Plan did not address role in community-wide preparedness efforts.</li> <li>• No exterior safety or security.</li> <li>• Some personnel did not know how to use radios.</li> <li>• Some patients entered ER without decon.</li> <li>• No PPE on people transporting victims throughout hospital.</li> <li>• Patient tracking effective; resource tracking not effective.</li> <li>• All belongings put in 1 bin, not secured separately.</li> </ul>
Command and Control	3.5	
Response	3	
Patient Treatment	3.5	
Administrative Practices	3.5	
OVERALL SCORE	3.25	