Prince George's County
Amateur Radio Emergency Service
Radio Amateur Civil Emergency Service

Final Operations Report
for the
Second Quarter 2011
ARES®/RACES Health Care Coalition Drill
April 5, 2011

Written by:
Wanda Montgomery, KA3AHI
Assistant Emergency Coordinator
aec-healthcare@pgares.org

Approved by:
Jim Montgomery WB3KAS
Emergency Coordinator
ec@pgares.org

Executive Summary

The results of the Second Quarter 2011 ARES®/RACES Health Care Coalition Drill held April 5, 2011 met with positive results. The drill was conducted by Prince George's County Amateur Radio Emergency Service/Radio Amateur Civil Emergency Service and sponsored by the Office of Emergency Management under the Department of Homeland Security. Six Prince George's County hospitals, and the Health Department were staffed with volunteer radio operators. The County Emergency Operating Center was not staffed. Nets were conducted in two RF segments; the first segment took place on VHF, and second on UHF.

Radio operators tested, evaluated and documented two newly installed 440 RMS Packet Nodes on 445.975MHz, one located at the county's EOC and the other in College Park. Results were documented for future evaluation to support emergency communications.

The Drill also tested the capability to connect various Maryland county operators with Prince George's County using WL2K to simulate the availability of mutual aide during an emergency incident. Eight counties, representing various health care facilities were successfully connected.

Cost avoidance to federal, state and local government by providing backup emergency communications via the Amateur radio volunteer community versus the commercial sector is on the order of $169,300.

The equipment used, operator hours spent and travel to and from the facilities is provided gratis to the county Hospitals and government entities by the Prince George's County Amateur Radio Emergency Service®.

Prince George's County
ARES®/RACES Final Drill Report
for
Second Quarter 2011 Health Care Drill
April 5, 2011

Introduction

This report addresses the results of the Second Quarter ARES®/RACES Health Care Coalition (HCC) Drill for the new year, 2011. Each drill is designed to be unique into itself, training our radio operators in various communication techniques to prepare for any communication tasking by our served agencies during an emergency incident. These drills are held the first Tuesday of the calendar quarter in January, April, July and October. Drills commence at 7:30pm and last one to two hours and are operated from hospitals, Health Department and the EOC.

The main focus for the Second Quarter Drill was to test two newly established 440 RMS Packet Nodes. One recently implemented at the Prince George's County (PRGE) Emergency Operating Center, located at Landover Hills, MD and the other at W3CB in College Park, MD.

Also, as a result of a presentation given at the ARRL Maryland State Convention, Timonium, Md., on March 26, 2011 by Wanda Montgomery, KA3AHI, AEC - Hospital Project, the PRGE Drill was expanded. An open invitation was extended to all Emergency Coordinators and Radio Officers within Maryland offering an opportunity to play in the PRGE Second Quarter Hospital Drill on April 5, 2011.

Primary Objectives of the Drill

For the PRGE ARES®/RACES Winlink Operators:

The primary objective of the ARES®/RACES Airmail Operators was to test the effectiveness of the two new 440 RMS Packet Nodes from all six hospitals, the County Health Department and the County Emergency Operations Center. Operators passed test results to NCS for the 440 net.

For the ARES/RACES. Maryland Counties, Invitees

The secondary objective was to have as many "Hams" stationed at any health care facility within adjacent Maryland counties to use Winlink to check into the PRGE Second Quarter Hospital Drill. These checkins simulated the number of digital operators standing by for mutual aide support should there be an emergency needing winlink operators.

Prince George's County
ARES®/RACES Final Drill Report
for
Second Quarter 2011 Health Care Drill
April 5, 2011

For the ARES/RACES Digital Liaison to the Net

W3CB, served as the Digital Liaison to W9WNH, NCS for the two meter net. W3CB operated from his home QTH. He received digital checkins via Winlink from "winlink operators" spread across seven Maryland counties. These checkins were then passed on to W9WNH for announcement inclusion in the net record.

For the ARES/RACES Net Control Station/Alternate Net Control (VHF)

The NCS conducted the VHF net, received digital checkins from the Digital Liaison and prepared the final net report document. The Alternate NCS checked into the net and was in standby mode ready to take the net should the NCS not be able to complete his duties.

For the ARES/RACES Net Control Station/Alternate Net Control (UHF)

The NCS NX3SS conducted the UHF net, received test results from the hospital winlink operators reporting the effectiveness of the new 440 RMS Packet Nodes. There was no Alternate NCS for the 440 net.

For ARES® Emergency Coordinator :

The ARES® Emergency Coordinator (EC), stationed at the Health Department, monitored the drill and hosted Mr. Herman Douglas, Emergency Preparedness Officer, PRGE Health Department.

For ARES® Assistant Emergency Coordinator for the Health Care Coalition

The ARES® Assistant Emergency Coordinator, AEC - Hospital Program, KA3AHI, acted as the Incident Commander of the drill giving instructions and assignments necessary to facilitate a trial run of events and identified modes of emergency backup communications that can be expected in drills and exercises for 2011.

Prince George's County
ARES®/RACES Final Drill Report
for
Second Quarter 2011 Health Care Drill
April 5, 2011

Timeline

On April 5, the Health Care Coalition Drill Plan was made available on the PRGE ARES Reflector, for all ARES members, with a copy to the ARES Staff and the specific served agency radio operator teams actively supporting the drill. On April 5, at 7:30 PM, all drill participants reported to their assigned posts and activated served agency's Amateur Radio stations. KA3AHI introduced three priority traffic messages to clarify drill objectives.

VHF, UHF, and mutual aide stations located within the state of Maryland were on line supporting this drill. The nets logged 26 check-ins for the VHF net, and, 12 for the UHF net.

Ten Winlink operators representing mutual aide support from the following counties checked in via W3CB, the Digital Liaison to the net, representing Prince George's County. They were:

Allegany
Anne Arundel
Cecil
Charles
Frederick
Kent
Washington
Prince George's

ARES/RACES Airmail Operators

Allegany County: N7MNS-7
N7MNS Mike, Allegany Co. EOC, ARES MD/DC ASEC, Western MD Health Systems

Anne Arundel:
N3SEO Frank, Anne Arundel Medical Center, Anne Arundel Co. ARES, Severna Park, MD

Cecil County:
KB3LJB George, Cecil Co. ARES EC, Union Hospital Elkton, MD

Prince George's County
ARES®/RACES Final Drill Report
for
Second Quarter 2011 Health Care Drill
April 5, 2011

Charles County:
KB3KOW Bob, CCARC Emergency Coordinator, Charles Co. Civista Hospital, Laplata, MD

Frederick County: K3ERM-2
NE3R Joe, Frederick Co. ARES, Independent Hose Company #1 Frederick, supporting Frederick Memorial Hospital
N8AAY Eric, Frederick Co. ARES, New Market, MD
(KB3FIO@winlink.org)

Kent County
KB3ENU Bob, Kent Amateur Radio Society, Kent Co. ARES, Chester River Hospital, Chestertown, MD

Prince George's County

Prince George's Hospital Airmail Operator:	Spence Spencer, AEC Ops, nx3ss@winlink.org
Prince George's Hospital Airmail Operator:	Jim Wallace, AEC-Admin, n3adf@winlink.org
Laurel Regional Hospital Airmail Operator:	Jerry Siegel, n3wsg@winlink.org
Laurel Regional Hospital Airmail Operator:	Jim Cross, SM, wi3n@winlink.org
Doctors Community Hospital Airmail Operator:	Jim Tilton, kd3ja@winlink.org
Fort Washington Medical Center Airmail Operator:	Charles Hallock, aa3ws@winlink.org
Southern Maryland Hospital Center Airmail Operator:	Jesse Alexander, wb2ifs@winlink.org
Prince George's County Health Dept Airmail Operator:	Jim Montgomery, EC, wb3kas@winlink.org
Prince George's County Health Dept Airmail Operator:	Wanda Montgomery, AEC-HCC, ka3ahi@winlink.org
ARES® - Digital Liaison to the Net	Cliff Bedore, MDD, w3cb@winlink.org

Washington County:
N3TCR Bill, Frederick Co. ARES, Meritus Medical Center, Hagerstown, Washington County, MD. (Simulated)

In addition, Hugh Dowell, W9WNH, Primary NCS, operated the VHF net from Bowie Hospital Center, Bowie, Maryland. Jim Baker, N3XKJ, VHF Alternate NCS operated from Laurel Regional Hospital, Laurel, Maryland. Spence Spencer, Primary NCS operated the UHF net from Prince George's Hospital Center, Cheverly, Maryland. Wanda Montgomery, KA3AHI, served as Incident Commander of the drill from PRGE Health Department, Largo, Maryland.

The PRGE Emergency Operations Center was not staffed.

Prince George's County
ARES®/RACES Final Drill Report
for
Second Quarter 2011 Health Care Drill
April 5, 2011

The following Operators checked into the VHF net

Net Time: 7:30pm to 8:00pm
Frequency: 146.061
NCS: W9WNH
Net Assistant: N3WYG
ANCS: N3XKJ
Number of Check-Ins 26

Traffic Passed
KA3AHI three priority messages to the net

ARRL Appointment Check-ins

KA3AHI	Wanda	AEC
WB3KAS	Jim	EC
NX3SS	Spence	AEC
N3ADF	Jim	AEC
WI3N	Jim	SM

Bowie Health Center (No Airmail)

W9WNH	Hugh
N3WYG	Milford

Doctors Community Hospital (Airmail KD3JA)

KD3JA	Jim

Ft. Washington Medical Center (Airmail AA3WS)

AA3WS	Charles

Laurel Regional Hospital (Airmail N3WSG)

N3XKJ	Jim
N3WSG	Jerry
KJ4ACS	Dave

Laurel City EOC (Airmail WI3N)

WI3N	Jim

Prince George's County
ARES®/RACES Final Drill Report
for
Second Quarter 2011 Health Care Drill
April 5, 2011

Prince George's Hospital Center (Airmail N3ADF)

NX2SS	Spence
N3ADF	Jim

Southern Maryland Hospital Center (No Airmail)

WB2IFS	Jesse
	Robert Butler(non-ham, PG CERT)

PRGE Health Department (Airmail WB3KAS)

WB3KAS	Jim
KA3AHI	Wanda
	Herman Douglas (Emergency Preparedness Officer)

Fire Services Bldg. PRGE EOC
None

NTS Liason

W3CB	Cliff	MDD
NX3SS	Spence	MEPN

Winlink Digital Checkins (Mutual Aide)
KB3LJB George, Cecil Co. ARES EC,
Union Hospital Elkton, MD
KB3KOW Bob, Charles Co. Civista Hospital, LaPlata, MD
N8AAY Eric, Frederick Co. ARES, New Market, MD
N3SEO Frank, Anne Arundel Medical Center, Anne Arundel Co. ARES, Severna Park, MD
KB3ENU Bob, Kent Amateur Radio Society, Kent Co. ARES, Chester River Hospital, Chestertown, MD
N7MNS-7 Mike, Allegany Co. EOC, ARES MD/DC ASEC, Western MD Health Systems
NE3R Joe, Frederick Co. ARES, Independent Hose Company #1 Frederick, supporting Frederick Memorial Hospital
N3TCR Bill, Washington Co. ARES, Meritus Medical Center, Hagerstown, MD. (Simulated)
WB2IFS/3 Jesse, Prince George's Co. ARES, Southern Maryland Hospital Center, Clinton, MD, Webmail via hospital WIFI,

Prince George's County
ARES®/RACES Final Drill Report
for
Second Quarter 2011 Health Care Drill
April 5, 2011

General Check-ins

KB3IJF	Cliff	N3SEO	Frank
KB3NIK	Dave	KB3CFC	Tony
N6UW	Aaron	KB3KOW	Bob

The following Operators checked into the UHF Net

NCS: NX3SS Spence
ANCS: N/A
Net called at: 2003L
Net secured at: 2020L
Total Checkins: 12

Doctors Community Hospital
KD3JA Jim

Prince George's Hospital Center
N3ADF Jim
NX3SS Spence

Laurel Regional Hospital
N3XKJ Jim
N3WSG Jerry
KJ4ACS Dave

Laurel EOC:
WI3N Jim

Fort Washington Medical Center:
AA3WS Charles

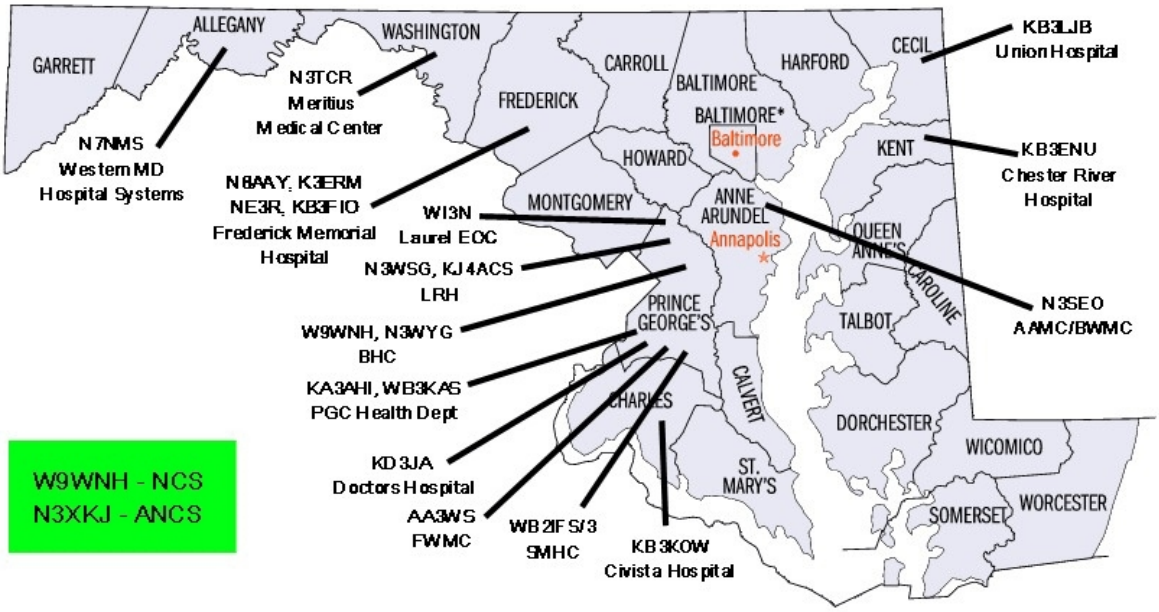
Bowie Health Center
W9WNH Hugh
N3WYG Milford

Prince George's County Health Department
WB3KAS Jim
KA3AHI Wanda
Herman Douglas (PGC Health Dept. Emergency Preparedness Officer)

Test results for 445.975 RMS Packet Node proved successful from the following HCC facilities:
LRH successful with both UHF Nodes
PGHC successful with both UHF Nodes
HD successful with the EOC UHF Node only

Future testing will be conducted from Bowie Health Center, Doctors Community Hospital, Fort Washington Medical Center, Southern Maryland Hospital Center and the Emergency Operations Center.

Prince George's County
ARES®/RACES Final Drill Report
for
Second Quarter 2011 Health Care Drill
April 5, 2011



2nd Quarterly PRGE Hospital Drill April5, 2011 - Health Care Checkins

The graphic above suggests that mutual aide from surrounding counties is doable. However, one can see that we need to encourage other counties in the Section to become more involved in this project.

Prince George's County
ARES®/RACES Final Drill Report
for
Second Quarter 2011 Health Care Drill
April 5, 2011

Implement HF Net As An Alternative Means Supporting Emergency Communications

Lessons learned from Katrina in 2005 proved the need for trained operators with HF communication expertise, voice and digital, including the ability to send and receive email using HF radio frequencies. As a result of Katrina, all communication infrastructures were totally depleted in New Orleans. Amateur Radio short distance communication modes, i.e., RMS Packet Nodes, including local repeaters, were essentially non-existent at ground zero.

Prince George's County ARES/RACES, and Amateur Radio operators staffing Charles County, Civista Hospital, Laplata, MD, took a giant leap forward and successfully incorporated HF operations in the PGC Health Care Coalition, January 4, 2011 First Quarter Drill. On an impromptu operational endeavor, ARES/RACES operated the HF Hospital Net (HFHN) on 3.820 MHz for one hour. This net drew in 11 HF operators, representing conditions that could exist when local area communications are "hard down." The need to get messages outside ground zero was only possible with HF communications. During Katrina, HF operators in all parts of the United States and other countries, as far away as Australia, received EmComm messages from HF communicators deployed to New Orleans. These trained operators knew how to get messages into world wide communication nets so the message for help got to the right Federal, State and local entities providing health and welfare for Katrina victims.

The stage is now set for implementing HF communications as an additional alternative means of getting EmComm messages out of ground zero and into Amateur Radio emergency networks during times of disasters in Prince George's County. Based on funding and acceptance by community hospitals, Health Department and Office of Emergency Management, Office of Homeland Security in Prince George's County, ARES/RACES will continue to chart a course to persuade served agencies to incorporate HF systems in their existing Federal Emergency Management Agency approved emergency communications using Amateur Radio. This takes emergency communications to a higher, more complex approach to EmComm. Prince George's County ARES has taken on this challenge for our organization.

As a continued effort to inform all who participated in the Second Quarter 2011 Health Care Drill, our ARES/RACES members and anyone who may read this report, Prince George's County ARES wishes to take this time to cordially invite everyone to also join in our High Frequency Hospital Net on each Wednesday following the third Monday of each month at 7:30 pm on 3820KHz You will recognize this frequency as being the Maryland Emergency Phone Net frequency.

Prince George's County
ARES®/RACES Final Drill Report
for
Second Quarter 2011 Health Care Drill
April 5, 2011

Please join us during this net. Our intentions are to grow this net to advertise our efforts in supporting the Health Care Coalition in Prince George's County, Md., as well as train operators for HF communication operations. This will be a great way to continue connecting all counties within Maryland/DC as is the desire of our Section Manager, Jim Cross, WI3N. We all know that it will be HF operations that will save the day . . .When all else fails!

The 2011 schedule of our HF Hospital Net is as follows:

April 20, 2011	7:30 PM	3820KHz
May 18, 2011	7:30 PM	3820KHz
June 22, 2011	7:30 PM	3820KHz
July 20, 2011	7:30 PM	3820KHz
August 17, 2011	7:30 PM	3820KHz
September 21, 2011	7:30 PM	3820KHz
October 19, 2011	7:30 PM	3820KHz
November 23, 2011	7:30 PM	3820KHz
December 21, 2011	7:30 PM	3820KHz

The net will be identified as the Prince George's County, Maryland, Hospital Net. Listen up for net control station KA3AHI and others.

We thank you in advance for your support.

Results of the Drill

Overall, the drill was a success. Radio operators understood the mission and successfully met the drill goals of passing Airmail traffic, communicated via VHF and UHF nets .

NCSs conducted the nets quickly and efficiently. Both Nets were busy with many operators checking in. The NCSs moved the Nets along smoothly. NCSs were professional, in charge at all times and was very effective. They conducted the Nets with ease of operation and were in complete control of the Nets as they moved 26 Amateur Radio operators plus two guest through the VHF Net, and 12 operators through the UHF Net.

Prince George's County
ARES®/RACES Final Drill Report
for
Second Quarter 2011 Health Care Drill
April 5, 2011

RMS Packet Nodes Used by PRGE Operators

When a served agency's Internet/email service is down, the RMS Packet Node systems at various locations around the County bridges the gap between the affected area and the outside world to get messages through. In this communication application, nodes are used by the Airmail operators to send and receive emails. In support of this drill, the six nodes used were; W3PGC-10 (VHF and UHF) located at the Fire Service Building, Landover Hills, provided by Office of Homeland Security; WB3KAS-10, located in Brandywine, MD, W3CB-10 (VHF and UHF) located in College Park, MD, and W3LRC-10 provided by Laurel Amateur Radio Club. KB3KOW-10 in Waldorf was identified as the node used by Civista Hospital operators in LaPlata, MD.

There are never enough Nodes to support EmComm situations. We need to have ARES members section wide to seriously consider standing up Nodes in their community. The more Nodes we have, either VHF, UHF or HF, the less chance of not delivering that important piece of traffic.

Prince George's County
ARES®/RACES Final Drill Report
for
Second Quarter 2011 Health Care Drill
April 5, 2011

Monetary Value of Service Provided by ARES® To Served Agencies and Local Government

The national rate for "volunteer" hours is estimated to be $20.00 per hour. Estimated costs of the equipment used (personal radios, computers, repeaters, etc.) will vary with each exercise, length of exercise and location. For this drill the monetary value of the service of trained radio operators and the equipment they provide is on the order of $169,300. The equipment used, operator hours spent and travel to and from the facilities is provided gratis to the county Health Care Coalition by the Prince George's County Amateur Radio Emergency Service®. If this gratis service were not available, and assuming that the county, state or federal government could even duplicate it with private contractors, it is likely that the cost would be greatly in excess of the estimate provided.

Each hospital's radio system is about $2500.00 each
Each repeater is about $10,000.00 ea
Each personal radio is about $300.00 ea
Each personal HF radio system will average about $3500 ea

Item	Each Cost	Number	Total Costs
Hospital Equipment (medical carts)	2500	11	27500
Repeaters used	10000	6	60000
Personal Radios used	300	33	9900
Personal Computers (Airmail)	1000	17	17000
RMS Packet Nodes (all that were used)	1000	13	13000
Planning (writing), travel and set up time @ $20/hr	20	170	3400
Personal HF Radio System	3500	11	38500
Total			169300