# College Hospital Costa Mesa
# Volunteer Amateur Radio Communications in Hospital Emergencies: A Proven Resource

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# KEEPING YOU C  NNECTED

earthquakes, firestorms, flooding, terrorist events, power failures,local telephone system outages, cut cables, switchgear failures.....

**Amateur Radio is a backup communication resource that can help you in large and small disasters!**

**Since 1980 HDSCS has Responded to 115 Emergencies!**

78% involved unit to unit communications and 92 phone failures, a train wreck MCI, several wild fire stanbys and a full hospital evacuation.

- Community Based
- Portable, Adaptable, Flexible
- Self Activation
- Real Time Drills
- In-service to Hospitals
- Medical and Disaster Training and Education

College Hospital Costa Mesa

http://www.hdscs.org

Excellence Integrity Service

Health Care Agency
Health Disaster Management

**College Hospital Costa Mesa**
**Volunteer Amateur Radio Communications in Hospital Emergencies:**
**A Proven Resource**

**Poster Session Presenter: Dave West BS, CLS, CHC, KI6EPI**

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# *AMATEUR RADIO EMERGENCY SERVICE*
## SUPPORTS HOSPITALS IN ORANGE COUNTY

The Hospital Disaster Support Communications System (HDSCS), a part of the Amateur Radio Emergency Service (ARES), was organized in 1980 at the request of hospitals in north Orange County that drill together for disaster preparedness. The initial request for support was the result of a phone outage at St. Jude Medical Center in Fullerton, California and the impressive response of Amateur Radio Operators.

**The HDSCS mission: Backing-up communications that are critical to patient care.**

Members are FCC-licensed Amateur Radio operators who use their own radio equipment. In addition, most hospitals have installed roof top antennas for the use by HDSCS with assistance of the HDSCS antenna team.

The system is made up of *Call-Up* and *Core Team* responders. All members are on *Call-Up*. When there is a communications problem (such as a phone outage) or communications overload, any member may be asked to respond to provide internal or external communications, or both! HDSCS leadership is contacted directly by a hospital for activation. *Core Teams* are made up of individuals who have agreed to respond first to HDSCS in a multi-agency emergency activation. They also commit to respond to a local hospital in the event of an area-wide disaster. If a Core Team responder is not needed by HDSCS, he or she can assist another Amateur Radio emergency group through mutual aid.

Members learn about the uniqueness of hospital communications, county EMS functioning, other emergency services/groups, hospital procedures and disaster plans. Training is provided in such areas as net protocol, message handling, equipment readiness, activation procedures, etc. All members have opportunities to practice each year with the hospitals in individual and multi-agency mass casualty drills. Meetings are held at the hospitals, EMS locations and other sites, such as ambulance companies and Red Cross facilities.

Amateur Radio Operators perform their services ***voluntarily.*** In accordance with FCC regulations, no fees can be charged for our communication service, nor can the individual operators be paid. HDSCS has no dues or treasury. Hospitals provide copying, mailing, pagers, speakers and meeting rooms. EMS provides our blue vests, meeting space and speakers. Care Ambulance has also provided meeting space. Members voluntarily provide badges, service pins, commemorative coins, repeater access and much more.

HDSCS is included in Orange County's Medical Disaster Response Plan and is recognized by the National Disaster Medical System. The group has responded to over 110 emergencies since 1980. FEMA awarded HDSCS the Certificate of Merit for "voluntary communications support in times of crisis" in 1998. In 2003, the group was awarded the National Certificate of Merit by the American Radio Relay League. It has also received commendations from local, state and national entities. In support of community preparedness, HDSCS was recognized by Congressman Dana Rohrabacher in 2004. HDSCS received a proclamation from Orange County Supervisor Bill Campbell and a Meritorious Service Award from Orange County Emergency Medical Services in 2005, our 25th year. At the start of 2010, HDSCS received a Certificate of Appreciation from Orange County Emergency Medical Services in gratitude for 30 years of service to Orange County Hospitals.

The following facilities currently include HDSCS in their disaster plans:

Anaheim General Hospital
Anaheim General, Buena Park Campus
Anaheim Regional Med. Ctr.
Chapman Medical Center
Childrens Hospital of O.C.
Coastal Communities Hospital
College Hospital, Costa Mesa
Fairview Developmental Center
Fountain Valley Regional Med. Ctr.
Garden Grove Hospital
HealthBridge Childrens Rehab
Healthsouth Tustin Rehab
Hoag Irvine
Hoag Memorial Hospital
Huntington Beach Hospital
Kaiser Anaheim Hospital
Kaiser Irvine Hospital
Kindred Hospital-Brea
Kindred Hospital-Santa Ana
Kindred Hospital-Westminster
La Palma Intercommunity Hospital
Los Alamitos Med. Ctr.
Mission Hospital, Laguna Beach
Mission Regional Med. Ctr.
Newport Specialty/Tustin Hospital
North Anaheim Surgicenter
Orange Coast Memorial MC
Placentia-Linda Hospital
Saddleback Memorial Medical Ctr.
Saddleback at San Clemente
St. Joseph (Orange)
St. Jude Medical Center
UCI Medical Center
West Anaheim Medical Center
Western Med.Ctr. Anaheim
Western Med.Ctr. Santa Ana

For more information, contact April Moell, WA6OPS, at (714) 879-6895

**E-mail: emcom4hosp@aol.com** **Weekly net: Tuesdays, 7:30PM on 146.97(-)PL136.5** **Web: www.HDSCS.org**

ARES/HDSCS Info

April 2011

# INCIDENT COMMANDER

COLLEGE HOSPITAL COSTA MESA

**Mission:** Organize and direct the Hospital Command Center (HCC). Give overall strategic direction for hospital incident management and support activities, including emergency response and recovery. Authorize total facility evacuation if warranted.

**ESSENTIAL POSITION**

Date: _____ Start: _____ End: _____ Position Assigned to: _____

Signature: _____ Initial: _____

Hospital Command Center (HCC) Location: _____ Telephone: _____

Fax: _____ Other Contact Info: _____ Radio Title: _____

| **Immediate (Operational Period 0-2 Hours)** | **Time** | **Initial** |
|---|---|---|
| Assume role of Incident Commander and activate the Hospital Incident Command System (HICS). **Consider activating HDSCS (Call-up sheet attached and at PBX).** | | |
| Read this entire Job Action Sheet and put on position identification. | | |
| Notify your usual supervisor and the hospital CEO, or designee, of the incident, activation of HICS and your HICS assignment. | | |
| Initiate the Incident Briefing Form (HICS Form 201) and include the following information:<br>• Nature of the problem (incident type, victim count, injury/illness type, etc.)<br>• Safety of staff, patients and visitors<br>• Risks to personnel and need for protective equipment<br>• Risks to the facility<br>• Need for decontamination<br>• Estimated duration of incident<br>• Need for modifying daily operations<br>• HICS team required to manage the incident<br>• Need to open up the HCC<br>• Overall community response actions being taken<br>• Status of local, county, and state Emergency Operations Centers (EOC) | | |
| Contact hospital operator and initiate hospital's emergency operations plan. | | |
| Determine need for and appropriately appoint Command Staff and Section Chiefs, or Branch/Unit/Team leaders and Medical/Technical Specialists as needed; distribute corresponding Job Action Sheets and position identification. Assign or complete the Branch Assignment List (HICS Form 204), as appropriate. ***For any Command Staff not assigned, complete the priorities summarized in the blue-shaded areas.*** | | |
| Brief all appointed staff of the nature of the problem, immediate critical issues and initial plan of action. Designate time for next briefing. | | |
| Assign one of more clerical personnel from current staffing or make a request for staff to the Labor Pool and Credentialing Unit Leader, if activated, to function as the HCC recorder(s). | | |
| Distribute the Section Personnel Time Sheet (HICS Form 252) to Command Staff and Medical/Technical Specialist assigned to Command, and ensure time is recorded appropriately. Submit the Section Personnel Time Sheet to the Finance/Administration Section's Time Unit Leader at the completion of a shift or at the end of each operational period. | | |
| Initiate the Incident Action Plan Safety Analysis (HICS Form 261) to document hazards and define mitigation. | | |

**HOSPITAL DISASTER SUPPORT COMMUNICATIONS SYSTEM**
**AMATEUR RADIO ACTIVATION**
**FOR**
# College Hospital Costa Mesa

(For drill planning, stand-by operations, inservices or information, call April Moell at 714-879-6895)

**CALL-UP LIST** for **phone outages**, **evacuations**, or **mass casualty incidents**. (Emergency phone lines, pay phones, modem/fax lines, cell phones, or HEAR/REDDI can be used to make initial call for help)

***CONTACT ONE PERSON AND PROVIDE***: name of **HOSPITAL**, closest **CROSS STREETS**, type of **EMERGENCY**, number of **OPERATORS NEEDED**, **WHERE** operators should report on arrival.

**DAYTIME/WEEKDAYS:**

| | | |
|---|---|---|
| Dave West, KI6EPI (lab) | 949-XXX-XXXX | 714-XXX-XXXX |
| Jim McLaughlin, AB6UF | 714-XXX-XXXX | |
| Allen Bullock, KD6LCL | 714-XXX-XXXX | |
| Ken/Cheryl Simpson | 714-XXX-XXXX | |

**NIGHTS/WEEKENDS:**

| | |
|---|---|
| Tom Gaccione, WB2LRH | 714-XXX-XXXX |
| Dave West | 714-XXX-XXXX |
| Jim McLaughlin | 714-XXX-XXXX |
| April/Joe Moell | 714-XXX-XXXX |

****PAGER INSTRUCTIONS**: IF UNABLE TO REACH ANY OF THE ABOVE OR IF LIMITED IN OPPORTUNITIES TO CALL, **PAGE 714-XXX-XXXX**, PUNCH IN **XXX**, PRESS # AND HANG UP. SOMEONE WILL ATTEMPT TO CALL AND/OR COME TO CHECK ON THE HOSPITAL.
**(If there is no response in 15 minutes repeat paging procedure)**

***((To activate hams for an MCI drill use paging instructions))***

**In the event of an area wide emergency, HDSCS communicators will attempt to call and/or come to check on your facility. They will ask the status of: **physical structure; your phone system; power; HEAR/ReddiNet; and your ability to receive patients.**

College 5/08

# Hospital Incident Command System
## Job Action Sheet
## AMATEUR RADIO OPERATOR(s)

Mission: Provide communications to facilitate patient care services during times when normal hospital communications have failed, are disrupted or overloaded, both within the hospital, and between the hospital and the outside community.

Date: _____ Start: _____ End: _____ Position Assigned to: _____ Initial: _____

TAC ID: _____

Position Reports to: Logistics Chief Signature: _____

Hospital Command Center (HCC) Location: _____ Telephone: _____

Fax: _____ Other Contact Info: _____ Radio Title: _____

| **Immediate** (Operational Period 0 - 2 Hours) | **Time** | **Initial** |
|---|---|---|
| Check in at Hospital Command Center (HCC). | | |
| Receive appointment and briefing from the Logistics Chief. Obtain packet containing Amateur Radio Operator Job Action Sheets. | | |
| Read this entire Job Action Sheet and review incident management team chart. Put on emergency medical team identification (blue vest and badge). | | |
| Activate/set-up equipment and check into countywide Amateur Radio net. | | |
| Advise command staff of others on network, e.g. EMS, hospitals. | | |
| Coordinate and establish internal frequencies with other AR operators. | | |
| Identify tactical calls to be used by other internal operators. | | |
| Document all key activities, actions, and decisions in an Operational Log (HICS Form 214) on a continual basis. | | |
| Document all communications (internal and external) on Incident Message Forms (HICS Form 213). | | |

| **Intermediate** (Operational Period 2 - 12 Hours) | **Time** | **Initial** |
|---|---|---|
| Check in with countywide Net Control at least every 30 minutes, if not in contact more frequently. | | |
| Relay hospital status through Net Control when requested by Command Staff to outside agency, e.g. EMS, city Emergency Operations Center. | | |
| Provide relay from outside agencies of incident updates to Command Staff. | | |
| Conduct roll call of any internal operators if necessary every 30 minutes. | | |
| Continue to document communications and activities. | | |
| Ensure your own physical readiness through proper nutrition; fluid intake; breaks and stress management techniques. | | |
| Brief any other incoming operators arriving as to internal network. | | |
| Upon shift change, brief your replacement on the status of all ongoing operations, issues, and other relevant incident information. | | |

| Secondary Operators (Internal Unit Communicators) | Time | Initial |
|---|---|---|
| Put on emergency medical team identification (blue vest and badge). | | |
| Check in at Hospital Command Center (HCC). | | |
| Get assigned location; check with Hospital Command Center operator. | | |
| Determine internal radio frequency, program and check radios. | | |
| Go to assigned location and check in with person in charge. | | |
| Establish communications via radio with Hospital Command Center. | | |
| Brief person in charge of location with whom you can communicate. | | |
| Document any outgoing messages on HICS 213 Messaging Form. | | |
| Document key activities, internal communications to Hospital Command Center or other units, and decisions on HICS Operations Log 214. | | |
| Stay on location until stand down or until relief operator is oriented and functional. | | |

| Relief Operators | Time | Initial |
|---|---|---|
| Put on emergency medical team identification (blue vest and badge). | | |
| Check in with lead operator in Hospital Command Center. | | |
| Get introductions to Incident Commander, Logistics Chief and other key personnel. | | |
| Obtain briefing from current operator, including any pending actions. | | |
| Set up relief operator radio equipment as required. | | |
| Secondary relief op checks in with Hospital Command Center control operator and indicates change operators and conducts radio check. | | |
| Hospital Command Center relief operator checks in with countywide Net Control and advises of change of lead operator and conducts radio check. | | |
| Hospital Command Center relief operator, conduct roll call of internal stations and advise of change and review contact procedures. | | |
| Log the change of shift on HICS Form 214 Operational Log. | | |

| Demobilization/System Recovery | Time | Initial |
|---|---|---|
| When position is deactivated, brief staff of any outstanding issues. | | |
| Secondary operators check out with Hospital Command Center lead operator. | | |
| HCC operator checks out and secures with external Net Control. | | |
| Submit all documentation (HICS 213s and 214s) to Documentation Unit Leader. | | |
| Participate in any on-site debriefings. | | |
| All operators check out with countywide Net Control as they leave facility. | | |

**Documents/Tools**

- HICS Form 207 – Incident Management Team Chart
- HICS Form 213 – Incident Message Form
- HICS Form 214 – Operational Log
- Hospital telephone directory

IRVINE
MEDICAL
CENTER

Mrs. April Moell
Hospital Disaster Support Communications System
P.O. Box 2508
Fullerton, CA 92633

SAMPLE REQUEST

4/10/92

Dear April;

As the Irvine Medical Center Emergency Preparedness Chairperson and on behalf of the Irvine Medical Center Administration I request that Irvine Medical Center become involved with H.D.S.C.S. as the organized amateur radio support for back-up communications during a disaster.

We understand that this is a volunteer effort and that people will respond to the best of their ability.

For all future correspondence between H.D.S.C.S. and Irvine Medical Center, please refer to the "Emergency Preparedness Chairperson" as the contact person.

We look forward to establishing a very vital relationship with H.D.S.C.S. Whatever we can do to facilitate your group's ability to operate out of Irvine Medical Center during a time of disaster will be carefully considered.

Sincerely,

Linda Eilertson

Linda Eilertson, R.N.
Admissions Nurse
Emergency Preparedness Chairperson

# How Often Do Hospitals Need Hams?

Southern California has its share of earthquakes, floods, and fires. But really big disasters are rare, fortunately. On the other hand, hospitals frequently face "little disasters." Backup communications are vital, whether the disaster is an area-wide earthquake or a failure in the hospital's own telephone switchboard. Patients can be at risk in either case.

Thanks to pre-planning and alerting procedures, hospitals in Orange County, California know how to quickly activate Amateur Radio communications support. They do it often. Here are some **statistics** that show why Amateur Radio backup of communications is a real need for hospitals.

- **36 hospitals** and health care facilities in Orange County have agreements with HDSCS for backup communications support. This includes 100% of the acute-care receiving hospitals in the county.
- Since 1980, HDSCS has activated for the following:
    - **115 communications emergency responses** (phone outages, earthquakes, firestorms, etc.)
    - **103 on-site standby operations** (pre-planned and short-notice phone/communications system repairs and cutovers)
    - **174 drills** at hospitals and other agencies, most of which have been multi-hospital drills.
    - **Many other** HDSCS activities at hospitals, including special event communications and demonstrations to employees and the public.
- There were **two HDSCS emergency callouts in 2010 and two so far in 2011**
- About 78% of our emergency callouts have been "isolated" telephone system outages such as switchgear failures and accidentally cut cables. The rest have been communication disruptions due to area-wide perils such as hazardous material release, power failures, earthquakes, firestorms, and flooding.
- The average duration of a HDSCS emergency activation is four hours, but some have lasted for 24 hours or more.
- An average emergency activation or standby operation requires eleven HDSCS communicators.

Summaries of recent callouts and activities are in the News Notes page at this site.

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Now, here's a **pop quiz** for readers who are licensed ham operators. It's easy, the answers are either true or false:

1. If all the phones a hospital in your area failed right now, would anyone at the hospital realize that Amateur Radio could be used as a backup, both for internal and external communications?
2. If so, would the hospital person know how to activate hams to come to the hospital?
3. Does the activation system include multiple points of contact, in case the first call is unsuccessful?
4. Does an organized group of hams exist to support hospitals in your area?

5. Would you and other hams be willing to "drop everything" and respond to an isolated communications failure at a hospital whenever called? To go to a hospital automatically and immediately when a widespread disaster strikes?

6. In a widespread emergency, will hospitals be one of the first agencies supported by local hams, not an afterthought?

7. Are there enough hams in ARES®/RACES to support your hospitals in addition to your commitments to Red Cross, government, and so on?

8. Have the hams received training in the nature of the hospital environment and the special communications needs of hospitals?

9. Do the hams carry "go kits" so they can rapidly set up to provide communications in the hospitals, whether fixed equipment is in place at the hospital or not?

10. Are the hams prepared and trained to provide internal (unit-to-unit) as well as external (hospital-to-outside-world) communications?

11. Is everyone's equipment always organized and ready, with batteries charged?

12. Do you regularly drill with your hospitals?

13. Do these drills include actual participation from hospital staff, not just a check-in to the area net from a hospital lobby?

14. Does staff participation include going through the activation procedure that would be used in a real emergency?

**Scoring:** If the answer to any of these questions is no, then you cannot say that Amateur Radio is adequately supporting hospitals in your area. What are you going to do about it?

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**Hospital employees:** You're not off the hook. Here's a quiz just for you:

1. How is your facility meeting its Joint Commission (formerly JCAHO) requirement for backup to communication systems?

2. Does your Communications Supervisor and Disaster Committee Chair understand what Amateur Radio is and how backup communications using Amateur Radio can help you in big and small disasters?

3. If yes, have you made an effort to contact Amateur Radio operators in your area to form an alliance?

4. If yes, has your Administrator formalized this alliance?

5. If yes, have you discussed all of the following with the hams?

    - Alerting procedures for both widespread and isolated disasters

- Special communications needs such as antennas on your buildings
- Drill opportunities
- Your critical internal and external communications needs

6. If yes, have you followed through with all of the following?

   - Given tours of your facility to the ham group
   - Kept your procedure books current with updated info about the hams
   - Verified your call-up procedures and kept them current
   - Included hams in your facility's JC-mandated community disaster drills

**Scoring:** If any answer is no, take corrective action now. The next disaster could happen at any time. Planning for communications backup is an important part of pro-active patient care.

*When a mass casualty incident occurs, large numbers of patients are transported to area hospitals. Communications channels are heavily used by local officials, rescue workers, medical personnel, media, and family members, often resulting in disruptions within the community and within the hospital. Amateur Radio operators can provide vital communications backup if there is advance planning and a well-tested alerting system.*

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Next page is CODE BLUE: Hams and Hospital Emergencies -- A *QST Magazine* article by Joe Moell

Or go back to the HDSCS home page

This page updated 25 May 2011

# Frequently Asked Questions About HDSCS

## From Administrators and Emergency Planners in Hospitals

**The following information is excerpted from one of the handouts given to Administrators and Disaster Committee members of Orange County (CA) hospitals that affiliate with HDSCS. This site also has a separate page of FAQ from ham operators.**

**Q: Who are these ham radio operators?**

**A:** Amateur Radio operators (sometimes called "hams") are persons from all walks of life who have been licensed by the Federal Communications Commission (FCC) after passing tests on radio theory, communications techniques, and FCC regulations. They use a variety of on-the-air modes such as voice, Morse Code, television, satellites, and computers for communication around the county and around the world. Their stations may be large ones in their homes or tiny hand-held ones on their belts.

There are over 600,000 licensed Amateur Radio operators in the USA. They have thousands of frequencies available to them in nine long-range shortwave bands and six local-coverage VHF/UHF bands. Amateur Radio frequencies are completely separate from both Citizens Band frequencies and the business frequencies used by hospital Maintenance and Security departments.

Amateur Radio is a hobby, but it is also an important public service. Many Orange County hams are involved in organized emergency support communications groups serving city governments, county government, and private agencies such as the Red Cross. There are about two dozen such Amateur Radio organizations in Orange County, one of which is HDSCS.

Ham radio saves lives and protects property when normal communications methods fail, but hams are prohibited from using their radios to provide regular day-to-day business or commercial communications for any company or agency.

**Q: What is HDSCS?**

**A:** The Hospital Disaster Support Communications System is a special group within the Amateur Radio Emergency Service (ARES®) of Orange County, California. It is not directly funded by any agency. Hams join HDSCS because supporting hospitals is their greatest public service interest. HDSCS activates when failure or overload occurs in normal communications systems such as telephone and HEAR/ReddiNet.* Amateur Radio support is voluntary and on a "best effort" basis. HDSCS operators strive to be self-contained, providing all of their own equipment in most situations. Most of them have "go kits" of radio gear and other essentials ready to use at all times.

Ham radio operators joining HDSCS learn about the county's medical communications systems,

equipment requirements, earthquake preparation, maps, hospital expectations, dealing with stress, and so forth. Meetings are held at numerous hospitals during the year to acquaint members with hospital functions, communications needs, and various aspects of emergencies involving medical services. On-the-air nets and drills keep the operators in a state of readiness. Members are activated to hospitals via **Call-up Lists** and **Core Team** assignments.

**Q: How can hams help hospitals?**

**A:** Failure of hospital communications is serious, sometimes life-critical. Here are some scenarios where backup communications can be vital:

- Internal or external telephone failure
- Mass casualty incident, causing overload of telephone system
- Area-wide disaster (e.g. earthquake, flood) resulting in widespread phone outage
- Evacuation of hospital buildings (e.g. bomb threat, gas leak)
- Back-up for the countywide Hospital Emergency Administrative Radio and data network (HEAR/ReddiNet*) when failure occurs
- Transferring large numbers of patients to new buildings
- Safety communications for hospital-sponsored public service events (e.g. walk-a-thons)

**Q: Our hospital has walkie-talkies. Why do we need hams too?**

**A:** In a disaster, you will need every communications resource you can get. Think through some of the following issues and discuss them at your next Disaster Committee meeting:

1. Is it efficient to "tie down" a patient care employee (such as a nurse) with the task of monitoring a walkie-talkie for incoming messages?
2. How many walkie-talkies do you really need?
3. Does every potential user know how to use them?
4. Does the staff know how to communicate effectively when many persons attempt to use their walkie-talkies at the same time?
5. Will the batteries last through a long communications failure?
6. How will you communicate with your physicians, other hospitals, the Red Cross blood bank, and your suppliers? (The power level and frequency assignments of your walkie-talkies will not support such communications.)

Hams can supplement your existing emergency resources. They are dedicated to communications tasks, so that these tasks do not detract your employees from their patient care activities. Hams can communicate with other hospitals and can handle messages to and from outside doctors, suppliers, and other agencies such as Red Cross. They can be a resource to help you obtain additional equipment such as portable generators.

**Q: What are the costs of HDSCS services?**

**A:** HDSCS does not charge any fees for communications support. HDSCS members are all unpaid volunteers. Amateur Radio operators are prohibited by federal regulations from accepting compensation for their on-air operations.

Some of our supported hospitals provide meeting rooms, newsletter copying/mailing, pagers and similar non-monetary support to the HDSCS organization. This is not required, but is greatly appreciated.

**Q: What equipment does our hospital need to buy for the ham operators?**

**A:** All HDSCS members provide their own radio equipment and portable antennas, both for internal (unit-to-unit) and external (hospital-to-outside-world) communications. So Orange County hospitals do not need to purchase, install, or store any radio sets (transmitters, receivers, etc.) for us to use.

For the most effective communications from your hospital to the outside, we ask that hospitals install a small rooftop VHF/UHF antenna with coaxial cable going directly to your emergency Command Post location. This antenna is dedicated to Amateur Radio communications and should not be located next to other communications or paging antennas on the roof. It mounts on a short mast --- no tall tower is needed. Ownership of the antenna remains with the hospital.

Since HDSCS uses several Amateur Radio frequency bands, we prefer multi-band antennas such as the Comet CX-133 2m/125cm/70cm tribander or the Diamond D-130J discone. If the coaxial cable run is over 30 feet, low-loss cable such as Belden 9913 should be used.

**Q: How do we activate the hams when we need them?**

**A:** In a mass casualty incident response, telephones may be functional early on. If so, use the **Call-up List** you have been given. Call until you get one HDSCS operator; he or she will activate the rest of the system. Use the HDSCS pager activation system if you cannot reach an operator on your Call-up List. You can call any time of day or night. We also recommend that you activate us any time the "Watch Mode" is announced over the HEAR/ReddiNet* system.

If your main switchboard fails, wait no more than ten minutes before activating hams. Use one of the following methods to call out:

- Try the **pay phones**. They are often independent of the switchboard system.
- Use a **cellular phone** in a physician's or employee's car.
- Connect a telephone to the **modem line** on a computer system.
- Use your **HEAR or the paramedic radio** to contact Orange County Communications (Control One) or another hospital, then give them the hams' phone numbers to call.

In an earthquake or other natural disaster, the operators on your **Core Team** will attempt to respond to your hospital without being called, as they realize that phone lines may be severed or overloaded.

**Q: What should we do to have HDSCS meet with our safety or disaster committee, or to have hams participate in our internal drills?**

**A:** To arrange this, contact April Moell, your HDSCS Emergency Coordinator. We are interested in working out a presentation to meet your needs and in testing disaster plans with you.

**Q: Do I need to have any licensed ham operators as employees in my facility?**

**A:** No. One of the advantages of HDSCS support is that there is no requirement on your facility to have staff members obtain Amateur Radio licenses or to maintain an Amateur Radio station. Your staff is free to perform patient care while Amateur Radio operators from the community come in to provide backup communications when needed.

Of course we always encourage any staff members who are interested in becoming part of the Amateur

Radio hobby and service to do so, and we would like to know of any licensed Amateur Radio operators working in your facility.

**Q: How does one become a licensed Amateur Radio operator?**

**A:** The best source of general information about ham radio is the American Radio Relay League (ARRL), which is the national association of Amateur Radio Operators. In the "Hello Radio" section of the ARRL Web site, you will find an overview and links to licensing requirements, study guides, etc. There you can also search to find an Amateur Radio club in your local area for further assistance.

**Q: How can I find out about Amateur Radio communications support for our sister hospital, which is not in Orange County?**

**A:** Throughout the USA, there are only a small number of Amateur Radio groups like HDSCS, dedicated to support of hospitals. In most other places, hospital communications would be provided by ham groups that also support city and county government as well as other agencies such as Red Cross. You will have to do a little research to find out how ham operators are organized in your area.

The best source of information about Amateur Radio emergency communications activities at the local level is the Field Organization of the American Radio Relay League (ARRL). There are 71 administrative sections in the ARRL Field Organization. Many sections consist of entire states, but highly-populated states have more than one section. Each section is headed by an elected Section Manager whose primary job is to recruit volunteer hams to serve in critical program areas such as emergency communications. The ARRL Web site has the national list of Section Managers with phone numbers and e-mail addresses.

Here are some other ways to find out about local ham radio organizations:

- Survey your hospital's employees -- there might be one or more Amateur Radio operators who are knowledgeable about the Amateur Radio Emergency Service in your locality.
- Check with law enforcement and fire department officials, as they may have contact with a local Amateur Radio group.
- If there is a local store catering to Amateur Radio operators, inquire there.

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**In the Photo:** The nursing background of Jean Creason KC6PPY makes her a valuable HDSCS member.

**HEAR and ReddiNet® are commercial VHF voice and digital inter-hospital radio communications systems provided by Healthcare Association of Southern California and maintained by the Communications Department of the County of Orange.*

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# Supporting Hospitals with Amateur Radio

# Your First Steps

**By Joe and April Moell**

*Based on 28 years of experience, here is our take on the priorities and issues facing leaders of Amateur Radio emergency groups wanting to provide emergency communications for their local hospitals.*

When a busy hospital loses its telephone service for any reason, it's a potential disaster for the staff and the patients. Admitting orders, requests for supplies, medicine and blood, as well as calls to the Code Blue team are dependent on the telephone and paging systems. Amateur Radio operators can meet all these communications needs while normal systems are being restored, but there are right and wrong ways to do it.

**Pop Quiz**

Let's say you are the leader of a local or regional Amateur Radio emergency communications organization. You have read about HDSCS and you realize that hospitals in your area will need communications help in the next telephone equipment failure or widespread disaster, and that either could occur at any time. What should your first priority be in providing effective support to them?

A. Install an Amateur Radio station in each hospital
B. Hold a class to get the hospital employees licensed
C. Set up alerting plans for hospitals to get rapid help from your group

The correct answer is "C" but far too many hams around the country don't realize it. When we meet them at conventions and other gatherings and we ask if their ARES/RACES groups support the local hospitals, they proudly tell us "yes," simply because they have installed ham stations at all the hospitals. We ask them if a hospital's phones were to fail at that minute, would that hospital know how to contact the ham group? Would enough members of the ham group be prepared to respond immediately for an indeterminate period of time? Far too often, we get a blank stare in return.

Orange County hospitals would not have been helped through communications emergencies over 100 times since 1980 if it were not for our personal preparedness and well thought out alerting system. More about that later, but first let's dig deeper into why answers A and B are wrong.

**Equipment Is Not a Plan**

"Our town just bought a new fire engine! We keep it in a locked barn ten miles outside the city. Now we'll never have to worry about a building burning down."

If someone told you that, you would think it's absurd. What good is a fire engine that's far away from all the buildings that need protecting?

What if you inquired further about the town's fire preparation and you were told that only one person had the key to the barn, nobody knew how to drive the fire engine, and the fire department had a disconnected number. Even more absurd, you say? Yes, but that's a good analogy for the way some ham

groups around the country have been "supporting" their local hospitals.

Some hospital managers from outside our area have told us that when they talk to local ham groups about emergency communications, the first thing the hams want is for the hospital to spend thousands of dollars to install a complete HF/VHF ham station. The hams then say that they don't have enough members in their group, so the hospital should get a bunch of its employees licensed. The hams' leader then says that if they ever need more help, they can just phone him, or get on the air and call.

Is that kind of support something for hams to be proud of? Do these hams have an effective plan that provides both unit-to-unit communications during internal phone failures and hospital-to-outside-world communications during disasters?

**"For hospital-to-hospital and hospital-to-EOC links, HDSCS requests that hospitals install a tri-band VHF/UHF antenna (such as Comet CX-333) with low-loss coaxial cable (such as Times LMR-400 regular or Ultraflex) going to the inside of the HICS-designated Hospital Command Center. Depending on the size of the facility, additional antennas and coax run serving key locations such as the PBX may also be warranted. Permanently installed stations for HF or VHF bands have not been shown to be necessary."**

**Just an Antenna**

HDSCS requests that our supported hospitals install a VHF/UHF antenna with coax going to the inside of the Hospital Command Center. Our operators are all prepared to bring in their own transceivers to connect to the antenna for hospital-to-hospital and hospital-to-EOC communications. Their self-contained setups can also be stationed within the hospital for unit-to-unit communications. We prepare to deploy temporary antennas if the hospitals antenna is damaged or unavailable.

In our experience, only the antennas are needed. Complete permanently installed stations are disadvantageous for several reasons:

1. Far too often, the permanent station is placed in a broom closet or other space that is not close enough to the Hospital Command Center. Being distant from the HCC keeps the hams "out of the loop" and may require an additional go-between person to link the HCC with the ham station.

2. If the station is kept securely locked up, chances are that the hams won't be able to quickly locate someone with a key who can provide access when needed outside of normal business hours. On the other hand, if the station is not kept locked up, it may also be subject to unauthorized use in violation of FCC rules. All or part of it may "disappear" over time or become damaged such that it isn't available when needed.

3. The equipment will become obsolete over time, leading the hams to demand that newer equipment be bought and installed.

4. Hams are familiar with operation of the radio equipment they own, but not necessarily the makes and models that the hospital installs. Unfamiliarity will slow them down when it's time to get on the air.

Installed stations merely create a false sense of adequate preparedness. Over the years, with just a few of our hospitals having pre-installed stations, we have seen each of these problems and have found that in almost every instance a well-prepared member can get into a hospital and get on the air faster and more effectively with his or her own gear than with any pre-installed station.

What about equipment for the HF (long distance) ham bands? Why not use packet radio, Winlink, ATV

and other special modes? Those are frequently asked questions and the answers are here.

We hope that hams around the USA will take our advice and experience and will base their hospital support on portable and flexible community responders instead of depending on pre-installed equipment and licensed employees. It's OK if you think our experience means nothing and that you simply must have complete stations installed in your local hospitals. However, it's not OK to make your Amateur Radio response contingent on the hospitals installing this equipment for you. It's not OK to wait for the hospital equipment to be installed before the ham operators do their personal preparedness. And it's absolutely not OK to get the equipment installed and think that the job is done. You still need a cadre of well-prepared community hams and a robust alerting plan. If you stop before taking those steps, you are doing a major disservice to the hospitals and to Amateur Radio.

**Community Hams are Dedicated Communicators**

Getting hospital employees to obtain ham licenses may be good for Amateur Radio statistics, but it's not the answer to hospital emergency communications. No employee is at the hospital 24/7/365. And when employees are there, they have other tasks to perform. When disaster strikes, they will be too busy to pay attention to the Amateur Radio network and get information that is important to their facility.

It is far better to have a group of outside volunteer hams at the ready, as we do, to go into the hospital and be specialists at performing communication tasks while the hospital folks go about their important patient care duties.

**"You can't claim that your Amateur Radio group provides effective hospital support if the members aren't ready to provide unit-to-unit message handling within the hospitals as well as communications from the hospitals to the outside world. Each member must be prepared to bring in portable equipment to set up and use in units such as the Emergency Department, Intensive Care, Labor and Delivery, Pharmacy, Laboratory, and so forth."**

In our experience, for every area-wide communications emergency such as an earthquake, flood or firestorm, there have been four single-hospital incidents such as telephone switching equipment failures, cables cut by backhoes, and so forth. The isolated incidents are just as threatening to patient well-being as the widespread emergencies. On average, HDSCS has deployed a total of eleven hams for first response and relief in each of these single-hospital phone failure callouts, sometimes lots more. Having a few hospital employees with ham tickets would be far from enough, and when those employees are not at the facility in the wee hours, how will the hospital get ham help?

Only about five per cent of HDSCS members are employed by hospitals. These hospital employees with ham licenses provide a valuable liaison with their facilities. They help educate our members on medical matters and communications needs. They know that they cannot fill the emergency communications needs of their facilities by themselves and that they need the other 95 per cent of the membership to be ready to help them when communications fail. They also know that HDSCS serves 36 hospitals in the county. By joining HDSCS, they are agreeing to serve at any of the other 35 hospitals when needed, in addition to their own.

**Direct Call-up Saves Vital Minutes**

On a daily basis, hospital communications are time-critical and life-critical, so when phones fail, hams must be summoned to the hospital as quickly as possible. There are four crucial components to a successful activation procedure:

1. Direct access to hams
2. Redundancy
3. Regular review and update
4. Tests and drills

A plan for the hospitals to contact the Amateur Radio emergency group directly is vital. Any "middlemen" waste precious time. We have learned that in some other places, RACES and ARES teams insist that hospitals first make contact wityh the fire department or law enforcement agency that sponsors the RACES group. In turn, these public safety officials are supposed to initiate a callout of the hams. This two-step process creates inevitable and unacceptable delays, even if the public safety agency is prompt in responding to the hospital's request.

A single-hospital phone outage is unlikely to become an officially-declared disaster, even though it can be disastrous for individual patients in critical condition within that hospital. How will government officials prioritize the phone failure, compared to a major fire or car chase that may be ongoing at the same time? In a mass-casualty situation, police and fire agencies may not be aware of any resulting hospital phone overload, and a callout for hams to go to the hospitals will not be near the top of their action lists.

Operating within the ARRL Amateur Radio Emergency Service (ARES) structure has made it a one-step process for hospitals to contact HDSCS directly. We know that this saves valuable time. In two recent phone failures, the first HDSCS responders were on site providing communications, with more on the way, when the Orange County Communications Center called to alert us about the same outage. It was good to have the backup of the Communications Center's call, but the hospital's ability to directly alert us earlier had saved an hour of priceless time.

An alerting plan is not adequate without redundancy in both the hams to be called and the methods to call them. No ham operator is available every hour of every day, yet we have had hospital personnel from outside our area tell us, "The leader of the Podunk ham club gave me his card and said if I ever had a communications problem to just call him."

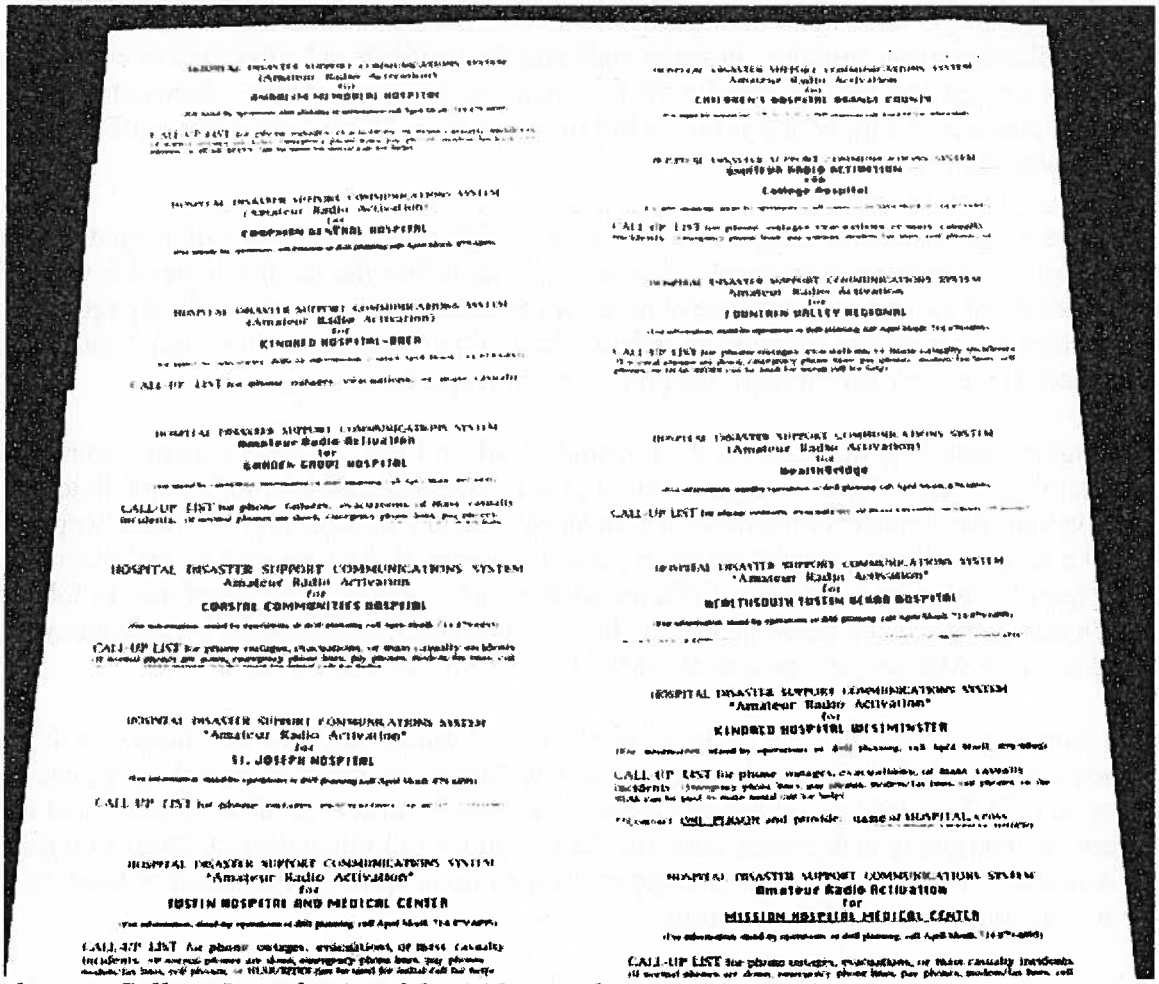
Do you really think that's a plan? What if the ham's phone line is busy or the hospital gets his phone machine? Worse yet, what if the hospital calls two years later and finds out that the ham contact is deceased? (We have heard that this actually happened in another state!)

Every hospital supported by HDSCS is given its own Call-up List of four persons for daytime/weekdays and four for evening/weekends. Depending on availability, the same hams might be on both day and evening lists. In every case, the persons on the Call-up List are normally available by phone at that time of day. They are not necessarily first responders themselves, but they are well versed on the activation procedures of HDSCS and can initiate the callout.

After a HDSCS member on the Call-up List receives an emergency call from a hospital and obtains information on the emergency, it is up to him or her to immediately initiate an appropriate activation of the system. Hospital staff need not take the time to make additional calls for us after the first successful one. Upon being called, the member first contacts one or more of the Coordinators. He or she then responds to the hospital, calls other members to do so or establishes Net Control, as directed by the Coordinator.

Names on our Call-up Lists are a mix of HDSCS Coordinators and experienced members. All are knowledgeable in the information that must be obtained from the calling hospital and they are very familiar with how the Amateur Radio team functions. Because Orange County is a large area, the Call-

up Lists reflect the geographic distribution of the members. Wherever possible, persons on each hospital's list are within a few minutes' drive of the facility.



*On display are Call-up Lists for 14 of the 36 hospitals currently served by HDSCS. Each hospital's list is tailored for its location and updated regularly. The list includes both voice numbers and a unique pager code.*

You are probably wondering how HDSCS gets contacted by a hospital if its phones can't be used. Depending on the nature of the outage, there are several effective alternatives. When switchboard equipment fails and underground lines are intact, HDSCS is frequently contacted from pay phones. Many hospitals have a few emergency phones that are separate from the main system, or a special emergency system that takes over the trunks when the normal switchboard goes down. Though such systems have only a very limited number of lines, they are adequate to activate the Amateur Radio team. Fax and modem lines separate from the main phone system are another possibility.

When underground cables are severed, affecting all lines to and from the hospital, cell phones have been used by hospital staff to call for help. An example was the 16-hour activation at Tustin Hospital in 2004. In another instance, the employee was only able to give us the name of the hospital before his cell phone's batteries failed. But that was enough to get our response going. Orange County has a hospital radio/data system called HEAR/ReddiNet that any hospital can use to contact another hospital, which could in turn alert the hams using its Call-up List. The same relay alert can be done via the hospital's paramedic base radio, if one is present.

Pagers are also an important part of the HDSCS activation system. Even though each hospital has at least three member voice numbers to contact, day or night, it is possible that all might be busy or not answered by a person. This was the case when West Anaheim Medical Center lost phones on the morning of Field Day 2004, when most members were away from home. In a major mass casualty incident or potential evacuation situation, hospital staff may be unable to take the time to call numbers until an answer is received and then to give details to a member. For both of these circumstances, our hospitals have one number to call, which brings a full response from HDSCS by setting off the pagers of all seven of the Coordinators.

For pager response, each hospital is assigned a unique three-digit code which the caller inputs instead of a return phone number. The three-digit number immediately identifies the facility in trouble without the page recipients having to recognize the phone number or call it back. When a three-digit page is received, we attempt to contact the hospital for information on the emergency. If we get through, we get the details we need. If we can't get through, we go into a full response anyway.

An important ongoing task is to maintain all the hospitals' Call-up Lists. Members change work, home, cell and pager numbers often. These changes must be given to the affected hospitals immediately. The flip side of this is that our contacts at the hospitals undergo constant change, too. We must keep checking to make sure that the appropriate contact person is aware of the Call-up List and where it is kept within the facility. When we e-mail or FAX an updated list to any hospital, April has to follow up and verify that it has gotten to key personnel in the facility, placed into the hospital's Emergency Procedures and Disaster Manual, and posted at for the PBX (switchboard) operators.

Our activation plans would be worthless if the hospitals did not utilize them. In the chaos of a disaster, they must remember to call us and know how to do so. The NIMS-compliant Hospital Emergency Command System (HICS), used by all Orange County hospitals for mass-casualty incidents and other situations where an emergency is declared, calls for the Hospital Communications Officer to initiate an activation of Amateur Radio communications support. But a one-hospital switchboard or trunk line failure rarely results in a formal HICS activation.

To insure that hospitals practice contacting HDSCS, we include our activation in the mass-casualty drills that every hospital must perform over the course of a year. Rather than have hams in place within the hospital at the start of the drill, we pre-stage them nearby. Each hospital must go through its call-up procedure before the hams enter and join the net. Besides insuring that the hospitals are familiar with the location of their Call-up Lists and the need to use them, our members get the valuable experience of coming into the hospital and setting up as the simulated emergency unfolds.

**Core Teams Provide Automatic Response**

A tornado, earthquake, hurricane or other major disaster may disrupt all telephone communications over a wide area, making it impossible for hospitals to call for ham help. Hams cannot assume that city and county agencies will somehow know which hospitals are in need of help in such cases. No news is not necessarily good news and hospitals must not be afterthoughts in Amateur Radio disaster response.

Besides being on Call-up Lists, most HDSCS members are Core Team Responders. This means that they have made a commitment that HDSCS is their primary Amateur Radio responsibility in a widespread disaster. They identify the hospital or hospitals closest to their home and work locations, and agree to respond and check on the status of those facilities immediately upon learning of the disaster, without waiting for a call.

An earthquake, tornado or hurricane is its own alerting system. It shouldn't be necessary for hospitals to

call us when one of these occurs, and it isn't. Upon feeling the ground shake, HDSCS members automatically get on the air, begin a net, and check on their closest hospitals. Similarly, when HDSCS members learn of flooding or wildfires within or close to Orange County, the group activates a net and checks on the hospitals most likely to be affected.

Over the years, rapid automatic response has proved vital in several emergencies. After the twin Landers (magnitude 7.3) and Big Bear (magnitude 6.4) earthquakes that occurred during Field Day 1992, HDSCS members immediately left their homes and Field Day sites to check on every hospital in the county (34 at that time). We determined the status of most of them in less than 90 minutes and all of them within three hours. Member Gary Holoubek WB6GCT arrived at Buena Park Doctors Hospital to find it completely dark because the emergency generator had started and then failed. All of the facility's phones were down, too. Besides providing emergency communications, we obtained a priority response to the facility from Southern California Edison.

Immediate Core Team response was important during the Laguna firestorm of 1993. One hospital asked for support and told of difficulty contacting other hospitals in that part of our county. We immediately responded to that hospital and also to three others that were eventually affected, saving valuable time. Moments after the 2002 Placentia train collision took place, we were aware of the disaster and the location. We didn't wait for hospitals to call or page us, so when some of our hospitals called after getting their own Emergency Command Posts set up, our HDSCS communicators were already heading into these hospitals or getting parked, ready to go in.

In November 2008, when we heard reports that part of the Freeway Complex wildfire had jumped the 57 freeway and that Kindred Brea Hospital was in its path, HDSCS immediately established a net and sent four members toward that hospital, even though no request had yet been received. Getting there before traffic was too congested proved worthwhile when officials decided to evacuate the hospital about an hour after the first hams arrived.

**Rounding Up the Hams**

An up-to-date roster of trained and prepared responders is the most important tool for activation of members in a call-up response. Just jumping on a repeater and trying to get anyone you can, as April had to do in 1979, might bring some help. However, it carries the risk of attracting hams that are neither prepared nor suited for communications in a hospital environment. Hams on the HDSCS roster have agreed to be hospital responders, to be ready and to participate in regular training and drills. Even if your community does not have a specialized hospital response group such as ours, there should be a special list of hams identified for initial response to hospitals.

HDSCS members are encouraged to monitor our repeaters whenever possible. A call there will usually yield some members who can respond immediately. But typically, more are needed and we turn to the roster. Besides a complete printout of members with home, work, cell and pager phone numbers for each, our Coordinators have special First Wave lists that identify the eight members who should be called first for each hospital, in daytime or evening. Because the hams on these lists are the ones likely to be closest and most available to the facility in need, our response time is greatly improved.

**"Your ARES group can provide effective Amateur Radio support to hospitals without installing complete stations in them, if you have a well trained and experienced cadre of hams in the community ready to respond with their equipment and a robust system to alert them. But if you don't have enough trained hams and the alerting system, you won't provide effective support, no matter how much pre-installed equipment there is."**

As with the hospital Call-up Lists, our rosters and First Wave lists undergo constant revision. HDSCS

members take our mission seriously and promptly advise Coordinators of any changes in phone numbers and work schedules. Roster updates are disseminated to all members via e-mail as they come in.

In a Core Team response after an area-wide disaster, HDSCS members come up on our designated frequencies and advise Net Control to which hospitals they are responding, based on their proximity at the time. If Net Control determines that some hospitals are being "left out" while others are "overcovered," responders are immediately reassigned as needed. The primary goal in the initial response is to insure that all of our served hospitals are provided with a link to the outside world until their normal communications can be re-established.

**Time to Act**

Amateur Radio operators want our hobby to be known as a national resource. We like to wear T-shirts that say "Amateur Radio, When All Else Fails." But we are no resource at all if important local agencies such as hospitals don't know that we can help and don't know how they can access our services. We aren't a viable resource if we don't plan ahead for how we will activate rapidly and serve these agencies, keep the plans current, and back them up with practice and personal preparation.

Through regular contact with hospitals and with activation procedures in place, Amateur Radio will be of service to them long before all else fails. That's important, because when it comes to patients' lives and well-being, if hams wait until all else fails, they have waited too long.

## Are You Ready?

- **If a backhoe accidentally cut the phone cables into your local hospital right now, would the hospital's staff members know that Amateur Radio is a backup resource? Would they know how to activate hams? As a ham, how would you proceed, once activated?**
- **If a massive earthquake occurred right now, would local hams go out to check on status of all the local hospitals without being officially asked by a government agency?**
- **If you got a call at work, asking you to respond to a hospital phone failure, would you have to go home to get your gear?**
- **If you or a family member were an ICU patient right now and the hospital phones failed, what would you want local hams to know and be able to do to help the staff to maintain life-critical communications?**

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Next page is We Get Letters -- Thanks from hospitals we have served and from public officials

# Frequently Asked Questions About Hospital Support

## From Amateur Radio Operators

**HDSCS receives a steady stream of e-mail from hams around the country with questions and concerns about Amateur Radio support for hospitals. On this page, April Moell gives frank answers to the most frequently asked questions. She also responds to some of the disturbing myths and excuses she hears in discussions at ham radio gatherings. This page has questions from Amateur Radio operators about hospital support. There is also a separate page of Frequently Asked Questions from Hospital Officials at this site.**

**Q: Our ham group is ready to approach the local hospital about ham radio support in emergencies. Whom do we contact at the hospital?**

**A:** Here's a case where it usually isn't best to go to at the top. Except in very small facilities, the CEO and Administrator usually delegate disaster preparedness tasks to others. In most cases, you should start with the Disaster/Safety Coordinator. Only very large hospitals have a Disaster/Safety Coordinator who does nothing else. Usually the position is shared by the Telecommunications Manager, Emergency Department nurse, or Director of Engineering/Facilities. The administrator may need to approve any ham radio participation at the hospital, but it's best if the hospital's Disaster Coordinator initiates this.

**Q: How do I get the hospital to become interested in Amateur Radio support?**

**A:** Most non-hams, including hospital employees, have heard of Amateur Radio. However, an understanding of how hams could help them isn't intuitive. Most people know that hams can talk to foreign countries, and they may even know that hams can help these countries in disasters. But they often don't know about our local public service capabilities and they don't fully understand how we differ from other radio services. To a hospital executive, that handi-talkie on your belt looks just like the Security officer's radio, or the one that the Maintenance worker carries. How could he guess that we could get a message to anywhere in the outside world with it?

Hams are sometimes mistaken for CB operators. Others are reminded of their neighbor with a giant antenna tower. They wonder, "Why should I want that and how would it help my hospital?"

In the hospital environment, hard sell does not work. You will turn off these people if you try to give the impression that hams are infallible, that they simply must use hams because "We're going to save the day!" Envision that they've never met you or any other local ham, they don't have a clue what ham radio is, and you're sitting there with this little HT on your belt. You're a volunteer, like the candy-striper in the gift shop. And you have the nerve to tell them they simply must use you? Just conjure up in your mind how the Administrator or Disaster Planner would react to that.

Instead, have a realistic dialogue about what hams can do and how they might do it. Skip the ham lingo and talk to them in terms they understand. Help them think about the types of messages they might need to send and receive in a communications failure and how ham radio could do that for them. The more you know about the hospital environment, the better you will be able to do this.

We hams must remember that that we are just one of several communications resources. If we understand the other resources, we will be better at expressing how we can fit in. Here's one clue: We're the only backup resource serving hospitals that can support both internal (unit to unit) and external communications, such as hospital-to-EOC or hospital-to-hospital.

Don't just talk about ham help in earthquakes, floods, hurricanes, and the other biggies. As you can see, HDSCS has been activated dozens of times for hospital emergencies that involve communications failures, but very few of them were widespread disasters. Most of them were one-facility phone outages with causes such as switchboard failures and cut cables. When a nurse can't reach a doctor due to a switchboard failure, that's just as big a crisis as it would be if the outage had been caused by a hurricane or earthquake.

We hams tend to think of emergency communications as just being to and from with the disaster site and Emergency Operations Center. But hospitals are more likely to want to contact their own doctors, other medical facilities, suppliers, and so forth. Learn their needs and plan accordingly.

**Q: I have heard that there is a new Homeland Security requirement (or recommendation) that all hospitals must (or should) install ham radio equipment for emergency communications. Shouldn't that help get the hospitals on board with us?**

**A:** We have been researching this apparent "urban legend" for some time and have found nothing of the sort. Hospitals don't have to put in ham equipment or use ham operators in emergencies. However, the Joint Commission* mandates that each accredited hospital must have an emergency management plan. That plan must identify backup internal and external communication systems to be used in the event of failure during emergencies *(EC.4.10, January 2004).* There are many ways that hospitals are meeting this requirement, including VHF/UHF walkie-talkies, cell phones, commercial radio/data systems (such as HEAR/ReddiNet), and Amateur Radio.

As HDSCS has shown in Orange County, there is no such thing as "too many backups." Each backup method has its place, as well as its own advantages and disadvantages in each emergency situation. Ham radio can play an important part in backing up patient care related communications, provided that the hams are well organized and an effective alerting system is in place.

Another Joint Commission requirement is for accredited hospitals to test their emergency management plans. Hospitals offering emergency services must conduct at least one drill per year that includes an influx of simulated patients. The drill assesses the communication, coordination and effectiveness of the organization and community's command structures *(EC.4.20, January 2004).* When Amateur Radio is a part of a hospital's JACHO-mandated emergency communications backup plan, the Amateur Radio operators should always be included in its drills.

**Q: A local hospital has asked for Amateur Radio support. Now what?**

**A:** First, before anything else, you will need a group of local hams committed to hospital support and willing to learn. Next, you need an effective activation procedure for the hospital to use to get ham help.

Many times hams tell me that they are ready to support their local hospitals, but when I ask how (and if) they would be contacted if the trunk lines to that hospital were suddenly cut by a backhoe, they have no answer. There are very good answers to this question, but they require pre-planning and written procedures. The hospital workers might be able to use a pay phone or a cell phone to alert hams or contact the outside world using their Paramedic or county radio system, but they have to remember to make the call and know how to do it.

Giving the hospital just one number to call (your group's leader, for instance) is not enough. What if that person is out of town for the day, or the week? You need redundancy in your plan. HDSCS gives each hospital a listing of multiple member phone numbers for day and night use, plus a group pager number.

**Q: Our ham group supports the Sheriff's Department. They ought to know when there's a local hospital problem and can notify our hams. Why should we have a direct-to-ham alerting system?**

**A:** Ham groups, particularly RACES groups, often tell me that their city or county will notify hams whenever a hospital communications problem happens. But I can tell you from experience in phone outages, it rarely happens. And when it does, the alert to hams is delayed by at least a half-hour, usually longer.

**Q: What about big emergencies such as earthquakes, tornados and hurricanes? I heard that HDSCS self-activates, but isn't that discouraged? Wouldn't it be best to wait until city or county officials assign us to hospitals?**

**A:** Imagine that a major earthquake has just occurred in a metropolitan area. Do officials immediately know the condition of all parts of the infrastructure, including hospitals? Of course not! Communications are interrupted and it will take hours for fire departments to do "windshield surveys," which only asses exteriors of structions and tell authorities little about their interiors.

Here's where hams can take advantage of their wide geographical distribution. HDSCS members self-activate when they feel the shaking (although we prefer the term "automatically activate"). We initiate a net and go out to check on all our supported hospitals.

When a city or county doesn't know the status of its hospitals, then government can't offer help. Even more important, it can't utilize the hospital as a victim receiving center. In contrast to the usual "top-down" activation procedures elsewhere, our "bottom-up" response helps EMS and other government officials quickly learn where the problem areas are. This gets help quickly to the hospitals that need it most urgently.

**Q: What radio frequencies are used by HDSCS?**

**A:** We do all of our emergency communications on Amateur Radio frequencies, including simplex and 14 repeaters on the 144, 223 and 440 MHz bands. We do not operate the hospital's commercial voice and digital radios for them.

**Q: What kind of radios do you recommend that we get the hospitals to buy for us so we can support them?**

**A:** We don't ask the hospitals to buy radios for our use.

Why is it that as soon as an agency says it wants Amateur Radio support, so many hams immediately tell

the agency that it has to buy a bunch of radio equipment? Could it be that too many hams simply don't know how else to respond?

Hospital employees in some parts of the country have told me that their local ham groups insist that they simply can't support hospitals unless and until the hospitals buy complete base stations and even some Amateur Radio handi-talkies. Are you kidding? How many of you hams are wearing your own handi-talkies right now? How many of your cars have radio gear in them? And homes? Why do you need more?

It almost sounds like extortion when hams say, in effect, "We're not going to support your hospital unless you buy us all this equipment." Or, "We want to put up a two-meter repeater on your hospital and if you let us do that, we'll support your hospital." So if the hospital doesn't give you what you want, does that mean you won't help them in an emergency?

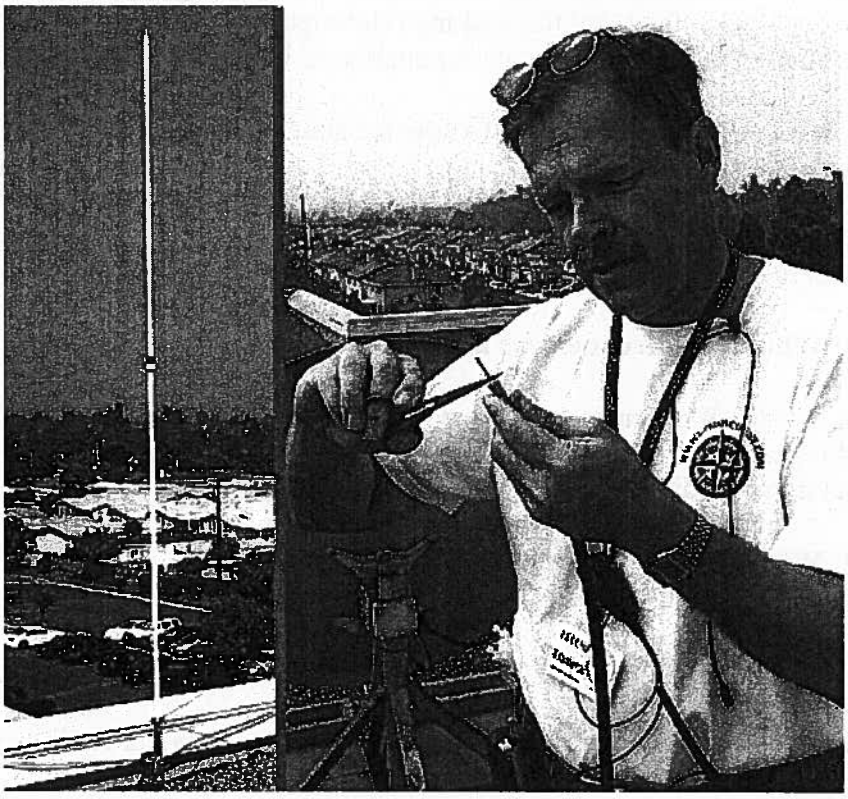
**Q: Why wouldn't a permanent station at each hospital be an important asset?**

**A:** We have found that complete permanent VHF/UHF stations in hospitals are a poor investment. This gear is too likely to become lost, stolen, damaged, obsolete, and unavailable when needed.

Think about this from a practical standpoint: If the equipment isn't kept locked up, all or part of it will slowly "disappear." But if it is locked up, you probably won't be able to get rapid access to it at 2 AM when the emergency hits and the Administrator with the keys isn't around. If the installed transceiver isn't familiar to the ham responding, he or she will waste valuable time figuring out how to use it. The shiny equipment bought today will probably become obsolete in a few years, and the hospital administrators won't appreciate your coming to them again for more money to replace it if you haven't used it for an emergency in the meantime.

**Q: Don't your Orange County hospitals have any pre-installed equipment?**

**A:** All we ask each hospital to install is one or more rooftop VHF/UHF antennas for our county-wide communications, with coax cable going to key areas such as the Disaster Command Post and PBX. Because we use three VHF/UHF bands, we prefer multi-band antennas such as the Comet CX-333 2m/125cm/70cm tribander. Many times the coax run must be over 100 feet, so we recommend Times LMR-400 or similar low-loss cable.



Each of our HDSCS members keeps his or her own "Go Kit" ready for use, with VHF and UHF transceivers, batteries, AC supplies and cables to attach to the hospital's antennas. If the hospital's antenna becomes damaged or unusable, our hams are ready with their own antennas. Our members know their own equipment, so they

can get on the air rapidly without
having to find the instruction manual for an unfamiliar pre-installed transceiver.

Note that a few hospitals in Orange County haven't installed antennas yet, but HDSCS still willingly supports these facilities as best we can. We never make our support contingent on any monetary expense by a hospital.

**Q: But the hospital found a mop closet where we could put our own complete station. Wouldn't it be a good idea to have our own space?**

**A:** A mop closet is no place for a ham station for emergency use. Out of sight, out of mind! The ham doing outside communications needs to be close to the people that he or she is communicating for, which usually is the staff at the Disaster Command Post.

If you put your station for external communications in an out-of-reach place, then you will need an additional communicator at the Command Post to relay messages between Command Post and the station, using VHF or UHF simplex.

**Q: Our local RACES group is planning to use packet radio, ATV and SSTV for emergency communications. Won't that be helpful to hospitals, too?**

**A:** It's very unlikely. Far too often, we find that Amateur Radio emergency preparedness groups are technology-driven instead of needs-driven. That mindset leads hams to push technologies that aren't truly practical or don't fit the mission.

Instead, we should always carefully analyze the agencies we want to support, assessing their typical communications paths and the types of messages that they send most often. If other supported agencies such as Red Cross and Weather Service have a real need for visual and digital communications, that's fine. But we have found that hospitals don't.

Some hams have been promoting packet radio to us for years. They claim that we should install packet in all our Orange County hospitals, because we might have to send lists of patients of supplies. But here's the reality: In 28 years and all of our emergencies, we've never had one in which we had to send messages with long lists of patients or supplies, and we've never had one where packet would have saved us a significant amount of time. The same is true for ATV, SSTV, and so forth.

What hospitals really need is basic, reliable voice communications. We concentrate on that, first and foremost.

**Q: In some northwestern and southeastern states, there is a big push to install stations for HF (long-distance shortwave frequencies) in all the hospitals. Why isn't HDSCS doing that?**

**A:** We have determined that HF stations in our hospitals are not necessary to meet our mission. In over 26 years of HDSCS support in drills and actual emergencies for dozens of hospitals, we have NEVER had an occasion where we needed HF frequencies to handle emergency traffic for a hospital.

We've handled lots of emergency messages. They have all been either unit-to-unit within the hospital, or between the hospitals and community resources such as physicians, utilities, other hospitals, Red Cross, EMS and the like. This traffic is most effectively handled by voice on short-range VHF and UHF frequencies, either via repeaters or simplex. We have never needed long distance HF communication,

but if we ever do, we have made plans to pass the traffic out of the hospital on VHF to local home stations that have HF capability. We could also relay the message via the county EOC, where a RACES HF station is located.

Some have claimed that HDSCS needs to be able to communicate with the state Office of Emergency Services in Sacramento after an earthquake or other wide-area disaster. But the established governmental protocol is quite different. If any Orange County hospital needs additional resources, the first request must go to Orange County Emergency Medical Services Agency. If the county can't provide, a request for resources from the state would be made by the OC-EMS officials. If normal telephone communications are not available, that request would go via RACES from the Orange County EOC, not directly from the hospital. The plan in your area is probably similar, because these are established protocols that are compliant with NIMS (National Incident Management System) and SEMS (Standardized Emergency Management System) policies.

**Q: But in our state we have hurricanes that can wipe out communications over many counties, so we need HF stations in our hospitals. Don't you agree?**

**A:** There is nothing wrong with having HF capability at your hospital(s). But don't assume that the installed station, its antenna and its power source will survive the hurricane in operating condition. And please don't delude yourself and the hospital staff into thinking that just because a station is there, the hospital is ready for any disaster. If the hospital doesn't have all of the other important elements of Amateur Radio support (a trained cadre of community hams with portable equipment, an activation plan, liaison with other ARES/RACES/ACS groups, regular drills and so forth), then your HF station may be of little real value and will give a false sense of security.

**Q: We have both ARES® and RACES in our county. Which is better for hospital support?**

**A:** There is a wide variation in policies of ARES and RACES groups around the country, so there is no hard-and-fast answer to this question. In some places, ARES and RACES are combined, with members wearing RACES hats during emergency activations and ARES hats for non-emergency public service communications. In other places they are separate organizations, with RACES responding to government agencies and ARES helping non-government entities.

The important thing to consider is that all of your local hospitals must to be able to get help in isolated emergencies quickly, with no "middlemen." In widespread emergencies, all hospitals should be checked right away, to verify that communications have not been disrupted, or if they have, to get help to them quickly.

A lot of folks tout dual ARES/RACES membership for individual hams and also combined ARES/RACES groups. Here's what I've seen around the country: When a combined ARES/RACES group supports hospitals and a disaster occurs, RACES procedures rule. That means a top-down response, where hams wait for an official to give them assignments. That mindset assumes that "no news is good news." You simply can't assume that with hospitals. There's nothing clairvoyant about county or city officials. How are they going to know that a hospital has a communications problem if the hospital can't communicate it to them?

That's why we believe that ARES is much more appropriate for supporting private hospitals than RACES. ARES permits automatic activation (our Core Team response) in widespread disasters such as earthquakes and hurricanes. ARES also facilitates direct contact from hospitals to hams for quick callout during isolated (one hospital) phone failures. By comparison, RACES procedures usually mandate a formal activation by a government official or agency, which consumes valuable time.

**Q: How do we fit hospital support into our existing ARES/RACES organization? Should there be a separate appointed Emergency Coordinator?**

**A:** That depends on the nature of your area and the other agencies/governments being served by the local hams. Here in Orange County, as I write this, we have a strong county-level RACES organization and 22 city-level RACES groups. ARES in our county is completely separate from RACES. At this time, OCARES primarily supports the Red Cross and hospitals, although there are other ARES members-at-large who are available to support cities and industries at the non-government level.

Orange County has over 30 hospitals, and I believe strongly that hospitals must have a priority response at the beginning of any major incident. Patients' lives and well-being are immediately at risk in any communications failure, and every hospital is an important resource for the community, especially in incidents where people have been injured. So we formed a specialized ARES organization (HDSCS) just for hospital support, with its own ARES EC and six Assistant ECs. We maintain a separate membership roster, meaning that all HDSCS members are also ARES members, but not all ARES members are HDSCS members.

In a rural area with only one or two medical facilities and other ARES/RACES activities such as SKYWARN, it might be OK to have a common roster and to train every member for a potential response to the hospital. But for any an urban area where there is a concentration of hospitals, I think a separate ARES organization such as ours would ultimately be best. Next best would be a sub-group of ARES members who are dedicated to hospital response and make extra effort to be involved in hospital drills and meetings. The rest of the ARES folks would be potential additional responders and should have at least some education about responding to the hospitals.

**Q: Should some of our ARES hams be totally dedicated to hospitals, or could they also respond to Red Cross and other agencies? Couldn't they also belong to RACES and ACS?**

**A:** In the mid-1980's, there was a major HAZMAT incident involving 3 cities and the Red Cross in Orange County. When city emergency managers made calls to activate their RACES radio responders as the incident progressed, they discovered that the majority of them were already deployed with other cities or the Red Cross. That soured most of these managers on the idea of multiple emergency group affiliations and it led to rigid membership requirements. Many RACES groups in our county now insist that hams that are on their rosters cannot be members of any other ARES/RACES organization.

By contrast, HDSCS does not insist on exclusive membership. Since about 80% of our activations involve only one hospital and are not widespread incidents, we aren't about to tell a ham who belongs to Red Cross or a city RACES group that we don't want him or her in HDSCS. But we do inquire about the other emergency group memberships and obligations of our members, and we take that into account in our planning. We ask new members to declare their group of "primary allegiance" in responding to a multi-agency or area-wide disaster.

Members who declare HDSCS as their primary response are placed on specific call-up lists for one or more of our hospitals. In addition to responding first to HDSCS callouts, these primary responders also identify a hospital that they live or work close to as their Core Hospital. In a major disaster, area-wide power failure or phone outage, these hams automatically deploy to check on their Core facilities, without waiting for a phone call. If they are somewhere else in the county or nearby in another county when a major disaster strikes, they come up on our designated frequency, indicate their locations and availability. Net Control then directs them based on the needs at that time. If Core Team responders are not needed and another agency could use additional support, we release them.

Hams declaring another group as primary are considered as only general "Call-up" members of HDSCS. In a multi-agency incident, they are asked to notify HDSCS if their primary groups do not activate or when they are no longer needed by that group. This has worked very well, because HDSCS is often active sooner and longer than the other groups. We've gotten relief operators following earthquakes after some cities deactivated their EOCs.

We don't let our members cop out and say, "I'll go out with whichever emergency group calls me first." That ambulance-chaser mentality pits one ham group against another when disaster strikes. It leaves group leaders wondering how many potential responders they really have.

**Q: Our ARES members are taking the ARRL Emergency Communications Course. What other education do they need to be ready to support hospitals?**

**A:** We've always been pretty good as hams in terms of the communications and message training that we do. But my observation is that hams aren't spending enough time to learn about the agencies they support, the procedures that agencies use on a day-to-day basis, some of the language and the nuances. I'm not expecting hams go out and take a medical terminology course. But if you're going to be supporting hospitals, it would be good to know a few terms like "stat," "Code Blue," "Code Red" and the triage terminology. Do you know what HEICS is? You're not going to be an intelligent intermediary for handling messages in an emergency if you don't get familiar with the hospital and its most important communications needs.

Learn to match in appearance and attitude. When you go into a hospital, you're going into a very professional environment. You have to fit in with that if you want to be taken seriously. You don't need to wear greens or even a uniform, but you won't be welcome in grubby clothes.

When you talk to hospitals and train your group members, emphasize both internal and external communications support. The hospital's business-band walkie-talkies help with internal (unit to unit) messages. Cell phones can do external calls (from hospital to outside doctor, for instance). However, ham radio can do both, which is a major advantage.

It's very important to participate in the hospitals' drills. And your participation needs to be realistic. It's no good for hams to come in an hour ahead, set up equipment in the lobby, independently transmit a few ham-created messages to the EOC or disaster site, and then go home without participating in a critique. That's what college students call "dry labbing," and it hurts our cause more than it helps.

Make the hospital folks test their activation procedures as part of the drill, so they will get used to the idea of calling hams right away when communications fail. It's frustrating to delay the start of hams' drill participation while waiting for that call, but if you don't do it, the hospital will get the impression that somehow hams will have ESP and show up without being called when a backhoe cuts their trunk lines.

Practice some message-handling with the staff. Don't expect that everything in the drill is going to be wonderful and you're going to get all kinds of good messages. You have to take them by the hand sometimes. Let them know to whom you can communicate and suggest a simulated message. Encourage some third-party interaction, where they talk directly to their counterparts at other facilities on ham radio.

Participate in the hospitals' critiques after the drills and be an active listener. You may find an opportunity to explain how ham radio could be of more assistance.

HDSCS does a lot of "standby operations," coming in during the wee hours when new hospital phone or electrical systems are cut in, and so forth. It gives us good experience and sometimes these operations have turned into real communications emergencies when things have gone wrong.

**Q: Our small ARES group already supports Red Cross and some other agencies. We can't support our hospitals now because we just don't have the people.**

**A:** Maybe you and your emergency group need to take a look at your priorities. Every hospital is a vital organ in the community. If it needs help in a disaster and it has no communications to the outside, lives could be lost. What could be higher priority for ARES communications than that?

Not every potential emergency involves all the other agencies your group serves. A single-hospital switchboard failure isn't going to require response by Red Cross.

If you need more members to add hospital support to your ARES activities, get busy recruiting and training them. On the other hand, if you tell a hospital official, "We don't have enough people to support your hospital," you may never get another chance with that facility.

**Q: We're planning on having a special licensing class just for hospital employees. Isn't that best for having radio operators who know the hospital?**

**A:** Across the country as I talk to hams and emergency groups, I observe this mindset far too often. A little critical thinking will show that basing your hospital support plan only on licensed hospital employees is a bad idea.

First, there are legal issues to consider. FCC regulations prohibit hams from communicating on their bands on behalf of their employers and from accepting compensation (including wages/salaries) for communicating on ham radio frequencies for anyone. (FCC 97.113) Spend some time with ARRL's FCC Rule Book to make sure you fully understand all the ramifications of these provisions.

There are practical issues also. Let's say that two doctors, a pharmacist and a biomedical specialist get their ham tickets. What happens to them in a mass-casualty incident or another disaster when patients descend on the hospital and communications are overloaded? They'll have to be hard at work at their regular jobs, of course. They won't be able to provide backup communications.

In an emergency when phones fail or are overloaded, hospitals need dedicated communicators. By that I mean listening as well as transmitting. We all get caught up in being ready to transmit an important message, so we forget that one of our most important values is our ability to be able to receive important information, too. If you're a hospital employee, busy with your hospital tasks, perhaps you can stop to jump on the radio and ask for something you need. But what if somebody needs something from you? You're not listening, because you're busy doing your hospital tasks. So you need non-hospital people as part of hospital communications backup support, because you can't wear all of those hats.

On average, we've needed 11 hams for each of our emergency callouts, including a Net Control, base station, and operators in the medical facility or facilities. Having a few hospital employees would be far from enough. It is far better to have a cadre of outside volunteer hams at the ready, as we do, to go into the hospital and perform communication tasks while the hospital folks go about their emergency medical duties.

Hospital-employed hams can serve as valuable liaisons, but they can't do the job by themselves.

**Q: The hospitals' drills and meetings are usually during the day on weekdays. That's hard for those of us who work.**

**A:** Weekday hospital drills and meetings are a fact of life. If hams keep whining about this, hospitals will never believe that Amateur Radio is a credible, reliable resource. I hear this excuse a lot from hams in other areas, and it really annoys me because these same hams are quite willing to take time off from work for the fun parts of our hobby. Remember last Field Day? How many local hams took the Friday before to prepare and maybe even the Monday after to recuperate? Same for the hamfests and other contests.

I know that one of the reasons HDSCS has been so well accepted in Orange County is the fact that we are represented at the major meetings with hospitals. We also participate in all the drills, regardless of day of the week or time that they occur. The hospitals trust we will be there, and we have been.

**Q: Our ARES group has an agreement to support the hospital in a disaster. But the hospital's new Disaster Coordinator doesn't seem to know anything about it.**

**A:** That's the real world. There's a much high turnover rate in hospital personnel these days. We hams must be willing to continuously re-explain and re-educate.

When was the last time your ARES EC made contact with the disaster planners at all of the local hospitals? When was the last time your ARES group participated in a hospital drill?

Be willing to review your role over and over again with the hospitals. You simply can't assume that all your local hospital people know and remember all that we can do. And who knows what kind of internal training they do? I can educate a Disaster/Safety coordinator over and over, but how much does he or she pass on to the rest of the hospital staff? So be willing to teach it and review it with multiple people, every year, multiple times per year. And make sure that the ham communicators are prepared to educate as necessary every time they respond.

Offer to teach. I go to many Disaster/Safety committees, Head Nurse meetings and hospital in-services to explain Amateur Radio. And we ask to be taught, too. Invite hospital people to your ham group's meetings. Have them explain to you how the Laboratory works. Have them tell about Radiology, the burn center, and so forth.

It's unfortunate, but from what I've seen, far too many hams don't have good staying power in public service. We want to be EC for a year or two, help the hospitals for a year or two, and then get out. I understand that it's your hobby, but if you're serious about helping hospitals, you need to develop regular contacts, regular participation, and they need to see you regularly. I go to about two dozen hospital disaster and drill planning meetings every year. I also have Assistant Coordinators who attend some meetings. When the hospital folks don't see me, they usually see somebody else they know, a regular.

**Q: The Administrator of our local hospital says he isn't interested in Amateur Radio help right now. Why bother?**

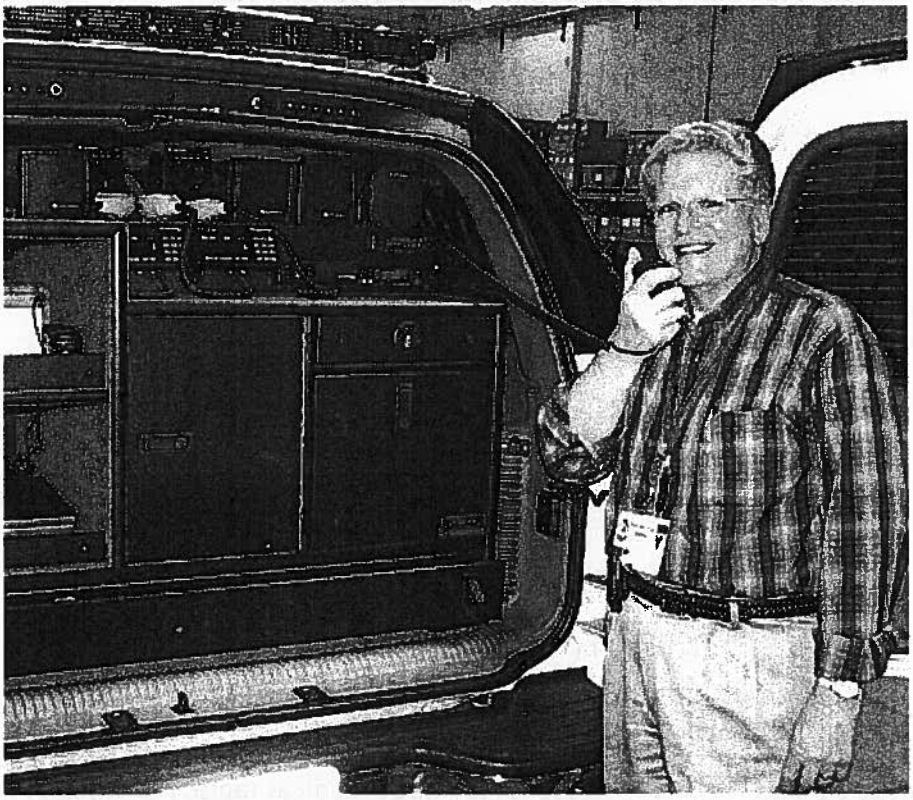
**A:** Hospitals are very self-sufficient entities. The reality is that they will get along without us. But they will get along far better with us in a disaster, if they understand how to use us and we know how to help them.

Sometimes we hams get whiny when a representative from a local hospital says, "No thanks, we really

don't think we need you." But why should we be surprised at this initial response, if we haven't had a chance to prove ourselves? Hospital folks don't intuitively understand and envision our capabilities.

And then we hams tend to make things worse because we don't go ahead and prepare anyway. Since when does a hospital saying it doesn't want you now mean that it won't ever really need you? Yes, it's true that some hospital Administrators aren't willing to take a chance on hams. But does that mean hams shouldn't be preparing to support them in the next big disaster anyway? We're not doing our emergency services for the benefit of those Administrators. We're doing it for the ultimate benefit of patients in the hospital beds. Be prepared, so you'll be ready in case you're invited in later, or a major emergency forces the issue.

**Q: It must take lots of money support all those hospitals. What kind of budget does HDSCS have?**



**A:** Zero! We have no dues and no treasury. We don't accept cash gifts and we like it that way. We've seen far too many other ham groups getting bogged down in fiscal matters, creating dissention that detracts from the mission of the group.

Yes, we have expenses, like this Web site, that are paid out of members' pockets or donated by friends of the group. Our supported hospitals have been quite willing to help us with other needs, in gratitude for our past support to them. At present, two hospitals are providing pagers for key HDSCS members. One hospital provides copying and mailing of our member newsletters. Another hospital donated two beautiful banners to us. Orange County EMS provided our blue emergency communicator vests through a grant, and so forth.

Perhaps you have heard the expression, "No money, no mission." We don't believe that it's always true. We've learned that you don't need lots of money to provide Amateur Radio support to hospitals. You just need committed volunteers.

**Q: Could you please provide the HDSCS manuals as a guide for our own group?**

**A:** Because they include specific details about Orange County hospitals and other sensitive information, our HDSCS member manual, other member documents and training materials aren't available to non-members. As a guide to planning support for hospitals in your area, here is a list of topics included in these documents:

- Activation (call up and pager) procedures for single hospital phone outages and mass casualty incidents

- Instructions for automatic (Core Team) response in area-wide Disasters (e.g. earthquakes)
- Protocols to be followed upon arrival at hospitals
- Our repeater/simplex frequencies, their tactical references and other access information
- Equipment preparedness, for go-kits and vehicles
- Personal and home preparedness
- Hospital response groups (EMS color-coded nets)
- Hospital locations, driving directions, and maps
- How hospitals are organized and how they respond in a crisis (e.g. HEICS and EMS System)
- Other hospital communication systems such as HEAR/ReddiNet, county radios, etc.
- Special procedures for HAZMAT incidents
- Message forms and special instructions for medication ordering
- Other in-hospital issues, e.g. appearance, confidentiality, stress, dealing with media
- How HDSCS interfaces with EMS, NDMS, NIMS and other agencies/systems
- Frequencies and contact information for other local and nearby ARES/RACES groups
- Glossary of important medical and EMS terminology

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**In the Photos** **At top:** Almost every large medical facility is expanding, remodeling, or planning to do so. Many California hospitals must rebuild to meet stringent earthquake standards that go into effect beginning in 2008. Every time a hospital "cuts in" a new phone system or interrupts utilities for some other construction-related reason, there is an opportunity for a "standby operation," where hams provide backup communications during the changeover. **In center:** HDSCS member Roman Kamienski KG6QMZ helps install an Amateur Radio VHF/UHF antenna atop an Orange County hospital. **Near bottom:** Bob McCord K6IWA operates ham radio gear in the Orange County EMS command vehicle. The HDSCS mission has expanded in recent years to include support to the Orange County Healthcare Agency and EMS.

*Formerly the Joint Commission for the Accreditation of Hospitals (JCAH, 1951) and the Joint Commission for the Accreditation of Healthcare Organizations (JCAHO, 1987)

Next page is RF Interference in Hospitals -- Our common-sense approach to avoiding this problem

Or go back to the HDSCS home page

# HOSPITAL
## Disaster Support
## Communications System

EmCom4Hosp@aol.com
www.hdscs.org

Emergency Coordinator:
April Moell WA6OPS

A specialty part of the
Amateur Radio Emergency Service
in Orange County since 1980

Asst. Emer. Coordinators:
Paul Broden K6MHD
Tom Gaccione WB2LRH
Dennis Kidder W6DQ
Jim McLaughlin AB6UF
Joe Moell KØOV
Jon Schaffer W6UFS
Cheryl Simpson KD6MWZ

## USING YOUR AMATEUR RADIO RESOURCE

The following are recommendations for activating the Hospital Disaster Support Communications System (HDSCS). Please keep your Call-Up list available for use in emergencies. It is recommended that copies be kept at PBX, in the nursing office, engineering and with the disaster/safety coordinator. For information, in-services, drills or stand-by operations call April Moell, 714-879-6895.

### EMERGENCIES (phone disruptions, power outages, mass casualty events, evacuations etc.)

Should any condition exist (for 10 minutes or more) at any time of day that has, or could, compromise your communications, internal or external, use your **Call-Up list** to activate the Amateur Radio Operators. We will respond as quickly as possible. Often the first radio operator will arrive within 30 minutes but a full compliment of operators for your hospital could take an hour or more to arrive and be in place. **Don't hesitate to call.** Even if phones return to normal operaton during, or just after our response, we will have at least one responder stay for a minimum of 30 minutes to make sure the system is functioning under load.

**In an area-wide disaster such as an earthquake**, the HDSCS communicators will respond as soon as possible to check on your facility. It is also possible that a communicator(s) may try to call on the phone to determine your status. Even if you indicate that things appear OK, they may call again to verify that the phone system has remained operational and that there are no further problems. Should they not get through on the phones, they will respond to check on and support your hospital as soon as possible.

### STAND-BY OPERATIONS (phone and/or power upgrades; any situation that might threaten communications or cause them to be down periodically or completely during and of the work)

Please contact April Moell or her designee with as much notice as possible. We know that sometimes hospital staff may not receive much notice, but HDSCS needs whatever lead time can be provided since our volunteer responders must modify work and/or family schedules to participate.

### DRILLS

**Single hospital drill:** Please give us one week notice. Activating for an emergency is easier than for a drill. Many of our operators must plan to take time off to participate in drills and all need to modify their schedules. For the drill to be valuable for us, and for your facility, we need to establish our volunteer communications network. This allows us to have the necessary contacts to respond to simulated messages generatee in the drill, e.g. Red Cross, suppliers etc.

**Multiple hospital drill:** We need at least two week notice to plan for larger scale drills, particularly if held during the day. To identify and coordinate the number of volunteer radio operators needed for a large drill, advance notice is necessary. Requests are usually made by the hospital representative at the local hospital disaster drill committee meetings, but can be made to the HDSCS coordinator via phone or email.

### EMPLOYEE DISASTER/SAFETY FAIRS

HDSCS members are happy to participate in your disaster/safety fairs. The interactions with employees are extremely valuable in helping them understand how the HDSCS can help and how to make use of the Amateur Radio operators in an emergency. Give us as much notice as possible.

# HOSPITAL DISASTER SUPPORT COMMUNICATIONS SYSTEM

## *HIPAA and PRIVACY ISSUES*

### Related to Use of Amateur Radio for Emergency Communications

The issue of patient confidentiality is not new. Hospitals have always been expected to protect patient privacy and confidentiality of records. As an Amateur Radio group supporting hospitals, HDSCS doesn't function in a vacuum. **Anything transmitted via Amateur Radio, referencing any patient care, is at the request of, and authorization by the hospital staff.** Learning about the hospital environment has helped our radio operators to be advisors as well as communicators. If asked to give a patient name, a communicator should alert the staff that absolute privacy cannot be guaranteed when transmitting over the radio, **It is the responsibility of the hospital personnel to make the decision to release names and any patient information. It is an issue of urgency *versus* the need for confidentiality.** HDSCS communicators have had to do this over the years and did so again recently during a phone outage at a local hospital. To minimize the chance of communications being monitored, communicators use the lowest power possible, and if available, use frequencies with minimal activity, limiting the chance that a transmission might be overheard.

Amateur Radio operators are only functioning as the communications system when phones aren't available. Communicators should avoid observational reporting during an incident unless specifically asked to do so. And communicators must be taught to be very careful around the media during, and after, any hospital emergency. It is not the role of Amateur Radio operators to give out any information to the media about what they have seen or heard. Remind the radio operators to always refer media to the hospital PIO for specific information. Should the radio operators want to write something for the local paper or an Amateur Radio newsletter , encourage them to review the information with the hospital PIO or disaster/safety coordinator before doing so.

*Now on to HIPAA.*

**1)** The big push for these regulations was concern about patient information on computers and people getting access to sensitive information such as diagnosis, social security numbers etc. Hospitals are mandated to protect this information. The hospitals in Orange County, California, started reviewing Amateur Radio involvement in the fall of 2002 in preparation for the implementation of the act in April 2003. One hospital looked extensively at this with their Risk Management and HIPAA managers. Their conclusion was, "HDSCS would be exempt from HIPAA for disaster purposes. As long as there is no post incident publishing of patient identifiable information, which has never been an issue, our folks don't see any reason to do anything special." Not one of the 34 Orange County supported hospitals has expressed concern about our communications support. But do understand HDSCS has a long time working relationship with these hospitals, has provided inservices for safety/disaster committees, been in drills, responded in real incidents, and is integrated into the county's mass casualty response plan.

**2)** All of the Orange County acute care hospitals utilize a software product known as ReddiNet, as an emergency medical data communications system. It was developed by the Hospital Association of Southern California (HASC) and was initially purchased by the county for the paramedic receiving hospitals. It is essentially a commercial packet system. It does have a victim search function that can be activated in a major incident that would include patient name, location, age and diagnosis. In their response to inquiries about HIPAA in May of 2003, HASC made the following statements: "The HIPAA Privacy Rule governs conduct of health plans, health care clearing houses, and health care providers who transmit any health information in electronic form in connection with certain standard transactions. HASC is a non-profit corporation whose membership includes hospitals throughout Southern California, but HASC does not directly provide medical or health services to patients and does not wish to furnish, bill or pay for health care in the normal course of business." Because of that they are not an entity covered by HIPAA. They are not

considered a business associate either because they don't receive protected information for the purpose of carrying out their regular activities. (The same can be said about Amateur Radio groups) Now what about the search function of the ReddiNet product? This function is provided so hospitals might help answer questions from anxious relatives as to the location of a patient. The data is considered Patient Health Information (PHI) for HIPAA purposes. The exchange of this information between hospitals and counties in a disaster would be permitted under HIPAA without express patient authorization. There is a responsibility on the part of the hospital to provide individuals with the opportunity to agree or object to disclosure unless trying to do so would interfere with its ability to respond to the emergency. Also note that the ReddiNet product is a private network and not subject to the security requirements of an Internet product.

3) Every physician's office, pharmacy and hospital now provides patients with handouts on Privacy Issues. In those you can find information helpful in understanding the issue as it relates to using Amateur Radio in an emergency.

Here are some quotes from a St. Joseph Health System (Orange, CA) handout that are relevant to Amateur Radio communications when normal hospital communications fail.

**"We (the hospital) may use and disclose medical information about you for your TREATMENT."** Guess what? When HDSCS has had to communicate about a patient at the hospital's request in an emergency, it has been related to a treatment issue.

**"Unless you (the patient) tell us otherwise, we will list your name, location, general condition, and religious affiliation with the hospital directory. The information may be provided to members of the clergy, to others who ask for you by name, including the media. We may release medical information about you to a family member, friend, or any other person involved with your medical care."** (An Amateur Radio operator using a name on the radio in an emergency at the request of hospital staff to inform a physician or assist in getting a family member notified certainly doesn't violate HIPAA/Privacy concerns. The radio operator is just the communications device here. The hospital staff make the decisions as to content.)

Speaking of notification, the hospital handout further states, **"We may use or disclose information to notify or assist in notifying a family member, personal representative, or another person responsible for your care, of your location and general condition.**

Hospitals also are expected to keep an "Accounting of Disclosures Log" so if the hospital staff think there might be an inadvertent disclosure, it should be listed.

Following Hurrincane Katrina, Health and Human Services issued clarification on the ability of hospitals to share patient information in emergencies. The California Medical Information Act also states this and even identifies radio transmissions to relay information for "treatment purposes."

If a facility is planning to use Amateur Radio to back up communications in emergencies, make sure the local Amateur Radio emergency group is trained and educated about the hospital and its emergency procedures. Representatives from the group should attend hospital drill and disaster planning meetings when possible to stay informed. And the group needs to be involved in drills and prepared to support the hospital for internal and external communications. Amateur Radio operators familiar with local hospitals and trained with portable equipment can be an invaluable resource in an emergency that compromises communications or when normal communications have failed. Encourage the Amateur Radio operators supporting your facility to be prepared to support ***any*** emergency from a phone outage, mass casualty incident, to a major area wide disaster. To the patients, and those who care from them, it's the loss of communications, not the cause, that matters.

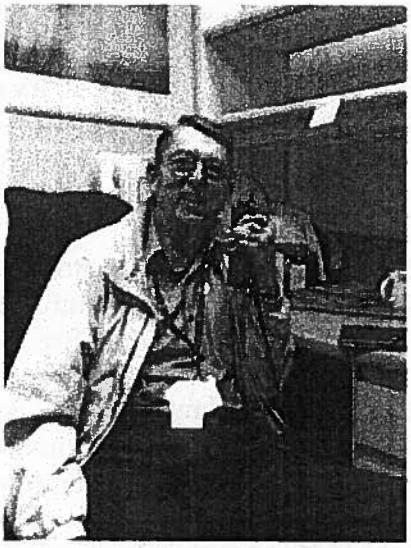
In any communications failure when a hospital must use alternate communications, there is back-up from HIPAA and The Joint Commission for such. To not use those communications resources, if available, might cause more of a problem for the hospital and the patients it cares for.

# HDSCS News Notes

**Recent activities of the Hospital Disaster Support Communications System**

## Emergency Responses

● **Emergency Activation #115:** At 10:28 AM on April 5, 2011, **eight HDSCS leaders received a group page with the code number for Saddleback Hospital in Laguna Hills.** Attempts to call the hospital were met with "all circuits busy" recordings. An on-air net formed immediately on two HDSCS repeaters with Joe Moell KØOV at first and later Cheryl Simpson KD6MWZ and April Moell WA6OPS as Net Controls. Ken Simpson W6KOS set out for the hospital and KØOV phoned others who live or work nearby to activate them. W6KOS arrived at 11:03 AM with others close behind. The hospital could not receive calls from the public and outgoing calls were partially disrupted, too. Unit-to-unit phone connections were functional but there was concern that they might fail also. HDSCS operators provided a backup to the hospital-to-community phones with Net Control's home phone number given to Orange County Communications for incoming calls as needed. Repair work by the phone provider, both on- and off-premises, continued throughout the day and our network continued also with three HDSCS relief operators arriving in the afternoon. Shortly after 5:30 PM, it was determined that the phone system had been sufficiently restored that Amateur Radio communications were no longer needed. Our operators secured and left at 6 PM. In addition to W6KOS, the HDSCS members responding to the hospital were (in alphabetical order) Tom Hall N6DGK, Scott Lolmaugh WD8ICK, Jim McLaughlin AB6UF, Pete Martinez K2PTM, Dave Popko AF6TN, John Walker AC7GK and Dave West KI6EPI.



● **Emergency Activation #114: A power surge, probably from lightning, caused failure of computer hardware in the telephone and data switch at Childrens Hospital of Orange County** (CHOC) on March 21, 2011. All internal phones on the units went down, as well as lines to the outside. At 5:33 AM, April and Joe Moell, WA6OPS and KØOV received a call from a switchboard operator who was using an emergency tie-line. April and Joe immediately established an on-air net and began a "first wave" callout of members who live close to that facility to respond with their go-kits and to establish communications for the hospital. April called the Supervisor at Orange County Communications agency to notify that CHOC could not receive incoming calls and offered her number for incoming call relay. This resulted in several calls, including one regarding transport of a young patient coming in for an urgent appendectomy. As they arrived at CHOC, HDSCS members set up internal communications from the most important units including the Emergency Department, Neonatal Intensive Care, Pediatric Intensive Care, and Pharmacy. Our Command Center and internal Net Control was near the telephone switchboard in the basement. Message handling continued through the morning, with some of the first-to-arrive operators being replaced by other HDSCS members when they had to leave for work or other commitments. By 10:45 AM, some of the phones were working but additional repair components were being awaited from a supplier. HDSCS continued to provide unit-to-unit and hospital-to-community messaging as needed, including coordination of patient treatments and a request for blood. At 1:02 PM, the repair crew announced that the phone system was back to normal except for some voicemail functions. HDSCS members remained on station for 30 more minutes as they always do to insure that phone systems are stable. Then they secured the operation. Ken Simpson W6KOS and Clay Stearns KE6TZR were the first operators to arrive at CHOC and to establish outside

communications. Later arrivals for internal communications and relief were (in alphabetical order) Paul Broden K6MHD (pictured at right), Tom Hall N6DGK, Bill Hegardt K6WIL, Rebecca Katzen KI6OEM, Dale Petes KI6ANS, Sam Stratton W5AGX and Fred Wagner KQ6Q.

● **Emergency Activation #113:** Shortly after 9 AM on October 1, 2010, an **intense thunderstorm cell passed northward over the city of Fullerton. Lightning set fire to palm trees and knocked out power** over most of the city. When power failed the first time, April Moell WA6OPS checked on the status of St. Jude hospital. Generators were operating but the telephone system was very busy with many internal calls. When city power came back and then failed again a few minutes later, St. Jude activated HDSCS by group paging. Paul Broden K6MHD arrived quickly at the hospital and was stationed at the Command Center that was being set up. Next to arrive was Bill Preston KZ3G, who provided communications from the PBX area. Telephones were overloading and no incoming calls were being accepted. A third operator, Ken Simpson W6KOS, provided communications from the St. Jude Medical Plaza across the street from the hospital, where surgeries and other procedures were being performed that day. Although the hospital staff told us that no more operators were needed at that time, we placed other members on standby, ready to respond rapidly. They included Monique Beringer KI6RVT, Patricia Beringer KI6RVU and Dale Petes KI6ANS. Our communications support continued at the hospital until shortly after 11:30, when power was fully restored and telephones were stable. Dennis Kidder W6DQ, April Moell WA6OPS and Joe Moell KØOV made callouts and served as base station support for this HDSCS emergency net.

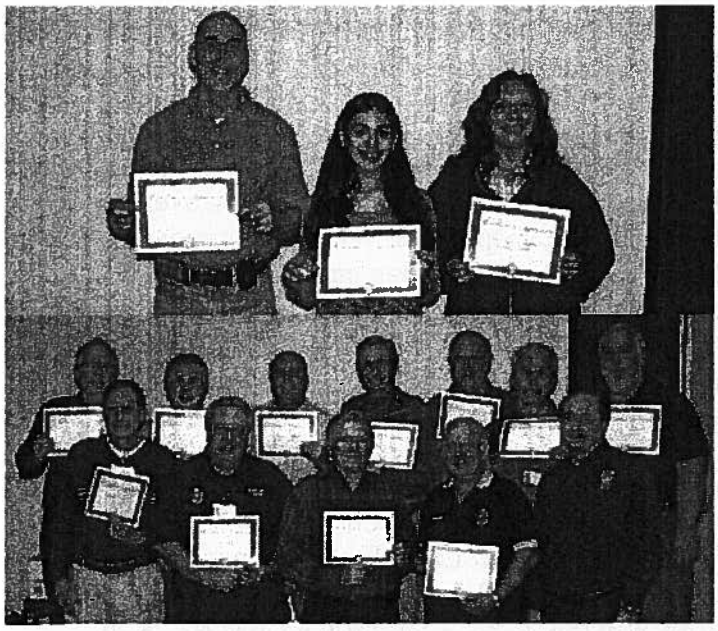
● **Emergency Activation #112: A power failure in the City of Orange took down the telephone system at Chapman Medical Center** at about 9:20 PM on June 23, 2010. When the lights went out in their own home, HDSCS members Ken and Cheryl Simpson (W6KOS and KD6MWZ) followed our established procedures by checking on the status of nearby hospitals. When they could not make telephone contact with Chapman Medical Center, Ken immediately set out for that hospital with his "go kit" and Cheryl contacted April and Joe Moell (WA6OPS and KØOV), who started calling out more HDSCS members to respond. When Ken and Richard Deen KI6HWY reached the hospital at about 9:45 PM, all internal and external phone lines were non-functional, so they established communications with Cheryl and April via Amateur Radio. April and Joe continued to call HDSCS operators to go to the hospital to provide communications between units therein. As technicians worked to reset the phone system, HDSCS members provided links for the hospital's Dmergency Department, Medical/surgical Unit, Intensive Care Unit, Subacute Care Unit, Geriatrics Unit and the Laboratory. All phones became functional again for internal and external calls at 11:30 PM and our operations secured at midnight when it was determined that the phone system was stable. Other HDSCS members serving in the hospital units were Paul Broden K6MHD, Tom Hall N6DGK, Justin Miller KI6AFZ and Bill Preston KZ3G.

● **Emergency Activations #110 and #111:** At about 2 AM on October 5, 2009, **the telephone switch at Western Medical Center in Santa Ana went down because one of its storage battery modules failed.** The hospital was left with just a few direct lines and its "power-based phones" (some internal extensions that connect directly to external trunk lines when the switch is inoperative). HDSCS Assistant Coordinator Cheryl Simpson KD6MWZ received a page about the internal emergency that was being declared and she immediately activated HDSCS in accordance with our standard procedures. The first HDSCS operator arrived at the hospital approximately 35 minutes after the page and immediately established communications with the outside from the Hospital Command Center. Additional HDSCS operators arrived soon thereafter and were stationed in Emergency, Surgery and Radiology departments. These are key units because WestMed Santa Ana is one of the three trauma centers for Orange County, where emergency surgery is performed frequently. Several important medical messages were passed by our ham operators including a "stat" request to Radiology for a portable X-ray unit and technician. As daybreak brought greater activity to the hospital, plans were made to add operators in additional units as needed. Temporary repairs to the telephone switch were completed about 10 AM and our operation secured one half hour after that. Taking shifts in the Hospital Command Center were Allen Bullock KD6LCL and Bill Hegardt K6WIL. Operators in other units were Ken Simpson W6KOS, Dave West KI6EPI and Larry Zysman N6BNM. Outside base operators were April Moell WA6OPS, Jackie Schaffer WA6AKP and Cheryl Simpson KD6MWZ. The hospital immediately made plans for permanent repairs, but before they could be implemented, another failure took place at about 5:30 PM on October 6. Again, HDSCS received an alert page and promptly responded. We assisted with communications as needed until the system was operational again at 8 PM. Responders to the hospital were Allen Bullock KD6LCL, Bill Hegardt K6WIL, Pete Martinez K2PTM and John Walker AC7GK. Base station operators were as before.

● **Emergency Activation #109:** Shortly before 6 PM on Tuesday, January 20, 2009, **HDSCS coordinators received a page from St. Jude Hospital, advising a "Code Triage" situation.** HDSCS Coordinator April Moell WA6OPS called the hospital's House Supervisor and was advised of a hazardous materials incident, with the possibility of 10 to 12 incoming patients. At that point, the **House Supervisor's telephone failed and attempts to call back to the hospital gave "all circuits busy" indications.** April immediately sent Assistant Coordinator Paul Broden K6MHD to the hospital to provide communications backup. He arrived in 16 minutes and met with Tim Beringer KI6RVT, the hospitals Safety Officer. Hospital staff members were deploying a decontamination tent but as it turned out, it was not needed. The situation de-escalated quickly when it was determined that the cause was pepper spray and that fewer victims would be received. WA6OPS contacted the OC-EMS Medical Disaster Management Coordinator. She and K6MHD served as liaison to that agency, answering inquiries about hospital diversion status. Communications returned to normal and our operations secured at 7 PM.


● **Emergency Activation #108:** Shortly before noon on Saturday, November 15, 2008, a **wildfire**

**broke out northeast of Brea-Olinda High School,** possibly sparked by embers from the "Freeway Complex Fire" that had been burning near the 91 Freeway at Green River Road since 9 AM. There was concern that this fire could threaten the Kindred Healthcare specialty hospital in Brea if it jumped westward over the 57 Freeway. HDSCS activated an on-air net and members checked in for possible service. When the fire did jump the freeway about 12:45 PM, **four members were immediately dispatched to the hospital so that they could get there before traffic became too congested.** At 2:45 PM, as the operators were in place and in communication with the HDSCS net from Kindred Brea, a page was received from St. Jude hospital and a call came in from Placentia Linda hospital, each requesting Amateur Radio operators. St. Jude was receiving heavy smoke and had gone on diversion status. Placentia-Linda had been advised that it might receive chronic pulmonary patients from skilled nursing facilities. HDSCS members were immediately sent from the net to these facilities. At 3:15 PM, **a decision was made to close and evacuate Kindred Brea, moving 36 patients by ambulance to four other Kindred hospitals** in Orange and Los Angeles Counties. Ten of these patients were on ventilators. HDSCS operators assisted with communications during the evacuation and our net kept officials at Orange County Emergency Medical Services Agency apprised of the situation. All patient-carrying ambulances departed by 6 PM. Operations continued at Placentia Linda Hospital until 6:20 PM. St. Jude requested that three of our members remain in critical areas, so relief operators were sent as needed. The net continued through the night and secured at 2:15 PM Sunday. Responding to the hospitals were Ken Allen KI6NBB, Monique Beringer KI6RVT, Patricia Beringer KI6RVU, Tim Beringer KI6RVS, Paul Broden K6MHD, Louie DeArman K6SM, Reid Green KF6LOK, Bill Preston KZ3G, Robbie Preston KI6KYX, Ken Simpson W6KOS, Rick Soikkeli AE6RS, Clay Stearns KE6TZR, Alex Valdez K9BLK, Fred Wagner KQ6Q, Dave West KI6EPI and Woody Woodward NJ6W. Serving as Net Controls were April Moell WA6OPS, Joe Moell KØOV and Jim McLaughlin AB6UF. Tom Gaccione WB2LRH operated from the Orange County Health Care Agency's Departmental Operations Center and kept the officials there informed.

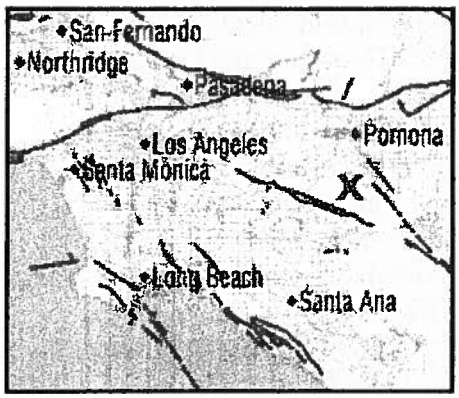


**In the photo at left:** On December 3, 2008, Orange County Emergency Medical Services Agency awarded certificates to the HDSCS members who provided communications to hospitals and OC-EMSA during the Freeway Complex Fire (see above). Presenting was Mike Steinkraus N6PTN, OC-EMSA's Medical Disaster Management Coordinator. Upper frame (L to R): Tim Beringer KI6RVS, Monique Beringer KI6RVT and Patricia Beringer KI6RVU. Lower frame back row: Joe Moell KØOV, April Moell WA6OPS, Tom Gaccione WB2LRH, Fred Wagner KQ6Q, Ken Simpson W6KOS, Alex Valdez K9BLK and Ken Allen KI6NBB. Front row: Louie DeArman K6SM, Dave West KI6EPI, Clay Stearns KE6TZR, Jim McLaughlin AB6UF and Mike Steinkraus N6PTN. Not pictured: Paul Broden K6MHD, Reid Green KF6LOK, Bill Preston NZ3W, Robbie Preston KI6KYX, Rick Soikkeli AE6RS and Woody Woodward NJ6W.

● **Emergency Activation #107: Telephones and data systems at St. Jude Hospital** in Fullerton went down suddenly at about 9:30 AM on Wednesday, September 24, 2008. The hospital's Telecommunications Manager

immediately sent a group page to HDSCS leaders, who responded by establishing an on-air net and dispatching the closest available members to the 300-bed facility. Ken Simpson W6KOS was first to get there, followed shortly by Dale Petes KI6ANS and Louie DeArman K6SM. Tom Gaccione WB2LRH and Alex Valdez K9BLK arrived a few minutes after that. They set up communications between the telephone switchboard area (PBX), Intensive Care Unit, Emergency Department and Operating Room areas. Operators remained on site until all repairs and adjustments were complete and the system was stable, securing at 1:30 PM. Cheryl Simpson was the first External Net Control and made calls to activate members, relieved by April Moell WA6OPS. Joe Moell KØOV was too far away to respond at the time, but he also made calls to get other responders to the hospital.

● **Emergency Activation #106: An equipment failure caused a sudden outage of all telephones and data services at Hoag Memorial Hospital** in the early evening of September 11, 2008. April Moell WA6OPS received a page at 6:48 PM and immediately activated HDSCS. Two members, Galel Fajardo KB6MOH and Scott Lolmaugh WD8ICK, were close by and responded to the hospital immediately, arriving within 45 minutes of the activation. Close behind were Jim McLaughlin AB6UF, Bob Evans W9TQC and Dave West KI6EPI. Although the hospital's initial assessment indicated that a five-hour outage was possible, it was fortunate that some phones began to come back on line before 8 PM. As repairs were completed, the hams began to stand down and operations were secured at 10:40 PM. Ken Simpson W6KOS, Joe Moell KØOV and Tom Gaccione WB2LRH were staged and ready to respond if the need had continued. April Moell WA6OPS was Net Control and base station operator.




● **Emergency Activation #105: A lunchtime earthquake of Richter magnitude 5.4, centered in the Chino Hills, caused an immediate activation of HDSCS** on July 29, 2008. Several members established an on-air net within seconds and began to check the status of our supported facilities by telephone and personal visit. Fourteen Orange County hospitals were within 15 miles of the epicenter, making them our highest priority. Communications disruptions at these hospitals were brief except at Kindred Healthcare in Westminster, where phone lines to the outside went down for approximately 30 minutes. Fred Lochner WA6FRA discovered this when he went to check on the hospital. He remained to provide backup communications until service was restored. Minor injuries from falling parts of a drop ceiling occurred at a therapy and wellness center in Brea that is operated by St. Jude Hospital in Fullerton. Paul Broden K6MHD went to the Command Center at St. Jude and was prepared to communicate with the Brea site, but that building was quickly evacuated and a response there was not needed. Within 90 minutes, our net had determined the status of all Orange County hospitals and had passed this information to OC Emergency Medical Services Agency. We also established communications with the Amateur Radio nets of Orange County RACES, Los Angeles County ARES and Orange County Red Cross. HDSCS Net Control stations were Paul Broden K6MHD and April Moell WA6OPS. Other participating members were Bob Bertels N6VAN, Tom Gaccione WB2LRH, Fred Lochner WA6FRA, Susan Hafner KD6YMH, Dennis Kidder W6DQ, Jim McLaughlin AB6UF, Joe Moell KØOV, Dale Petes KI6ANS, Jackie Schaffer WA6AKP, Jon Schaffer W6UFS, Cheryl Simpson KD6MWZ, Ken Simpson W6KOS, Clay Stearns KE6TZR, Matthew Stofle W7MWS, Alex Valdez K9BLK, Corky Walker KG6YWY, John Walker AC7GK, Dave West KI6EPI, Woody Woodward NJ6W and Larry Woolf KF6YCM.

● **More activation reports**

# Hospital Disaster Support Communications System

**Our Mission:**
**Supporting communications that are critical to patient care**

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## Latest News Headlines


Click for photos of Field Day 2011

- **Hear HDSCS founder April Moell speak** at the 2011 ARRL Southwestern Division Convention in Torrance, California. Her presentation **"Amateur Radio's Role in the Hospital Incident Command System (HICS)"** will be on Saturday, September 10 at 10:00 AM in Rooms 2-4 of the convention hotel. HDSCS will also have an information table in or near the convention exhibit area for Q&A.

- **HDSCS participated in the annual ARRL Field Day communications exercise by setting up several stations in front of Huntington Beach Hospital during the weekend of June 25-26, 2011.** Our Field Day activities included a free class for Scout radio merit badges that was attended by over 30 Scouts. We had many visitors including Congressman Dana Rohrabacher. Click here for a page of photos from Field Day 2011.

- Twenty HDSCS members **provided communications for hospitals in the annual Golden Guardian disaster exercise** on May 18, 2011. The scenario was flooding in northern California