Assistance for Emergency Health

Abstract: The public health agencies of Pacific island nations have the responsibility of maintaining health during national emergencies. Assistance for completion of this task is available to the Pacific islands in the form of technical, informational, educational and humanitarian aid. Assistance for Pacific island preparedness and response may originate from local, jurisdictional, regional and international levels. The Internet also now offers many useful resources for disaster education, collaboration and aid. This article discusses mechanisms and resources that Pacific island health officials may utilize to promote emergency health within their own jurisdictions.

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I. Introduction

Assistance for Emergency Health

Assistance for emergency health is available to Pacific public health and medical agencies from groups at the local, regional and international level. This assistance may be categorized as follows:
- Technical: assessments, consultations and capacity-building
- Informational: internet search engines, journals, listservers, email, media
- Educational: schools, distance learning, workshops, conferences
- Humanitarian: food, water, shelter, medical care, pharmaceuticals, money, human resources, logistical support and communications

II. Local assistance

Local assistance during an emergency comes from our neighbors … from the next home, the next village, the next island, and the next nation. This type of assistance is usually the first to arrive after a disaster and in many cases will have a remarkable impact upon the final health outcome of the disaster victims. There are good examples of this cooperation and working together among jurisdictions that Pacific island nations may also benefit from knowing.

During the 1970’s Los Angeles and other cities in California began to grow into large suburbs comprised of separate and independent city and county jurisdictions. Also during this time the area was prone to wildfire. The state soon experienced a phenomenon where wildfires, (ignoring political boundaries as they are known to do), would cross jurisdictions and thus necessitate that jurisdiction emergency responders work together to battle the blaze. They were successful. There is a saying that, “All disaster response is local”. Local people are most successful when they work together.

So, along with fighting the fire, these local jurisdictions also developed a series of successful methods and approaches for emergency response that are now used throughout the entire U.S., and in many areas of the world. Examples of these successful methods of helping your neighbor include the following:
1. The Incident Command (or Management) System: A system for organizing activities and managing staff to work together during an emergency response.
2. Mutual Aid Agreements: pacts made by jurisdictions in advance of a disaster committing to help each other and work together.
3. Memorandums of Understanding: pacts made between jurisdictions and other groups in advance of a disaster that describe how they will help each other and work together.

III. Mutual aid agreements and memorandums of understanding

Local agreements

There are many opportunities for jurisdictions to develop Memorandums of Understanding (MOU’s) and/or Mutual Aid Agreements (MAA’s) that may occur on a local level. These agreements establish in advance the roles and responsibilities that may be expected among both governmental and non-governmental partners. These agreements may be formed between various sub-national agencies on a state or local level. They may also include agreements between the jurisdictional government and private firms or merchants. Table 1 is a list of examples of private firms and

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Table 1. Examples of private firms and groups that may be included within MAA's and MOU's

<table>
<thead>
<tr>
<th>Local &amp; regional medical, nursing &amp; hospital societies</th>
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<tbody>
<tr>
<td>Private health clinics</td>
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<tr>
<td>Private mental health agencies</td>
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<tr>
<td>Private family service agencies</td>
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<tr>
<td>Hazardous material information services</td>
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<tr>
<td>Poison control information services</td>
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<tr>
<td>Non-governmental charitable organizations, (i.e. Red Cross, Peace Corps, etc)</td>
</tr>
<tr>
<td>Private funeral homes</td>
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<tr>
<td>Veterinarians</td>
</tr>
<tr>
<td>News media</td>
</tr>
<tr>
<td>Heavy construction companies &amp; equipment operators</td>
</tr>
<tr>
<td>Refrigeration companies</td>
</tr>
<tr>
<td>Water tanker companies</td>
</tr>
<tr>
<td>Power plants, utility services, pipeline companies</td>
</tr>
<tr>
<td>Portable lavatory suppliers</td>
</tr>
<tr>
<td>Radio supply &amp; repair services</td>
</tr>
<tr>
<td>Churches</td>
</tr>
<tr>
<td>Amateur radio clubs</td>
</tr>
<tr>
<td>Hardware stores</td>
</tr>
<tr>
<td>Grocery stores</td>
</tr>
<tr>
<td>Local charities and community service groups</td>
</tr>
<tr>
<td>Local &amp; regional medical, nursing &amp; hospital societies</td>
</tr>
<tr>
<td>Private health clinics</td>
</tr>
<tr>
<td>Private mental health agencies</td>
</tr>
<tr>
<td>Private family service agencies</td>
</tr>
</tbody>
</table>

Regional agreements

The constitution of the Federated States of Micronesia says that the Pacific Ocean serves to link the island nations rather than separate them. This statement illustrates the valuable asset of good neighbors that Pacific islanders may call upon when faced with disaster. This good neighbor policy is not only limited to the natural goodwill among Pacific island peoples but also reflects the common economic, cultural and family ties that also exist here.

In times of disaster, it's expected that neighbors help neighbors. This expectation may best be planned for and detailed in advance of the event in the form of MAA's and MOU's. This promotes regional relationships and serves to facilitate a more cost-effective sharing of common resources. Pacific regional public health, emergency management and medical organizations have already served as an effective network for emergency health collaborations. These organizations may also serve as platforms for regional cooperation in both preparedness and response efforts.

International agreements

In the case of a major disaster involving this jurisdiction, there are multiple national governments and international non-governmental organizations, NGO's, that would likely respond with assistance. Other nations that may come to offer support and assistance include New Zealand, Australia, France, Taiwan, USA, and Japan. NGO's and International Organizations that may likely respond to a disaster within the jurisdiction may include WHO, Red Cross, Peace Corps and the United Nations, among others. The efficiency of this external assistance may be facilitated and amplified by planning in advance for the process. MAA's and MOU's provide a mechanism for the time sensitive activation and coordination of such humanitarian assistance efforts.
IV. Resources for information, education and communication

In order to work together, neighbors must be able to learn and share valuable information. They must be able to find aid and communicate their needs to this source for assistance. The internet offers a uniquely valuable tool for Pacific public health agencies to gain this information and education, as well as communicate that knowledge with our peers and our constituents. The Secretariat of the Pacific Community’s PACNET and the CDC’s Pacific Emergency Health Initiative PEHI-NET offer Pacific islanders with an easy access to information and communication resources specifically designed for prevention and control of Pacific island health emergencies. The internet is also now blossoming with a nearly endless list of disaster and emergency-related websites. These contain a broad scope of information and training opportunities to aid in developing emergency in disaster health.

Provided below is a list of websites that contain valuable references from which Pacific island public health and medical workers may also gain additional information and potential resources. While the list is extensive, it is not meant to be all-inclusive. The list does manage to provide general as well as specific information on a variety of topics and should provide an adequate entry point into the virtual realm of public health and emergency management.

Note: all sites are prefixed with http://

V. Internet resources for disaster management and assistance

This list is also available on the PHD site.

United Nations agencies

UN Headquarters
www.un.org/
UN System
www.unsystem.org
UN Office for the Coordination of Humanitarian Affairs (UNOCHA)
www.reliefweb.int/ocha_ol
ReliefWeb: Home page
www.reliefweb.int
UN International Decade for Natural Disaster Reduction (IDNDR) Conference
www.reliefweb.int
UNDHA Online
156.106.192.130/dha_ol
UN High Commissioner for Refugees (UNHCR)
www.unhcr.ch
UN International Children’s Emergency Fund (UNICEF)
www.unicef.org

UN Population Fund (UNFPA)
www.unfpa.org
World Health Organization (WHO) Home Page
www.who.ch
E-mail directory
www.who.ch/dir/Email_Dir.html
Program list
www.who.ch/programmes/WHOProgrammes.html
Center for Health Development
www.who.or.jp
Outbreaks (WHO/EMC)
www.who.int/emc/index.html
The Weekly Epidemiological Record (WHO/EMC)
www.who.int/wer/
Pan American Health Organization (PAHO) Home Page
www.paho.org
Disaster/Humanitarian Assistance
www.reliefweb.int
Food and Agricultural Organization (FAO). Economic and Social Department - Food and Nutrition
www.fao.org/reliefoperations

U.S. Government

USAID Home Page
www.info.usaid.gov
Humanitarian Response
www.info.usaid.gov/hum_response
OFDA Home Page
www.info.usaid.gov/ofda
Field Operations Guide
www.usaid.gov/hum_response/ofda/fog/ifrhome
US State Department Policy - Population, Refugees and Migration
www.state.gov/www/global/prm/index.html
Services
www.state.gov/www/services.html
General Accounting Office
www.gao.gov
Center for Medicare & Medicaid Services
www.hcfa.gov
CDC Home Page
www.cdc.gov
CDC - Bioterrorism
www.bt.cdc.gov
CDC - Emergency Health
dev.nceh.cdc.gov/edphs/default.htm
Health Informatics
inside.nceh.cdc.gov/hio
Department of Health and Human Services (DHHS)
www.os.dhhs.gov
Federal Emergency Management Agency (FEMA)
www.fema.gov
Project Impact: Building a Disaster Resistant Community
www.fema.gov/about/im_steps.htm
FEMA index
fema.gov/fema
Department of Defense, Reutilization Services (government surplus for sale)
www.dms.dla.mil

Uniformed Services University of the Health Sciences
www.usuhs.mil

**U.S. non-governmental organizations, NGO's**

InterAction - American Council for Voluntary International Action
www.interaction.org

International Service Agencies
www.charity.org

American Red Cross
www.redcross.org

CARE - US
www.care.org

Catholic Relief Services
www.catholicrelief.org

Doctors Without Borders (US)
www.dwb.org/index.htm

International Medical Corps
www.imc-ja.com/

International Rescue Committee
www.intrecom.org

Lutheran World Relief
www.lwr.org

Save the Children - US
www.savethechildren.org

U.S. Committee for Refugees
www.irs-a-uscr.org

World Vision
www.worldvision.org

**International organizations**

Medecins sans Frontieres - International
www.msf.org

Oxfam U.K. and Ireland
www.oxfam.org

ICRC
www.icrc.ch

IFRC
www.ifrc.org

RedR (disaster relief)
www.redr.org

The European Community Humanitarian Office (ECHO)
europa.eu.int/comm/echo

**General information about disasters**

The Global Health Disaster Network (Japan)
hypnos.m.ehime-u.ac.jp

The International Crisis Group (ICG)
www.int-crisis-group.org

Global Health Disaster Network (USA)
www.pitt.edu/~ghdnet/ghdnet/

Disaster Research Center (Univ. of Delaware/USA)
www.udel.edu/DRC/

Internet Disaster Information Network (USA)
www.disaster.net/index.html

Journal of Prehospital and Disaster Medicine
pdm.medicine.wisc.edu

Disaster Center
www.disastercenter.com

PAHO Disaster Information Page
www.disaster.info.desastres.net

Emergency Net News
www.emergency.com/index.htm

**Mass gatherings**

British Medical Journal
bmj.com/cgi/content/full/318/7189/957

**Natural disasters**

Natural Disaster Management
www.ndm.co.uk

University of Colorado Natural Hazards Center
www.colorado.edu/hazards

**Geohazards**

Association of Bay Area Governments (San Francisco Bay Area)
www.abag.ca.gov/baycare/eqmaps

Earthquake Hazard Center
www.ehc.arch.vuw.ac.nz

European Geophysical Society

Earthquake Hazards Program
quake.wr.usgs.gov/recent/index.html

National Earthquake Hazards Reduction Program
quake.usgs.gov/info/othersites.html

National Research Institute for Earth Science and Disaster Prevention
www.bosai.go.jp/index.html

Geohazards International
www.geohazard.org

Redwood City Public Seismic Network
psn.quake.net

Southern California Earthquake Data Center
www.scecd.scec.org

University of Arkansas Earthquake Education
quake.uarl.edu

World-Wide Earthquake Locator (Univ. of Edinburgh/UK)
www.geo.ed.ac.uk/quakes/quakes.html

Quakeline (National Center for Earthquake Engineering Research) (University of Buffalo/USA)
mceer.buffalo.edu

Asteroid and Comet Impact
impact.arc.nasa.gov/index.html
Volcanoes
Volcano World (USA)
  volcano.und.nodak.edu/
US Geological Survey Long Valley Observatory
  lvo.wr.usgs.gov/index.html
University of North Dakota
  volcano.und.nodak.edu/ww.html

Floods
University of Wisconsin
  www.seagrant.wisc.edu/index.html
US Department of Natural Resources Floodplain Management
  www.nrc.state.nc.us/floodplain/floodplain.html
Grand Forks Flood 1997, North Dakota
  www.draves.com/gf/index.htm
National Weather Service (NWS) Hydrological Information Center
  www.nws.noaa.gov/oh/hic/flood_stats/index.html
NWS Flood Threat Assessment
  www.nws.noaa.gov/oh/hic/nho/index.shtml

Tsunamis
Tsunami Hazard Mitigation
  www.pmel.noaa.gov/tsunami-hazard
Tsunami Community
  www.tsunamicommunity.org
Pacific Tsunami Museum
  www.tsunami.org

Hurricanes
International Hurricane Center
  www.ihc.fiu.edu
USGS Hurricane and Coastal Storm page
  www.usgs.gov/hurricanes/stormsites.html
Hurricane information
  www.hurricanes.net

Terrorism and Weapons of Mass Destruction (WMD)
Patterns of Global Terrorism 1998 (US State Dept)
Johns Hopkins Center for Civilian BioDefense
  www.hopkins-biodefense.org
Emergency Response to Chemical/Biological Terrorist Incidents
  www.emergency.com/cbwlesn1.htm
Military Critical Technologies
  www.dtic.mil/mct
Nuclear, Biological and Chemical Defense (NBC) Product and Service Handbook
  www.nbcindustrygroup.com/handbook/index08.htm
DHHS Transferring Select Agents
  www.cdc.gov/od/ohs/irsat/42cfr72.htm
Biological and Toxic Weapons Convention
  www.boku.ac.at/iam/efb/btwc.htm
NBC (medical information)
  www.nbc-med.org/others
Chemical and Biological Defense Information Analysis Center (CBDIAC)
  www.cbiac.apgea.army.mil
Biosafety Information Network and Advisory Service (BINAS)
  binas.unido.org/binas
International Center for Genetic Engineering and Biotechnology
  www.rcseb.trieste.it/~bsafeserv

Disaster management

Preparedness and planning
Asian Disaster Reduction Center
  www.adrc.or.jp/top.asp
Australian Emergency Management
  www.ema.gov.au
Emergency Management Center Oak Ridge National Laboratory
  emc.ornl.gov
Emergency Preparedness Information Exchange (EPIX)
  epix.hazard.net
Texas Cooperative Extension Service Emergency Information
  archnet2.tamu.edu/dbilbo/Taes%20Emergency/TAEXtop.htm
Campbell County, Kentucky Disaster Preparedness
  home.fuse.net/ccdes/prepared.htm
FEMA
  www.fema.gov/pte/prep.htm
Agency for Toxic Substances and Disease Registry (ATSDR) Health Risk and Communication
  www.atsdr.cdc.gov/HEC/primer.html
Disaster Plans
  sul-server-2stanford.edu/bytopic/disasters/plan
Mitigation and Risk Assessment
The Natural Hazards Mitigation Group (Univ. of Geneva/ Switzerland)
  www.unige.ch/hazards/
Act Now Preparedness Update
  www.emforum.org/vlibary/actnow05.htm
UN Division of Early Warning and Assessment
  www.grid.unep.ch/activities/earlywarning/preview

Quality improvement

QI
  www.doa.state.nc.us/improve/links.htm
Quality Improvement for EMS
  www.nhtsa.dot.gov/people/injury/ems/leaderguide/#expert
Disaster responders and hospitals

EMS
California EMS Authority
www.emsa.cahwnet.gov
EMS Magazine
www.emsmagazine.com
Arizona Emergency Medicine Research Center
www.emergencymedicine.arizona.edu/aemrc
Search and Rescue
Urban Search and Rescue (USR) Sacramento, California
www.mother.com/~hxgarzon/usar.htm
Fairfax County, Virginia USAR
www.vatfl.org

Fire services

FEMA US Fire Administration
www.usfa.fema.gov

HAZMAT

Arizona Emergency Medicine Research Center
www.emergencymedicine.arizona.edu/aemrc
ATSDR
www.atsdr.cdc.gov
Emergency Response to Chemical and Biological Terrorism Incidents
www.emergency.com/cbwesn1.htm
Chelyabinsk
www.logtv.com/chelya

Hospital

Occupational Safety and Health Administration (OSHA)
Hospital and Community Emergency Response
www.osha-slc.gov/Publications/OSHA3152/osh3152.html

Public sector information

Public health
Healthy People 2010
web.health.gov/healthypeople
National Institute of Health
www.nih.gov
Rollins School of Public Health, Emory Public Health Links
www.sph.emory.edu/PHL
Mexican Institute of Public Health (in Spanish)
www.insp.mx/index.html

Environmental health
Enviromental Defense Fund
www.enviromentaldefense.org/home.cfm
National Institute for Enviromental Health Sciences
www.niehs.nih.gov

Public works
US Society on Dams
www2.privatei.com/~uscold
American Public Works Association
www.pubworks.com

Food & Drug Safety
US Dept. of Agriculture (USDA) Food Safety and Inspection
www.fsis.usda.gov

Sustainable development
Center of Excellence for Sustainable Development
www.sustainable.doe.gov/wingspread2/wingprin.html

Consultants
Applied Science and Analysis Inc.
www.asaanlr.com

Business recovery
Rothstein Association Inc.
www.rothstein.com
Disaster Recovery Information Exchange
www.drie.org
MIT Business Continuity Plan
web.mit.edu/security/www/pubplan.htm
Private and Public Business Inc.
www.ppbi.org
Survive
www.survive.com
Binomial International
www.binomial.com

Financial assistance
National Science Foundation
www.nsf.gov/home/grants.htm
GrantsNet
www.grantsnet.org
World Bank
www.worldbank.org

Medical information

General Medicine
Medscape
www.medscape.com
PDR
www.pdr.com
Medscape Primary Care
www.medscape.com/primarycarehome
eMedicine CME on line
cme.emedicine.com
eMedicine Home Page
www.emedicine.com
Emergency medicine
Arizona Emergency Medicine Research Center
  www.emergencymedicine.arizona.edu/aemrc
eMedicine on line Textbook
  www.emedicine.com/emerg/topic839.htm
Society for Academic Emergency Medicine (SAEM)
  www.saem.org
American College of Emergency Physicians (ACEP)
  www.acep.org

Infectious diseases
Communicable Disease Surveillance and Response
  www.who.int/emc
Infectious Disease Weblink
  pages.prodigy.net/pdeziel

HIV
Global AIDS Program (CDC)
  www.cdc.gov/nchstp/od/gap/default.htm

Occupational Medicine
Pathcon Laboratories
  www.pathcon.com
Federal Occupational Health
  www.foh.dhhs.gov

Literature searches
Library of Congress
  catalog.loc.gov
National Archives
  www.nara.gov
Library of Congress Newspapers and Periodicals
  locweb.loc.gov/global/ncp/ncp.html
National Academy Press
  www.nap.edu/index.html
National Academies
  www.nas.edu
Natural Disaster Reference Database
  ntswww.gsfc.nasa.gov/ndrd
Ovid
  gateway.ovid.com
PubMed
Learning Resource Center
  www.lrc.fema.gov
Agency for Healthcare Research & Quality
  www.ahrq.gov
Solutions Software Databases
  www.env-sol.com
Medical Journal of Australia
  www.mja.com.au

Technical information
Demographic and Health Surveys Home Page
  www.measuredhs.com
International Atomic Energy Agency (IAEA)
  www.iaea.org
World Meteorological Organization (WMO)
  www.wmo.ch/
United Nations International Computing Centre (ICC)
  www.unicc.org/
Emergency Medicine Software
  promed-windows.com/default.htm
Safety PAD (hand held device)
  www.safetypad.com/default.htm
Telemedicine sites
  www.accord.co.il
  www.tvrc.com
  www.apollotelemedicine.com
  www.wintronixinc.com
Volunteers in Technical Assistance
  www.vita.org

Universities / training organizations
Center for Research on the Epidemiology of Disasters
  (CRED), Univ. Catholique de Louvaine
  www.cred.be
Center of Excellence in Disaster Management and
  Humanitarian Assistance (COE)
  coe-dmha.org
European Masters in Disaster Medicine
  www.dismedmaster.com
International Trauma Anesthesia and Critical Care Society
  www.trauma.itaccs.com
University of Wisconsin-Disaster Management Center
  dmc.engr.wisc.edu
The Carter Center Home Page
  www.cartercenter.org
Health Programs
  www.cartercenter.org/healthprograms.html
Emergency Preparedness Information Exchange (EPIX/
  Canada)
  hoshi.cic.sfu.ca/epix/
UCLA Center for Public Health and Disaster Relief
  www.ph.ucla.edu/cphdr
Humanitarianism and War Project
  www.stg.brown.edu/projects/hw/default.htm
Harvard School of Public Health
  www.hsph.harvard.edu

Pacific regional information
Journal of Community Health and Clinical Medicine for
  the Pacific
  www.resourcebooks.co.nz/phd/phd.htm
Secretariat of the Pacific Community
  www.spc.org.nc