Improving Global Response to Radiation Emergencies

CONTACT US:
reacts@orise.orau.gov
(865) 576-3131
www.orau.org/radiation-emergency-medicine/

Improving Radiation Emergency Response Through Education and Specialized Expertise

For more than 30 years, REAC/TS has responded to thousands of calls for assistance and information related to the medical management of radiological events. Adding its depth of research and consultation capabilities, REAC/TS is uniquely qualified to teach medical personnel, health physicists, first responders, and occupational health professionals about radiation emergency medical response.

As an international expert in the medical management of radiation emergencies, REAC/TS provides incident response and consultation, continuing medical education, and simulation exercises to countries across the globe.

2009 Key Accomplishments

• Students in Singapore, Toronto, and Kuwait participated in specially designed REAC/TS courses centered on medical management of radiation accidents. In addition, REAC/TS provided a specialized training course for the IAEA in Vienna, where students from over 20 countries were represented.
• As part of Exercise 2009, a DOE national-level exercise that tested the U.S. government’s technical response to a large-scale release of radiological material resulting from two dirty bombs in the New York state capital building, REAC/TS performed mock chromosomal analyses in its Cytogenetic Biodosimetry Laboratory (CBL). REAC/TS also provided continuing medical education in Albany, Lake Placid, Tarrytown, Syracuse, and Buffalo.

• One of only a handful of laboratories of its kind in the world, the CBL supported the World Health Organization (WHO) by leading an international scoring exercise that was used as a pilot to test the ability of member laboratories to provide emergency triage and radiation dose assessment via the Internet site BioDoseNet. CBL doctors recruited 15 readers from eight countries to independently examine the same 25 images for structural chromosome aberrations and then shared their results with the CBL.

• REAC/TS personnel began using ultrasonography and thermography to establish accurate, less costly, non-invasive techniques for determining the level of radiation damage in tissue underlying a wound. Thermography measures the effects of radiation injuries over time. Because the process of healing generates heat, thermography may enable reconstruction of the extent and depth of the original injury.

Key Customers and Partners

• U.S. Department of Energy (DOE)
  o National Nuclear Security Administration (NNSA)
  o Office of Health, Safety and Security (HS&SS)
  o U.S. Department of Health and Human Services (DHHS)
  o Centers for Disease Control and Prevention (CDC)
  o National Center for Environmental Health (NCEH)
  o World Health Organization (WHO)
  o Radiation Emergency Medical Planning & Assistance Network (REMPAN)
  o International Atomic Energy Agency (IAEA)
  o Response Assistance Network (RANET)
  o National Aeronautics and Space Administration (NASA)

2009 by the Numbers

• 1,090+ emergency personnel from 25 states and more than 25 countries trained
• 40 courses conducted
  o 13 live at REAC/TS
  o 25 held off site

FY09 by the Numbers

• 40 courses conducted
  o 25 held off site

2009 Key Accomplishments

• Students in Singapore, Toronto, and Kuwait participated in specially designed REAC/TS courses centered on medical management of radiation accidents. In addition, REAC/TS provided a specialized training course for the IAEA in Vienna, where students from over 20 countries were represented.
• As part of Exercise 2009, a DOE national-level exercise that tested the U.S. government’s technical response to a large-scale release of radiological material resulting from two dirty bombs in the New York state capital building, REAC/TS performed mock chromosomal analyses in its Cytogenetic Biodosimetry Laboratory (CBL). REAC/TS also provided continuing medical education in Albany, Lake Placid, Tarrytown, Syracuse, and Buffalo.

• One of only a handful of laboratories of its kind in the world, the CBL supported the World Health Organization (WHO) by leading an international scoring exercise that was used as a pilot to test the ability of member laboratories to provide emergency triage and radiation dose assessment via the Internet site BioDoseNet. CBL doctors recruited 15 readers from eight countries to independently examine the same 25 images for structural chromosome aberrations and then shared their results with the CBL.

• REAC/TS personnel began using ultrasonography and thermography to establish accurate, less costly, non-invasive techniques for determining the level of radiation damage in tissue underlying a wound. Thermography measures the effects of radiation injuries over time. Because the process of healing generates heat, thermography may enable reconstruction of the extent and depth of the original injury.

Key Customers and Partners

• U.S. Department of Energy (DOE)
  o National Nuclear Security Administration (NNSA)
  o Office of Health, Safety and Security (HS&SS)
  o U.S. Department of Health and Human Services (DHHS)
  o Centers for Disease Control and Prevention (CDC)
  o National Center for Environmental Health (NCEH)
  o World Health Organization (WHO)
  o Radiation Emergency Medical Planning & Assistance Network (REMPAN)
  o International Atomic Energy Agency (IAEA)
  o Response Assistance Network (RANET)
  o National Aeronautics and Space Administration (NASA)

2009 by the Numbers

• 1,090+ emergency personnel from 25 states and more than 25 countries trained
• 40 courses conducted
  o 13 live at REAC/TS
  o 25 held off site

FY09 by the Numbers

• 40 courses conducted
  o 25 held off site

2009 Key Accomplishments

• Students in Singapore, Toronto, and Kuwait participated in specially designed REAC/TS courses centered on medical management of radiation accidents. In addition, REAC/TS provided a specialized training course for the IAEA in Vienna, where students from over 20 countries were represented.
• As part of Exercise 2009, a DOE national-level exercise that tested the U.S. government’s technical response to a large-scale release of radiological material resulting from two dirty bombs in the New York state capital building, REAC/TS performed mock chromosomal analyses in its Cytogenetic Biodosimetry Laboratory (CBL). REAC/TS also provided continuing medical education in Albany, Lake Placid, Tarrytown, Syracuse, and Buffalo.

• One of only a handful of laboratories of its kind in the world, the CBL supported the World Health Organization (WHO) by leading an international scoring exercise that was used as a pilot to test the ability of member laboratories to provide emergency triage and radiation dose assessment via the Internet site BioDoseNet. CBL doctors recruited 15 readers from eight countries to independently examine the same 25 images for structural chromosome aberrations and then shared their results with the CBL.

• REAC/TS personnel began using ultrasonography and thermography to establish accurate, less costly, non-invasive techniques for determining the level of radiation damage in tissue underlying a wound. Thermography measures the effects of radiation injuries over time. Because the process of healing generates heat, thermography may enable reconstruction of the extent and depth of the original injury.

Key Customers and Partners

• U.S. Department of Energy (DOE)
  o National Nuclear Security Administration (NNSA)
  o Office of Health, Safety and Security (HS&SS)
  o U.S. Department of Health and Human Services (DHHS)
  o Centers for Disease Control and Prevention (CDC)
  o National Center for Environmental Health (NCEH)
  o World Health Organization (WHO)
  o Radiation Emergency Medical Planning & Assistance Network (REMPAN)
  o International Atomic Energy Agency (IAEA)
  o Response Assistance Network (RANET)
  o National Aeronautics and Space Administration (NASA)

2009 by the Numbers

• 1,090+ emergency personnel from 25 states and more than 25 countries trained
• 40 courses conducted
  o 13 live at REAC/TS
  o 25 held off site

FY09 by the Numbers

• 40 courses conducted
  o 25 held off site

2009 Key Accomplishments

• Students in Singapore, Toronto, and Kuwait participated in specially designed REAC/TS courses centered on medical management of radiation accidents. In addition, REAC/TS provided a specialized training course for the IAEA in Vienna, where students from over 20 countries were represented.
• As part of Exercise 2009, a DOE national-level exercise that tested the U.S. government’s technical response to a large-scale release of radiological material resulting from two dirty bombs in the New York state capital building, REAC/TS performed mock chromosomal analyses in its Cytogenetic Biodosimetry Laboratory (CBL). REAC/TS also provided continuing medical education in Albany, Lake Placid, Tarrytown, Syracuse, and Buffalo.

• One of only a handful of laboratories of its kind in the world, the CBL supported the World Health Organization (WHO) by leading an international scoring exercise that was used as a pilot to test the ability of member laboratories to provide emergency triage and radiation dose assessment via the Internet site BioDoseNet. CBL doctors recruited 15 readers from eight countries to independently examine the same 25 images for structural chromosome aberrations and then shared their results with the CBL.

• REAC/TS personnel began using ultrasonography and thermography to establish accurate, less costly, non-invasive techniques for determining the level of radiation damage in tissue underlying a wound. Thermography measures the effects of radiation injuries over time. Because the process of healing generates heat, thermography may enable reconstruction of the extent and depth of the original injury.

Key Customers and Partners

• U.S. Department of Energy (DOE)
  o National Nuclear Security Administration (NNSA)
  o Office of Health, Safety and Security (HS&SS)
  o U.S. Department of Health and Human Services (DHHS)
  o Centers for Disease Control and Prevention (CDC)
  o National Center for Environmental Health (NCEH)
  o World Health Organization (WHO)
  o Radiation Emergency Medical Planning & Assistance Network (REMPAN)
  o International Atomic Energy Agency (IAEA)
  o Response Assistance Network (RANET)
  o National Aeronautics and Space Administration (NASA)

2009 by the Numbers

• 1,090+ emergency personnel from 25 states and more than 25 countries trained
• 40 courses conducted
  o 13 live at REAC/TS
  o 25 held off site

FY09 by the Numbers

• 40 courses conducted
  o 25 held off site

2009 Key Accomplishments

• Students in Singapore, Toronto, and Kuwait participated in specially designed REAC/TS courses centered on medical management of radiation accidents. In addition, REAC/TS provided a specialized training course for the IAEA in Vienna, where students from over 20 countries were represented.
• As part of Exercise 2009, a DOE national-level exercise that tested the U.S. government’s technical response to a large-scale release of radiological material resulting from two dirty bombs in the New York state capital building, REAC/TS performed mock chromosomal analyses in its Cytogenetic Biodosimetry Laboratory (CBL). REAC/TS also provided continuing medical education in Albany, Lake Placid, Tarrytown, Syracuse, and Buffalo.

• One of only a handful of laboratories of its kind in the world, the CBL supported the World Health Organization (WHO) by leading an international scoring exercise that was used as a pilot to test the ability of member laboratories to provide emergency triage and radiation dose assessment via the Internet site BioDoseNet. CBL doctors recruited 15 readers from eight countries to independently examine the same 25 images for structural chromosome aberrations and then shared their results with the CBL.

• REAC/TS personnel began using ultrasonography and thermography to establish accurate, less costly, non-invasive techniques for determining the level of radiation damage in tissue underlying a wound. Thermography measures the effects of radiation injuries over time. Because the process of healing generates heat, thermography may enable reconstruction of the extent and depth of the original injury.

Key Customers and Partners

• U.S. Department of Energy (DOE)
  o National Nuclear Security Administration (NNSA)
  o Office of Health, Safety and Security (HS&SS)
  o U.S. Department of Health and Human Services (DHHS)
  o Centers for Disease Control and Prevention (CDC)
  o National Center for Environmental Health (NCEH)
  o World Health Organization (WHO)
  o Radiation Emergency Medical Planning & Assistance Network (REMPAN)
  o International Atomic Energy Agency (IAEA)
  o Response Assistance Network (RANET)
  o National Aeronautics and Space Administration (NASA)