3) Medical Toxicology Service that takes medical referrals and admissions; and
4) Chemical Incident Response Service (CIRS) provides incident assistance with information, laboratory, and medical support

**Methods:** for detection of unknown poisonous substances: Clinical assessments together with biochemical and physiological data obtained from local laboratories sometimes can point to the type of chemical involved, but proper confirmation only can come from analytical work. Samples taken from the environment (air, soil, water, etc.) are the easiest to deal with, but if these are not available, then biological materials are the other alternative. Samples of blood and urine should be taken without delay, and it is vital to guard against contamination and to ensure that the correct containers are used. For a "blind screen" in adults, 10 ml of lithium-heparinised blood, 4 ml of EDTA blood, and 50 ml of unpreserved urine will suffice. Prepared sample collection kits with instructions and request forms supplied by the incident centre help. The samples must be transported to the laboratory as quickly as possible to avoid losses of chemicals during storage.

Techniques such as gas-liquid chromatography (GLC) and high performance, liquid chromatography (HPLC) cover a wide range of chemicals. Ideally, these should be linked to a mass-spectrometer that provides unequivocal analytical evidence. Mass-spectrometers are equipped with vast libraries of spectra that can be matched to those of the unknown chemical within minutes. Groups of compounds that can be detected include volatile solvents, alcohols, glycol ethers, pesticides, and drugs. For identification of toxic metals, Inductively Coupled Plasma Mass Spectrometry (TPC-MS) is the best technique, and can screen for elevated levels of over 30 elements in less than one hour.

No amount of investment in these expensive analytical instruments will bear fruit without having a team of fully trained and experienced analytical toxicologists available to undertake the assays.

**Results**: Since 1994, the CIRS has identified and responded to an increasing number of incidents with 937 recorded in 1998. Over the last year, incidents have led to the specialised toxicological analysis of over 2,000 biological samples, and these results have been invaluable in managing these incidents.

**Conclusion**: This multidisciplinary approach within CIRS apparently is a novel development. It requires close collaboration and training with the 75 Health Authorities in England who are responsible for the health of approximately 37 million people. In order to assess this system of incident response and management, links with other expert organisations nationally and internationally have been developed. These include the International Programme on Chemical Safety (WHO/ILO/UNEP) and the Agency for Toxic Substances and Disease Registry (ATSDR), USA.

**Keywords**: assessments; chemicals; chromatography; detection; identification; poisons; responses; sampling; spectrometry

*Panel Discussion VII*

## The Efficacy of the Internet in Disaster Computer Programs

**Wednesday, 12 May, 10:00–11:30 hours**
**Chair:** *Kendall Ho, I. Kamae*

### PN7-1
### Megacity Network: Capacity Building, Transfer and Share of Knowledge and Health Information

*Saiedeh von Keitz*
Center for Health Development, World Health Organization (WHO)

Health has been identified as one of the key sectors that can benefit from a national telecommunication infrastructure. Applications of high performance computing, such as TeleMedicine, for delivery of medical care and a strong capacity for telecommunication and multimedia technology is needed. In addition, the extent to which public health can achieve its mission depends largely on the effective collection, analysis, use, and communication of health and health-related information.

To get the most out of the health telematics for the developing and developed countries, building local capacities in telecommunication infrastructure in order to access health information as well as in producing, managing, and disseminating of health information is essential.

The WHO Centre for Health Development in Kobe, Japan, commenced the project of networking with Megacities, due to the fragility and complication of health situation (especially in case of natural disasters and outbreaks) in these most populous urban agglomerations. Transparency of the health infrastructure and accessibility of health information has become critical for Megacities at both national and international level. It also was WCK's concern that language has always been a barrier between nations to exchange information, data and knowledge. Therefore, WCK has decided to implement this project in English as the common language for sharing health information internationally, as well as in the local language for the benefit of the countries.

The Network of Health Institutions in Megacities, interconnects health ministries, national institutes, medical, health, nursing, and pharmaceutical schools; national hospitals and sanatoriums, universities, university hospitals, university centres and institutes, public health centres, public health research centres, general hospitals, clinical research institutes of national hospitals, associations, societies, intergovernmental and non-governmental organizations, and WHO collaborating centres.

http://megacitynetwork.who.or.jp

**Keywords**: capacity building; collaboration; infrastructure; knowledge, magacity network; telecommunications