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Mister Chairman, Distinguished Delegates, Ladies and Gentlemen,

I welcome the opportunity to speak today in plenary session about the management of chemicals exposure fatalities from a forensic pathology point of view.

First a statement of purpose.

Forensic pathology deals with chemicals exposure fatalities on a daily basis. In this short presentation, the approach of forensic pathology towards chemicals exposure fatalities will be outlined.

Let me describe a typical case.

A 65-year-old woman died shortly after cleaning her bathroom with a mixture of various chemicals including bleach and an acid-containing product. According to witnesses, her symptoms included a cough and shortness of breath along with red tearing eyes. She was a non-smoker and had no significant medical history other than asthma.

Her autopsy showed marked pulmonary edema, congestion, and hyperemia. The heart and the brain were congested.

Histological examinations showed edema, fresh intra-alveolar bleeding, and emphysematous changes in both lungs, perivascular interstitial fibrosis in the heart, and that her brain, kidney, and liver were also congested.

Toxicological analysis showed that paracetamol, methylprednisolone, venlafaxine, and its metabolite O-desmethylvenlafaxine were detected in her blood. These drugs and their levels can be explained by the drugs she received for her asthma and depression.

Now the structure for how the deaths were documented.

Accurate death certification begins with a thorough account of what was observed at the scene and an inquiry into the decedent's past medical history. The forensic pathologist report also contains findings from the postmortem examination, postmortem toxicology, histopathology, genetic examination, etc.

So what is the applicability of these procedures to other chemicals exposure investigations?

First, analysis protocols.

There is an expectation that the results of analysis by a forensic laboratory are reliable and accurate. In order to set standards, accreditation of the laboratory is an important step. So all forensic analysis should be performed at an accredited laboratory.

Next come documentation and forensic investigation protocols.

There are at least two main internationally-accepted standard autopsy protocols – the Minnesota Protocol, a detailed set of international guidelines providing instructions for conducting forensic autopsies and analysis of skeletal remains. The Minnesota Protocol was adopted by the United Nations Economic and Social Council in its resolution 1989/65 on 24 May 1989. A second widely employed international standard is the European harmonization of medico-legal autopsy rules.

In conclusion, while a conventional toxicologist is mainly concerned with the detection of substances, a forensic pathologist is concerned with the detection of drugs or poisons in samples and is capable of defending his/her result in a court of law. In terms of Chemical Warfare Agents, forensic pathology has an important role to play, and the potential for providing clear evidence for international criminal courts and international organizations.

Thank you for your kind attention, and I wish for this statement to be made part of the final CSP record and posted on the external server and website.