Medical examiners' seminar looked at mysteries surrounding sudden death

Dorothy Grant

In brief

MEDICAL EXAMINERS IN NOVA SCOTIA recently attended their first-ever seminar concerning the skills, challenges and techniques their jobs require. It was welcomed by the physicians, most of whom are family physicians with little training in the investigation of sudden death.

En bref

DES EXAMINATEURS MÉDICAUX DE LA NOUVELLE-ÉCOSSE ont participé récemment à leur premier colloque sur les compétences spécialisées, les défis et les techniques de leur emploi. Cette activité a été bien accueillie par les médecins, dont la plupart sont médecins de famille et ont peu de formation en investigation des morts subites.

Dr. Donald Pugsley, a family physician from Brookfield, NS, clearly recalls the advice he received when he agreed to accept a medical examiner's (ME) position in his community. "It was given during a brief telephone conversation. I was simply advised not to do anything stupid. I was told, however, to use common sense in order to avoid making a serious mistake. I wasn't offered any formal training, so all I could do was study Nova Scotia's Fatality Inquiries Act and borrow books from the medical school library."

Pugsley's introduction to the job was not unusual. When Dr. John Butt, one of North America's leading forensic pathologists, was appointed Nova Scotia's chief medical examiner in 1996, he discovered that the province's MEs, most of whom are family doctors, had been working within a flawed system. He was particularly disturbed to learn that few if any of Nova Scotia's 50 examiners had received even the most basic instruction in how to investigate sudden deaths.

The problems were obvious: not only might possible homicides or suspicious deaths be overlooked, but also autopsies were being performed when it should have been determined that death had resulted from natural causes. Butt decided that investigators who routinely visited the scene of sudden, unexpected deaths needed comprehensive training and that MEs needed to know when to order an autopsy.

Many attending the scene of a sudden death "had no clear idea what they should be looking for in order to determine that a postmortem should be performed," Butt said. "Because of this, police have been pushing the autopsy."

Conversations with provincial medical examiners only served to reinforce Butt's impression that MEs felt isolated or abandoned by the system. In some cases this led to communication problems with the police, who mistakenly interpreted a medical examiner's apprehension about a sudden-death scene as disinterest or unwillingness to cooperate.

With the support of the Department of Justice, Butt responded by organizing Nova Scotia's first training course for MEs, "Basic medical investigation in sudden death." It attracted many of the province's examiners, as well as some pathologists and officers from the RCMP and regional police forces. All were eager to expand their knowledge about a field that often presents conundrums worthy of Sherlock Holmes.

The 2-day seminar took participants through many of the important elements of an effective death-investigation system. Proper completion of a death certificate, described as an investigation's "bottom line," received considerable attention. With characteristic candour, Butt said that far too often this important legal

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documentation lacks information concerning the exact cause of death.

Participants learned many details about how to conduct a sudden-death investigation, such as establishing the exact location and position of a body, as well as its core temperature, lividity, putrefaction and insect-related evidence such as blowfly eggs. (Blowflys are active only at night). This evidence can help determine the approximate time of death.

The autopsy and complex clinical manifestations it can unlock in determining an exact cause of death were examined in detail. DNA, fingerprints, dental records and ways to recognize carbon monoxide or potassium cyanide poisoning were discussed, as was the necessity of performing an autopsy in all cases believed to involve sudden infant death syndrome or a scuba-diving fatality.

The keynote speaker was Dr. Larry Lewman, Oregon's chief medical examiner, who frequently lectures at police departments in the US. Recounting case studies involving sudden deaths, he stressed factors that can make visual identification of a body unreliable. He advised medical examiners to ensure that the person making the visual identification is reliable, knew the dead person very well and is not emotionally distraught. He also warned against asking a devastated family member to identify a badly decomposed body, calling such actions "callous."

Using graphic and often disturbing slides, Lewman illustrated the skills required to unravel the mysteries associated with human tragedy. The evidence at a crime or death scene can be scant — a small, badly charred bone fragment may be the only clue to a crime. In one case, a tooth found in an apartment building incinerator was the only evidence available to the police and a pathologist investigating a gruesome homicide; dental records ultimately provided the name of the murder victim but the murderer's identity has never been determined.

Lewman also recounted the investigation of a woman's badly burned body; her husband told police her clothing had caught fire while she was cooking, but an autopsy revealed a tiny knife wound on a small area of her body that had escaped the flames. Further examination revealed that two cellophane bags had been crammed down her throat and ignited with a flammable fluid.

Dr. Simon Avis, Newfoundland's chief medical examiner, discussed the investigation of deaths related to injuries from blunt and sharp objects, as well as the art of determining a murder weapon by studying a wound closely. He cautioned that doctors who perform autopsies should be on the lookout for broken blades inside a body.

Avis also dealt with the investigation of suicides, which account for 1.9% of all deaths in Canada. A note of explanation is left in less than 20% of these cases, he said.

Men who commit suicide are more likely to choose firearms, particularly shotguns, and women are more likely to choose hanging. Drug overdose ranks third, most commonly involving tricyclic antidepressants and codeine. (Physicians who commit suicide most often use barbiturates, a method that is very uncommon outside the medical profession.)

If a consensus emerged from the 2-day seminar, it was that the medical investigation of sudden death requires an educational background few family doctors possess. The nuances surrounding homicides, the dimensions and complexities of suicides, and the puzzling medical questions associated with drownings and fire-related deaths only confirm the conviction that medical examiners must be highly trained.

Dr. Michelle Dow, a medical examiner in Digby, and Dr. Arthur Patterson of Lunenburg were enthusiastic about the seminar, which they said was long overdue. Dow, with 8 years' experience, and Patterson, who has been a medical examiner for more than 20 years, spoke of their frustration with a system that failed to address the difficulties of the job.

Pugsley also left the seminar feeling more optimistic about his responsibilities as a medical examiner. His confidence was no doubt enhanced by the awareness that he is a member of a system that is now based on solid principles, not one that may have relied far too often on nothing more than "common sense." ⚕