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### **G25 A Hot Air Balloon Crash in Wairarapa, New Zealand: A Forensic Dental Perspective**

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After attending this presentation, attendees will understand the importance of preparation, planning, and appropriate training for Disaster Victim Identification (DVI) work. Attendees will also understand the role of the forensic odontologist in the identification of badly damaged human remains.

This presentation will impact the forensic science community by outlining the DVI response and problems associated with a hot air balloon crash in New Zealand.

On January 7, 2012, on a perfect summer day, a scenic hot air balloon trip ended in disaster when the basket collided with power lines, caught fire, and eventually crashed onto farmland near the rural town of Carterton, North Island, New Zealand. This was one of the deadliest air disasters to occur on mainland New Zealand in decades; 11 people (ten passengers and the pilot) lost their lives. Two of the passengers jumped from the balloon to their deaths; the remainder were trapped and engulfed in flames. Emergency services were at the scene very quickly and witness reports along with camera footage taken by the balloon ground crew would help to reconstruct the final moments of the flight.

This accident was managed as a DVI incident with multidisciplinary participation. One of the forensic odontologists and the regional forensic pathologist attended the scene to locate, preserve, document, and assist with the safe transportation of the remains. The badly damaged and burned bodies were taken to Wellington Regional Hospital mortuary where autopsies and identifications were undertaken. At the mortuary, forensic odontologists, fingerprint teams, and DNA teams worked alongside forensic pathologists with police and coronial support for the next week. Crash investigators, fire services, and police worked together at the scene. Surprisingly, all victims were from the region, simplifying the collection of antemortem information in readiness for comparison with the postmortem findings. Being a “closed” disaster, there was a readily available passenger list. Toxicological findings indicated the presence of tetrahydrocannabinol (a constituent of cannabis) in the body of the pilot.

Events surrounding the crash and the difficulties encountered by the DVI teams and relatives of the deceased will be outlined in this presentation. It is essential that all agencies and individuals working in this field manage the situation effectively and sensitively and learn from the process. At times of tragedy, relatives need excellent communication from those assisting to help them understand why this event claimed the lives of their loved ones. The post-incident debriefing was invaluable for improving the response for future events. An inquiry into the accident has been conducted by the Transport Accident Investigation Commission. At inquest, the families of the deceased requested that recommendations should be acted upon to prevent this type of tragedy from happening in the future. Will anything be done?

All victims were identified in the following days. After attending this presentation, attendees will understand the importance of preparation, planning, and appropriate team training for timely action when prevention fails and incidents occur. This presentation also emphasizes the role of the forensic odontologist when remains are badly damaged and commingled.

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#### **Balloon Crash, DVI, Dental**