



F18 How Technology Helped Forensic Dentists to Organize and Handle Two Concurrent Mass Disasters: Flight 587 and the World Trade Center

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After attending this presentation, attendees will understand how technology helped identify the victims of a mass disaster.

This presentation will impact the forensic community and/or humanity by demonstrating how technology helped identify the victims of a mass disaster.

On November 12, 2001, American Airlines Flight 587 took off from John F. Kennedy International Airport and crashed into Belle Harbor, New York (in the borough of Queens) shocking the city of New York that was already reeling from the attacks of September 11th. All 260 people on the flight along with five people on the ground perished. The airspace over New York was closed, with the assumption that this was another terrorist attack.

The Office of Chief Medical Examiner City of New York (OCME), its disaster victim identification team (DVIT) faced the unprecedented task of running two mass disaster identification efforts at the same time.

Since the Manhattan office of the OCME was already set up for the processing and identification of the World Trade Center (WTC) victims, it was decided to bring the victims of Flight 587 to Manhattan approximately 20 miles away, instead of setting up a new recovery site at the Medical Examiner's Queens office.

The DVIT teams consisting of pathologists, medical legal investigators, NTSB investigators, FBI investigators, the NYPD and other agencies as well as the forensic dental teams were in place and began processing the victims. NYPD detectives processed property, including wallets, jewelry etc. and other personal effects on the victims, which helped give clues in the identification process. The NYPD also fingerprinted all the victims according to the protocols set for the WTC identification process. After the pathologists performed the autopsies and obtained DNA samples, the postmortem dental teams examined the full body radiographs to confirm presence of dental remains. The jaws were dissected as necessary and chartings and radiographs were done. The dental chartings were entered into WIN-ID, a dental comparison and identification program. The postmortem radiographs were scanned and entered into a database with Adobe® Photoshop® which is accessible by the WinID program.

In the Manhattan office, new protocols were set up to differentiate the victims of Flight 587 from the victims of the World Trade Center. New computer databases, new identification numbers and different visual cues, i.e., the color of paper, folders etc. were implemented.

The antemortem dental team began the task of gathering dental records. Flight 587 was bound for Santo Domingo in the Dominican Republic, an island in the Caribbean. Many of the victims were from the Dominican Republic and the task of getting dental records was made more difficult because of the language barrier and the possibility of no existing dental records. All antemortem records were entered into WinID and ante-mortem radiographs were scanned using Adobe® Photoshop®. This enabled the comparison teams to pull up the ante and postmortem radiographs quickly for evaluation.

After two weeks, all the postmortems were completed. All post-mortem chartings were entered into the computers with incident numbers differentiating Flight 587 from the World Trade Center. After about four weeks, all dental records that were available were received and processed into the computer databases. Postmortem and antemortem comparisons using WinID were done and completed. The victims of Flight 587 that could be identified by forensic dentistry were completed after four weeks. Other means of identification including DNA were utilized to identify those whom no antemortem dental records were available.

Forensic Odontology, WinID, DNA