



G46 Collecting Antemortem Dental Data

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After attending this presentation, attendees will better understand the importance of and polymorphism in antemortem dental data.

This presentation will impact the forensic science community by illustrating the different forms antemortem dental data can take, how to collect and transmit this data, what problems may arise in this process, and possible improvements.

Whether in individual or mass casualty cases, the quality of antemortem dental data is crucial for success in the identification process.

The first problem encountered with an unidentified body is learning the deceased's supposed identity; in the case of a mass disaster, making a list of all the presumed deceased persons is crucial. A missing persons' dental records database may exist in certain states, but there is no real uniformity. The problem of identifying migrants, whose purported identity may be falsified and whose actual dental records may be very difficult to obtain, also arises. Over these past few years, and especially in the case of terrorist attacks, social networks have been used to announce calls for help, and missing persons apps for smart phones have been created. In the case of Disaster Victim Identification (DVI), the International Criminal Police Organization's (INTERPOL's) protocol for collecting antemortem dental data is followed. Several questions about this data collection must be detailed: Where? When? By whom? For whom? How? What? The process of collecting these data must be exhaustive and must try to focus on one sole investigator to contact the family of the deceased. Despite our computerized culture, neither national nor international dental databases exist. Collection must be conducted for each victim, in each country, and attempts must be made to contact the dentist(s) involved.

During data collections, forensic dentists have often had to be very resourceful and imaginative in seeking out dental records. It is sometimes difficult to find the victim's dentist, and these tasks often take on the feel of a true investigation with a race against the clock. This may be the case for those victims who have not been to a dentist, those who have moved residences, and those involved in disasters involving entire families — in this case, DNA problems may also arise — or in disaster scenarios, such as Hurricane Katrina in the United States, where many medical records were destroyed. In case the forensic team is unable to find the victim's dentist, then insurance company, health, mutual, or military records may be consulted.

As opposed to postmortem data, which are systematized (e.g., systematic numbering, photographs, radiographs, odontograms), antemortem data take wide and varying forms. Antemortem data may include family testimony, practitioner's testimony, dental records, odontograms, and radiographs of varying forms, as well as personal or professional photographs, casts, quotes, prostheses, implants, surgical material, letters (professional correspondence), and, more rarely, facial reconstruction.

Once these data have been transmitted, a pair of forensic dentists analyze and transcribe the data into an odontogram that is then completed and verified by analyzing radiographs, which are an essential identification element. Practical cases will help to illustrate this data collection process.

Even if the victim's dentist is identified, other problems may arise. Although rare, physicians may refuse to share data; more often, computer system changes or a lack of data backups may impede access to past data. Files may also have been damaged in a fire, flood, or another natural disaster. Computer problems may also make data transmission challenging.

In addition to the technical elements, the psychological aspect of these investigations must not be overlooked. The investigating forensic dentist contacting the victim's dentist may be the first harbinger of bad news. This work is conducted in a group of two within the odontological team, which is itself incorporated into the antemortem team, where sometimes victims' families are received. Communication and support among team members is fundamental, and third-party psychological support may be provided.

In order to improve the quality of future antemortem data, dentists and future dentists must be informed regarding how important it is to safeguard proper records and radiographs. The creation of a national database of missing persons could facilitate comparisons with the data recovered from non-identified bodies. A standardized procedure and an exhaustive investigation must be conducted to allow exchange of information among different countries, transparency, traceability, and quality control. The quality of our work in collecting antemortem dental data is essential to achieve a positive dental identification.

Antemortem Data, Identification, Dental