



### F8 Forensic Odontologists' Armamentarium for Dental Identification in a Rural Setting

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After attending this presentation, attendees gain the knowledge to construct a functional, well equipped portable tote that will give him/her the ability to perform forensic identification in a rural Coroners office.

This presentation will impact the forensic community by helping the neophyte rural forensic odontologist to compile a well equipped portable tote that contains commonly used implements for performing a dental identification.

At the conclusion of this abstract, the forensic odontologist will have the knowledge to construct a functional, well equipped portable

tote that will give him/her the ability to perform forensic identification in a rural coroner's office.

Small communities often have a small coroner's office that may service several counties. The crime rate is usually lower in a small rural town. Cases requiring a forensic odontologists' expertise occur seldom in small rural towns and counties. Small towns often have limited resources. Odontologists may be responsible for their own equipment when assisting in the identification of an unknown victim. The following is a list of tools, forms, and photographic equipment that should be standard fare for the rural forensic odontologist: mouth mirror, explorer, cotton forceps, scaler, toothbrush, scalpel, rope wax, gloves, mask, disposable lab jacket, and extra lighting such as a headlamp. A headlamp, commonly used for camping is great for hands free extra light. Employing a UV LED light illuminate composites, and make them readily detectable. Scalers and toothbrushes clean off dried blood, tissue, and debris from the teeth. Blood and tissue are often encrusted onto the tooth surfaces and need to be removed so that the teeth and their restorations can be evaluated. Rope wax can be used to hold an x-ray film next to the teeth or for propping up jaw fragments on a table for radiographing. Jaw dissection is necessary when the body is severely burned, decomposed or in rigor, prohibiting the odontologist from opening and examining the jaws. A *Striker* saw is commonly used to cut and dissect the maxilla and mandible. Most coroner's offices have these saws available for the pathologist. If a *Striker* saw is not available to dissect the jaws, a *Sawzall* can be employed. A *Sawzall* is a reciprocating saw, commonly used for home construction and remodeling. It is approximately 18 ¾" in length and weighs around 8lbs. The ½ inch blades can be replaced as needed. The 15 amp *Sawzall* is the most powerful version and can be purchased at a hardware store. Garden loppers can be used to cut through the ramus of the mandible. Lopper handles come in a variety of lengths. The standard lengths are 26-37 inches with a 3 inch cutting diameter. Longer handles afford the operator more leverage. The blades can be cleaned and sharpened. Once the mandible is removed, the removal of the maxilla is not always necessary. When the mandible is removed, the maxilla is visualized. Postmortem, antemortem dental charts, ABFO (American Board of Forensic Odontologists) ruler, pens, pencils, and radiographic mounts should be part of the forensic odontologists armamentarium. Standard dental charts can be employed or copies of antemortem and postmortem charts can be copied from a variety of forensic books and manuals. If a dental xray unit is available, periapical radiographs should be taken of the full mouth or whatever fragments are available. If the body will be viewed at a wake, then the jaws should not be dissected. A skull xray can be ordered from the local hospital or through the morgue facilities. Periapical radiographs are more diagnostic than a skull radiograph. Superimposition of the right and left sides of the jaws occur when full skull radiographs are taken. Intraoral cameras are used to photograph the victims' teeth, and also alleged bite marks. The ABFO ruler should be in all bite mark photos along with the case number. Digital cameras are ideal for downloading the images to a computer. The *ADA Professional Product Review* stated that some dentists have found that Acclaim USB, CDR USBCam2, and SOPOR 717 produce high quality images. *WIN-ID* computer program is ideal for mass disasters. Antemortem and postmortem dental charting can be entered into this program and then a comparison is run by the program to match the records. Forensic odontologists need to carry their own equipment when assisting small rural coroners.

#### **Armamentarium, Rural, Odontologist**