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**Media Advisory -- For Immediate Release****Anatomy of An Emergency  
Response That Went Right****Prompt Effective Measures Save A Young Man's Hand**

University Orthopedics' Manuel F. DaSilva was the orthopedic surgeon on call early in the morning of September 5, 2007 when a young man in Burrillville lost his hand at the wrist while working on a meat grinder. Within 12 hours, thanks to the coordinated efforts of emergency responders, Dr. DaSilva and the Trauma Center Staff at Rhode Island Hospital, the patient's hand was successfully replanted and today he is on the road to recovering most of his hand's functionality

Dr. Dasilva, who is a faculty member at the Brown Alpert Medical School of Brown University, has had specific training at the National Hand Center and has performed this rare and complicated procedure on five occasions. He also noted that there are at least 3 other University Orthopedic surgeons serving the RI Hospital Trauma Unit capable of performing this surgery. It took the doctor and surgical team more than 8 hours to repair the bone, and reconnect all the veins, arteries, tendons and soft tissue.

While the surgeon and trauma unit staff played an important part in this successful outcome, DaSilva said there were a significant number of critical decisions made throughout the emergency response. These are instructive to anyone who becomes involved in this type of medical emergency:

**Responders did not over-react.** Responders did not attempt to force the injured limb and severed hand out of the machine or try to reverse the machine. This could have caused additional damage and made the body parts inoperable.

**Call for special equipment.** Instead, responders called for special cutting equipment that would allow the machine to be taken apart without causing additional damage to the man and his hand.

**Call for a surgeon.** Responders called for, and Rhode Island Hospital dispatched, a surgeon who supervised extrication of the man and his severed hand from the meat cutter.

**Appropriate preservation measures:** The response team knew that the severed hand should be kept cold by wrapping it in moist gauze, putting it in a zip-lock bag and transporting it in an iced cooler. Just as important they avoided direct contact of the amputated hand with ice or ice water. This could have caused "frost bite" and prevented or limited the opportunity for a successful replantation.

**Call for a chopper.** With every minute being critical, a helicopter was called for and waiting for the patient to transport him as soon as he could be extricated from the meat cutter.

**Appropriate destination.** Because they were transporting by helicopter, first responders might have chosen any trauma unit in the Providence, Boston or Worcester area. Capabilities of the Rhode Island Hospital Trauma Unit for this type of injury were

nearby and World Class.

**O.R. readiness.** Before the trauma victim arrived, the surgeon and his team had already been assembled in the operating room.

**Fast clinical evaluation.** The surgeon had to make a fast evaluation of the patient's hand and limb. He knew from experience and training that the "clean margin" in both indicated that this replantation could be performed successfully.

**Right procedural sequence.** Hand replantation is actually a series of several different types of surgical procedures. Dr. DaSilva immediately cleaned the hand and limb and tagged all of the veins, arteries, bone structures and tendons that would have to be reconnected. After quickly repairing some bone damage, his first priority was to revascularize the hand so that there was ample blood flow to and from the hand. Although revascularization at this point makes some of the other structures less accessible for subsequent repair, this sequence is important to keep all of the tissue in the hand alive and as healthy as possible. With this step completed the hand regained some of its natural color. Dr. DaSilva could then take the time he needed to meticulously perform all of the other connecting procedures.

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The practice serves Southern New England with offices in Johnston and Newport along with two Orthopedic Care Centers in Providence and one in East Greenwich. Last year, more than 2,800 physicians referred patients to University Orthopedics and patients received treatment in more than 40,000 physical therapy visits.

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