

increase in insurance fines. The insurance experts affirm that the number of accidents resulting in material damages is inversely proportional to the driver's age. The inexperience of the young paramedic results in crashes, additionally endangering the patient that the vehicle is transporting. Another aspect that complicates the problem is proving that the damaged emergency vehicle is not juridically responsible. In spite of repeated orders given to the paramedics regarding their driving technique; the number of accidents has not decreased. Two years ago, drive data recorders (DDR) were installed in ambulance. The DDRs are linked by WiFi by the car key. Each paramedic is identified by his/her key. Each key is recovered once a week and a software program is used to detect problems. Data are compiled for the speed, the beacons, the sirens, and the geographical position of the ambulance, in real time. This information has been made available by the judicial processes.

Since the implementation of the DDRs, the number of ambulance road crashes and complaints has decreased. Of the 4.7 ambulance crashes each year (prior to the implementation), the number of incidents has decreased to 0.6. After one-year period of adaptation, the paramedics accepted the principle, particularly because it protects them from the risks of false declarations of contravening. Hopefully, the number of accidents will decrease due to this system.

**Keywords:** ambulance; crash; drive data recorder; emergency medical services; France; paramedic

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### (N32) Telephone Cardiopulmonary Resuscitation: Intensive Training Increases the Number of Patients Who Will Benefit

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**Introduction:** Telephone cardiopulmonary resuscitation (T-CPR) improves the survival rate of out-of-hospital cardiac arrest. Previous articles showed only 50% of patients deserving T-CPR received it, mainly because dispatchers did not recognize the cardiac arrest.

**Methods:** After eight weeks of intensive T-CPR training, data were collected for six months (296 cases). All trauma, pediatrics, deaths, and cases when the caller was distant from the patient were excluded. Cases when the patient still was able to talk during the call or when witnesses spontaneously performed CPR also were excluded. For each case, dispatchers had to explain why they did not provide T-CPR.

**Results:** Out of 296 cases, 139 were excluded. Of the remaining 157 cases, dispatchers decided not to provide T-CPR because the patient was too old, too physically diminished, willing but not able because the witness was too agitated to listen to instructions, or because there was a language barrier. Of the remaining 139, T-CPR was offered in 72 cases (52%). Five inappropriate T-CPR (false positives) were counted. Of the 67 who did not receive T-CPR, dispatchers failed to ask the right question (is breathing normal?) on 22 occasions. On the remaining 45 cases, the witness described the breathing as normal.

**Conclusions:** Improving the rate of TCPR is difficult. The main reason TCPR was not provided was agonal breathing.

Dispatchers must ask to hear the patient's breathing by having the witness place the telephone on the mouth of the victim. In the future, videophones will be of great help. The outcomes of these patients must be collected to confirm the usefulness of TCPR.

**Keywords:** cardiac arrest; dispatching; emergency health; out-of-hospital cardiac arrest; telephone cardiopulmonary resuscitation

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### (N33) Dispatching: Seizure Patients May Need Telephone Cardiopulmonary Resuscitation

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**Introduction:** Ventricular tachycardia and ventricular fibrillation during cardiac arrest sometimes produces a seizure that is wrongly considered epilepsy. Therefore no telephone cardiopulmonary resuscitation (T-CPR) is provided.

**Methods:** Over an eight-week period, dispatchers were trained to systematically call witnesses back two minutes after an adult seizure, to check the breathing and the state of consciousness of the patient. For six months, all calls with seizure as the major complaint were collected. Children <18 years old were excluded. Whether the new procedure was used and how many out-of-hospital cardiac arrests presenting as seizures received T-CPR with this procedure (second call after two minutes) was recorded.

**Results:** Over a six-month period, 93 calls for an adult seizure were placed. Cases where the witness was a medical professional (24) were excluded, as were cases when the caller was distant from the patient (9). Of the 60 remaining cases, dispatchers called back after two minutes on only 26 occasions (43%). Only three of those 60 patients were classified naca 6 or 7. Two of them benefited from T-CPR after the second call. No T-CPR was provided to the third victim (dispatcher did not call back).

**Conclusions:** Cardiac arrest presenting as a seizure is unusual. Although this procedure is time-consuming, it proves to be useful. The compliance of the dispatchers on this procedure still is low. More explanation and training is necessary to improve the rate of "second calls".

**Keywords:** cardiopulmonary resuscitation; dispatching; emergency health; out-of-hospital cardiac arrest; seizure; telephone cardiopulmonary resuscitation

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### (N34) On-Site Presence of a Paramedic, Emergency Physician, and Dispatcher is a Key to Success during Major Incidents

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**Introduction:** Efficient leadership is the key to a successful management during a major incident. Since the beginning of 2008, Switzerland has been experimenting with a new, on-site, medical management system: a specially trained paramedic and emergency physician are sent on-site to lead the management of the crisis.

**Methods:** As soon as the incident involves >10 wounded victims or requires more than five medical vehicles (ambu-