

# Dispatching: a seizure may sometimes need T-CPR

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## SCIENTIFIC BACKGROUND

Ventricular tachycardia and ventricular fibrillation during cardiac arrest (CA) sometimes produce a seizure crisis which is wrongly considered by bystanders and dispatchers as epilepsy. Therefore no T-CPR is provided.

## AIM OF THE STUDY

To introduce a new procedure: for each call with an adult's seizure as the main complain, after dispatching an ambulance, the dispatcher has to call back the bystander after 2 minutes to check on the state of consciousness and breathing of the patient. This may allow to suspect CA and therefore provide T-CPR if necessary.

To measure the acceptance' rate of this new procedure by dispatchers.

To measure the incidence of CA presenting as epilepsy.

To measure the efficiency of this procedure on the immediate survival rate.

## METHODS

### Settings:

All our dispatchers are paramedics or nurses.

Our call center is in charge for all medical emergencies in the State of Vaud (650'000 inhabitants, 80'000 calls and 30'000 missions per year).

### Methods:

During 8 weeks, dispatchers received intensive informations on physio-pathological causes for seizures. They were also informed of results from previous observations showing that CA sometimes present as seizures.

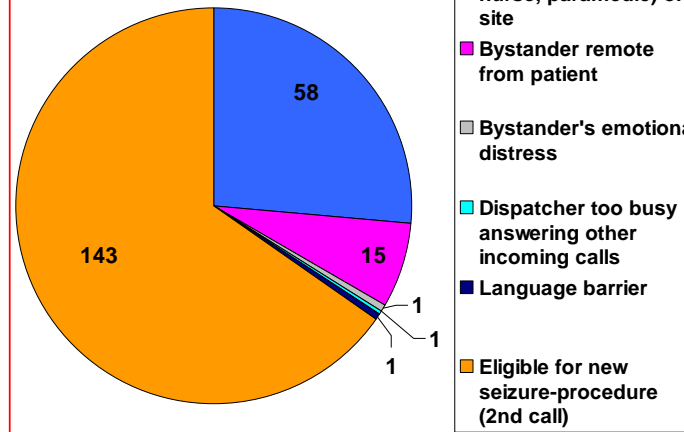
Dispatchers were trained to systematically call back adult seizure bystanders after 2 minutes, to check on the patient's quality of breathing and state of consciousness. In case of apnea or agonal breathing once seizure is over, T-CPR was proposed.

We then prospectively collected all missions with adult seizure as the main complaint over 8 months. We checked if the new procedure was applied and how many out-of-hospital CA presenting as a seizure received T-CPR with this procedure (2nd call after 2 minutes).

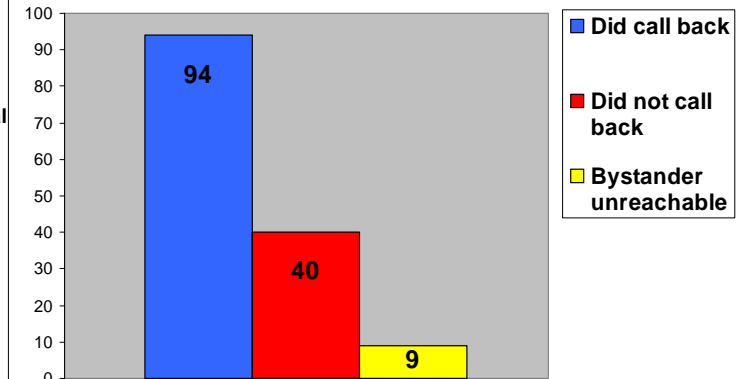
All tapes were reviewed by the medical director

## RESULTS

Incoming calls for an adult's seizure : 219 cases



Application by dispatchers of the new procedure (2nd call)



## CONCLUSION

Adult's seizure is quite frequent. Most of those situations are eligible to apply the new procedure (2<sup>nd</sup> call). But the level of acceptance by dispatchers of this new procedure is still low (65%). The reasons after asking dispatchers are numerous: not enough time, they don't believe it is useful.

During the study only 3 adult's seizure turned out to be CA. Two of them benefited of the procedure and therefore CA was suspected, T-CPR proposed and applied. One of the patient arrived alive at the hospital, the other one died on-site. The third patient, who did not benefited of the procedure, also died on-site.

The incidence of those cases is rare. Nevertheless, it is a quite simple and costless new procedure that may saves lives. Therefore, our EMS will pursue the use of this procedure.

### Further developments:

To better understand the reasons dispatchers do not apply the procedure, and to improve their compliance.

To collect the outcome of those patients once they are at the hospital.

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