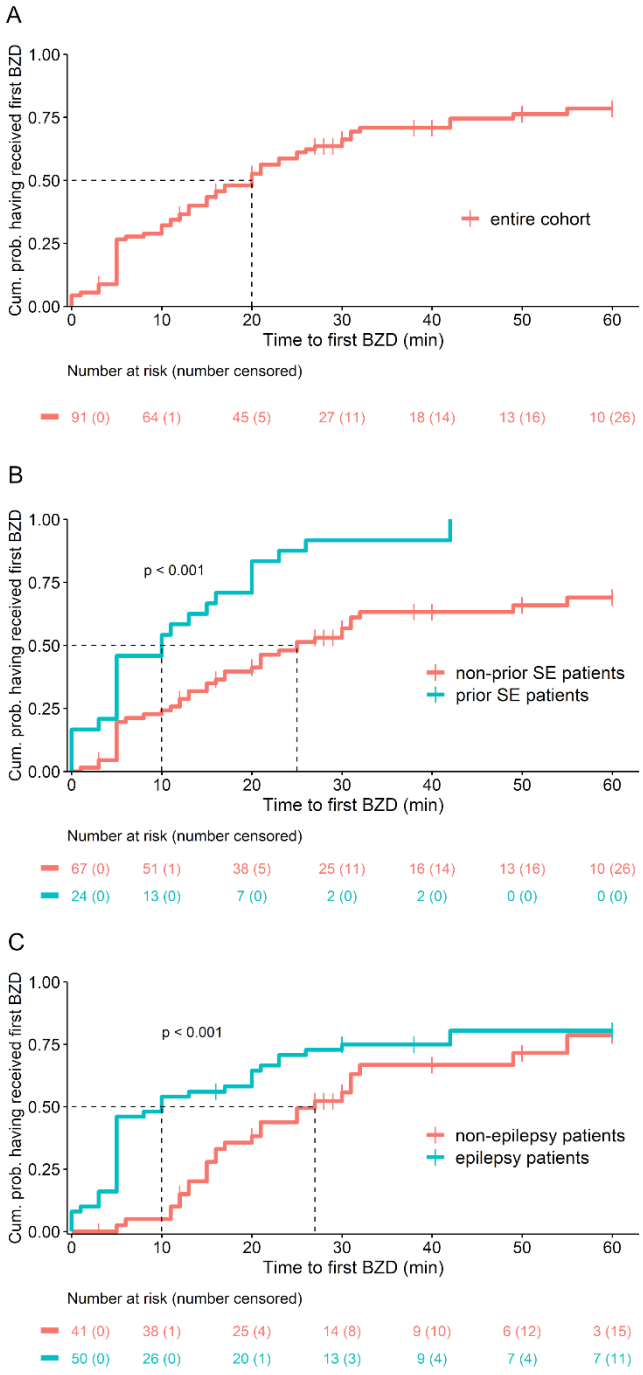
SUPPLEMENTARY MATERIAL – RESULTS

Table e-1. Treatment administered in the prehospital setting by caregivers and Emergency Medical Services (EMS).

		Treatment by caregivers			
		0 BZD	**1 BZD**	**2 BZD**	**3 BZD**
Treatment by EMS	**0 BZD**	**N=20** [11] t_c 20 (10-25.5) t_{EMS} 18.5 (10-27) t_{total} 36.5 (29-52.5)	**N=7** [7] t_c 15 (14.5-37.5) t_{EMS} 18 (15.5-21) t_{total} 34 (30.5-61)	**N=4** [4] t_c 37 (22.5-57) t_{EMS} 34.5 (33-35) t_{total} 70 (55-92)	-
	1 BZD	**N=23** [12] t_c 15 (10-25) t_{EMS} 20 (16-25.5) t_{total} 40 (29.5-55.5)	**N=8** [8] t_c 13.5 (8-31) t_{EMS} 33.5 (19 -44) t_{total} 56 (29.5-65)	**N=5** [5] t_c 25 (15-30) t_{EMS} 24 (20-38) t_{total} 45 (45-68)	**N=1** [1] t_c 35 t_{EMS} 65 t_{total} 100
	2 BZD	**N=9** [4] t_c 10 (8-15) t_{EMS} 24 (10-28) t_{total} 31 (20-44)	**N=4** [4] t_c 23.5 (21-24) t_{EMS} 49 (40-52.5) t_{total} 69.5 (63.5-71)	**N=1** [1] t_c 30 t_{EMS} 16 t_{total} 46	**N=1** [1] t_c 784 t_{EMS} 61 t_{total} 845
	3 BZD	**N=3** [1] t_c 6 (4.5-8) t_{EMS} 9 (8.5-27) t_{total} 18 (15-34.5)	**N=3** [3] t_c 20 (18.5-20) t_{EMS} 36 (34.5-42.5) t_{total} 56 (53-62.5)	-	-
	4 BZD	**N=1** [0] t_c 9.5 t_{EMS} 28 t_{total} 37.5	-	-	-
	5 BZD	**N=1** [1] t_c 50 t_{EMS} 30 t_{total} 80	-	-	-

Legend. **BZD**: benzodiazepine/s. **EMS:** Emergency Medical Services. **N**: number of patients. $\mathbf{t_c}$: time from seizure onset to EMS arrival, time within the care of caregivers. $\mathbf{t_{EMS}}$: time within the care of EMS before hospital arrival. $\mathbf{t_{total}}$: time from seizure onset to hospital arrival. Times are expressed as median (p25-p75) in minutes. The numbers within [ ] are the patients with a known risk for subsequent seizures within the category. Example to read the table: 20 patients did not receive any BZD by caregivers and by EMS; 11 of these patients were at risk for seizures; among these patients, the median time within the care of caregivers was 20 (10-25.5) minutes, the median time within the care of EMS was 18.5 (10-27) minutes, and the median time to hospital arrival from seizure onset was 36.5 (29-52.5) minutes.

Fig e-1. Kaplan-Meier (KM) curves show the cumulative probability of having received the first benzodiazepine (BZD) over time from seizure onset by caregivers or Emergency Medical Services in the prehospital setting. Fig e-1A shows the KM curve of the entire cohort; Fig e-1B shows 2 KM curves comparing patients with and without prior status epilepticus (SE) ($p<0.001$); and Fig e-1C shows 2 KM curves comparing patients with and without epilepsy ($p<0.001$). Times are censored at hospital arrival and 60 minutes. We provide the number of patients at risk and the cumulative number of censored patients at each time point.



Although epilepsy patients were more likely to receive the first BZD compared to patients without a history of epilepsy during the early stages of SE based on the related KM curve, history of epilepsy was not relevant in the multivariable Cox model suggesting that possibly: 1) the unadjusted difference was driven by confounders, 2) our sample was underpowered to find an actual difference, or 3) as the Cox model considers the HR for epilepsy as the mean of the 60-minute interval, it could be more difficult to find statistical differences at early stages.

Fig e-2. Kaplan-Meier curve of the entire cohort shows the cumulative probability of having received a non-benzodiazepine anti-seizure medication (non-BZD ASM) over time from seizure onset by caregivers or Emergency Medical Services in the prehospital setting. Times are censored at hospital arrival and 60 minutes. We provide the number of patients at risk and the cumulative number of censored patients at each time point.

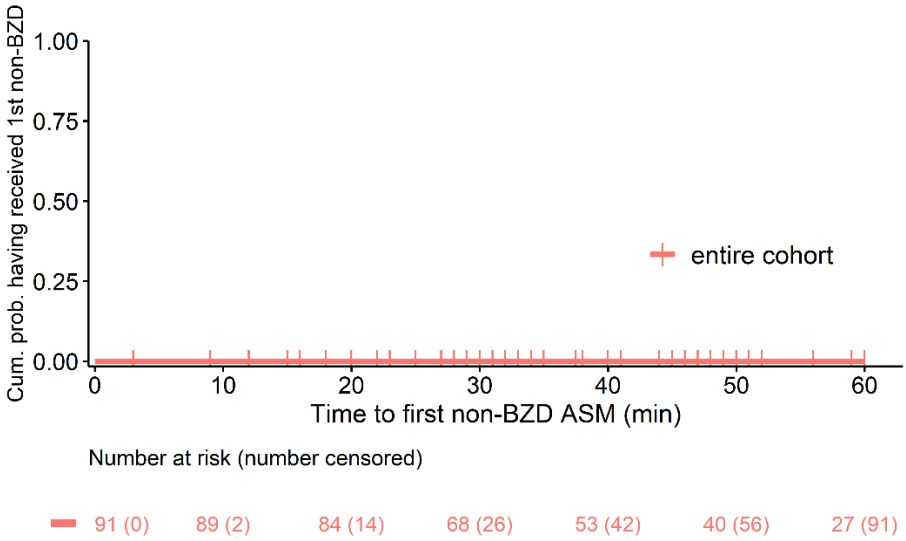


Fig e-3. Kaplan-Meier (KM) curves show the cumulative probability of having received a rescue medication by caregivers over time from seizure onset in the prehospital setting (at-risk patients). Time is censored at EMS arrival and 30 minutes. Fig e-3A corresponds to the KM curve with all the at-risk patients, while Fig e-3B shows 2 KM curves comparing the at-risk patients with and without prior SE ($p = 0.02$).

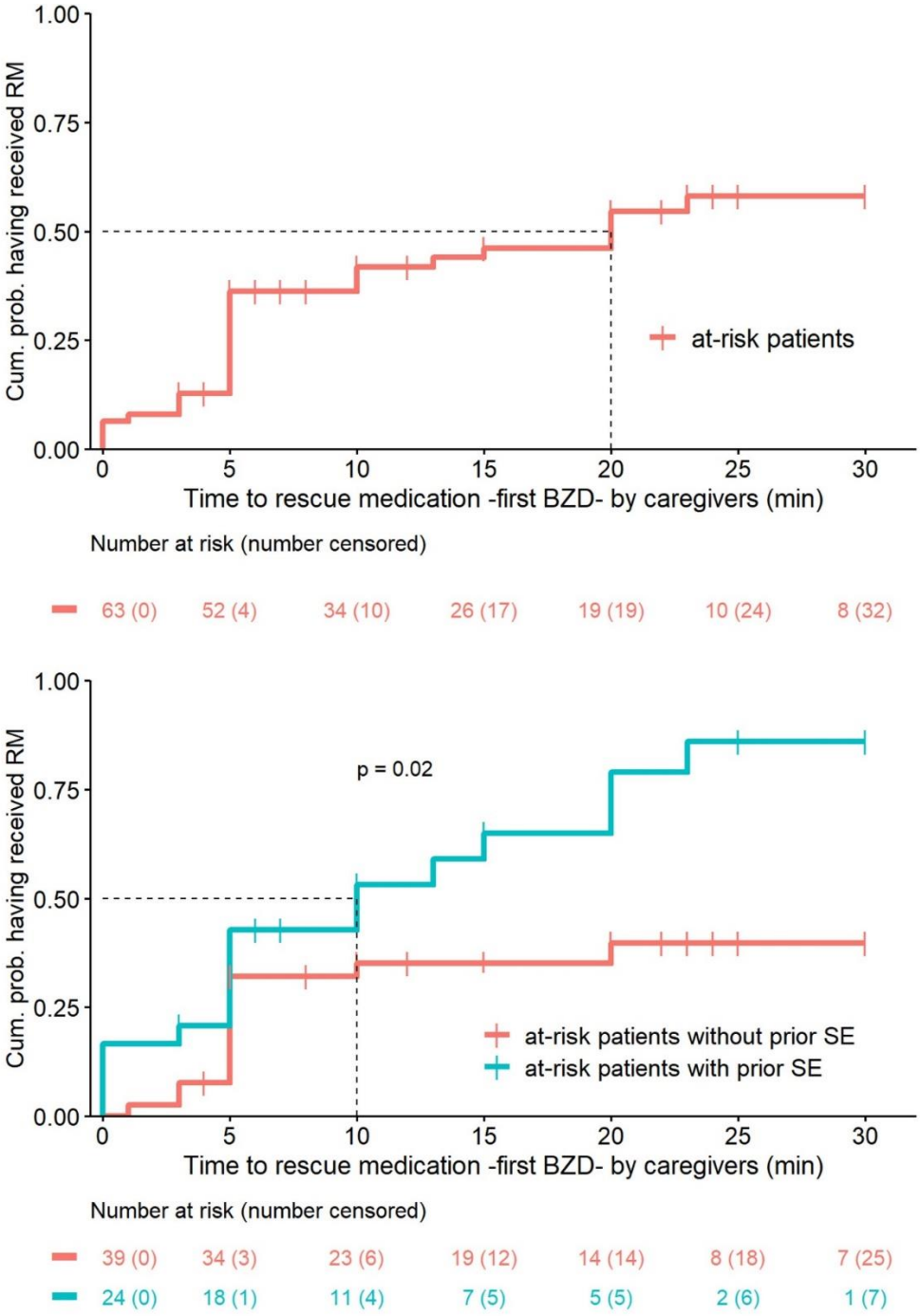
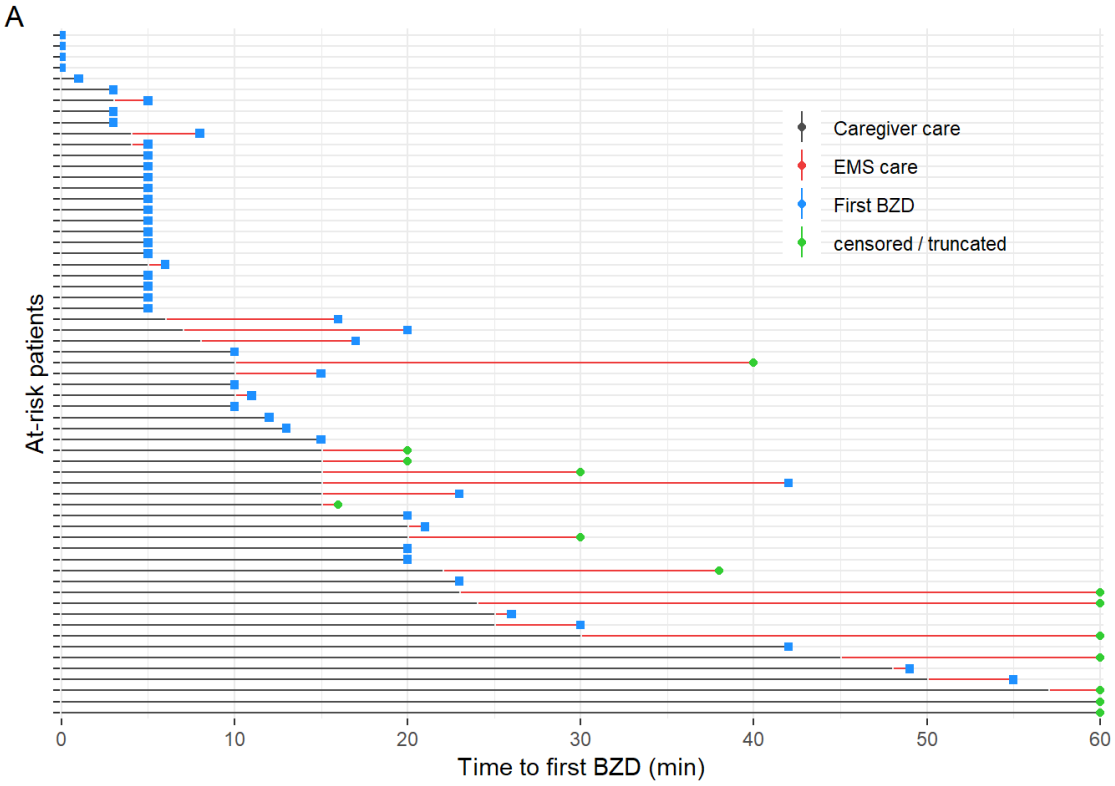
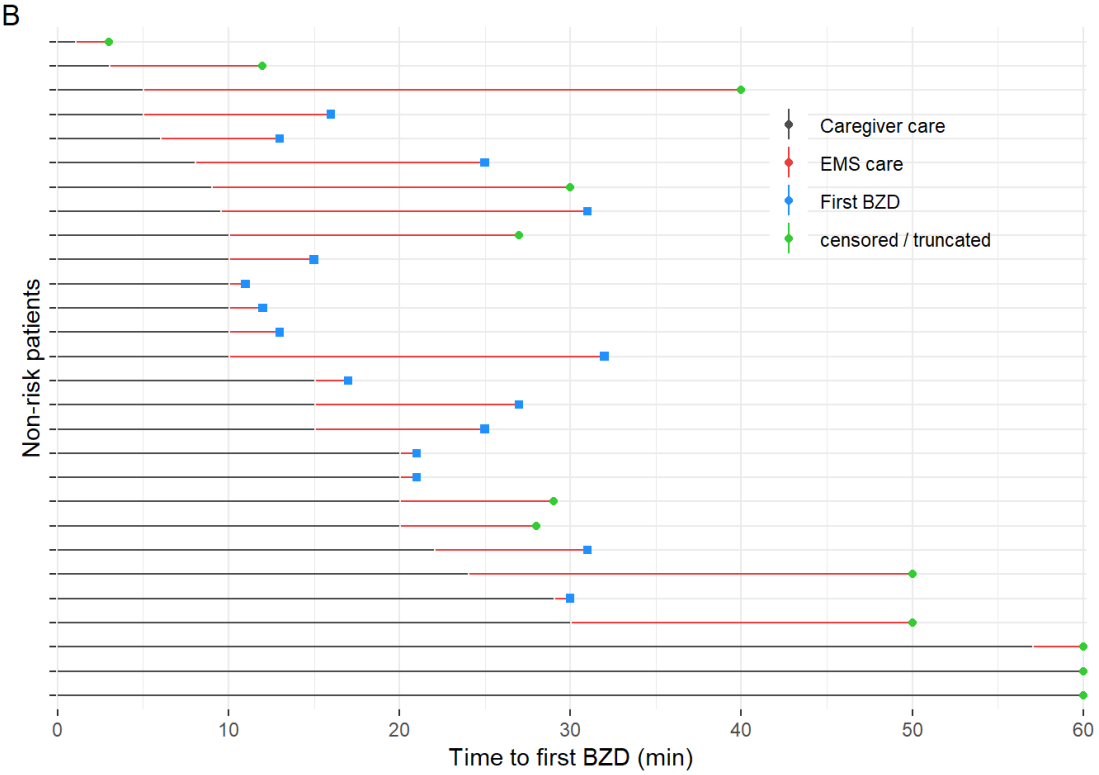


Fig e-4. Line chart. Line chart including time intervals from seizure onset under caregiver's care (black line) and EMS care (red line) before the first benzodiazepine administered (blue square). If the patient arrived at the hospital by EMS without any benzodiazepine administered, or the patient spent more than 60 minutes outside the hospital without medication administered, it was marked with a green circle (censored/truncated). Each line represents one patient (y axis). The line chart A represents the patients at risk for subsequent seizures (n=63), and the line chart B, the patients without risk for subsequent seizures from our study population (n=28).



B


Caregiver care
EMS care
First BZD
censored / truncated
Non-risk patients
0
10
20
30
40
50
60
Time to first BZD (min)