Effectiveness of telephone-assisted first aid among young laypeople - a simulation study

Marcell Péter¹, Henrietta Bánfai-Csonka¹, Attila Pandur¹, Bence Schiszler¹, Balázs Radnai¹, József Betlehem¹, Bálint Bánfai¹

„Kids save lives” in Hungary

¹*University of Pécs Faculty of Health Sciences Institute of Emergency Care and Pedagogy of Health*

Purpose of the study:

Dispatcher-assisted first aid can increase bystanders’ willingness to help after an injury or illness. Our aim was to determine how effective can be telephone-assisted instructions in simulated first aid situations among young laypeople.

Material and methods:

One-hundred eight laypeople (mean age: 17.1±3.4 years) were involved in the study (62 girls and 46 boys). Effectiveness of dispatcher-assisted first aid was measured in three simulated situations: cardiopulmonary resuscitation (n=36), unconscious patient (n=36) and severe bleeding (n=36). Data collection was made with a self-fill-in questionnaire (before and after the scenario), an AMBU CPR software and a checklist. Participants had the opportunity to make the decision that they would like or would like not to call the ambulance. The role of the dispatcher was played by an instructor outside the simulation room.

Conclusions:

Only less than the half of the participants could perform effective first aid in the scenarios. Dispatcher-assisted first aid can be useful in an emergency situation but further improvement is necessary not only in dispatcher system but also in nationwide first aid training system.

Keywords: telephone-assisted CPR, basic life support, unconsciousness, bleeding, simulation.

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Results:

One-hundred two participants called the ambulance in the situations. The mean time before calling the ambulance was 01:06±00:39 minutes. Results were not influenced by age (p=0.97) and sex (p=0.132). Participants with prior knowledge in first aid called the ambulance (p=0.002) and started the treatment earlier (p<0.001) but they did not perform higher quality first aid (p=0.058). Fourteen participants (38.8%) could do effective chest compressions. Despite the instruction none of the participants could perform effective ventilation. Recovery position was performed correctly by 12 participants (33.4%) and 16 participants (44.5%) could stop bleeding. Based on the opinions the usefulness of dispatcher instructions was 4.96±1.51 (in a 1 to 5 Likert-scale) before the simulation and increased to 5.27±0.98 after the scenario (p<0.001).

	Prior knowledge (n=61)	No prior knowledge (n=47)	P
Start of calling the ambulance (Minutes)	0:55 (SD=00:30)	1:20 (SD=00:44)	p=0,04
Duration of call (Minutes)	1:28 (SD=00:49)	2:09 (SD=01:42)	p=0.01
Start of first aid (Minutes)	0:45 (SD=00:33)	01:29 (SD=00:52)	p<0.01