

Media and CPR – friends or foes?

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Aims

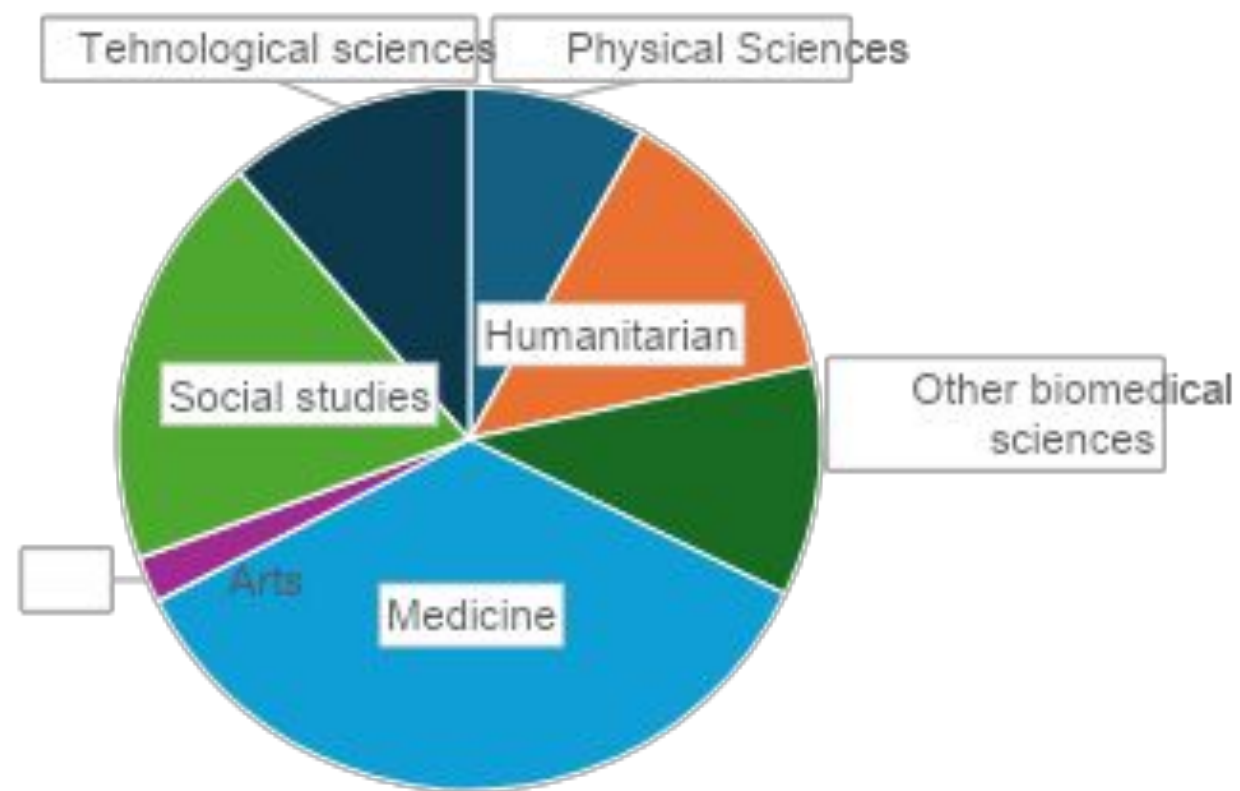
1. To analyse the sources used to gain CPR knowledge among Lithuanian students
2. To evaluate objective CPR knowledge
3. To evaluate confidence in CPR knowledge
4. To evaluate how watching medical TV series affects objective CPR knowledge and confidence in it
5. To compare results in Lithuania and Estonia

Methods

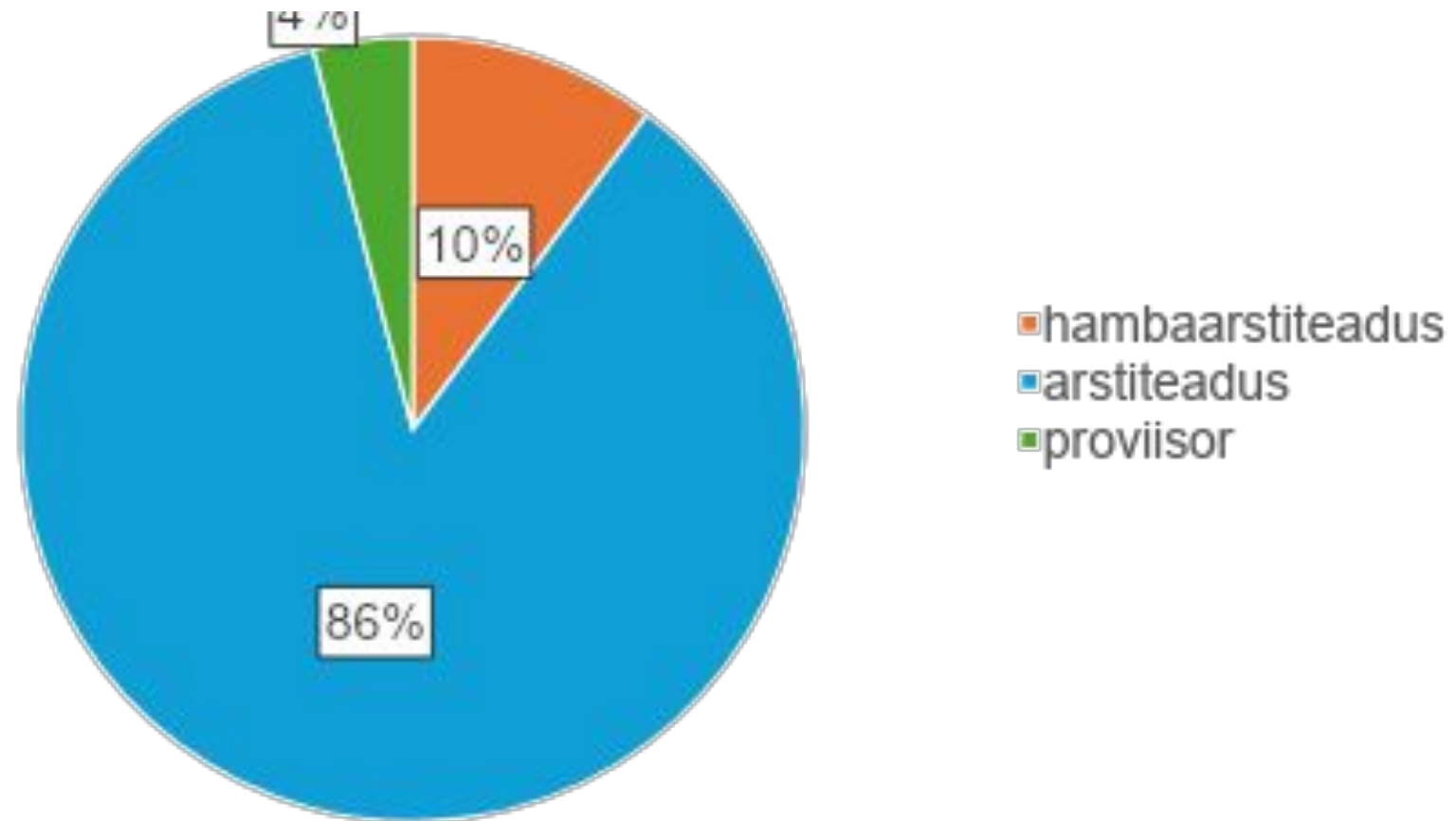
- Anonymous online survey with **283 (98) respondents**
- A **10 question test** based on European Resuscitation Guidelines
- 2 statements: „I am confident in my CPR knowledge“ and „I would perform CPR in an emergency“ -> **confidence score (CS)**

- CPR knowledge sources
- Approximate number of medical TV series watched

Lithuania (283)

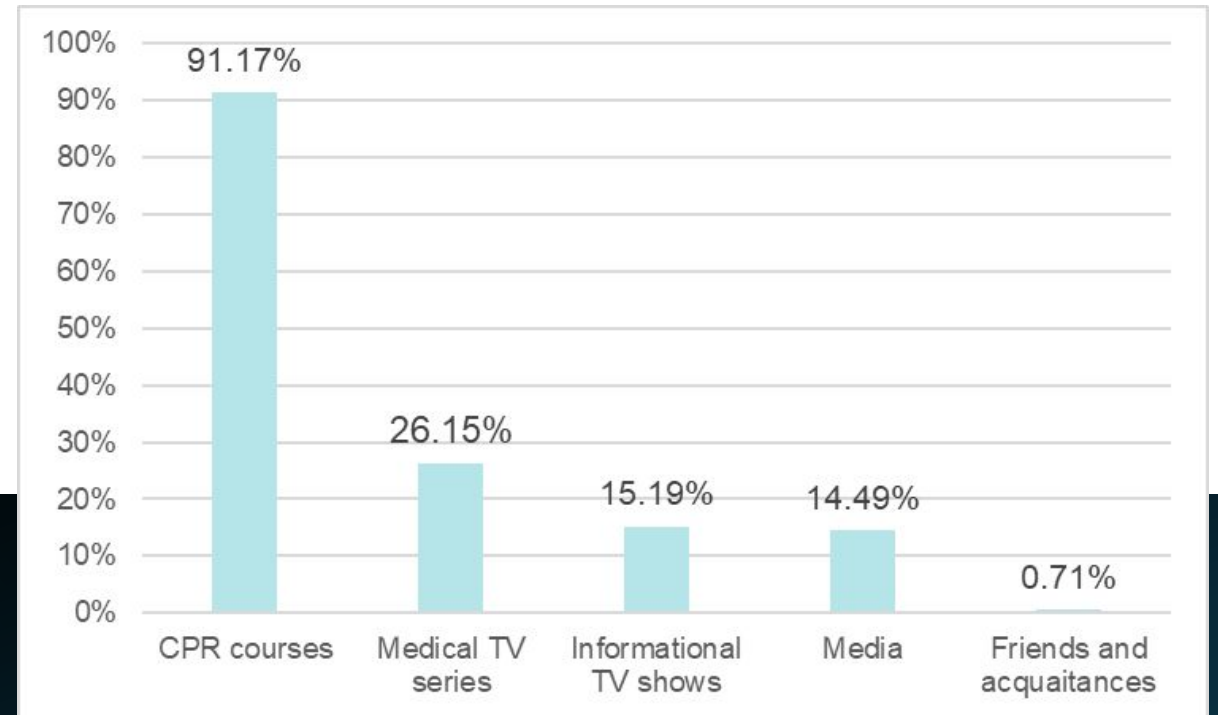


Estonia (98)

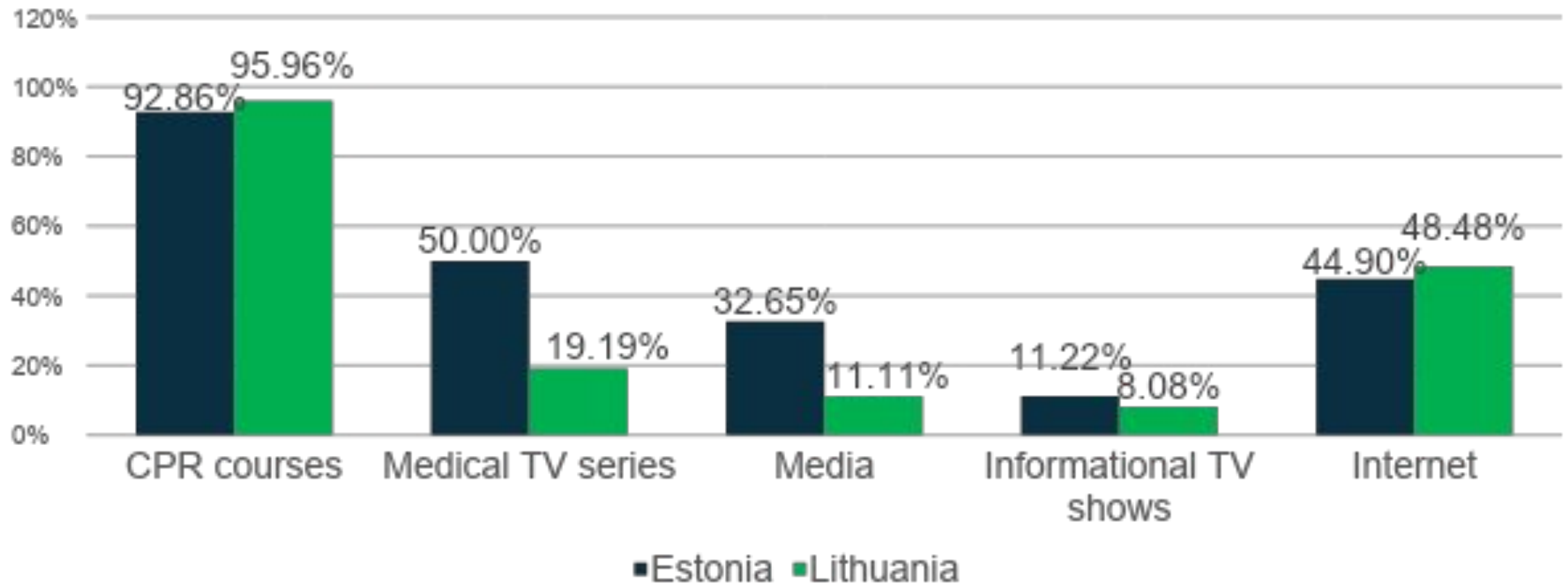


Sources of CPR knowledge

9 out of 10 students in Lithuania have attended professional CPR courses!



Medical students



CPR knowledge among students

- **Medical students**

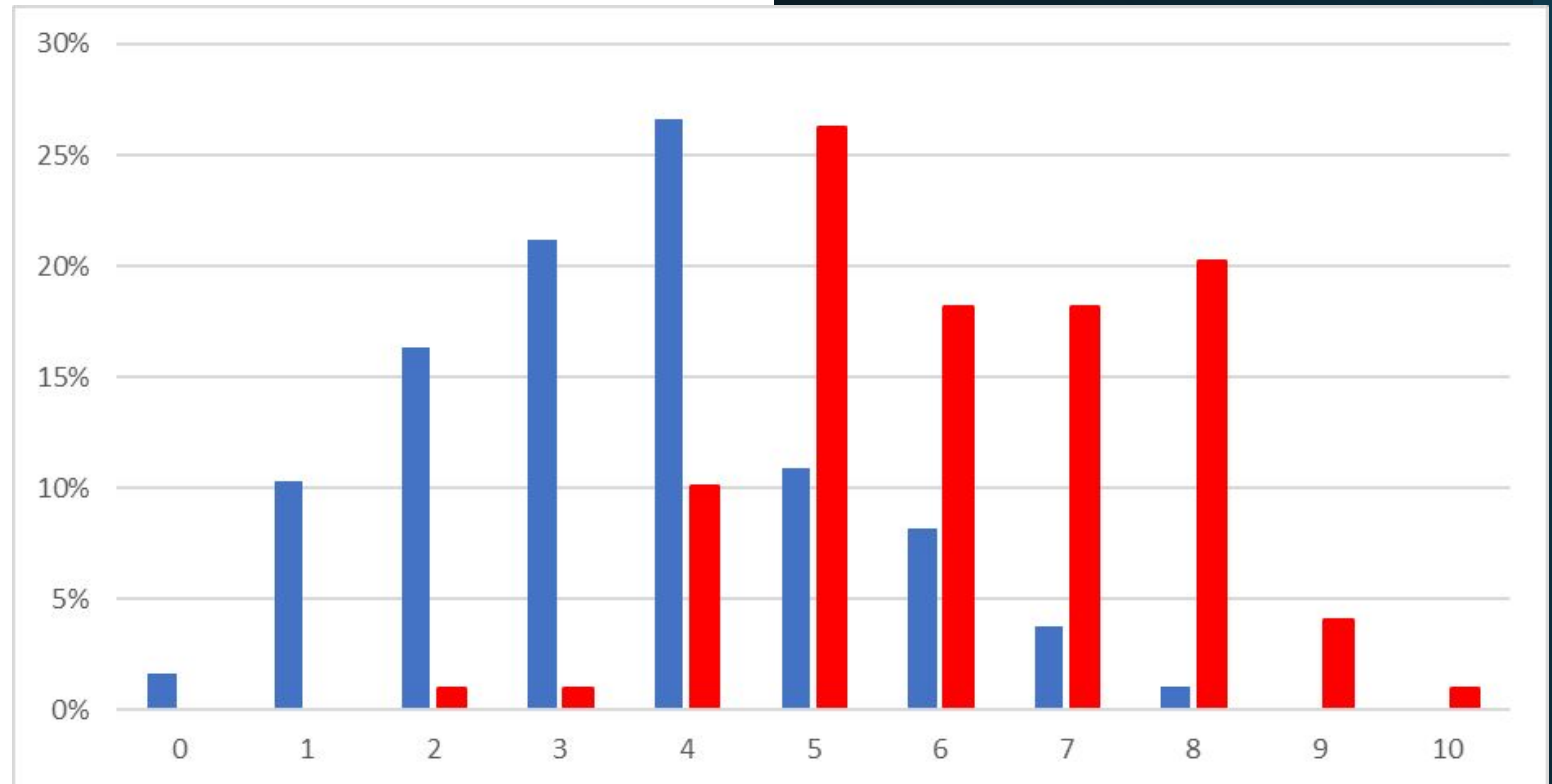
- Average test score: 6,21

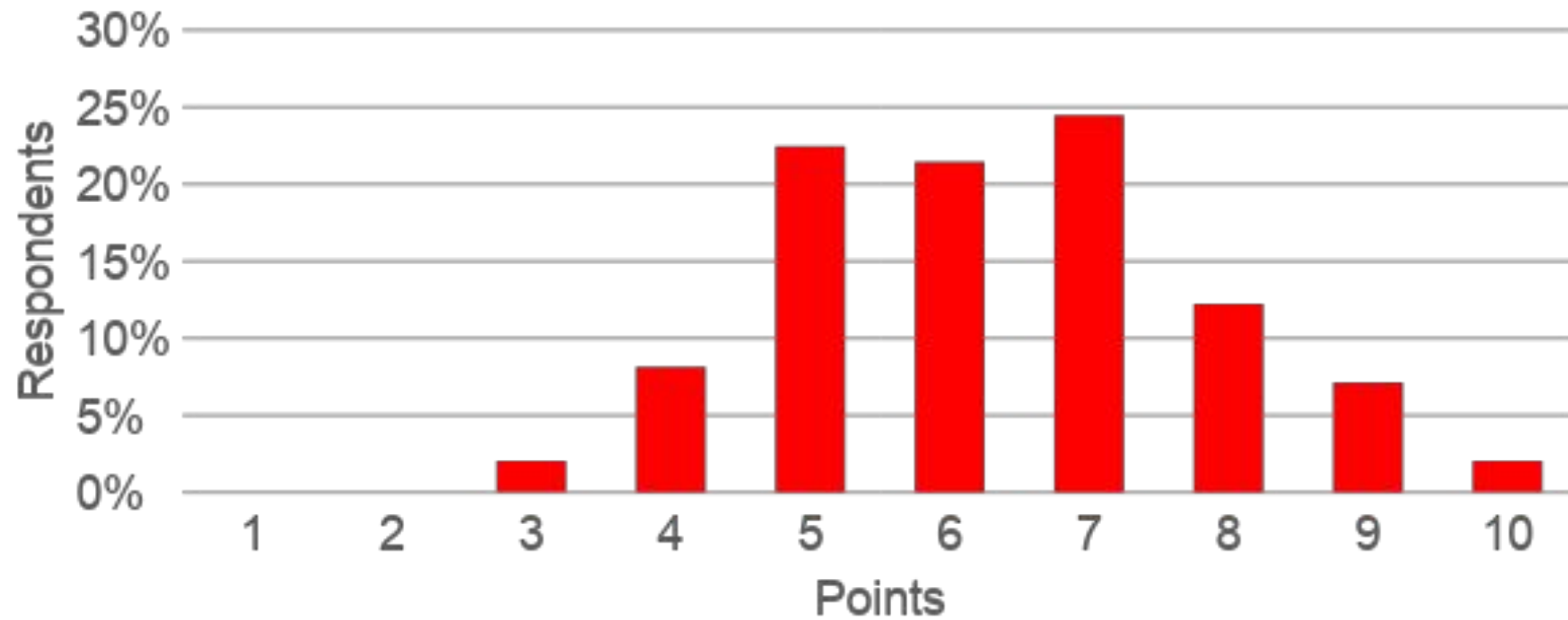
- Average CS: 7,64

- **Students from other fields**

- Average test score: 3,52

- Average CS: 4,97





Average score: 6,34

Estonian medical students

The most concerning
mistakes...

Who can use the AED?

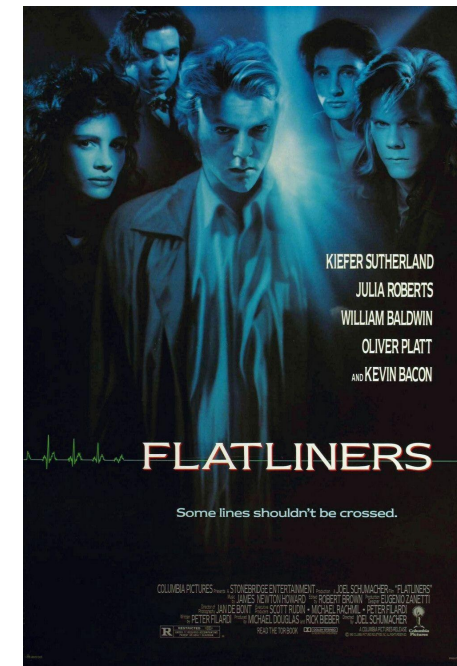
- 91,8% Estonian and 97% Lithuanian medical students answered correctly
- **Only 60,9% of other students knew the answer**
- Early defibrillation is key to survival
- Every minute of ventricular fibrillation leads to a 10% deduction in survival¹
- Early use of AED ↑ survival OR=1,75 ²

1.Marenco, John P., et al. "Improving survival from sudden cardiac arrest: the role of the automated external defibrillator." *Jama* 285.9 (2001): 1193-1200.

2.Elhussain, Mohamed O., et al. "The Role of Automated External Defibrillator Use in the Out-of-Hospital Cardiac Arrest Survival Rate and Outcome: A Systematic Review." *Cureus* 15.10 (2023).

The myth of Asystole

80,5% in Lithuania and 46,9% in Estonia believed a flat-line should be defibrillated



BUSINESS INSIDER

11 things medical shows always get wrong, according to doctors

You wouldn't actually use a defibrillator on a patient whose heart has stopped.



@ericchionh9766 prieš 3 dienas

Till today, I still don't understand why they persist in defibrillating a flatline.



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Atsakyti



@pianissimo7121 prieš 3 dienas

[@ericchionh9766](#) as someone with only movie level medical knowledge, Should you not? Also is someone flatlined can't we try anything as they are dead anyway?

How successful is CPR?

- Medical students – 30%, others – 75%
- In other studies – **more than half believes CPR success rate is >75%**^{1,2}
- The real success rate is <15%

1. Shif, Yuri, Pratik Doshi, and Khalid F. Almoosa. "What CPR means to surrogate decision makers of ICU patients." *Resuscitation* 90 (2015): 73-78.

2. Bandolin, Norkamari Shakira, et al. "Perspectives of emergency department attendees on outcomes of resuscitation efforts: origins and impact on cardiopulmonary resuscitation preference." *Emergency Medicine Journal* 37.10 (2020): 611-616.

The myth of survival

- Grey's Anatomy and House MD – 46 CPRs in 91 episodes
- The survival rate was 69,6%
- **Decision of DNR???**



Portanova, Jaclyn, et al. "It isn't like this on TV: Revisiting CPR survival rates depicted on popular TV shows." *Resuscitation* 96 (2015): 148-150.

Medical TV series

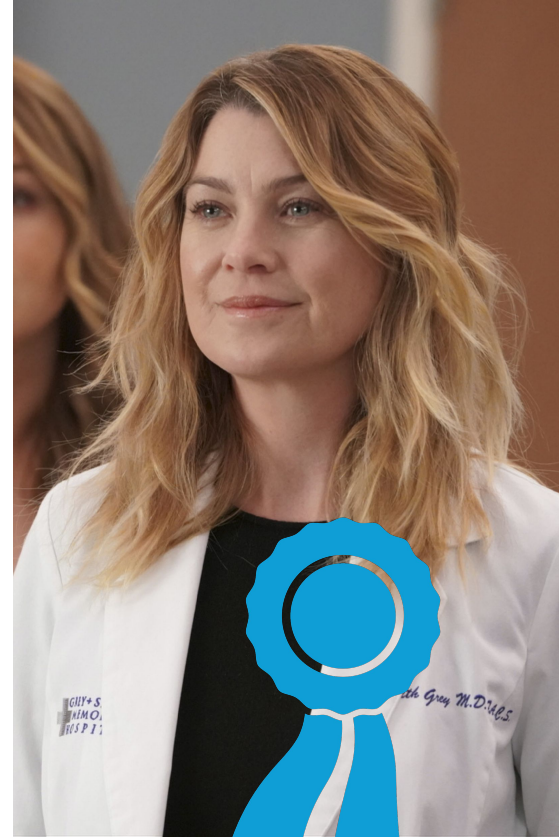
- Medical students watched more medical TV series (248,8 vs 133,86 episodes)
- Weak positive correlation between a number of episodes watched and a higher CPR test score ($r=0,2614$)
- 2 most popular TV series mentioned were „House MD“ and „Grey's Anatomy“ in both countries.
- **Which one is better?**

The ultimate battle

| | Grey's Anatomy | | | House MD | | |
|--------------------------|--------------------|--------------------------|---------|--------------------|--------------------------|---------|
| | Watched the series | Did not watch the series | p-value | Watched the series | Did not watch the series | p-value |
| Average test score | 5.04 | 3.99 | <0,01 | 4.55 | 4.19 | 0.22 |
| Average confidence score | 6.70 | 5.25 | <0,01 | 6.02 | 5.53 | 0.13 |

Conclusions

- While the attendance of professional CPR courses among students is exceptionally high, their **CPR knowledge is still insufficient**
- Despite being inaccurate medical TV series have a **weak positive influence** on their viewers' CPR knowledge
- Grey's Anatomy is a better CPR teacher than House MD



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