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Letter to the Editor

Distant learning of BLS amid the COVID-19 pandemic: Influence of the outbreak on lay trainees' willingness to attempt CPR, and the motivating effect of the training



To the Editor,

Risk of disease transmission is well known to be a factor limiting willingness of laypeople to attempt cardiopulmonary resuscitation (CPR). Current COVID-19 pandemic intensify concerns regarding a potential decrease in readiness of lay public to provide help as a result of the fear of being infected¹.

To investigate impact of the pandemic on laypeople's attitudes toward the performance of bystander CPR, the levels of willingness before and after the COVID-19 outbreak start were compared. Voluntary participants of the Russian-speaking massive open online course (MOOC) in basic life support (BLS) and automated external defibrillation (AED)² rated their readiness to attempt CPR on a stranger using the 5-point Likert scale both pre- and post-training. The one-month data collected for April 2020 were compared with the data for April 2019.

In April 2020, a total of 5062 individuals joined the course (vs. 833 in April 2019). Of them, 43% ($n=2171$) completed the course curriculum (vs. 19%, $n=157$). After completing the course, a substantial increase ($p < 0.001$) in the average level of readiness to attempt resuscitation

(from 3.5 to 4.3 points) and in the proportion of trainees who expressed high levels of willingness to provide CPR (4–5 points; from 54% to 84%) were recorded. The motivating effect of the training was also confirmed for April 2019: self-assessed willingness and the proportion of trainees with high willingness increased from 3.2 to 4.1 points and from 42% to 79%, respectively ($p < 0.001$). Further, in April 2020, the percentage of trainees expressing high baseline willingness to help was significantly higher than in April 2019 ($p < 0.001$).

In summary, the comparison suggests the pandemic did not cause any decrease in the baseline or post-training levels of willingness to provide CPR in trainees of the MOOC. However, one should account that the audience of the course does not represent general population, and the voluntary participants of the MOOC may have higher personal motivation to help.

There was a six-fold higher course enrollment rate and fourteen-fold higher course completion rate in April 2020 compared to April 2019. Substantial growth in the number of course participants started from March 17, 2020 (Fig. 1). Supposedly, the increment was

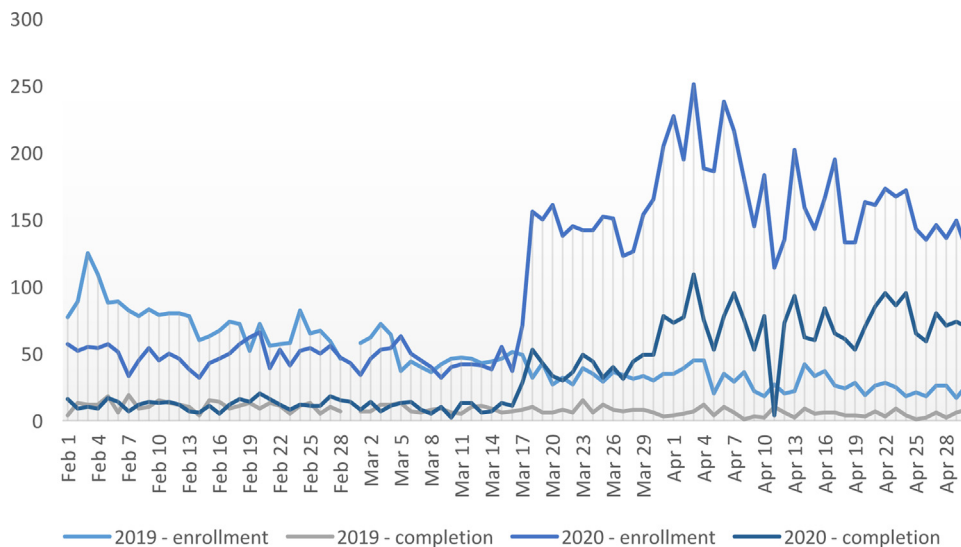


Figure 1 – Daily enrollment and completion rates of the BLS/AED MOOC (February–April 2019–2020).

triggered by the recommendation of the Ministry of Education and Science of the Russian Federation to switch higher education to distance learning approach from March 16, 2020. An increase in the course enrollment and completion rates was also observed for the English-language version of the MOOC³.

In response to the current COVID-19 pandemic, the European Resuscitation Council recommended to withhold face-to-face BLS training for laypeople, and emphasized the relevance of distance learning to minimize the risk of infection transmission⁴.

Being widely available and free of charge, MOOCs offer an opportunity to increase accessibility of resuscitation training, to inform the community on the recommended precautions in relation to the infection risk to rescuers⁵, as well as to support and boost public motivation toward assistance in the distressing time of the global COVID-19 outbreak.

Conflicts of interest

None.

REFERENCES

1. Scquizzato T, Olasveengen TM, Ristagno G, Semeraro F. The other side of novel coronavirus outbreak: fear of performing cardiopulmonary resuscitation. *Resuscitation* 2020;150:92–3.
2. Birkun AA, Dantanarayana VR. Open online course on basic cardiopulmonary resuscitation: investigation of an audience and the effects of distant training. *Gen Reanimatol* 2020;16:52–63.

3. Birkun AA, Dantanarayana VR. Basic life support and automated external defibrillation. 2019 (accessed 10 May 2020, at <https://stepik.org/course/48612>).
4. Lott C, Carmona F, Van de Voorde P, et al. European Resuscitation Council COVID-19 guidelines: Section 6. Education. 2020 (accessed 10 May 2020, at https://www.erc.edu/sites/5714e77d5e615861f00f7d18/content_entry5ea884fa4c84867335e4d1ff/5ea886ae4c84867421e4d1f8/files/ERC_covid19_pages_section6.pdf?.1588257412).
5. Olasveengen T, Castrén M, Handley A, et al. European Resuscitation Council COVID-19 guidelines: Section 2. Basic life support in adults. 2020 (accessed 10 May 2020, at https://erc.edu/sites/5714e77d5e615861f00f7d18/content_entry5ea884fa4c84867335e4d1ff/5ea886474c84867421e4d1e7/files/ERC_covid19_pages_section2.pdf?.1588257341).

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