School saves lives: shaping physically educated citizens

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Background and purpose
In Europe and the United States, more than 700,000 people die each year from cardiac arrest (Berdowski et al., 2010). If bystander cardiopulmonary resuscitation (CPR) could increase this survival rate by 2-3 times, less than 20% of the general population is able to perform it effectively (Plant & Taylor, 2013). School can play an active role in teaching basic life support (BLS) training programs that would have a significant impact on public health (Conolly et al., 2007). In a societal transfer perspective (Cloes, 2017), PE teachers are ideally placed to learn BLS to their students (Colquhoun, 2012).

Methods
Twenty-one secondary school PE teachers were recruited and trained to one of the 3 evolutive BLS cycles adapted to the PE curriculum of each teaching level. Students learned the CPR+AED protocol during 6 sessions of PE with hands-on application on training manikins and AEDs. Students’ knowledge of the BLS protocol was assessed by an open-ended questionnaire at baseline (T0), after the intervention (T1), and after a follow-up period of 3 months (T2). Practical application of the BLS protocol was assessed on a manikin measuring CPR performance at T1 and T2.

Results
In each teaching level, students (1st: 10.7±0.8 years, n=186; 2nd: 14.5±0.9 years, n=112; 3rd: 17.1±0.8 years, n=307) demonstrated significant improvements of knowledge of the CPR+AED protocol at T1 (p<.000) that remained stable at T2. Second and third cycles students were able to perform chest compressions close to the international recommendations (ERC, 2015) at T1 and T2. More than 80% of the students felt able to help a victim of cardiac arrest at T1 and T2.

Conclusions
The CPR+AED sequence led to encouraging improvements of knowledge, abilities, and confidence of the students. PE teachers felt valued and able to contribute autonomously to this major public health challenge.