

Evaluation of Automated External Defibrillators (AEDs) in School District of Philadelphia



Cardiology at Children's Hospital of Philadelphia/Perelman School of Medicine



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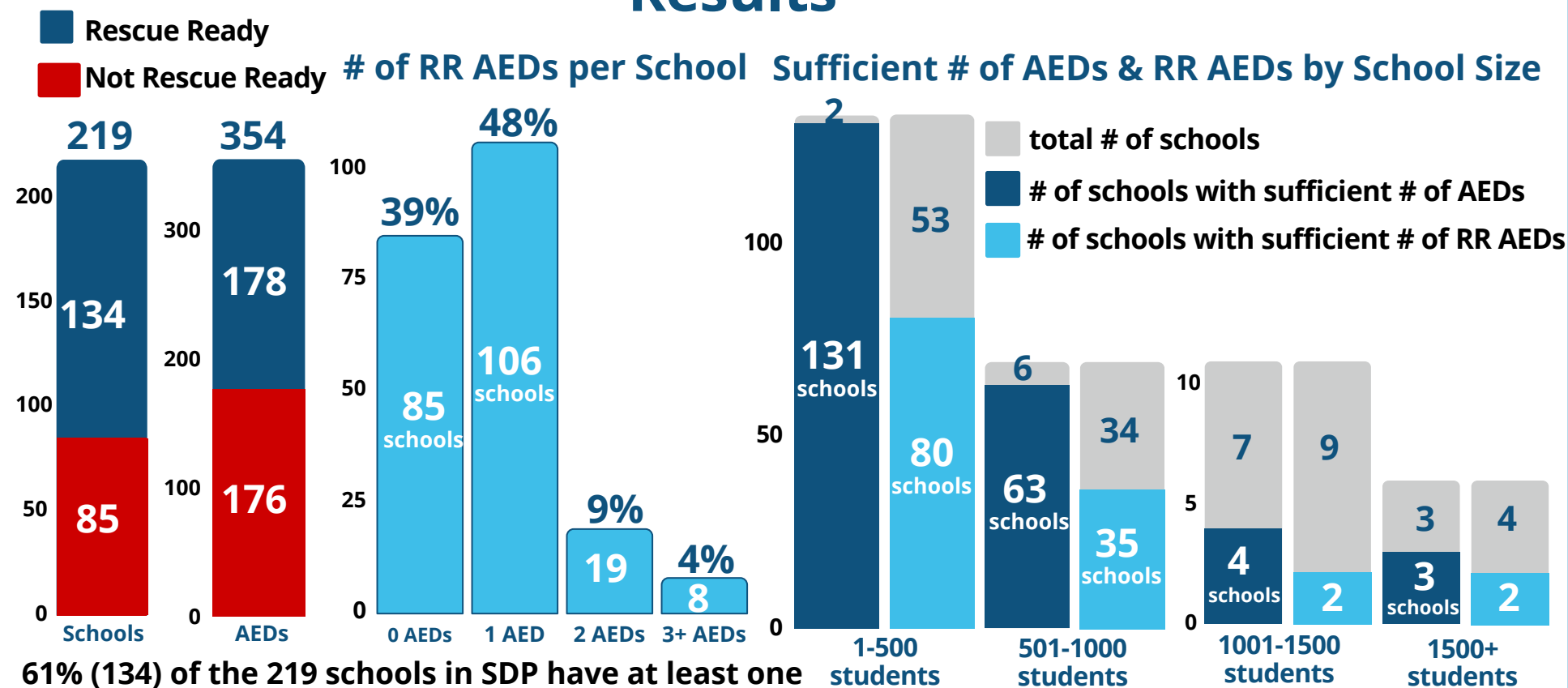
Background

- There are ~380,000 sudden cardiac arrests (SCA) in the US a year with a survival rate of 10-12%. If witnessed in a school with AEDs and a Cardiac Emergency Response Plan (CERP) the survival rate increases to 80-85%.
- 1 in 70 high schools will have a SCA each year.
- 20% of the population can be found daily on a school campus, so implementation of AEDs and CERP in schools can save as many as 50,000 deaths each year.
- A school has a sufficient number of AEDS if they have one AED per 500 students.
- A **rescue-ready (RR) AED** is less than 10 years old and does not have expired batteries or pads.
- Pennsylvania General Assembly Act 35 of 2014 required all Pennsylvania Schools to report the number, condition, age, and placement of their AEDs.

Methods

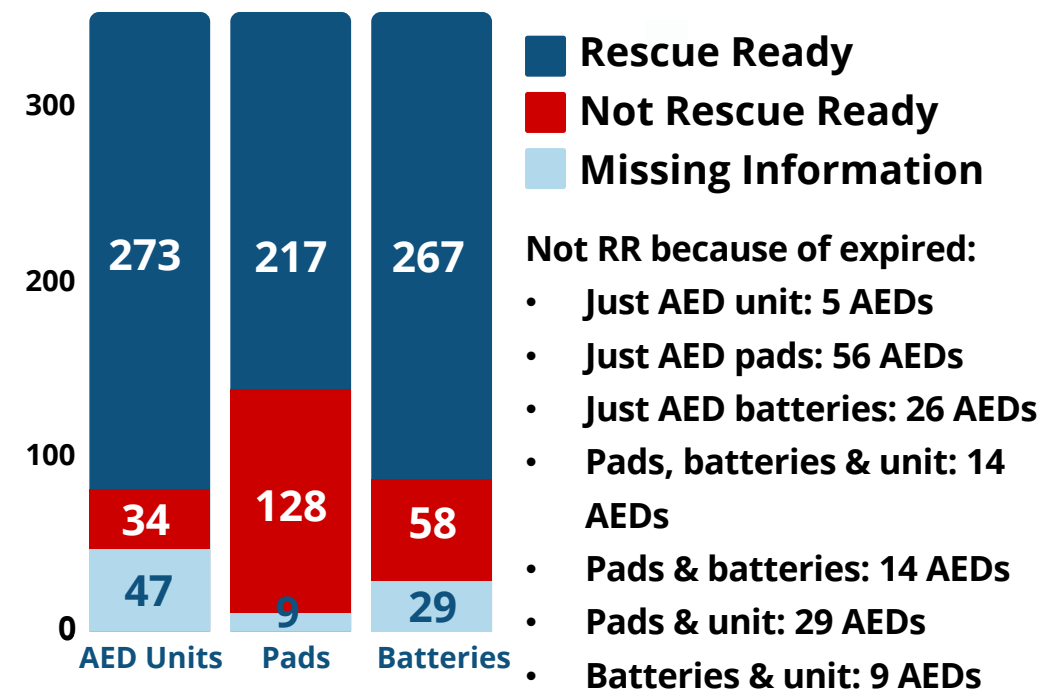
- The **objective** of this study is to assess the AEDs in Philadelphia public schools to ensure that they can become **Heart Safe**.
- Data from the School District of Philadelphia (SDP) was analyzed from their Google Sheets database.
- The study population included 219 schools and their 354 AEDs.
- Statistical analysis was performed using Stata Statistical Software: Release 17. College Station, TX: StataCorp LLC.

Results

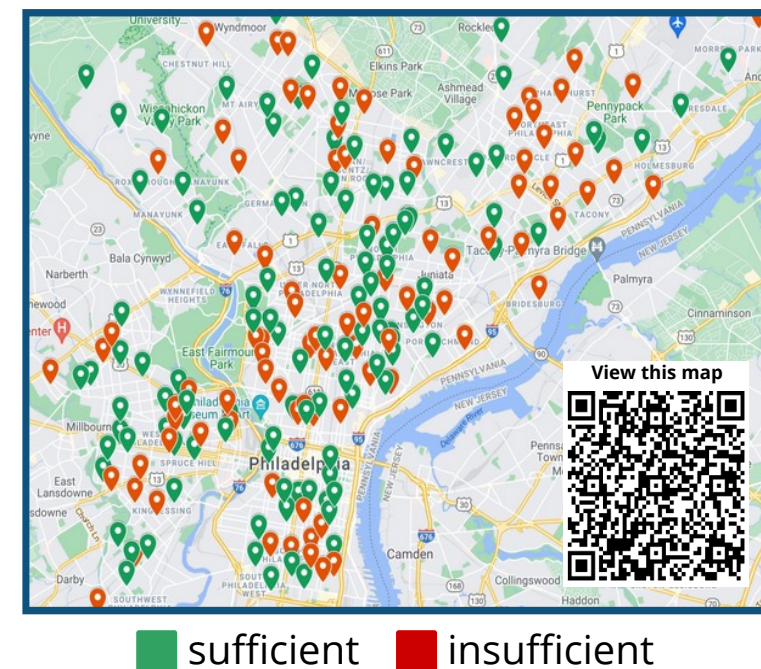


61% (134) of the 219 schools in SDP have at least one RR AED 50.3% (178) of the 354 AEDS in SDP are RR.

Condition of AED Units, Pads & Batteries



Map of Sufficient Number of RR AEDs per SDP school:



Key Points

- Of the 99% of the SDP schools that have at least one AED, **61% have at least one Rescue Ready AED**.
- Of the 92% of SDP schools have a sufficient number of AEDs, **54% have a sufficient number of Rescue Ready AEDs**.
- **50.3%** of the 354 AEDs in SDP are Rescue Ready.
- **56 AEDs and XX schools** can immediately become rescue ready with the **replacement of expired pads**.

Discussion/Conclusions

- This study demonstrates the **importance of education** surrounding long-term maintenance of AEDs.
- Maintaining a Rescue Ready AED involves ensuring that its three components (pads, batteries and units) are up-to-date and not expired.
- The SDP has ensured that the majority of their schools have a sufficient number of AEDs, but to become Heart Safe they should ensure all their AEDs are Rescue Ready.