

# University Campus-Based Occurrence of Sudden Cardiac Arrest in Japan: A Multicenter Survey

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## Background

- Out-of-hospital cardiac arrest (OHCA) in young individuals is rare but potentially fatal.
- In Japan, nationwide surveys of elementary–high schools reported 295 OHCA cases over six years (0.4 per 100,000/year); 71% were cardiac in origin and 65% occurred during exercise. However, data on universities remain limited.

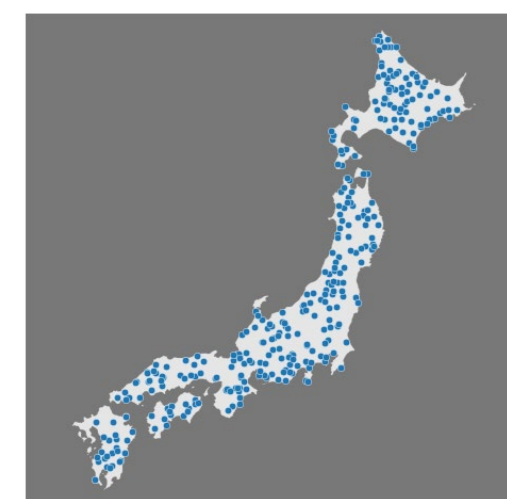
## Purpose

To investigate cardiac arrest cases in universities and preparedness for OHCA response.

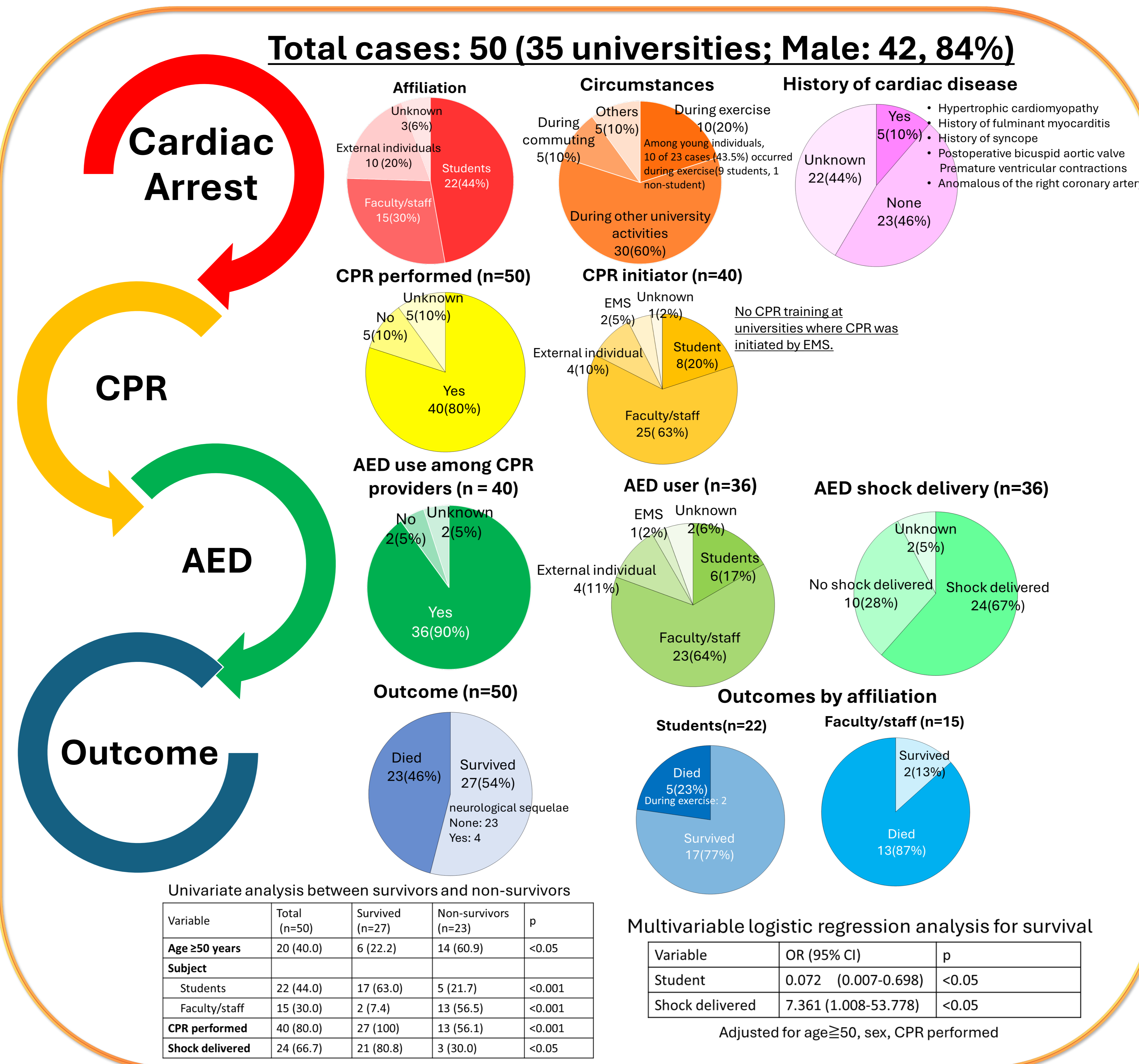
## Methods

A nationwide survey through the Japan University Health Association collected suspected cardiac arrest cases at universities (April 2019–March 2024) using Google Forms. Factors associated with survival were analyzed using univariate and multivariable logistic regression.

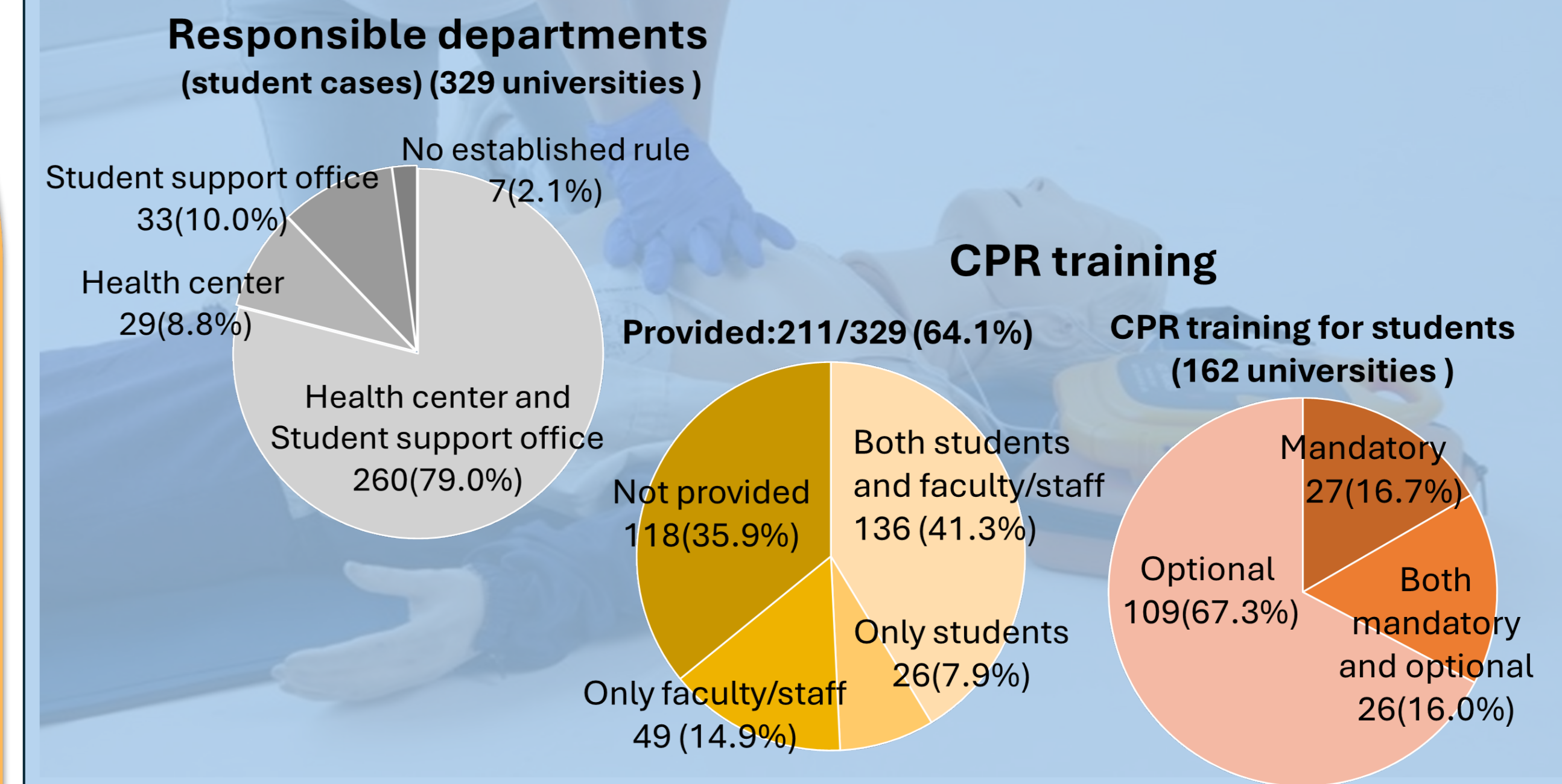
## Results



329 of 515 universities responded (64%).



## Emergency Response on University Campuses



## Summary and Discussions

- Cardiac arrest occurred in 35 of 329 universities (11%), totaling 50 cases over 5 years, indicating that OHCA is a potential emergency in universities.
- Among individuals aged 10–20 years, 43% occurred during exercise, suggesting that exercise remains an important trigger.
- CPR was performed in 40 cases (80%), and 37 (93%) were initiated by bystanders at universities providing CPR training.
- Survival was 54%, higher than the reported 5–10% 1-month survival rate in Japan, highlighting the importance of CPR training and emergency preparedness.