



# “Where and Who” did deliver Public Access defibrillations for OHCA in Japan?

Kyoko TSUKIGASE<sup>1)</sup>, Hiroshi TAKYU<sup>2)</sup>, Hironori INOUE<sup>2)</sup>, Hideharu TANAKA<sup>1)2)</sup>.  
1) Research Institute of Disaster Management and EMS, Kokushikan University  
2) Graduate School of Emergency Medical System, Kokushikan University



## Background

Total 1,040 out of hospital cardiac arrest patients (OHCAs) received public access defibrillation (PAD) by bystanders in 2016. The number of PAD has been increasing since 2005, but the implementation rate is only 4% of OHCAs. One reason was found out previously that mismatch between sites and install location of AED. However, the question remain unclear that neurological outcome related between where and who deliver PAD for OHCAs at the scene.

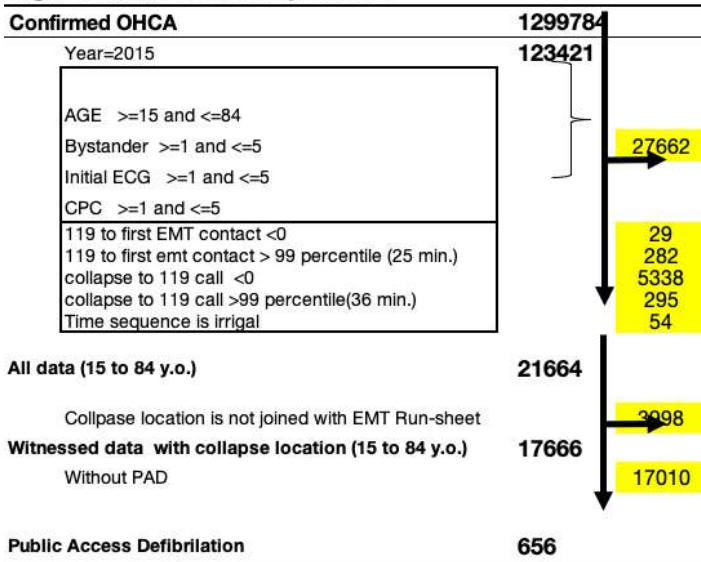
## Purpose

The purpose of this study was to find out of the relation between the location of OHCAs and category of bystander.

## Material and Method

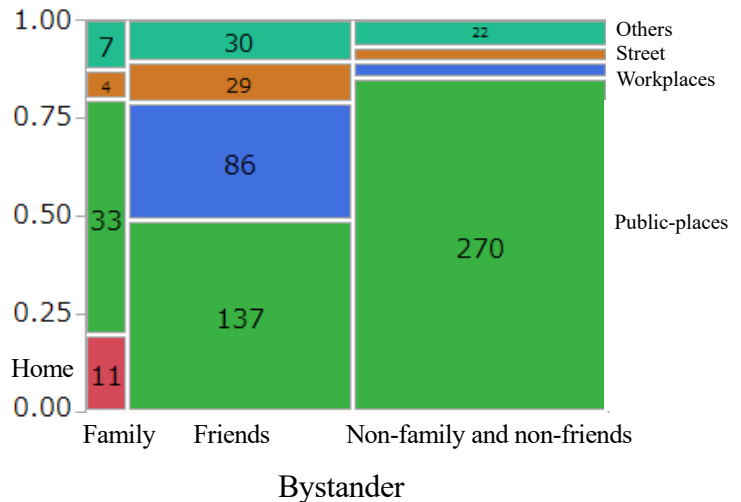
Retrospective nationwide cohort study were conducted from January 1 through December 31, 2015. Eligible of 17,666 OHCAs' data of location and nature of witnesses were compared for these analyses. Primary outcome as Cerebral Performance Category (CPC) 1 or 2, compared if OHCAs received PAD or not. Microsoft® Excel® was used for data and processing.

Fig.1 Definition of study cohort



## Result

Total 656 OHCAs received PAD by bystander. When we compared with the category of locations and bystanders, 270 (41.2%) OHCAs received PAD by non-family and non-friends at public-places, 137 (20.9%) received by friends at public-places and 86 (13.1%) received by friends at workplaces. Patients received PAD on senior nursing home has 2.06 time higher odds ratio of CPC1-2 than that of non-PAD. At gym has 6.94 and at workplaces has 7.53 times odds ratio, respectively.



\* The width of the graph is in proportion to number of patients

## Conclusion

Japan is facing an unprecedented super-aging society and undergoing major social structural changes, Reflect these result, our latest findings are

1. Most OHCAs occurred at home but no PAD apply by family.
2. Most of PAD deliver by workers at senior nursing home.
3. Younger OHCAs received PAD at gym and workplaces by friends. Further implementation of AED and training should be necessary for the houses and apartment's resident and spread DA (Dispatcher Assisted)-CPR as well.