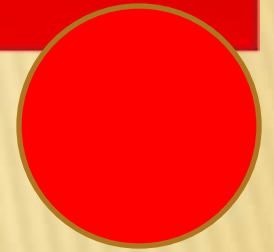


# *DEVELOPING PAD SYSTEM IN JAPAN*



*Hideharu Tanaka M,D.,*

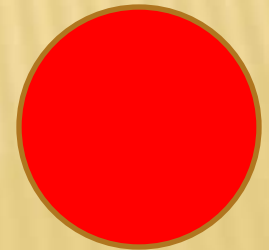
*Professor , Department emergency system.*

*Graduate school, Kokushikan University,*

# *Chapter 1*

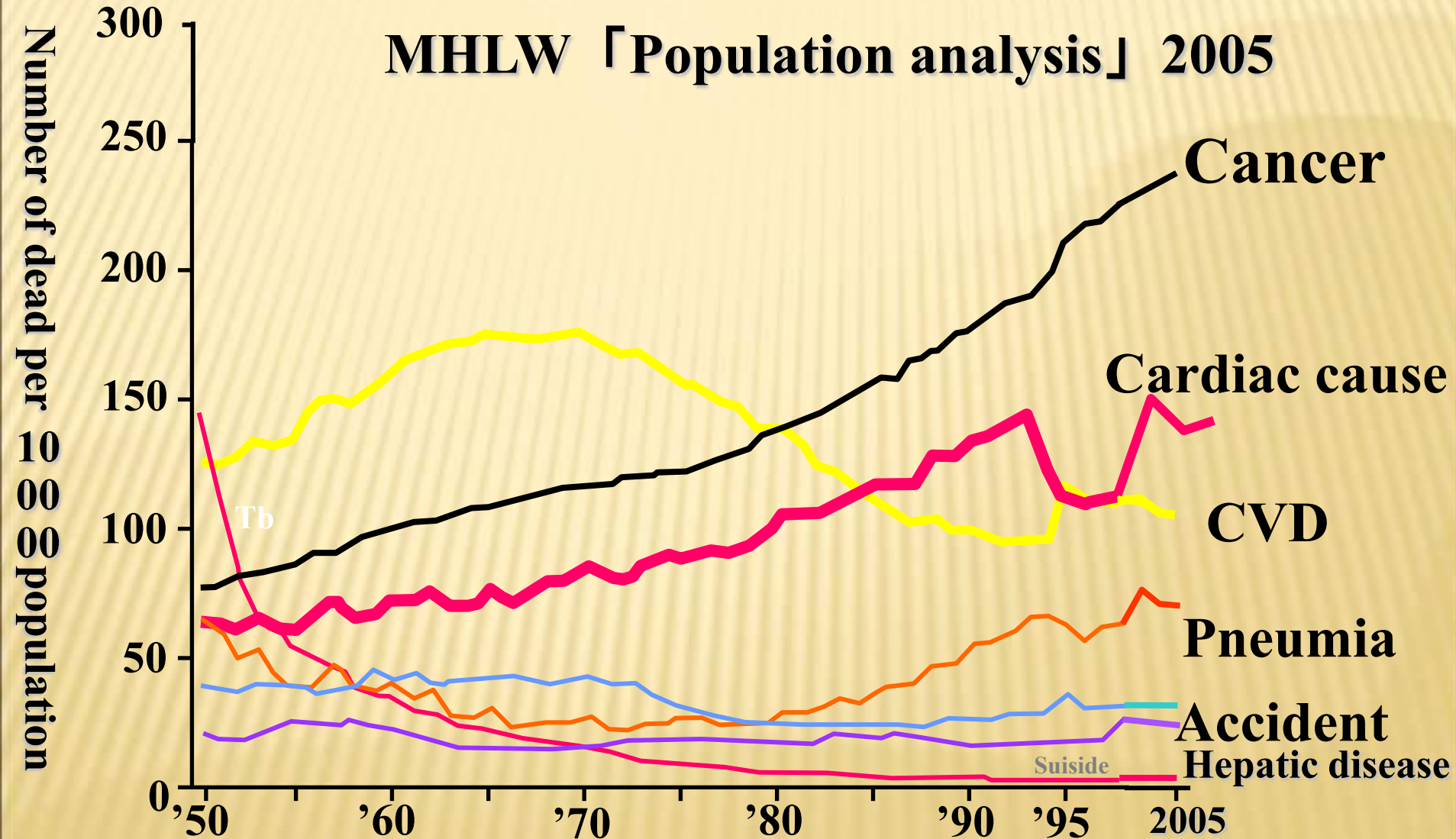
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## *✕ Changes of cause of death*



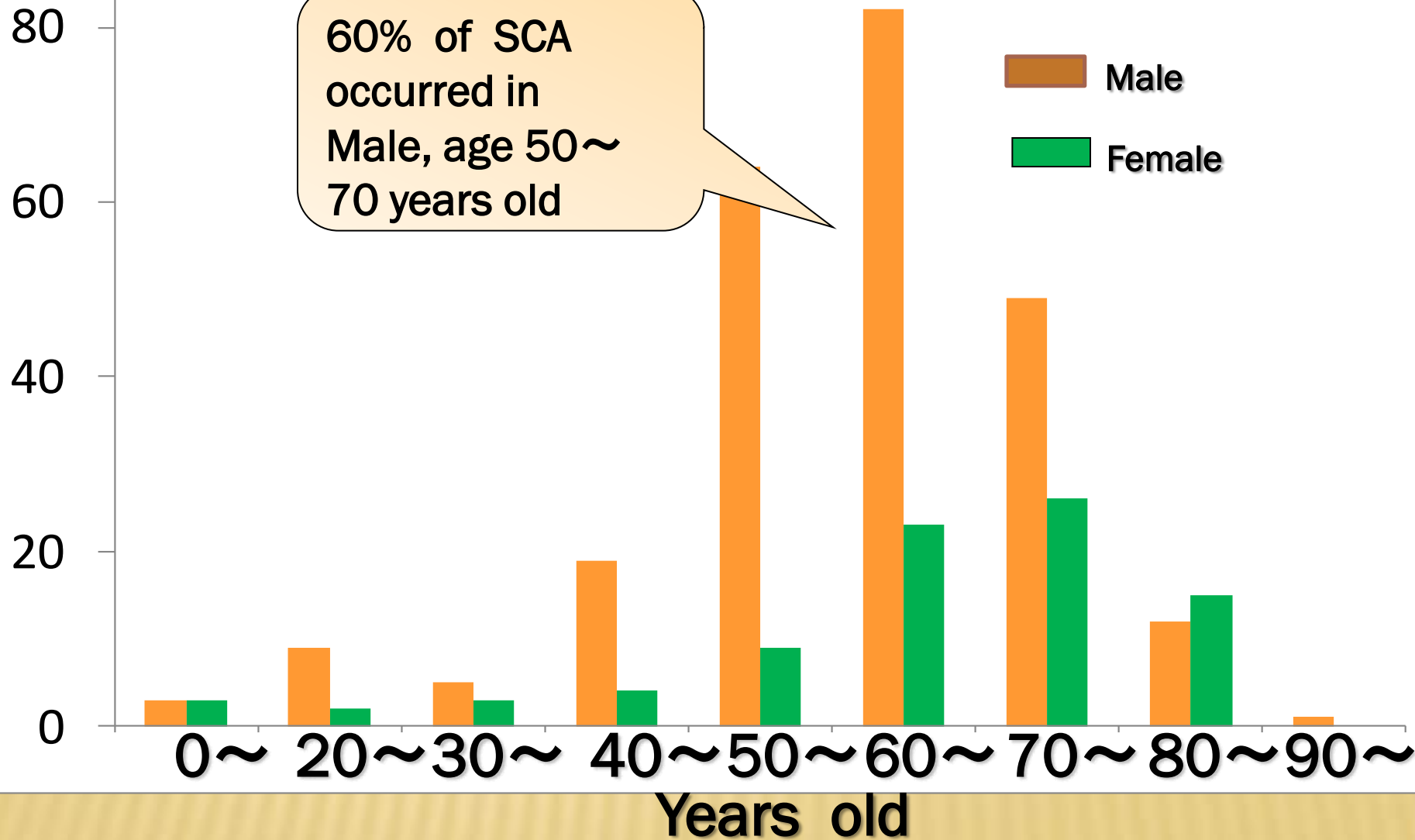
# Main cause of death

MHLW 「Population analysis」 2005

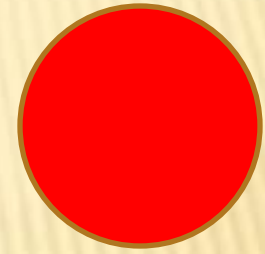


# Age and gender trend of SCA

60% of SCA occurred in Male, age 50~70 years old



# *Chapter 2*

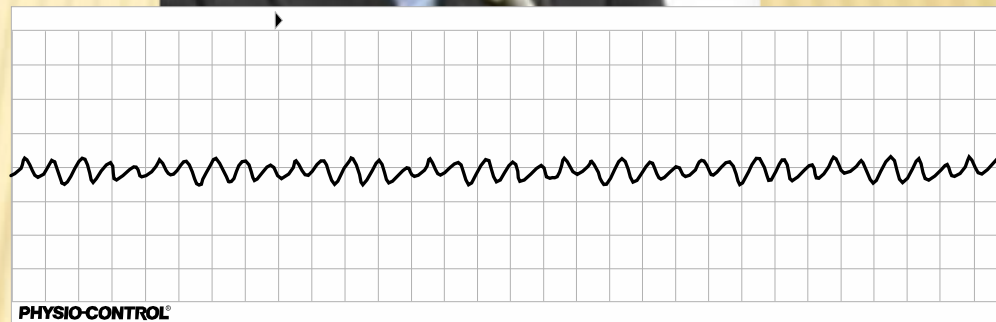


*Sudden cardiac arrest become  
Major social concern since 2002*





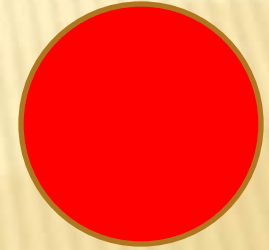
# Prince Takamadonomiya died by VF



PAD system has been started July ,2004 in Japan

# Chapter 3

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## ✘ *Process of the introduction of AED*



# History of Public AED in Japan

Oct. 2001	<b>International airlines of <u>JAL installed AED</u></b>
Dec. 2001	<b>MHLW* announced that <u>using AED by Cabin Attendants in aircrafts does not conflict with the Medical Act</u></b>
May 2002	<b>Regulatory approval of FR2 for <u>world cup soccer</u></b>
Nov 2002	<b><u>Prince Takamadonomiya( imperial family)</u> was died by SCA while playing squash in Canada embassy.</b>
Dec 2002	<b>The Japanese Cardiology Society suggested to be used AED by non-medical persons</b>
Apr 2003	<b><u>Paramedics can use AED</u> without doctors instructions</b>
July 2003	<b><u>All Nippon Airways</u> installed Philips AED</b>
July 2004	<b>MHLW announced that to be <u>used AED by lay person</u></b>



# DRIVING FORCE OF AED INSTALLATION IN JAPAN

Year	Driving Force	Big Social event
2002	Hospital	Soccer World cup ,JAL
2003	Hospital and Clinic	ANA
2004	Hospital and Clinic, Airport	Airport (Haneda )
2005	Clinic, athletic gym, Public Space	Aichi EXPO(4/5 SCA saved)
2006	Public Space University ▪ high school Hotel, Nursing home, Department, Factory, Sports institute	Tokyo Marathon(2 /2 SCA saved)
2007	Local government、 elementary school, junior high school、 Office、 Factory、 golf Corse, athletic gym、 financial institute	SA&PA of Highway Rail road station
2008	Dental clinic、 elementary school, junior high school、 Kindergarten ▪ Nursery、 Bank、 Office	JR Bullet train
2009	Highway、 community center, Kindergarten ▪ nursing home、 Pachinko store、 Apartment	Highway Tokyo Marathon(2 /2 SCA saved)

# SAFETY TOKYO MARATHON 2007 AND EFFECT OF AED

**Tokyo marathon,** a flag ship race in Japan.

our medical team slogan as follows:

[Early defibrillation within 3munte, no one  
dead during Tokyo marathon race]

## **Mobile AED team**

(bicycle AED team,  
covered every 2—3km;  
provide quick and certain  
CPR, AED with oxygenated BVM ventilation



# SYSTEM OF TOKYO MARATHON MEDICAL SUPPORT TEAM



Quick response to Patients



Paramedic go to scene



Command control and Dispatch



CPR and Shock performed



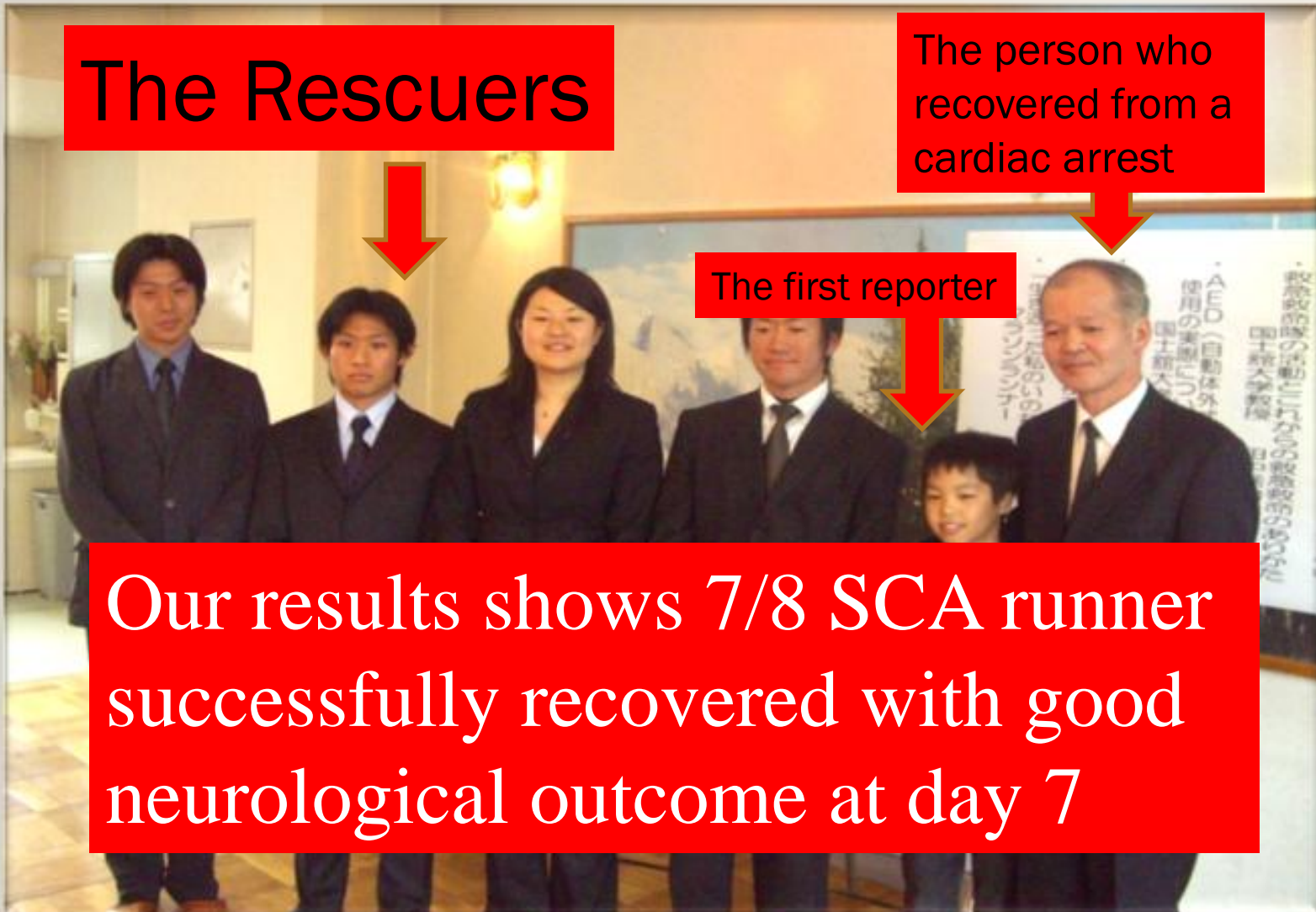
# A REENCOUNTER WITH A SAVED PERSON AND RESCUERS WITHIN 3WKS AFTER ACCIDENT

The Rescuers

The person who recovered from a cardiac arrest

The first reporter

Our results shows 7/8 SCA runner successfully recovered with good neurological outcome at day 7





# FAMOUS COMEDIAN COLLAPSED DURING TOKYO MARATHON 2009

に走る我々や沿道のファ  
ンの応援に大声で応える  
サービス精神を見せてい  
た。

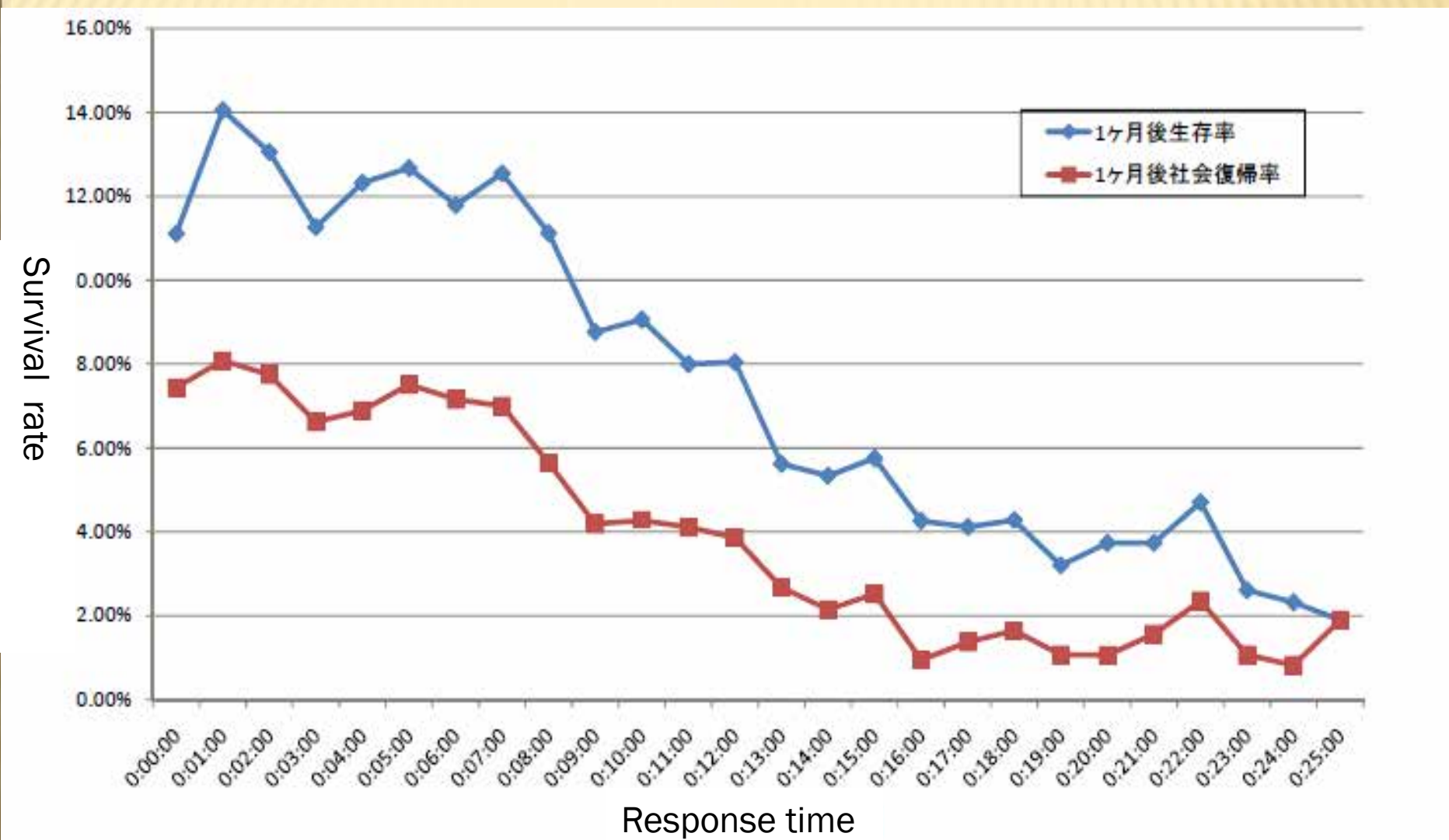


das  
MEDIC

(上) だった  
近で意識を生  
受けて救急搬

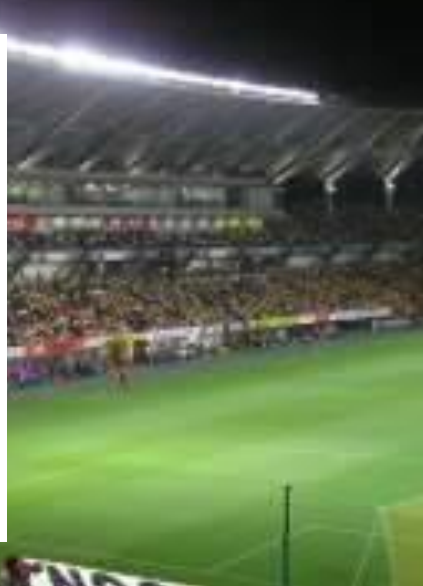


# RESPONSE TIME OF CARDIAC CAUSE, WITNESSED SCA (2005-08)





# FIFA WORLD CUP SOCCER 2002 JAPAN/KOREA



# AED DISSEMINATED IN JAPAN AFTER 2004





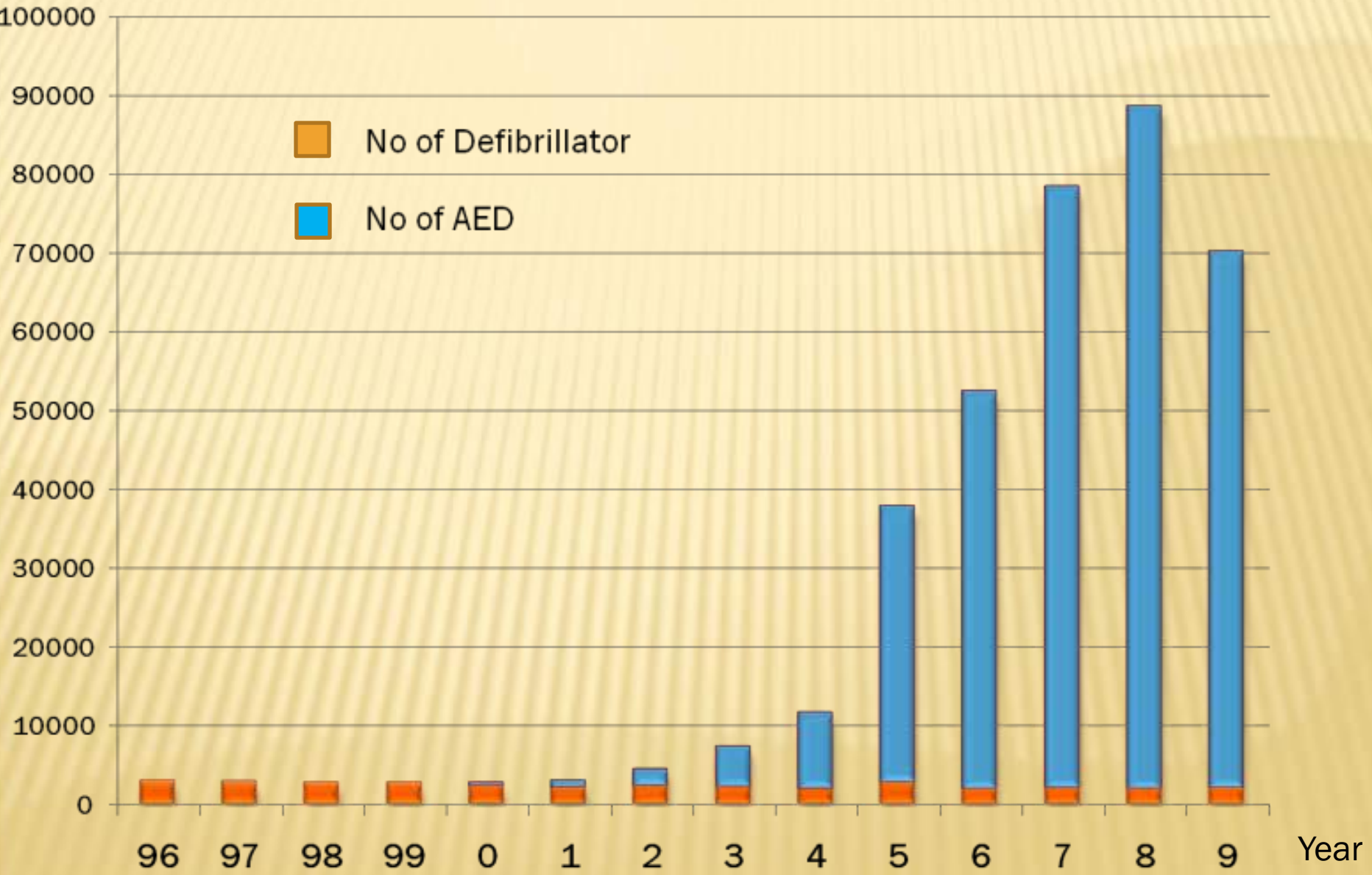
# AED DISSEMINATED IN JAPAN AFTER 2004



Bullet train station

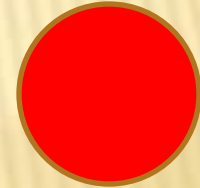
# Number of AED installed in Japan

No of AED installation



# CHAPTER 4

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✘ *Utstein registry has been started since 2005*



# *UTSTEIN REGISTRY IN JAPAN*

- Data has been corrected since 2004, Jan 1.
- All of FD input OHCA data by paramedics(internet-base)
- Data corrected Local Gov and FDMA
- Analysis has been started since 2007 by Implementation working group for All-Japan Registry of the Fire and Disaster Management Agency(FDMA)

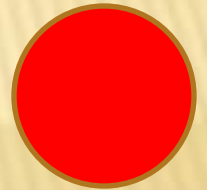
Implementation working group :

Iwami T, Kawamura T, Nagao K, Hiraide A and Tanaka T

3 paper has been submitted by JAMA.NEJM, LANCET

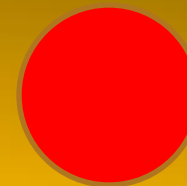


# UTSTEIN REGISTRY DATA 2005-2008



	2005	2006	2007	2008
Total number of OHCA	102738	105942	109461	113827
Witnessed OHCA caused by cardiac origin	17882	18897	19707	20767
No of Bystander CPR	7335(41%)	8108(42.9%)	9376(47.6%)	9970(48%)
No of 1M. Survival	631(8.6%)	819(10.1%)	12.2(%)	12.8(%)

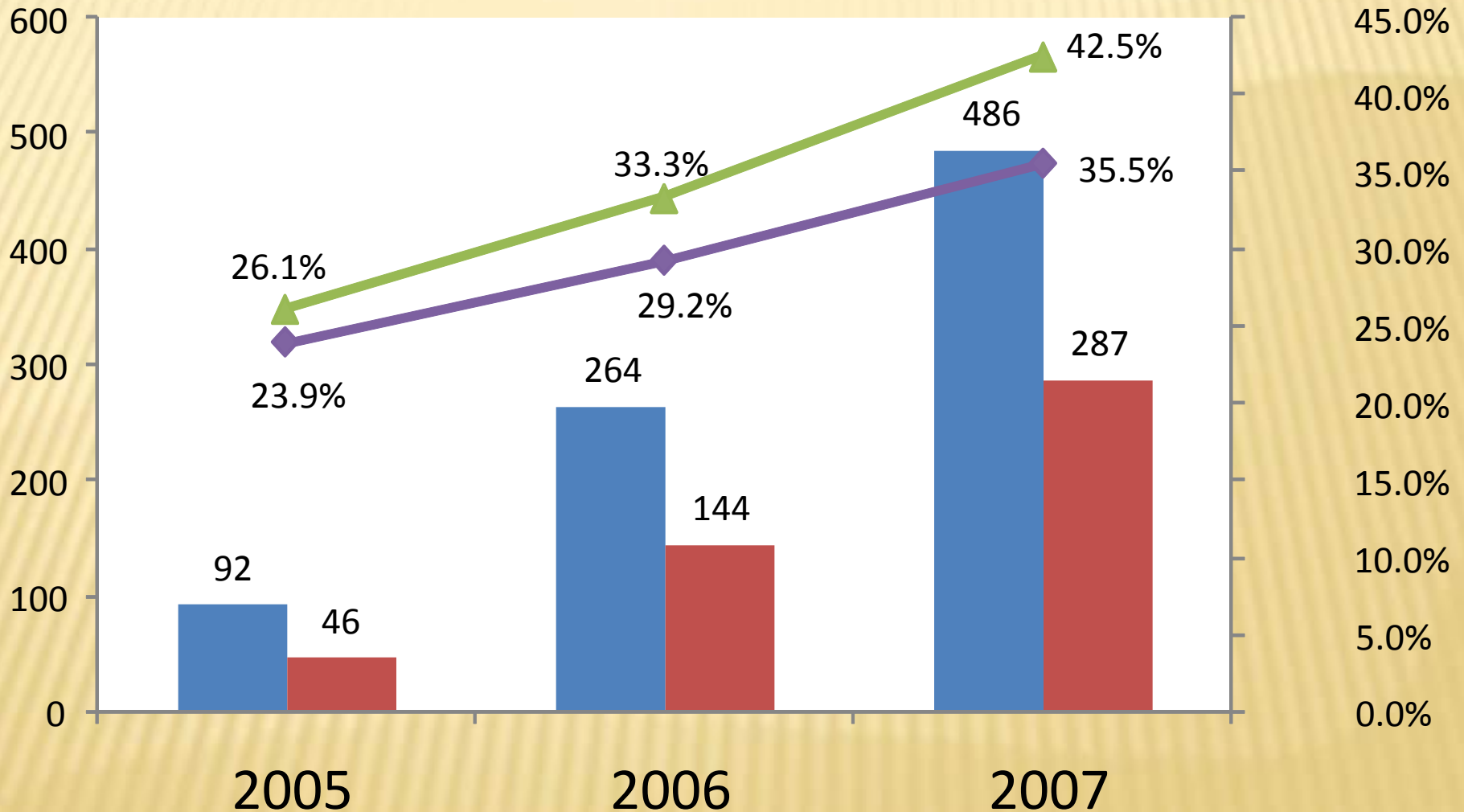
# NATIONWIDE PUBLIC ACCESS DEFIBRILLATION IN JAPAN



## ✕ Cumulative number of PAD-AED and OHCA

	2005	2006	2007
Cumulative number of PAD-AED	9906	43212	88265
PAD-AEDs per inhabitant area(km <sup>2</sup> )	0.11	0.48	0.97
PAD-AEDs per 100,000 population	7.8	33.8	69.0
Incidence of OHCA (per 100,000 )	52.8	54.2	55.3
cardiac origin (presumed )	27.8	27.8	28.4
Neurological intact of 1M survival	24.4%	28.7%	34.3%

# EFFECTS OF PAD



**Early exposure of CPR is necessary**

**The CPR education from the elementary school is necessary to increase high quality bystander**





# *CPR FOR SCHOOL PROGRAM*



