

Emergency Medical Service System in Taipei City



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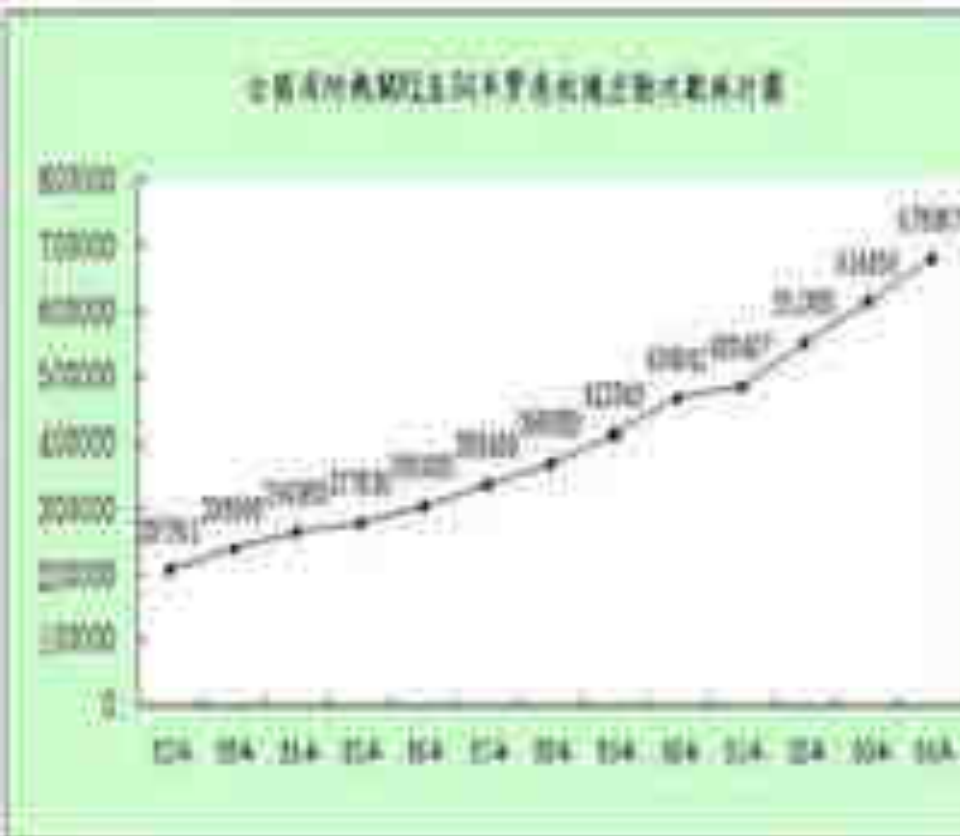
IN THIS TALK...

- Milestones of Taipei City EMSS
- System configuration and optimization
- Some examples of previous research



Public Demand, Taiwan EMS

Annual growth at 10%



1.1 call per 10,000 per day



Area: 271.8 km²
Population: 2.62 M
Density: 9,639.2 /km²

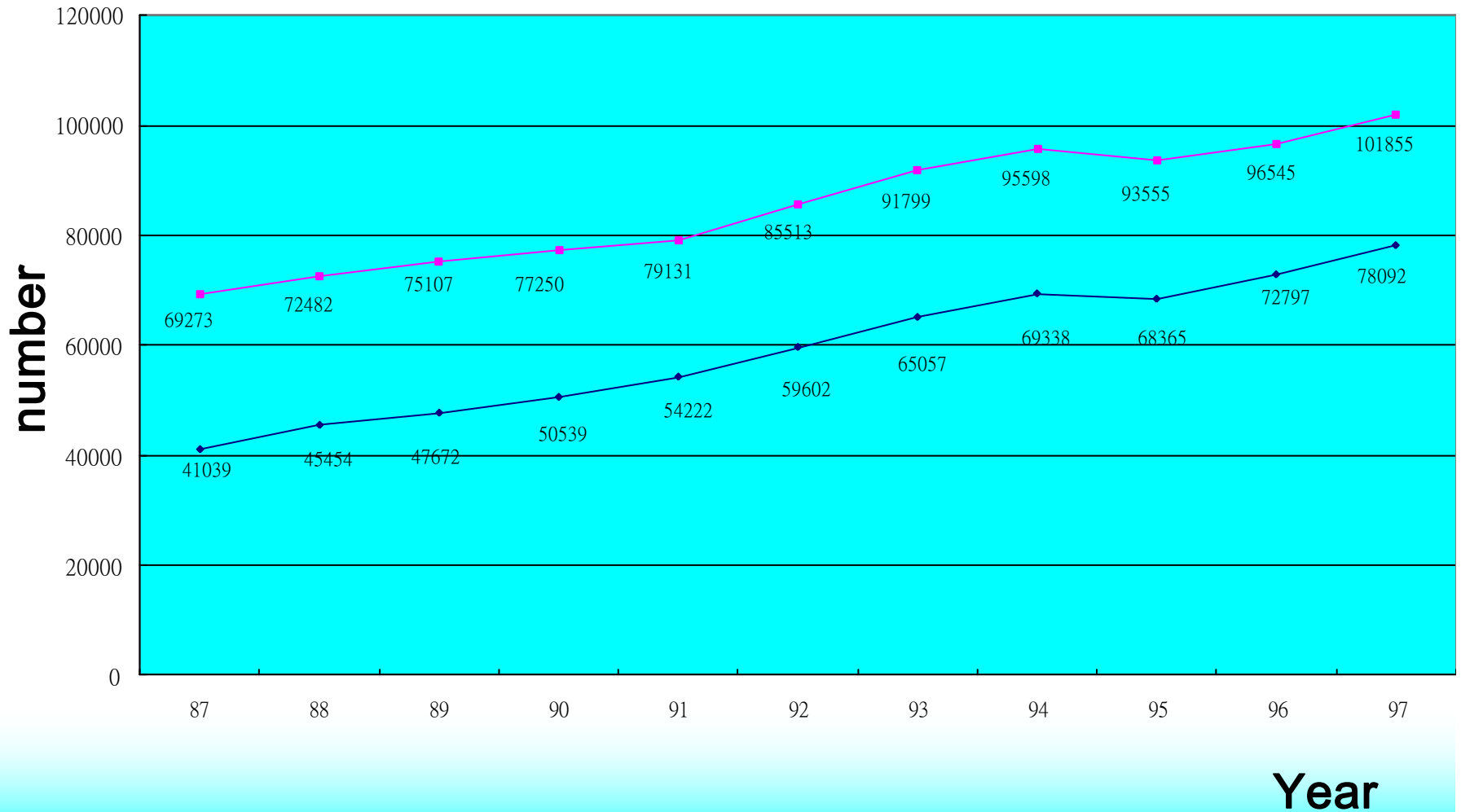
12 districts



Area: 2,052.6 km²
Population: 3.85 M
Density: 1,872.7 /km²

Calls / Services

Demands- Taipei City EMS



1.05 call per 10,000 per day

Modern EMS : Milestones (I)

• 1990

- first official EMT training curriculum (SECCM)

• 1995

- *The Emergency Medical Service Act*
- 2000, 2007

• 1998

- Emergency Medicine as a medical specialty

• 1998

- Hospital-based ALS and Fire-based BLS team (Taipei City)
- EMT-only EMS squads (Taipei City)



Modern EMS : Milestones (II)

Medical Direction



Fire-based ALS

- 1999-2000
 - Medical Direction (TPE)
 - AED use by EMT (Taipei City)
- 2002
 - Trauma system pilot (Taipei City)
- 2003
 - Fire-based ALS team (Taipei City)
- 2007
 - Medical oversight
- 2008
 - Public Access Defibrillation

Taipei City EMS



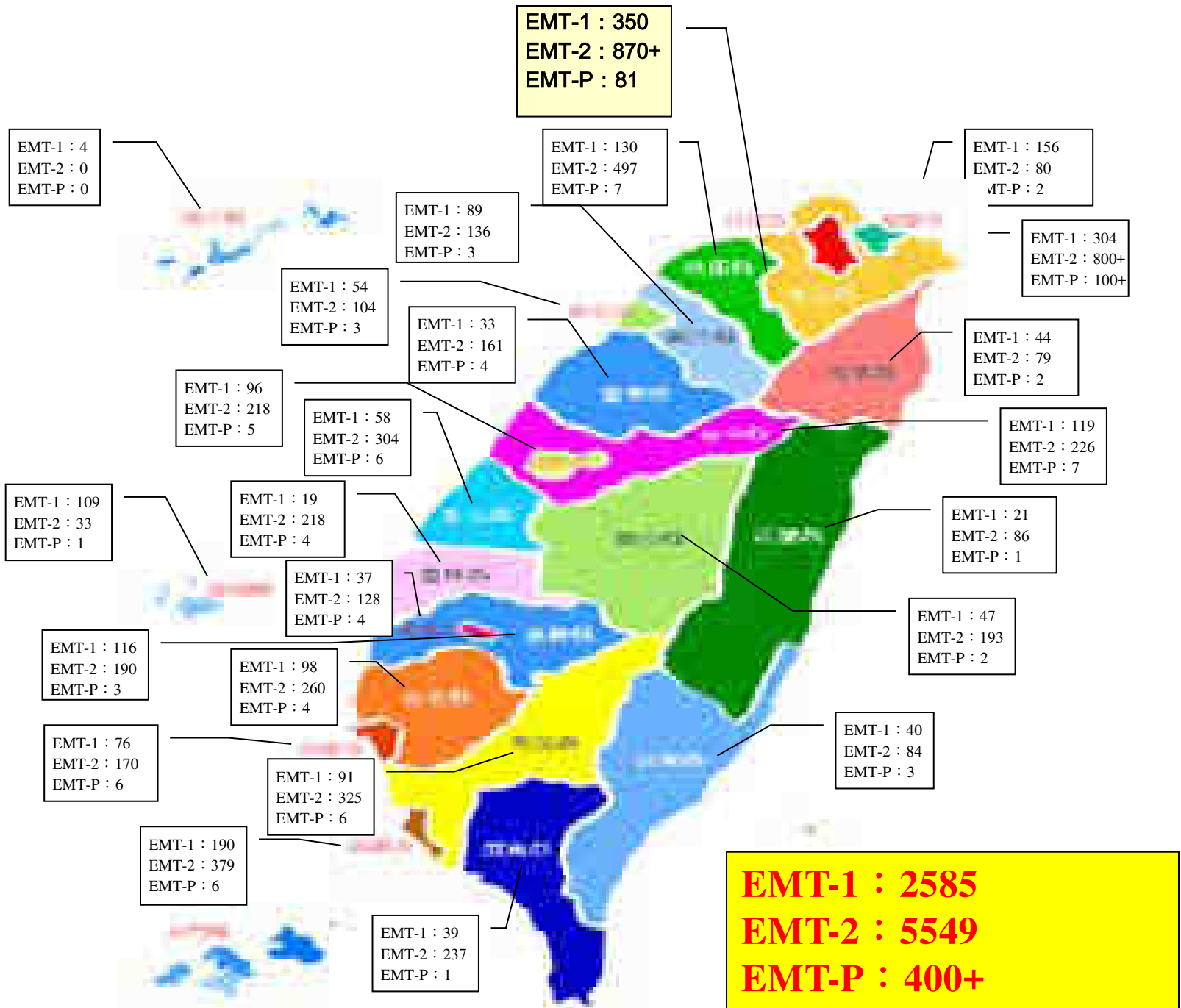
The money comes from Charities & Temples



Sources & Types of Providers

- All prehospital EMSS in Taiwan are fire-based
- Degree of voluntary involvement varies

Provider	Training (hours)	Training	Scope of Practice
EMT-I	40	Fire Dept Fire Academy	First responder, BLS-D
EMT-II	280	Fire Dept Fire Academy	BLS-D, LMA, Fluids
EMT-paramedic	1280	Tertiary Medical Centers	Advanced life support (intubation, Rx)
Dispatcher	40	Fire Dept	Priority Dispatch



Ambulance : 11輛
Station : 5

Ambulance : 74
Station : 34

Ambulance : 17
Station : 8

Ambulance : 25
Station : 15

Ambulance : 110
Station : 8

Ambulance : 14
Station : 9

Ambulance : 22
Station : 19

Ambulance : 18
Station : 15

Ambulance : 22
Station : 15

Ambulance : 47
Station : 27

Ambulance : 46
Station : 29

Ambulance : 13
Station : 15

Ambulance : 24
Station : 20

Ambulance : 26
Station : 17

Ambulance : 12
Station : 6

Ambulance : 19
Station : 16

Ambulance : 23
Station : 21

Ambulance : 39
Station : 36

Ambulance : 17
Station : 14

Ambulance : 16
Station : 14

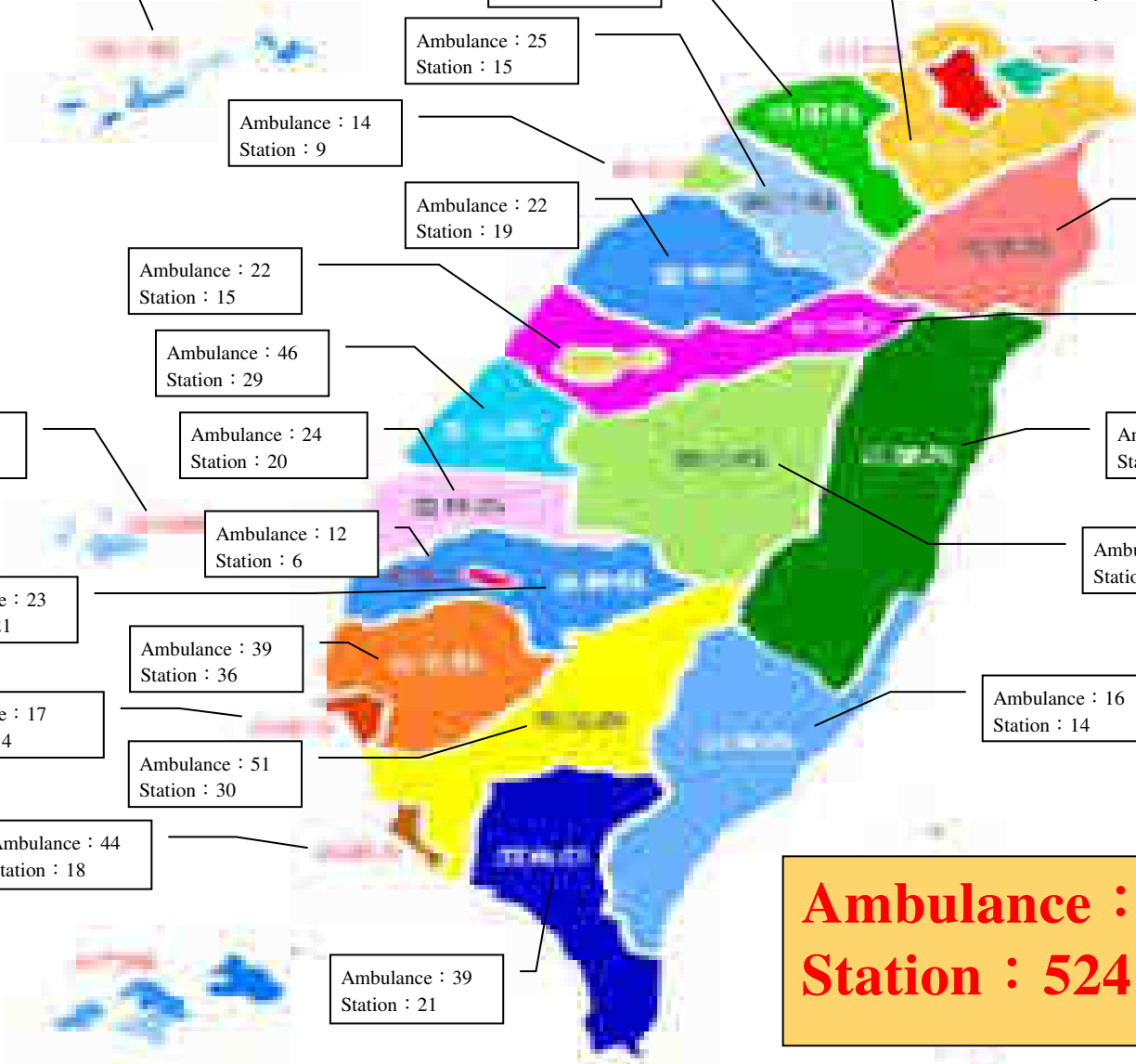
Ambulance : 51
Station : 30

Ambulance : 44
Station : 18

Ambulance : 39
Station : 21

**Ambulance : 71
Station : 41**

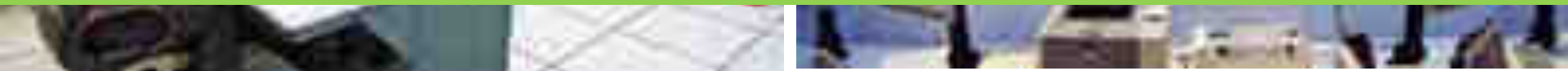
**Ambulance : 833
Station : 524**





119 Access to EMSS

- Universal number of 119 (Fire & EMS)
- Central and horizontal dispatch
- Location identification capability (enhanced 119 system) in urban cities
- No triage to alternative source of care; almost all request resulted in ambulance transport



Early Defibrillation- Fire BLS-D, since 2000



- All levels of EMTs authorized to use AEDs since 2000
- All squads in TPEC equipped with AED
- AED implementation varies with jurisdiction
- Public access defibrillation since 2008



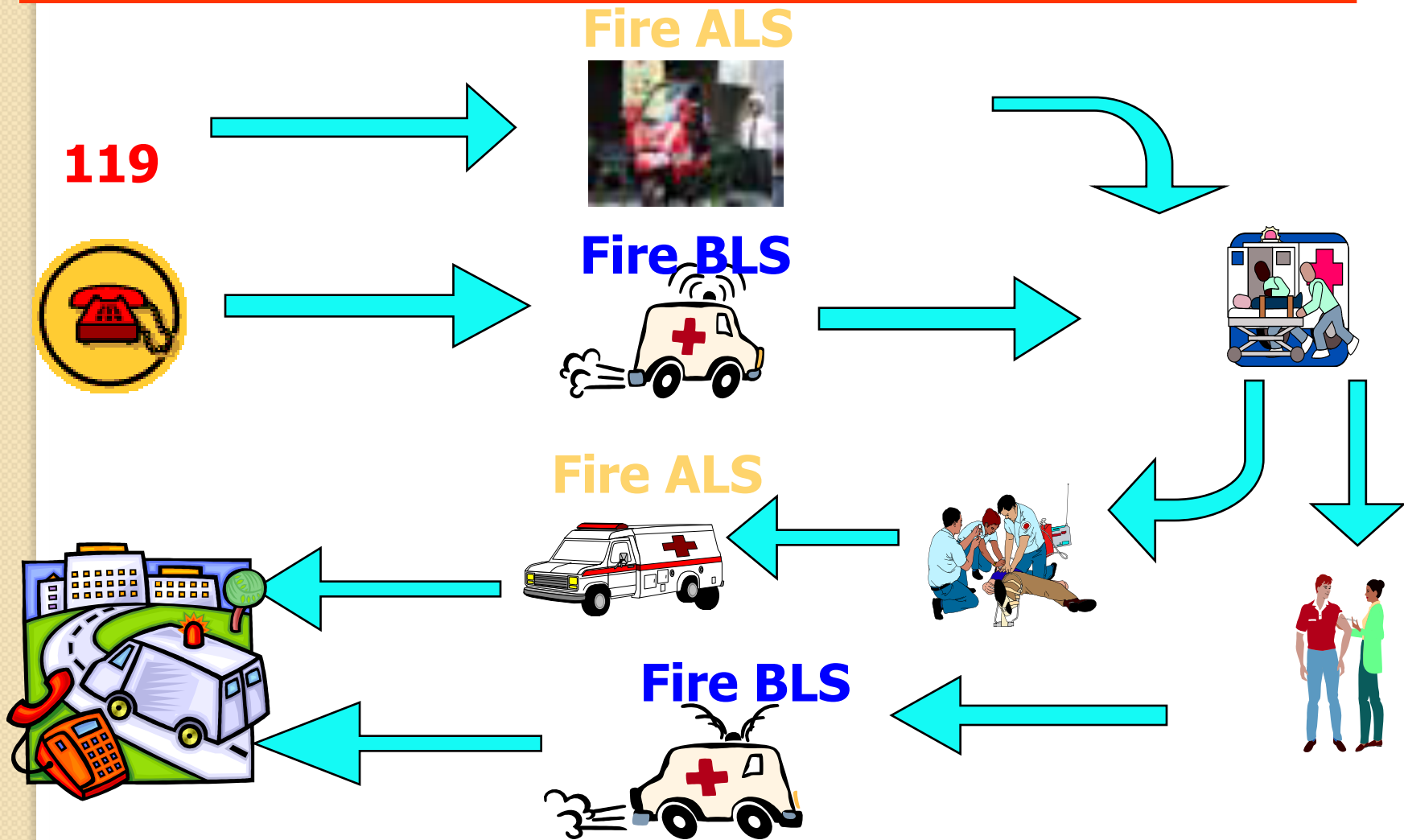
Fire-based ALS

- EMT-paramedics training started since 2002
- ALS services in few metropolitan cities, **firstly in Taipei City since 2003**
- Versatile ambulance deployment
- Motorcycle ambulance squads



Two Tiered BLS-D / ALS – Taipei City

Fire-based since 2003



許麗英九期 副團隊醫救風臨金



金風救護隊副團長許麗英九期
金風救護隊副團長許麗英九期
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金風救護隊副團長許麗英九期

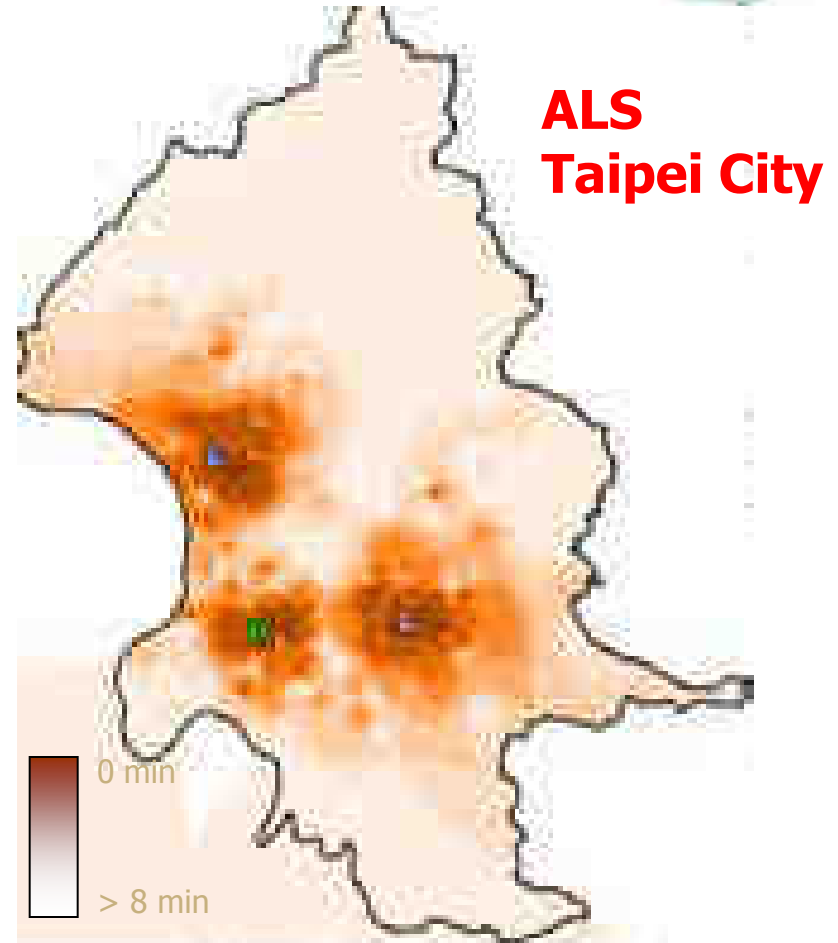
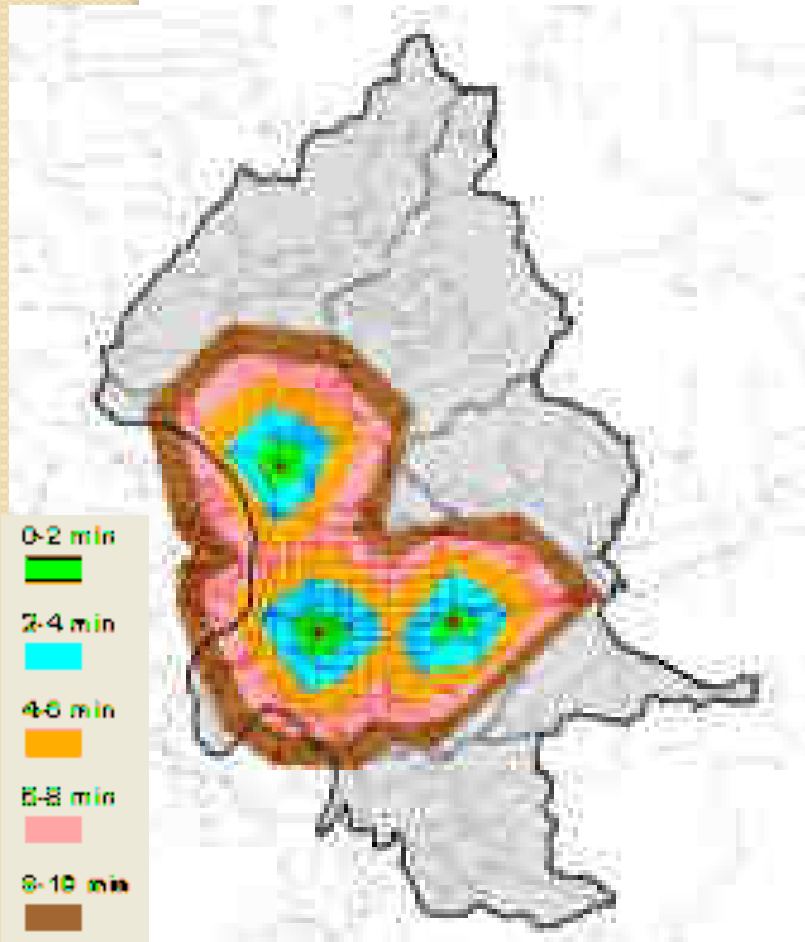
Three ALS squads

81 EMT-P



- 531/2003 OHCA patients
(By 3 EMT-P squad), in 2008
- 0-2min 56 Cases (10.5%)
- 2-4min 143 Cases (26.9%)
- 4-6min 129 Cases (24.3%)
- 6-8min 90 Cases (16.9%)
- >8min 112 Cases (21.1%)

- 88.6% Matched
- 0-2 (86.3%)
- 2-4 (88.5%)
- 4-6 (87.2%)
- 6-8 (89.7%)
- >8 (93.1%)



Trauma Care System Pilot in 2002 – Taipei City

- Trauma Center Categorization
- Trauma Triage Protocol
- Education / Inservice
- System Evaluation



Major Trauma Criteria – Taipei City Example

- Unconscious(GCS<14 or P / AVPU)
- Resp > 29 or < 10
- SBP < 90mmHg
- ≥ 2 proximal long bone fracture
- Paralysis
- Amputation above ankle or wrist
- Penetrating wound to head, neck and torso
- Second degree burn > 15%
- Fall > 6 m
- High energy impact
- Patient comorbidity

Medical Direction Committee 1999

CITY GOVERNMENT

緊急醫療諮詢委員會
EMS Advisory Committee

Fire Dept 消防局

Health Dept 衛生局

醫療顧問委員會
Medical Directors' Committee

急救責任醫院
EMS Hospitals

救護隊
EMS Squads

急診與重症醫療
Emergency & Critical Care

到院前救護
Prehospital Care

Medical Direction Committee since 1999

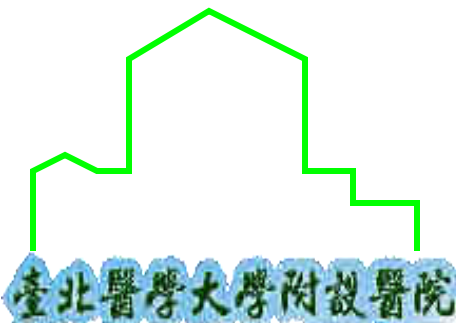
Major responding hospitals in Taipei City



臺北醫事學院
TAIPEI UNIVERSITY OF HEALTH SCIENCES



財團法人
新華醫院
XIN HUA HOSPITAL



臺北醫學大學附設醫院
TAIPEI MEDICAL UNIVERSITY AFFILIATED HOSPITAL



臺北市立醫院
TAIPEI CITY HOSPITAL

臺北市政府的防救災救護隊
Disaster Relief Team
救災救護隊
救災救護隊

救災救護隊
救災救護隊
救災救護隊
救災救護隊
救災救護隊

Main Tasks : Medical Direction Committee

- Set Standards / Protocols
- Education Programs
- Quality Control & Vigilance
- Implementation New Skills



臺北市政府消防局中級救護技術員會編訂
 中華民國 102 年 12 月 10 日
 初版

臺北市政府消防局中級救護技術員緊急救護標準作業流程暨各項基本救護操作標準步驟手冊

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【 姓名: 王小明 / 身份证号: 110101199001010001 / 手机号: 13800138000 】

【 个人信息 】 姓名: 王小明 | 性别: 男 | 出生日期: 1990-01-01 | 身份证号: 110101199001010001 | 手机号: 13800138000

姓名	王小明	性别	男	出生日期	1990-01-01	身份证号	110101199001010001	手机号	13800138000
职业	程序员	学历	本科	籍贯	北京	民族	汉族	婚姻状况	未婚
工作单位	ABC科技有限公司	入职日期	2020-03-15	薪资	15000元/月	社保缴纳	已缴纳	公积金	已缴纳

【 教育经历 】	学校名称	专业	入学时间	毕业时间	学历
北京理工大学	计算机科学与技术	2010-09	2014-06	本科	
清华大学	软件工程	2014-09	2016-06	硕士	
【 工作经历 】	公司名称	职位	入职日期	离职日期	薪资
ABC科技有限公司	后端开发工程师	2020-03-15	至今	15000元/月	
DEF信息技术有限公司	前端开发工程师	2018-01-01	2019-12-31	12000元/月	
【 技能证书 】	证书名称	颁发机构	获取日期	有效期	
计算机二级证书	教育部考试中心	2015-05	长期有效		
软考高级证书	工业和信息化部	2016-11	长期有效		

【 资产状况 】	资产类别	资产名称	价值	备注
房产	北京市朝阳区XX路XX号	1500000元	自住	
车辆	北京市XX牌XX号	200000元	自用	
存款	工商银行XX支行	50000元	活期	
股票	沪深两市	100000元	长期持有	
【 负债状况 】	负债类别	负债名称	金额	还款日期
房贷	工商银行XX支行	800000元	每月还款5000元	
车贷	建设银行XX支行	150000元	每月还款10000元	
信用卡	招商银行XX卡	50000元	每月还款5000元	

【 家庭状况 】	家庭成员	姓名	出生日期	关系
配偶	李小红	1985-05-20	妻子	
子女	王小强	2015-08-10	儿子	
父母	王大爷	1930-01-01	父亲	
父母	王大妈	1935-02-01	母亲	

【 其他信息 】	项目	内容
兴趣爱好	阅读、运动、旅行	
健康状况	良好	
政治面貌	中共党员	
自我评价	积极向上，责任心强，具备良好的团队合作精神和沟通能力。	

【 总结 】	姓名	王小明	身份证号	110101199001010001
	手机号	13800138000	职业	程序员
	工作单位	ABC科技有限公司	学历	本科
	资产总额	2000000元	负债总额	950000元

Form with fields for user information and system settings. A red circle highlights the '姓名' (Name) field.

姓名	姓	名
性别	男	女
出生日期	年	月
身份证号	身份证号	身份证号
手机号	手机号	手机号
电子邮箱	电子邮箱	电子邮箱
密码	密码	密码
确认密码	确认密码	确认密码
验证码	验证码	验证码

Form with fields for user information and system settings. A red circle highlights the '姓名' (Name) field.

姓名	姓	名
性别	男	女
出生日期	年	月
身份证号	身份证号	身份证号
手机号	手机号	手机号
电子邮箱	电子邮箱	电子邮箱
密码	密码	密码
确认密码	确认密码	确认密码
验证码	验证码	验证码

Form with a table of data and a red circle highlighting the '姓名' (Name) field.

姓名	姓	名
性别	男	女
出生日期	年	月
身份证号	身份证号	身份证号
手机号	手机号	手机号
电子邮箱	电子邮箱	电子邮箱
密码	密码	密码
确认密码	确认密码	确认密码
验证码	验证码	验证码

姓名	年齡	性別	職業	地址	電話	地址	地址	地址	地址	地址	地址
張三	30	男	工程師	台北市	1234	1234	1234	1234	1234	1234	1234
李四	25	女	設計師	台北市	5678	5678	5678	5678	5678	5678	5678

開始時間: 10:00 登錄時間: 10:05 預計處理時間: 1分 已處理時間: 6分
 事件來源: 系統管理 處理時間: 10分 可視化: TDA, 顯示生成時間

共同問題 情況說明: 學生生活 規定 新課程說明 線上觀看



1. 我們歡迎您來參加。凡不參加者請
 與會前準備好下列事項: 1. 不要講
 2. 不要講 (不要講) (不要講) (不要講)
 3. 不要坐在椅子上。
 4. 保持良好動作姿勢且請關閉所有電子設備
 於此時間之內保持呼吸。

ALS 講	ALS 不要講	練習講	規定中	線上	線上	線上
共同問題	情況說明	線上觀看				

不滿意請 叫LS 叫派 ALS 叫派 傳呼請派派 我係中環商場 總上由中環

行	通訊中心ID	通訊設備類型	通訊狀態	通訊設備ID	通訊人姓名	通訊人電話	通訊人地址	通訊人統一號碼	通訊時間	通訊地點	通訊種類	通訊狀態
1	00000000	ALS	未派派	00000000	劉國強, 梁新							可以派
2	00000000	ALS	未派派	00000000	楊國強, 楊國強							可以派

呼起時： 0分0秒
 已處理時間： 7分15秒
 案件編號： 004
 通訊建議： ALS
 可派狀態： 004, 僅許性通訊處
 通訊時間： 7分30秒
 通訊地點： 30秒
 通訊設備ID： 15秒
 通訊人姓名： 劉國強, 梁新
 通訊人電話： 00000000
 通訊人地址： 00000000
 通訊人統一號碼： 00000000
 通訊時間： 00:00:00
 通訊地點： 00000000
 通訊種類： 00000000
 通訊狀態： 00000000

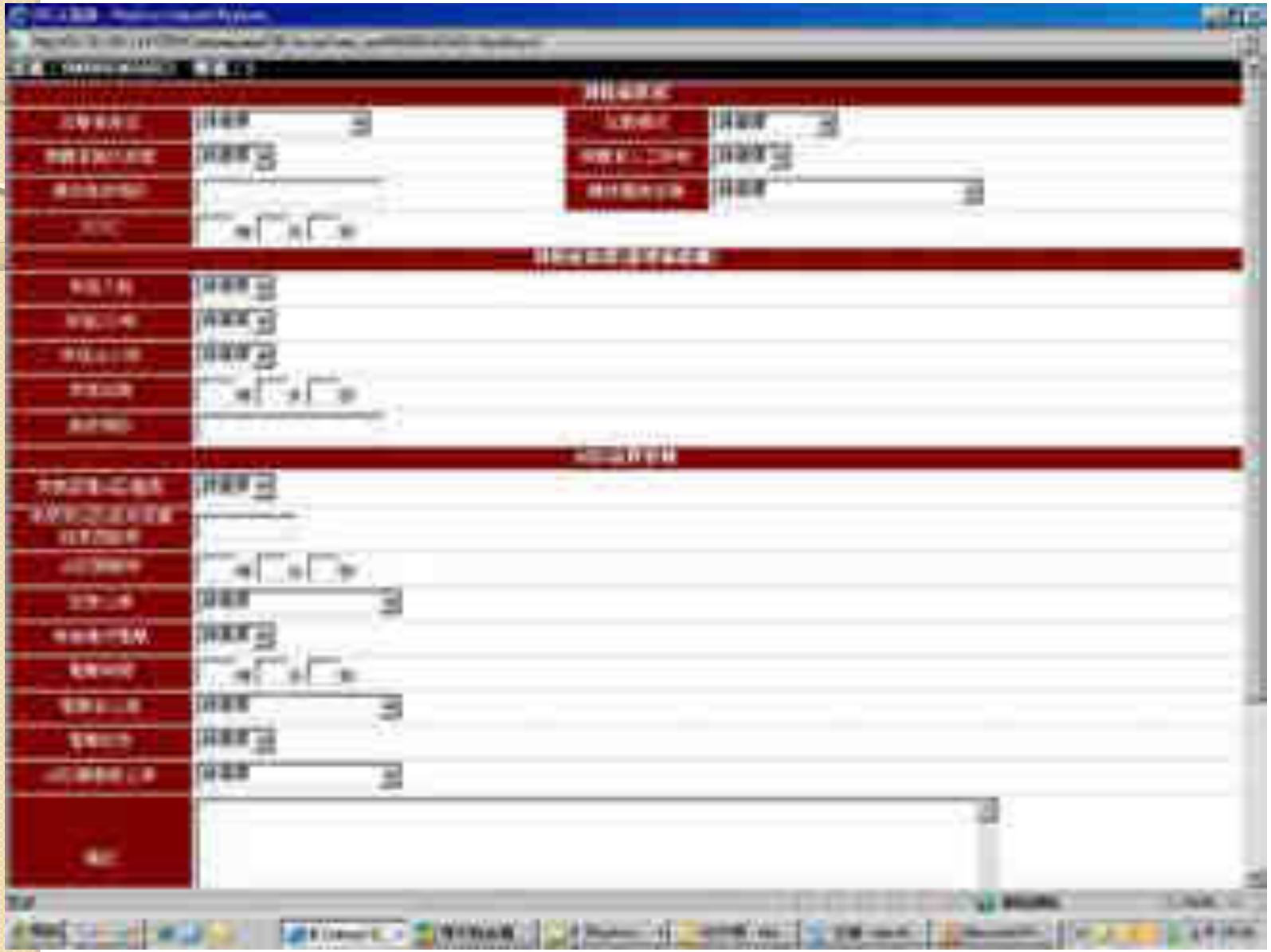
總上由中環

通訊建議

通訊建議內容

- * 病人有嘔吐或不適症狀時，請即派隊
- * 可以的話將病人平車帶到離梯較好位置
- * 先派大門打開
- * 請個人到門口招呼救護車
- * 觀察病人情況變差或有什麼問題，即時向
- * 119 匯報

ALS 派派	ALS 派派	傳呼請派派	我係中環商場	總上由中環
通訊時間	通訊地點	通訊設備ID		



EMT Skill Competition



Medical Oversight / Director 2007

- System of medical oversight stipulated in EMS Act 2007
- Fire departments in jurisdictions required by law to identify medical director
- Medical Director Training by Taiwan Society of Emergency Medicine
- Pilot funding provided by Department of Health
- Currently, 15 / 23 jurisdictions have designated medical director
- Online consultation in Taipei City since 1999

Quality Assurance / Evaluation

Taipei City Government – NTUH ED

- *OHCA and trauma registry*
- *Dispatch*
- *AED implementation*
- *Quality of CPR*
- *ALS effectiveness on OHCA*
- *Cost-effectiveness analysis on OHCA*
- *Trauma system implementation*
- *Clinical trial*
- *Development of quality Indicators for EMSS*

Cost-effectiveness of Different Advanced Life Support Providers for Victims of Out-of-hospital Cardiac Arrests
Journal of Intensive Care Medicine 2013; 28(1): 1-8

2008 Healthy City Survey



Rank	City	Population (Millions)	Life expectancy at birth (years)		Infant mortality rate (per 1,000 live births)		Road traffic deaths (per 100,000 people)	Hazardous waste (per 10,000 people)
			Male	Female	Male	Female		
1	香港	7.0	78.1	82.1	10.0	1.0	1.0	0.0
2	台北	2.3	77.5	81.5	10.5	1.5	1.5	0.0
3	高雄	2.7	76.5	80.5	11.5	2.5	2.5	0.0
4	台中	2.5	76.0	80.0	12.0	3.0	3.0	0.0
5	基隆	0.8	75.5	79.5	13.0	4.0	4.0	0.0
6	新竹	1.2	75.0	79.0	14.0	5.0	5.0	0.0
7	嘉義	1.5	74.5	78.5	15.0	6.0	6.0	0.0
8	屏東	3.2	74.0	78.0	16.0	7.0	7.0	0.0
9	台南	1.8	73.5	77.5	17.0	8.0	8.0	0.0
10	苗栗	1.0	73.0	77.0	18.0	9.0	9.0	0.0
11	彰化	2.2	72.5	76.5	19.0	10.0	10.0	0.0
12	南投	1.5	72.0	76.0	20.0	11.0	11.0	0.0
13	雲林	2.0	71.5	75.5	21.0	12.0	12.0	0.0
14	苗栗	1.0	71.0	75.0	22.0	13.0	13.0	0.0
15	嘉義	1.5	70.5	74.5	23.0	14.0	14.0	0.0
16	台南	1.8	70.0	74.0	24.0	15.0	15.0	0.0
17	高雄	2.7	69.5	73.5	25.0	16.0	16.0	0.0
18	台北	2.3	69.0	73.0	26.0	17.0	17.0	0.0
19	香港	7.0	68.5	72.5	27.0	18.0	18.0	0.0

- Therapeutic hypothermia: two hospital

- ECMO

- Clinical trial

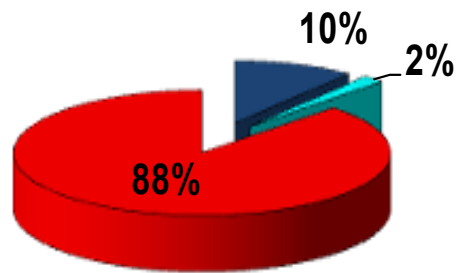
- Web-based OHCA Registry

A blurred screenshot of a web-based OHCA Registry interface. The interface displays a grid of data with various columns and rows, likely representing patient records or incident details. The text is illegible due to blurring.

Problems~

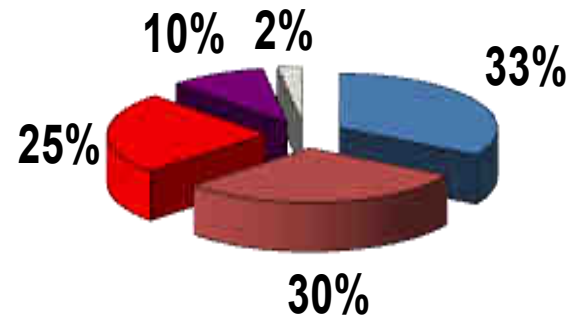
Early CPR: needs improvement

% bystander CPR



■ Self CPR ■ Dispatcher-guided ■ No CPR

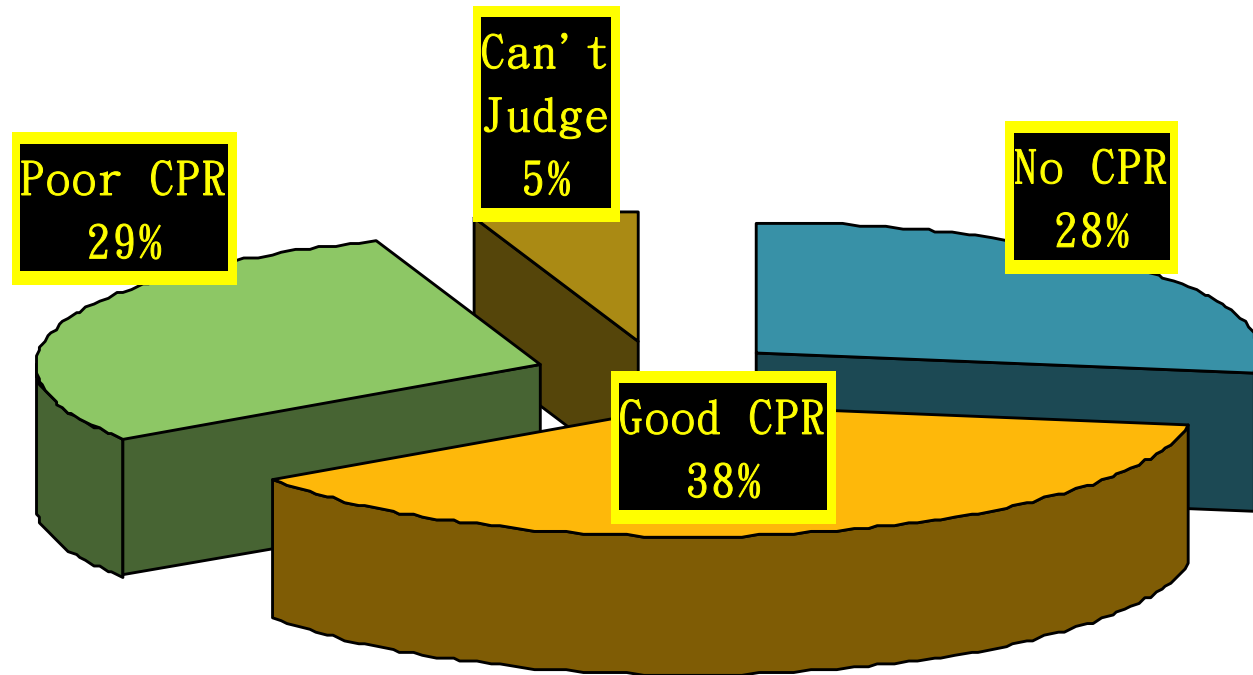
Reason of no-CPR



■ No training ■ Think 119 will soon arrive
■ Unaware of arrest ■ Absence
■ Panic

AED in Taipei City EMS

Quality of CPR



- 264 cases, 23 premature termination, based on 241 analyses



Improve CPR delivery

Q-CPR™ Measurement and Feedback Tool
 monitoring CPR quality in real time

Monitoring CPR quality is essential to ensure that the resuscitation efforts are effective. The Q-CPR™ Measurement and Feedback Tool provides real-time feedback to the rescuer, allowing them to adjust their technique as needed. This tool is designed to be used by healthcare providers and lay rescuers alike, providing a simple and effective way to improve CPR delivery.

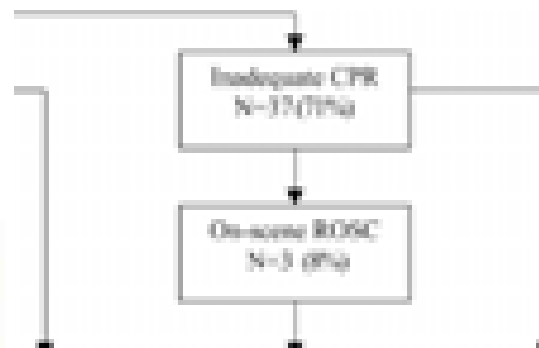


The Q-CPR™ Measurement and Feedback Tool is a simple and effective way to improve CPR delivery. It provides real-time feedback to the rescuer, allowing them to adjust their technique as needed. This tool is designed to be used by healthcare providers and lay rescuers alike, providing a simple and effective way to improve CPR delivery.



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Inadequate CPR (N = 17)	Difference (95% CI)
3/17 (18%, 3-21%)	45% (19-68%)
5/17 (29%, 6-28%)	73% (45-83%)
3/17 (18%, 3-21%)	65% (37-82%)
3/17 (18%, 3-21%)	45% (19-68%)

CPR: cardiopulmonary resuscitation. ROSC: return of spontaneous

*Differences for P (two-tailed) (or CI) involving % (N of N) following the analysis of post-resuscitation (resuscitation by having returned normal) (definition provided and volume for each subgroup and overall group). Resuscitation: ROSC (N=3/8%)
 *Differences for P (two-tailed) (or CI) involving % (N of N) following the analysis of post-resuscitation (resuscitation by having returned normal) (definition provided and volume for each subgroup and overall group). Resuscitation: ROSC (N=3/8%)

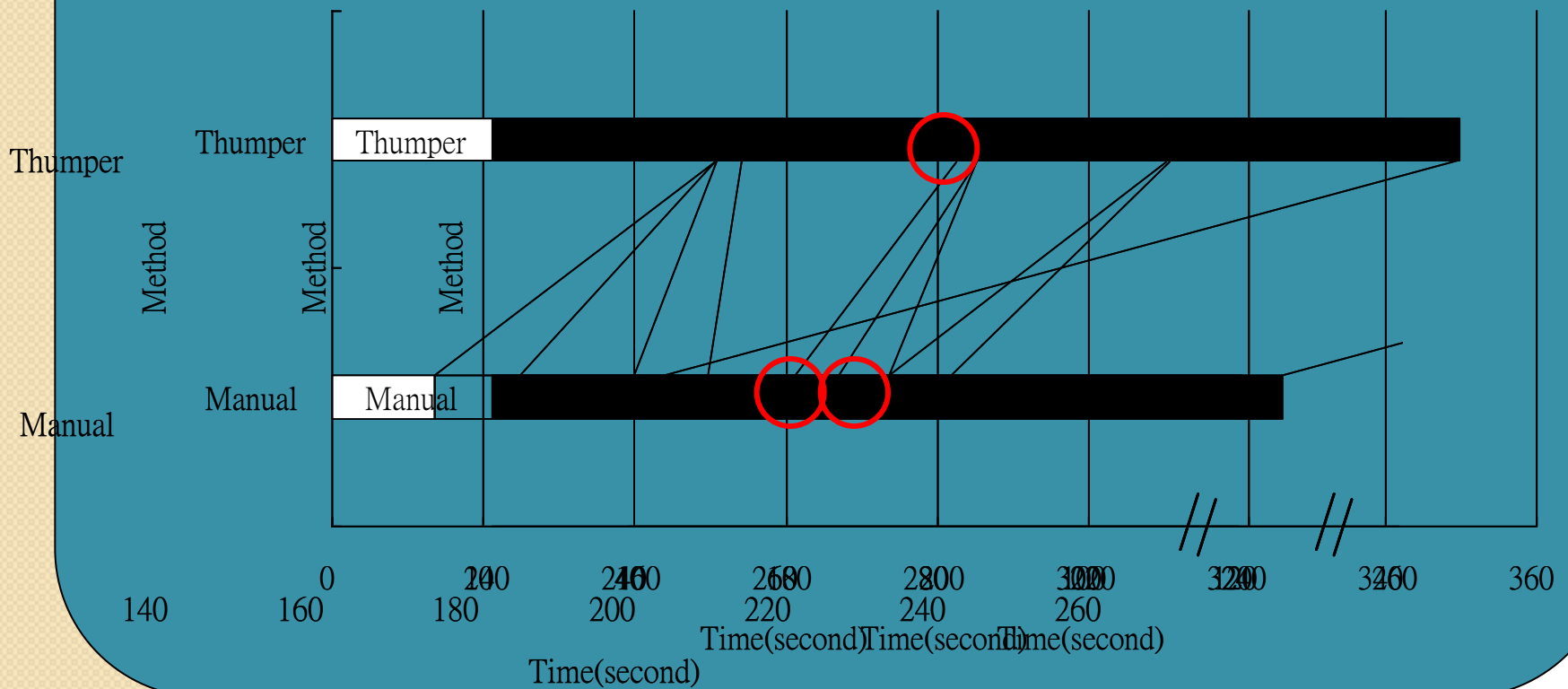
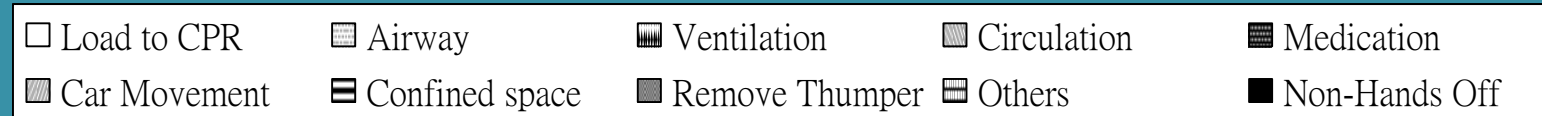
		P-value
	58% (-2.9 - 72%)	0.04
)	9% (-2.9 - 20%)	0.001
	0.3 (-0.6 - 1.2)	NS

s of variables, differences of means or proportions and 95% confidence
 NS: not significant.

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Cause of Suboptimal CPR



Well... survival for VF is good, but we have so few of them! (13%)

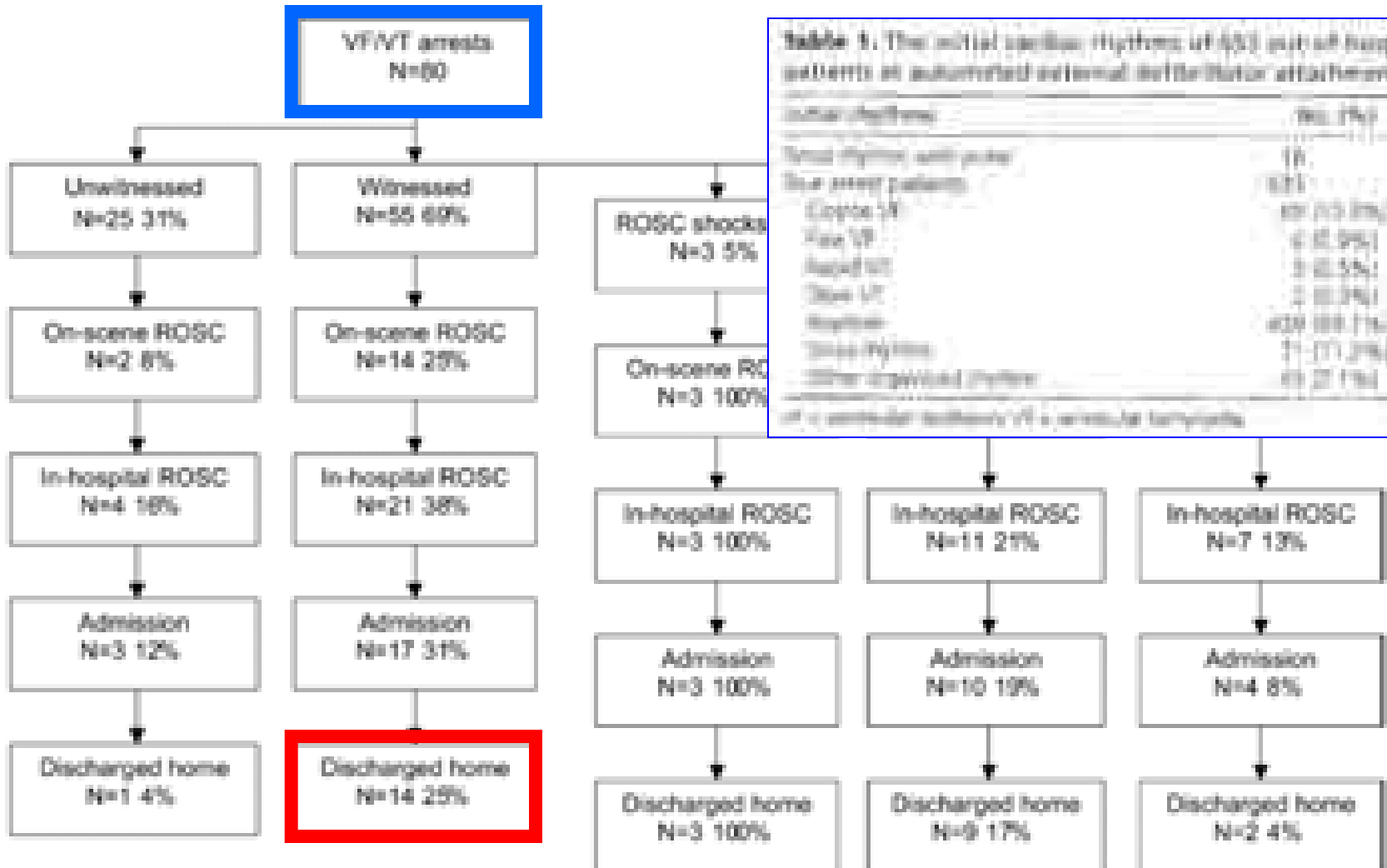


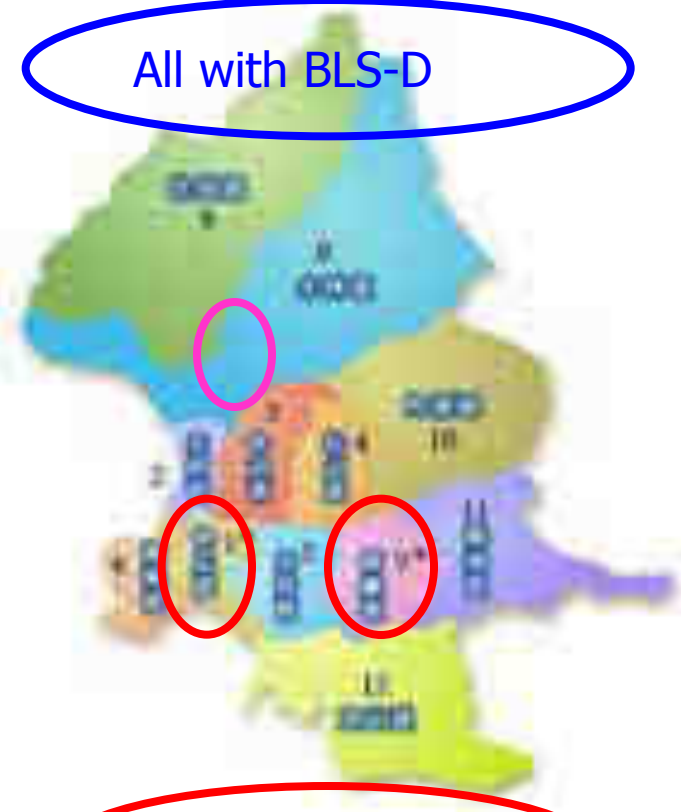
Table 1. The initial cardiac rhythm (N=53) post-hospital admission at automated external defibrillator attachment.

Initial rhythm	No.	Per
Normal rhythm with pulse	16	30%
Blue arrest patients	18	34%
Coronary VT	10	19%
Non-VT	8	15%
Asystole	2	4%
VF	2	4%
VT	2	4%
Other organized rhythm	10	19%
VF	7	13%
Other organized rhythm	3	6%

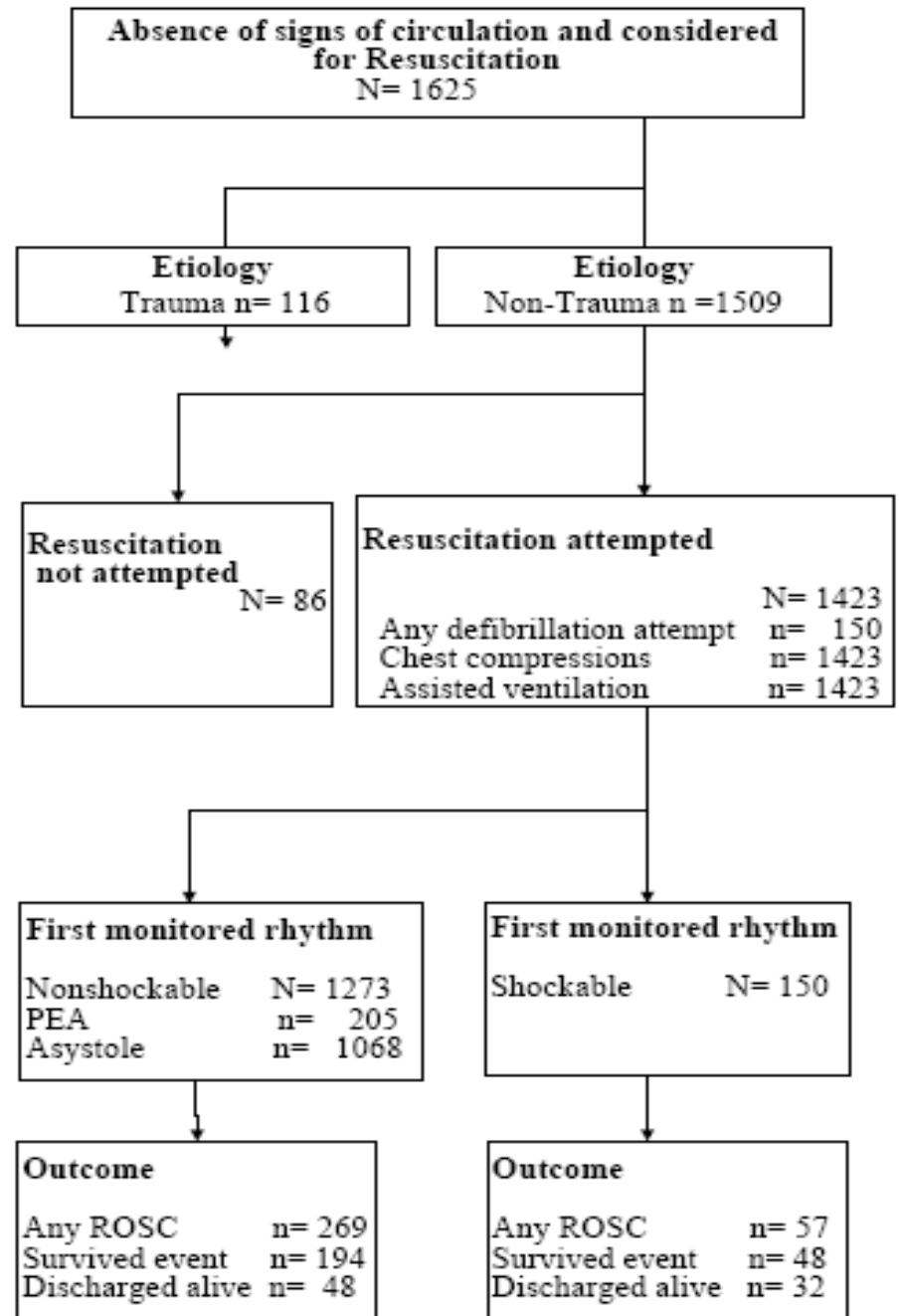
During the process of phasing in ALS capability...

Sep. 2003 ~ Aug. 2004

All with BLS-D



+ ALS teams



Adjusted Odds Ratios for Outcomes

1037 (73%) received BLS-D, and 386 (27%) received ALS.

	ROSC(%)			Survival to ED-ICU Admission(%)			Survival to Hospital Discharge(%)		
	OR	95%CI	p	OR	95%CI	p	OR	95%CI	p
Type of services (ALS vs. BLS-D)	1.57	1.18-2.08	0.002	1.66	1.21-2.25	0.002	0.41	0.33-2.32	0.18
Age group (66+ vs. 0-65)	1.25	0.84-1.67	0.12	1.10	0.80-1.51	0.57	0.32	0.78-2.23	0.30
Gender (Male vs. Female)	0.93	0.71-1.23	0.63	1.01	0.74-1.37	0.97	0.69	0.66-1.79	0.74
Witnessed by Bystander (Yes vs. No)	1.12	0.86-1.47	0.41	1.03	0.75-1.39	0.87	0.42	0.39-2.29	0.15
Bystander CPR (Yes vs. No)	1.72	0.87-3.64	0.06	1.83	1.00-3.44	0.04	2.26	1.03-3.44	0.04
Initial Monitored Rhythm (Shockable vs. Non-Shockable)	2.17	1.20-4.3	0.001	2.14	1.41-3.24	0.001	5.25	3.30-10.38	0.001

Adding video communication to dispatch instructions on the quality of rescue breathing in simulated cardiac arrests--a randomized controlled study.

- [Yang CW](#), [Wang HC](#), [Chiang WC](#), [Chang WT](#), [Yen ZS](#), [Chen SY](#), [Ko PC](#), [Ma MH](#), [Chen SC](#), [Chang SC](#), [Lin FY](#).
- **OBJECTIVE:** Both ventilations and compressions are important for victims of prolonged cardiopulmonary resuscitation (CPR) and asphyxial arrest. Dispatch assistance increases bystander CPR, but the quality of dispatcher-assisted CPR (DA-CPR), especially rescue breathing, remains unsatisfactory. This study was conducted to assess the impact of adding interactive video communication to dispatch instructions on the quality of rescue breathing in simulated cardiac arrests.
- **METHODS:** In this simulation-based study, adults without CPR training within 5 years were recruited between April and July 2007 and randomized to receive dispatch assistance with either voice instruction alone (voice group, n=53) or interactive voice and video instruction (video group, n=43) via a video cell phone. The quality of rescue breathing was evaluated by reviewing the videos and mannequin reports.
- **RESULTS:** Subjects in the video group were more likely to open the airway correctly (95.3% vs. 58.5%, $P<0.01$) and to lift the chin properly (95.3% vs. 62.3%, $P<0.01$), but had similar rates of head-tilt (95.3% vs. 84.9%, $P=0.10$). Volunteers in the video group had larger volume of ventilation (median volume 540 ml vs. 0 ml, $P<0.01$), greater possibility to sustain an open airway (88.4% vs. 60.4%, $P<0.01$) and a tendency towards better nose-pinch (97.7% vs. 86.8%, $P=0.06$). The video group spent longer time to open the airway (59 s vs. 56 s, $P<0.05$) and to give the first rescue breathing (139 s vs. 102 s, $P<0.01$).
- **CONCLUSION:** Adding video communication to dispatch instructions improved the quality of bystander rescue breathing, including higher proportion of airway opened, and larger volume of ventilation delivered, in simulated cardiac arrests.



EMERGENCY CENTER



The demand for prehospital advanced life support and the appropriateness of dispatch in Taipei

Young-Chiang Liu, Tsing-Tai Chen, Pei-Hsin Chen, Hui-Hsin Lin, Fu-Hsun Shih, Jui-Shan Yen, Matthew Hsu-Wing Ma*, Shyr-Chyi Chen, Wen-Jong Chen, Fang-Yue Liu

Table 3 Table demonstrating the result of ALS demand and calculation of the appropriateness of ALS dispatch among all retrieved EMS cases (n = 5433)

	ALS Demand (n=470)	BLS Demand (n=4963)
ALS dispatch (n=175)	65	110
BLS dispatch (n=5258)	425	4853
Rate of ALS demand	$470/5433 = 8.65\%$	
Rate of ALS dispatch appropriateness	The number of people who should and actually received ALS out of the number of people who actually received	
	$ALS = (65 - 425) / (5433 - 5258) = 65/175 = 37.14\%$	
Rate of ALS overtriage	The number of people who should have received BLS out of the number of people who actually received	
	$ALS = (4963 - 4833) / (5433 - 5258) = 130/175 = 74.29\%$	
Rate of ALS undertriage	The number of people who should have received ALS out of the number of people who actually received	
	$BLS = (470 - 65) / (5433 - 175) = 405/5258 = 7.70\%$	

Lu TC, Ma MHM, Resuscitation 2005 → **Computer Assisted.....???**

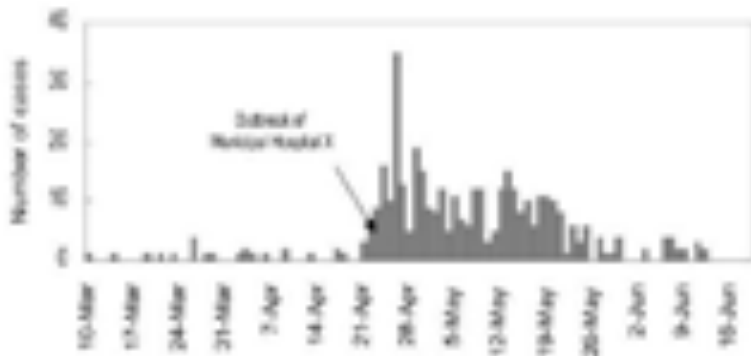
CLINICAL INVESTIGATIONS

Emergency Medical Services Utilization during an Outbreak of Severe Acute Respiratory Syndrome (SARS) and the Incidence of SARS-associated Coronavirus Infection among Emergency Medical Technicians

Journal of the American College of Emergency Physicians, 2004
 Journal of the American College of Emergency Physicians, 2004
 Journal of the American College of Emergency Physicians, 2004
 Journal of the American College of Emergency Physicians, 2004

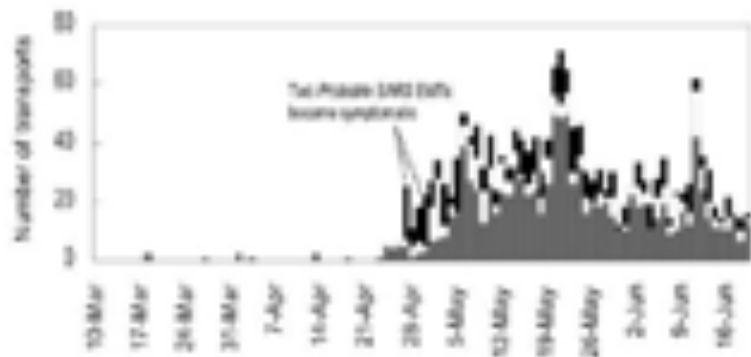
(A)

■ Febrile SARS



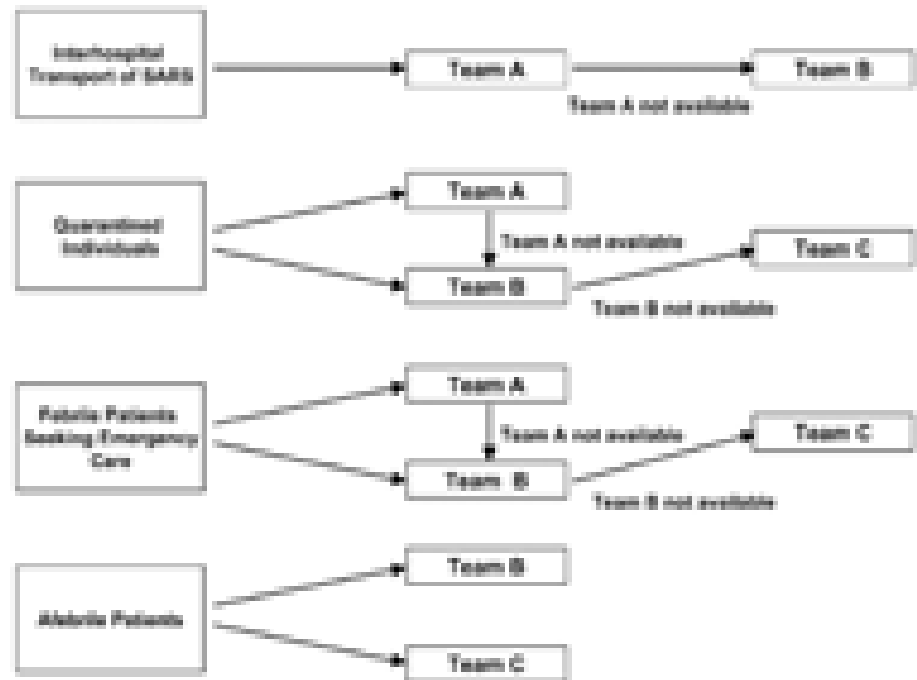
(B)

■ Febrile □ Quarantined ■ Intehospital



PATIENT CHARACTERISTICS

DISPATCH PRIORITY OF RESPONSE TEAMS

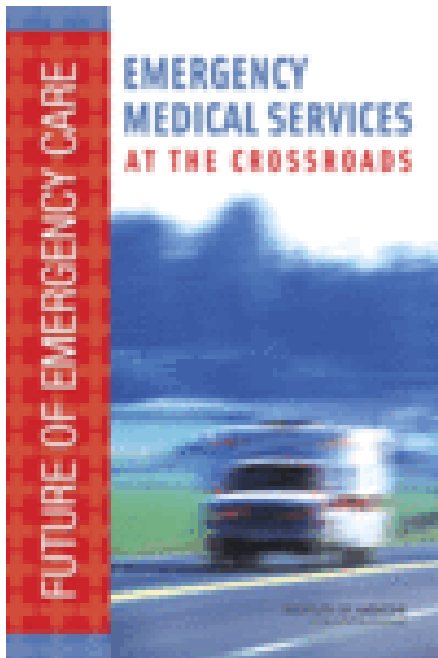


The infected rate was 1.3% (95% CI=0.4~3.6%), or 0.1% (95% CI=0.03~0.4%) per transport.

Ko et al. Acad Emerg Med 2004

Challenges

IOM: EMS at the Cross Road



- Insufficient coordination
- Disparities in response times
- Uncertain quality of care
- Lack of readiness for disaster
- Divided professional identify
- Limited evidence-base

Momentum of Progress



Leadership



Providers



Partnership



Community

Our Visions

- **Providers**
 - Competent, motivated, and empowered
- **Service**
 - Evidence-based, state-of-the art, and cost-effective
- **Response**
 - Immediate and Smart
- **System**
 - Coordinated, continuous, optimized and accountable

Thank U



EMSS in Taipei Related Publications- NTUH

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EMSS in Taipei Related Publications- NTUH

13. Huang CH, Hsu CY, Chen HW, Tsai MS, Cheng HJ, Chang CH, Lee YT, Chen WJ. Erythropoietin improves the postresuscitation myocardial dysfunction and survival in the asphyxia-induced cardiac arrest model. *Shock*. 2007 Jul;28:53-8.
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當我成為高級救護技術員時，
我衷心地保證，
要奉獻自己為救護工作服務。

我將遵從倫理與法律的規範
為危急傷病患的福祉奮鬥。

維護病患的安全是我最高的原則，
保障病患的隱私是我當負的責任。

即使環境險惡，我仍要全力以赴。
讓所有的生老病苦，在我面前都能得到安撫。

我會持續精進自己的能力與判斷，
也會分享知識給任何需要的同僚，
為建立起高級救護技術員的光榮傳統，
我會盡最大的努力。

請上蒼賜予我智慧與勇氣，
讓每次的任務都能化險為夷。

我鄭重地，自主地以我的人格，作以上的宣誓。

