

# Briefing Session

Compression-only CPR (COCPR) Training  
Program for Secondary School Students

Emergency Medicine Unit,  
Li Ka Shing Faculty of Medicine,  
The University of Hong Kong

# Project Leaders

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# Important Contacts

- ▶ Our Unit welcomes inquiries by email or phone.
- ▶ Should inquiries involve an exchange of detailed information, communication via email are much preferred for clarification.
- ▶ The following person shall be contacted.

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# Major Content of this Briefing Session

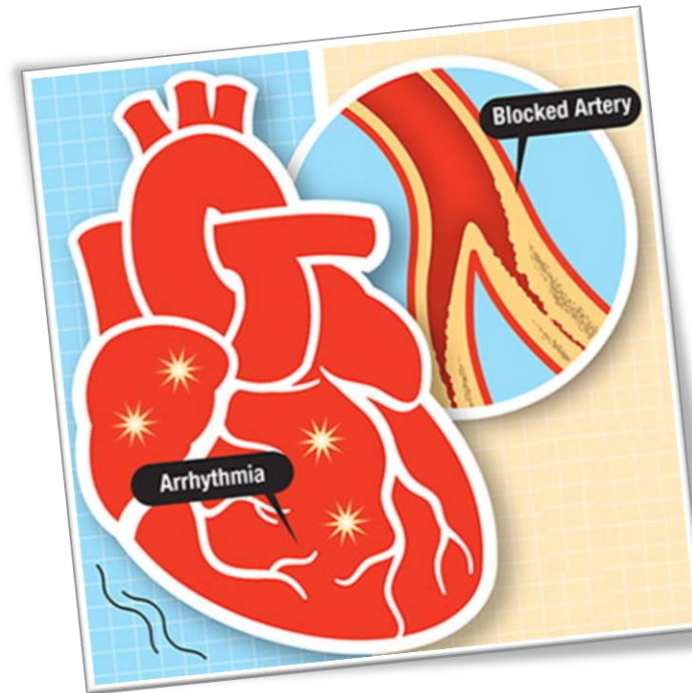
- ▶ Basic Concepts and Terms
  1. Sudden Cardiac Arrest: What is it? Why bothers?
  2. Two Types of Cardiopulmonary Resuscitation (CPR):  
What is it? Why to learn?
  3. Compression-only CPR (COCPR): Why to Promote?
- ▶ Outlines for the COCPR Training Program for Secondary School Students

# Basic Concepts and Terms

1. Sudden Cardiac Arrest: What is it? Why bothers?
2. Two Types of Cardiopulmonary Resuscitation (CPR):  
What is it? Why to learn?
3. Compression-only CPR (COCPR): Why to Promote?

# Sudden Cardiac Arrest: What is it?

- ▶ refers to a **sudden** and **unexpected** malfunction of the heart.
- ▶ is often caused by **arrhythmia** (electrical conduction abnormalities).
- ▶ results in **no or ineffective** contractile activities of the heart.
- ▶ **is different** from heart attacks (caused by blocked blood flow).



# Sudden Cardiac Arrest: Why Bothers?

- ▶ **Impaired/ceased blood supply** to vital organs
- ▶ **Death** within minutes
- ▶ Survival rate in Hong Kong is the **lowest** in Asia (**1.25%**).



# Cardiopulmonary Resuscitation (CPR): What is it?

- ▶ **One of the first-aid techniques** that involves **a series of actions** to support circulation
- ▶ **CPR helps maintain blood perfusion** to vital organs, hence buying time for more advanced treatment.





# Two Types of CPR

## Compression-only CPR (COCPR)

- Chest compression **without** mouth-to-mouth rescue breathing



## Conventional CPR

- Combination of mouth-to-mouth rescue breathing and chest compression



# Cardiopulmonary Resuscitation (CPR): Why to learn?

- ▶ Researches pointed out that **survival chance** could be **doubled or tripled** with the practice of bystander CPR on SCA victims.



# Compression-only CPR (CO CPR): Why to Promote?

- 1) As **efficacious** as the conventional CPR for adults with sudden cardiac arrest
- 2) More **acceptable** to the public
  - ▶ Some may worry about the transmission of infectious diseases through mouth-to-mouth contact.
- 3) **More easily learned** and practiced by laypersons
  - ▶ One only needs to compress the chest at a specific rate.



# COCPR Training Program for Secondary School Students: Outlines

Supported by Quality Education Fund

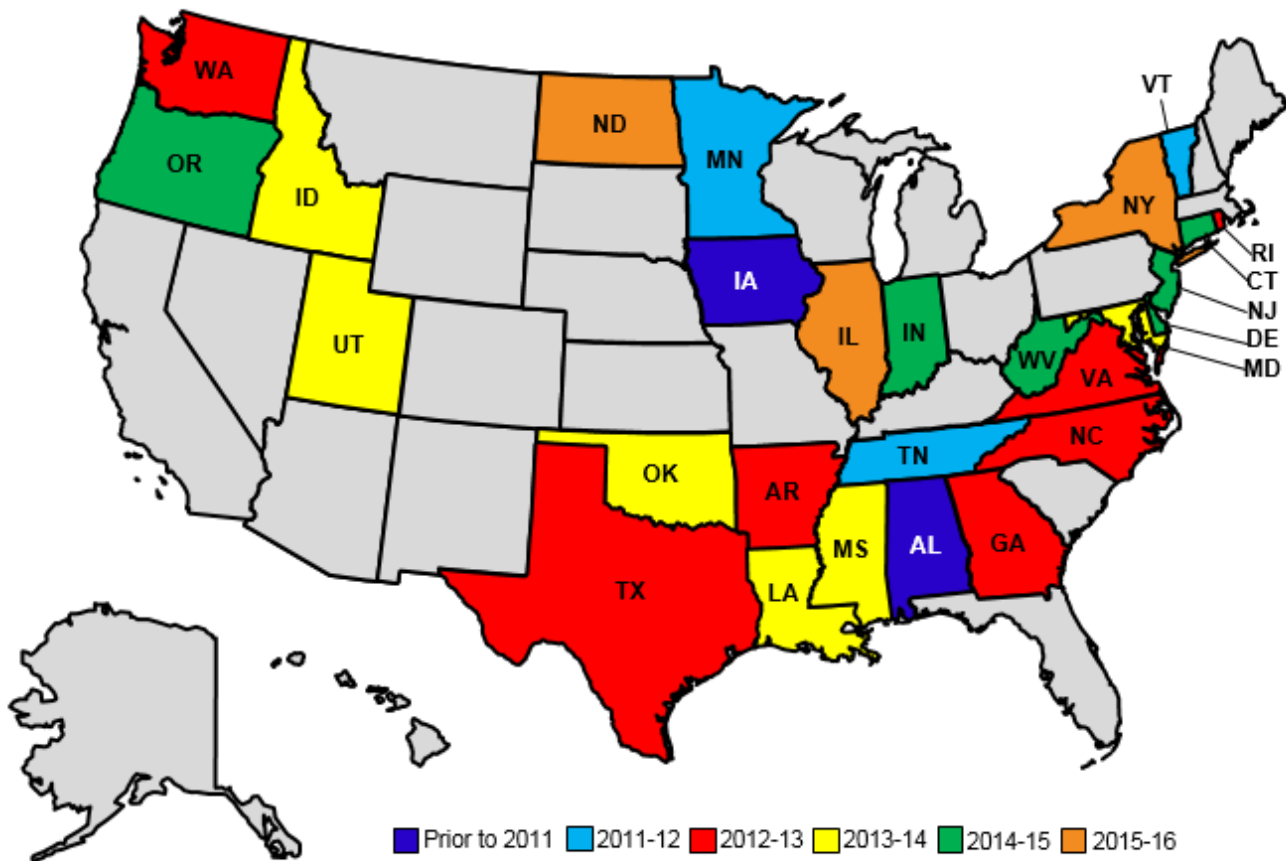
# Background

- ▶ Out-of-hospital cardiac arrest (OHCA) is a **major** emergency care issue worldwide.
- ▶ Local bystander CPR rate is low (**15.6%**).
- ▶ High school students showed a **positive attitude** towards CPR in a study published in 2015.
- ▶ CPR training for secondary school students is a **practical way to increase the local bystander CPR rate**.



# CPR in Schools

27 states | 54% of public high school graduates



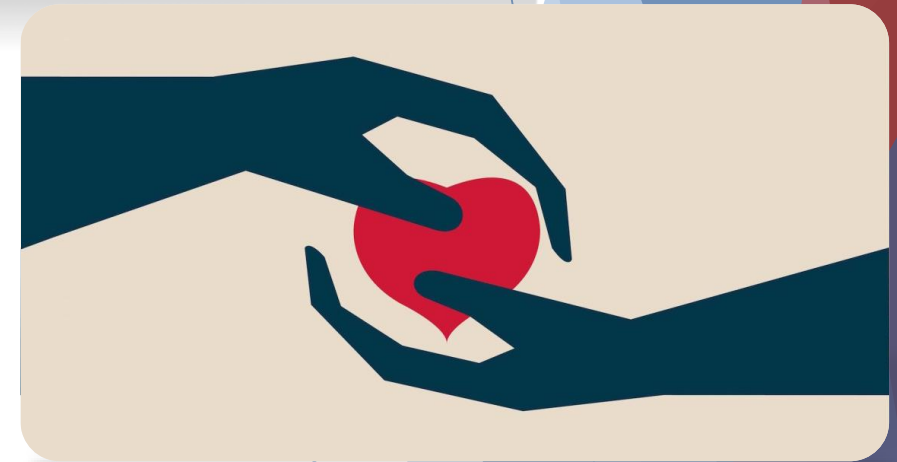
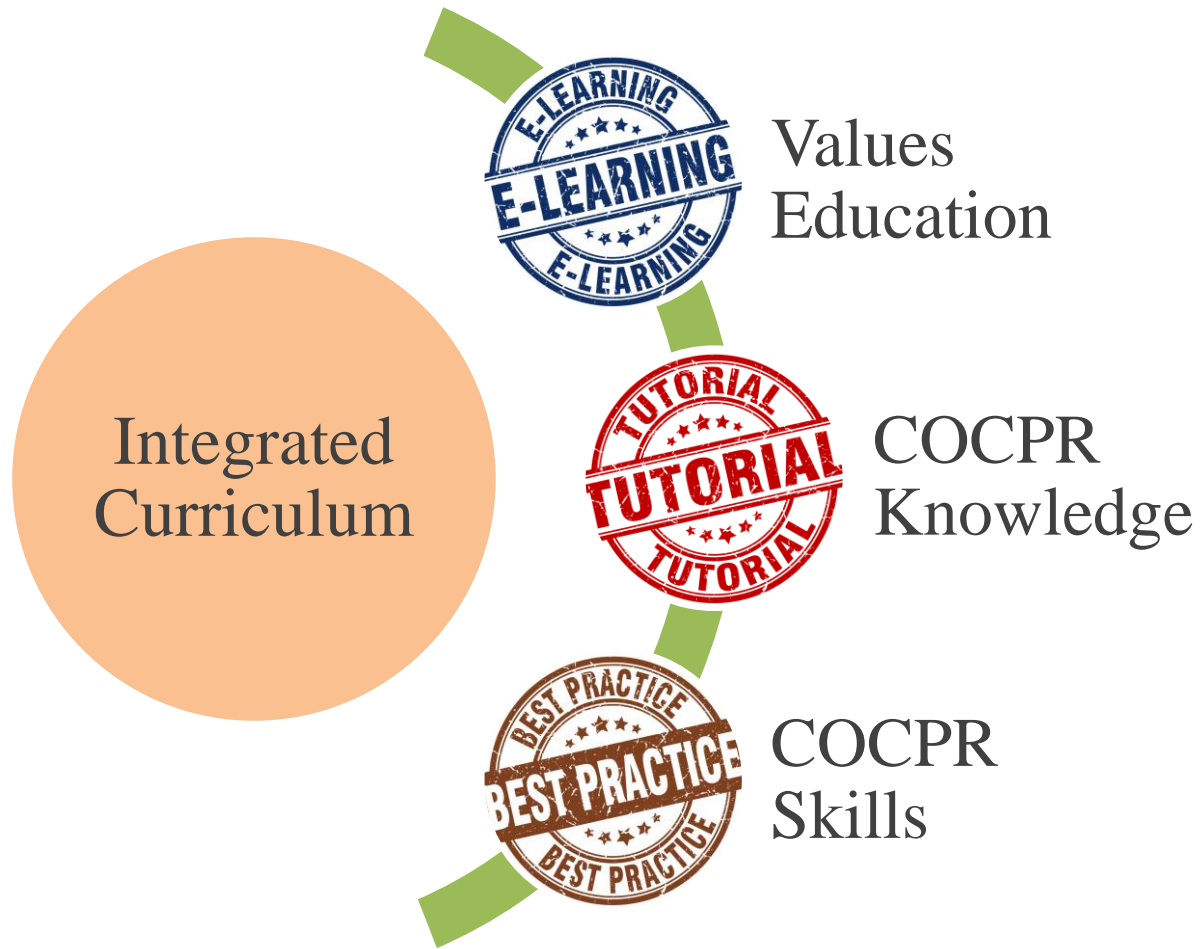
■ Prior to 2011 
 ■ 2011-12 
 ■ 2012-13 
 ■ 2013-14 
 ■ 2014-15 
 ■ 2015-16

Annual Public High School Graduates*	
AL	42,920
AR	28,540
CT	35,540
DE	8,120
GA	92,010
IA	32,310
ID	17,170
IL	130,340
IN	65,940
LA	35,720
MD	56,990
MS	25,720
MN	56,320
NC	88,040
ND	6,980
NJ	92,220
NY	193,480
OK	37,300
OR	34,490
RI	9,480
TX	291,830
TN	58,800
UT	31,860
VA	79,900
VT	6,070
WA	65,310
WV	16,740
<b>Total</b>	<b>1,639,920</b>



\* NCES, Projections of Education Statistics to 2021. Table 14: Actual and projected numbers for public high school graduates, by region and state: School year 2013-14. ([http://nces.ed.gov/programs/projections/projections2021/tables/table\\_14CT.asp](http://nces.ed.gov/programs/projections/projections2021/tables/table_14CT.asp)).

# Core Content in this Training Program



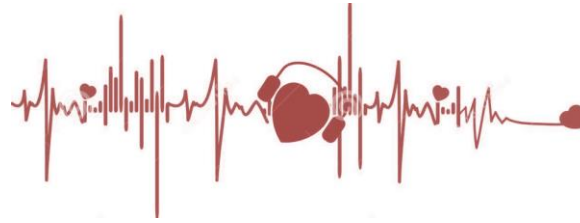
# Teaching Strategies

- ▶ Use of the following mix of pedagogical methods to maximize teaching and learning effectiveness
  1. Web-based **interactive** learning modules;
  2. **Scenario-based** practical skill training (face-to-face); and
  3. **Technology-enhanced** learning through an innovative bystander CPR app





# Program Schedule



- ▶ Duration: From **Dec 2016 to Dec 2017**
- ▶ Recruitment of **at least 30 schools** as Partner Schools
- ▶ Target Students: **S.3 to S.6**
- ▶ **Expected** Number of Beneficiaries Per Partner School:

Approximately  
420 – 525 students

# What Are your Teaching Tools?

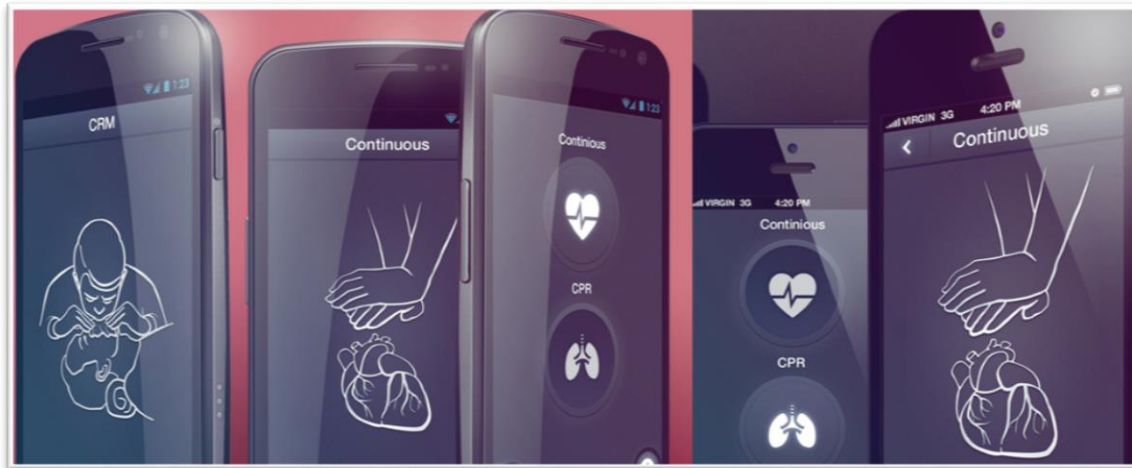
To assist with your teaching of COCPR, EMU will provide Partner Schools with the following:-

1. Teaching kits, which include:-
  - a. **Manikins** for practice (“Little Anne”) (**8** pieces per Partner School);
  - b. CPR kneeling mats (**8** pieces per Partner School); and
  - c. Comprehensive **Instructor Manuals** with all teaching and learning materials.



# What Are your Teaching Tools?

2. Bystander COCPR **e-learning modules**, which cover:-
  - a. **values education** in relation to the practice of COCPR; and
  - b. **technical knowledge and skills** of COCPR.
3. A bystander COCPR **app**
  - a. to provide **instant feedback** on COCPR performance.



# Complementary Supply of Instructors and Additional Manikins



- ▶ Upon request, our Unit may provide **complementary supply of instructors and additional manikins** to facilitate implementation of planned training classes within partner schools.
- ▶ Partner Schools are encouraged to **forward their planned training schedules** to our Unit as early as possible for liaison and coordination.

# Brief Timeline for Partner Schools

COCPR training at our partner schools will be conducted in **a flexible school-oriented manner.**



### Dec 2016

- **Briefings** to the project-in-charge of partner schools
- **Within-school discussion** on the implementation plan of this training program (such as the number of required teachers, classroom availability, feasibility to arrange classes in line with the formal curriculum, etc.)



### Jan 2017

- **Liaison work** with the project-in-charge of partner schools on matters of implementation (such as planned class schedules, requests for complementary supply of instructors, etc.)
- **Enrollment exercise** within respective partner schools for interested students
- Release of a **post-briefing information package** to partner schools
- **Within-school promotional activities**



### Feb 2017

- **Pre-training surveys**
- **Instructor training workshops** for teachers
- Opening of **e-learning modules and a bystander CPR app** to teachers
- **Preparation work** for teaching COCPR classes (for example, arranging teaching venues, reviewing instructor manuals, grouping enrolled students, obtaining parental consent, etc.)
- Release of **account codes** to teachers and enrolled students for logging on to the e-learning modules and the bystander CPR app



### Mar- Sep 2017

- **COCPR training classes** for students
- Continual **review of students' progress**
- **Post-training surveys**
- **Liaison for inter-school competition**
- **Liaison for COCPR marathon (Pending)**



### Oct 2017

- An **inter-school competition** for all partner schools
- **COCPR marathon (Pending)**

# Roles of Involved Teachers

Your role as an proactive educator for our youngsters is of tremendous value.

# Teachers' roles

- ▶ Teachers of Partner Schools (in particular the primary and secondary project-in-charge) will be **actively involved** in the **implementation** of the entire training program at their serving school.
- ▶ Their commitments may include, but not limited to:-
  1. to **participate in COCPR program instructor training** sessions;
  2. to **be instructors** within their schools for the teaching duties of this training program;
  3. to **monitor** students' learning progress in the e-learning modules and bystander COCPR app;
  4. to **share feedback** on the teaching kits;
  5. to **facilitate completion of pre/post- training surveys.**



# 1. To participate in COCPR Program: Instructor training sessions

- ▶ One (1) session of training (lasting 3 hours) at HKU Sassoon Road Campus
- ▶ Teachers will:-
  - 1) **acquire the principles and practical skills** of compression-only CPR; and
  - 2) **learn to utilize** the following **teaching resources**, including:-
    - teaching kits, including instructor manuals and manikins;
    - e-learning modules and the associated learning management system; and
    - the bystander CPR app.



## 2. To act as instructors in their schools

Trained teachers would then:-

- 1) **lead and conduct** within-school training sessions on COCPR;  
**Each** student will receive **a total of approximately 90-minute training**.
- 2) **evaluate** students' performance by using standardized assessment instruments; and Practical training will involve scenario-based COCPR **practice** and **evaluation** of students' learning outcomes.
- 3) **monitor** students' completion of e-learning modules and attendance in training classes.



### 3. To monitor students' learning progress

- ▶ Teachers should make use of the **learning management system** to **monitor** students' actions and **identify** their learning strength/weakness; and
- ▶ **monitor** students' **completion** in learning activities with reference to their **attendance** in training classes, **performance** in assessments, completion of **worksheets**, etc.



## 4. To share feedback on the teaching tools

- ▶ Teachers are expected to keep in **close contact with EMU** to **share both students' and teachers' feedback** on the teaching tools (such as teaching kits, bystander COCPR e-learning modules and a bystander COCPR app).



# Inter-school Competition

- ▶ In order to evaluate students' **ability in performing COCPR under stress**, an **inter-school** compression-only CPR **competition** for all Partner Schools will be organized in Oct 2017 (tentatively).
- ▶ **Media** will be invited to record the event, so as to raise public awareness of compression-only CPR.



# A pending CPR marathon

- ▶ Let's break the world record.

CARDIOPULMONARY  
RESUSCITATION  
MARATHON. 2016  
心肺復蘇馬拉松





We are happy to listen and to address all your concern.  
Your counterparts probably share similar questions with you.  
Do feel free to raise out if there is any on your mind.

Thank you for your participation.