



Improving Outcomes from Pre-hospital and Emergency Care across the Asia-Pacific

## STUDY PROPOSAL REQUEST FORM

Please complete the form and email to PAROS secretariat at [paros.secretariat@yahoo.com](mailto:paros.secretariat@yahoo.com) by the stipulated date. You will be notified in due time on whether your study has been accepted for presentation.

### 1. BASIC INFORMATION

<b>Name:</b> Won Chul Cha	<b>Designation:</b> Samsung Medical Center
<b>Email:</b> <a href="mailto:docchaster@gmail.com">docchaster@gmail.com</a>	<b>Country:</b> Republic of Korea

### 2. TYPE OF REQUEST (Please select one)

<input checked="" type="checkbox"/> New Study Proposal (initial)	<input type="checkbox"/> Secondary Analyses	<input type="checkbox"/> Explanatory Analyses
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### 3. STUDY TITLE

Developing and validating survival prediction model for Asian OHCA victims.

### 4. ABSTRACT OF STUDY PROPOSAL

In **no more than 350 words**, describe the study under the given headings below.

#### Objectives/Hypotheses

In this study, we want to find the association between CPR case volume and survival of OHCA. (primary object)  
We also would like to find the inflection point of volume-survival curve with the prediction model.(secondary object)

**Methodology** (To include sample size, settings, inclusion & exclusion criteria, etc. For secondary & explanatory analyses: include statistical plan, type of analyses, measurement, etc.)

We will use the PAROS dataset collected by the end of 2012. We will include all OHCA over 18 yr of age with presumed cardiac origin. Utstein factors along with EMS data will be included. Ambulance teams responded to and treated each OHCA will be identified in order to calculate annual CPR volume.

The primary outcome is the rate of survival to discharge. Multivariate analyses will be performed in order to develop a prediction model for OHCA survival. The model will be adjusted through calibration and discrimination process. Afterward, it will be validated both internally and externally.

With the model, we will prove the positive association between case volume of CPR and survival of OHCA victims. We will plot the volume-survival curve with the model to find the inflection point, which is to be the cut-off value.

**Significance of the study** ( e.g. provide brief description on how the study can improve current systems, its benefit to patients and how it can be implemented)

Quality of prehospital care is essential for survival of OHCA victims. Coordinated team approach with good compression quality increase the probability of survival. Continuous education and training is the primary mean to improve quality, thus mandatory for better survival. For better efficiency and effectiveness, it is important to distinguish target prehospital teams requiring further training. However, this process is very difficult without extensive quality assurance program.

Secretariat

Singapore General Hospital

Outram Road, Singapore 169608 | Tel: (65) 6321 3590 | Fax: (65) 6226 0294 | Email address: [paros.secretariat@yahoo.com](mailto:paros.secretariat@yahoo.com) |

Website: <http://www.scri.edu.sg/index.php/paros-clinical-research-network>



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The case volume is related to outcome in many aspects of health care system. It also has been suggested as a quality indicator for prehospital advanced airway management. However, the effect of case volume on the prehospital BLS outcome has not been studied before.

With this study, we can develop a prediction model of OHCA survival, which includes the CPR volume. With the validated model, we can find cut-off value of CPR volume to determine prehospital teams for further education and training without heavy resources to monitor CPR quality.

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