IMPLEMENTATION OF A BUNDLE OF UTSTEIN TEN STEP RECOMMENDATIONS FROM THE GLOBAL RESUSCITATION ALLIANCE TO IMPROVE SURVIVAL OUTCOMES AFTER OUT-OF-HOSPITAL CARDIAC ARREST IN A METROPOLIS: A BEFORE AND AFTER STUDY

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Aim We aimed to evaluate whether implementation of a bundle of three programs of Utstein ten-step implementation strategy (UTIS) proposed by the Global Resuscitation Alliance improved outcomes after OHCAs.

Method This study was a before-and-after study. All emergency medical services (EMS)-treated adult OHCAs with cardiac arrest were included. Seoul implemented a bundle of three CPR programs among UTIS programs in 2015:

1. Telephone–CPR (T-CPR) program: a monthly–based and individual dispatcher–targeted quality assurance protocol on telephone–CPR for every OHCA,
2. Rapid CPR program: a multi–tier response, and
3. Feedback CPR program: professional recording of EMS–CPR and feedback to individual team by medical director using high technology defibrillator devices.

The EMS process and outcomes of OHCAs in the study period (2015–2016) were compared with control period (2013–2014). The primary outcome was a good neurological recovery (cerebral performance category 1 or 2). A mixed–effects logistic regression model including random intercepts for district EMS agency level was used to estimate the association between study period with outcomes, adjusted for potential confounders.

Results Total 5968 and 6232 patients were included in the control and study period. T-CPR rate, Rapid CPR, and Feedback CPR in control versus study period were 48.1% versus 54.2%, 1.0% versus 35.8%, and 27.8% versus 63.8%, respectively (all p-values<0.001). Good neurological recovery rate was increased from 5.6% to 6.5%. In multivariable analyses, the adjusted OR of study period for good neurological recovery was 1.31 (95% CI: 1.11 to 1.55).

Conclusion The citywide implementation of a bundle of UTIS programs was significantly associated with better OHCA outcomes.

Conflict of interest None

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