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Seoul, South Korea – Community AED & CPR

Improve Bystander CPR in Seoul, South Korea with Dispatcher-Assisted CPR

THE CHALLENGE

To improve bystander CPR rate through implementation of dispatcher-assisted CPR (DA-CPR)

The gap between the knowledge and practice of bystander CPR remains as a challenge in providing early CPR before EMS arrival among OHCA patients. In order to increase bystander CPR rate, the dispatcher-assisted CPR (DA-CPR) system was implemented in Seoul, South Korea in 2011 where primary call dispatchers (PCDs), first in line to respond to emergency calls, asked two key questions to all callers to detect possible cardiac arrest cases, which then were transferred to medical call dispatcher (MCDs), who provided pre-arrival CPR instruction to the caller. A strong quality assurance program supplemented the implementation including establishment of the DA-CPR Registry for monitoring and feedback purposes, and monthly supervisory monitoring where 10% of DA-CPR recordings were audited by medical directors. Through the system, we aimed to achieve increased bystander CPR rates and in turn improved patient outcomes.

THE RESULT

Significant improvement in survival with good neurological recovery. Prior to 2011, the bystander rate in Korea was estimated around 6-9%. Bystander CPR increased to 46.5% by the end of 2013 where 33.3% received bystander CPR with dispatcher assistance. The likelihood of patients who received DA-CPR and had the arrest in public locations surviving with good neurological outcomes was observed to have nearly doubled.

BIGGEST OBSTACLE TO IMPLEMENTATION

Detection of cardiac arrest case by the primary call dispatcher at the dispatch center. In order for dispatcher-assisted CPR instruction to be initiated, calls detected as cardiac arrest cases must be forwarded to medical call dispatcher by the primary call dispatcher. Therefore, it was important to provide standardized and simplified protocol for OHCA detection as well as hold regular training sessions. Approximately 1/4 of cases were detected in 2011, calling for ongoing efforts. We held monthly educational meetings where registry-based statistics were reported and respective feedback was provided to all MCDs and PCDs. Additionally, OHCA cases whose arrests occurred in private locations did not significantly benefit from the DA-CPR system, calling for further actions in educating home bystanders.