Using the CARES DA-CPR Module for Performance Improvement in New Castle County, Delaware

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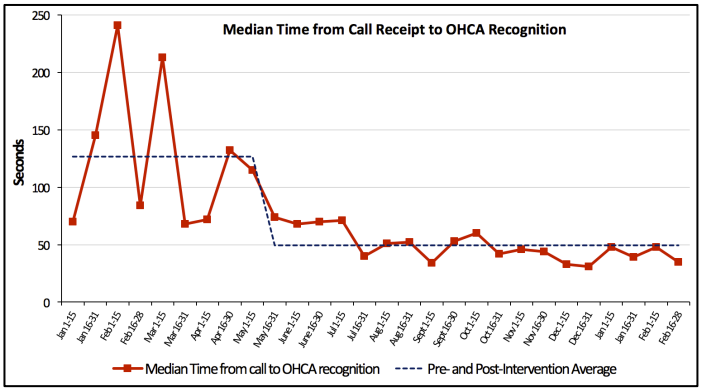
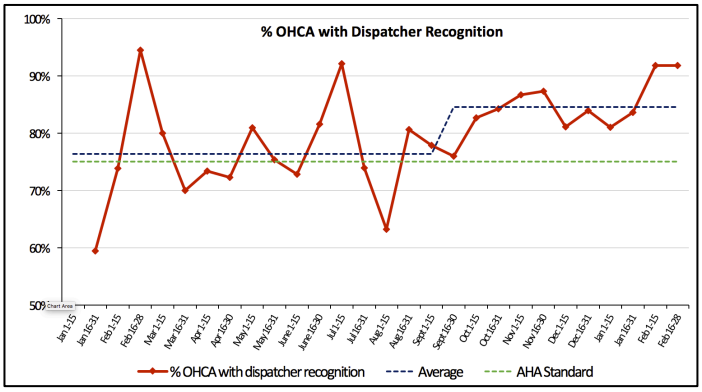
New Castle County (NCC) EMS in Delaware has been a CARES participant since 2009, and has seen significant increases in our OHCA survival rate over the past 10 years as a result of continuous performance measurement and practice modifications. Dispatcher Assisted CPR (DA-CPR) utilizing an emergency medical dispatch system (PMD) has been part of Communications practice for years. We took the next step in 2018, as the Emergency Communications Division, with clinical oversight from the County EMS Medical Director, Emergency Communications Chief and a performance improvement team from Emergency Communications added the CARES DA-CPR module to ensure 100% review of all cardiac arrest calls.

From January to April, baseline data were compiled with call review by shift supervisors who were trained in the DA-CPR data dictionary and data reporting process. The EMS Medical Director met with all four shifts of telecommunicators in late April to describe the performance improvement initiative that would work to improve DA-CPR and, correspondingly, overall rates of bystander CPR in New Castle County. The aim of the performance improvement project was to increase the frequency of bystander CPR for patients with OHCA, by targeting early dispatcher recognition of cardiac arrest and initiation of pre-arrival instructions.





Various methods were implemented, including but not limited to: trained supervisors reviewed 100% of OHCA calls, twice monthly progress reports with run charts and control charts were distributed for all metrics, and regular feedback from the EMS Medical Director was shared with all telecommunicators throughout the project either in-person at shift "roll calls" or electronically.

By the beginning of 2019, after a review of over 500 calls, all telecommunicator metrics showed improvement in median measurements during the post-intervention period. The greatest impact was seen in telecommunicator recognition time, which improved by over 1 minute. Bystander CPR performance improved in both the frequency of CPR and time to first compression, which decreased by nearly 30 seconds on average.

	Pre-intervention	Post-intervention
Recognition of OHCA by telecommunicator	76.3%	84.6%
Time to recognition of OHCA	127 seconds	50 seconds
Time to first compression	162 seconds	136 seconds
Bystander CPR after witnessed cardiac arrest	<45%	50%

NCC EMS and County Communications leadership considers this project to be a success that will allow for improved care for years to come, and improve the opportunity for countless lives to be saved in the community. The CARES DA-CPR module will continue to be utilized and tracked to ensure ongoing improvement and increases in survival.