



A member of the
**Global
Resuscitation
Alliance**



King County, Washington – HP-CPR

Improve EMS CPR in King County, Washington with High-Performance CPR

THE CHALLENGE

Improve the quality of CPR by EMS personnel. Ongoing QI identified a problem, which we felt needed improvement. For many years, the quality of CPR has been measured with voice recording and CPR detection devices. This ongoing QI identified many cardiac arrest events with pauses in chest compression, incorrect rate of compression, and long intervals to intubate the patient.

Annual survival from witnessed VF cardiac arrest from 1995-2004 ranged from 30% to 35%. As a result of this information we changed our CPR protocols in January, 2005 to achieve the following:

- No pause in CPR greater than 10 seconds
- Training to insure proper rate, depth, and full recoil
- Shock immediately followed by CPR
- Pre-charging the defibrillator prior to assessment
- No stacked shocks
- Intubation with ongoing CPR
- Training to integrate EMTs with paramedics
- Quality of CPR is owned by the EMTs
- Paramedics are responsible for advanced procedures

THE RESULT

Dramatic improvement in survival Discharged Survival improved 50% in the first year following the new training and this rate has been maintained. Survival is now above 50% (and one year we reached 62%).

BIGGEST OBSTACLE TO IMPLEMENTATION

Massive training requirement In our EMS system we have 2500 EMTs who all needed training in what we term High-Performance CPR. With 30 EMS agencies in our system this was a big challenge but one that was achieved with the help on online instruction and hands-on instruction by the training officers in every EMS agency. We also provided information on the science of CPR and why the changes were so important. When the EMTs realized the reasons for the metrics of CPR (rate, depth, full recoil, no pauses) the need for quality CPR sold itself. We also provided feedback to every department in terms of how well they were achieving high-performance CPR.