Debriefing and Cardiac Arrest Quality Improvement

An interview with David Baumrind, EMT-CC

Written by David B. Hiltz, AHA ECC Programs-Public Safety

Recently, David Baumrind of East Hampton, NY and I began talking about various strategies to improve resuscitation outcomes. As part of those discussions, we talked about debriefing and how it could be used to help improve the quality of resuscitation being provided, as well as sharing our perspectives on the subject.

Hiltz: David, could you introduce yourself and tell us a little about your involvement in EMS?

Baumrind: Sure. My name is David Baumrind, and I am an EMT-Critical Care in Eastern Long Island, NY. I got my start in EMS in 2006 with a volunteer agency in East Hampton. Like many, I really enjoyed EMS, and in 2009 became an ALS provider.

Over the past couple of years, I have taken it upon myself to learn as much as possible about cardiac arrests and the quality of resuscitation. I was frustrated about our low survival rates, and thought there must be an opportunity for us to improve. I learned about Medic One and their fantastic survival to discharge rates, and some of the things they are doing to improve. In my area, as with so many others, we do the best we can, but we don’t have any success rates that can come close to those organizations that are leading the way. So, in 2011, I’ve made it a mission for myself and my agency to try to raise the bar and improve our resuscitation outcomes. In fact, our organization created the position of STEMI/Cardiac Arrest Coordinator, dedicating resources to improving our patient care in this area. One of the first and easiest steps to implement was a structured debriefing with the crew after each cardiac arrest call.

Hiltz: David, we have had some really great discussions regarding strategies to improve cardiac arrest survival, eliminating what Dr. Mickey Eisenberg calls “survival envy” and I think we both agree that this can be a daunting task. What other strategies are you considering in East Hampton and how/why did debriefing “rise to the top” as a priority?
Baumrind: Well Dave, I have to say, looking at places like King County, WA, and Rochester MN actually gives me great hope. As they will tell you, it’s not magic, or anything that can’t be accomplished anywhere else. If they are at fifty percent survival to discharge, it seems even if we got to fifteen percent it would have a huge impact on our community. We don’t have to be King County, but the message is that it is possible. Having said that, they’ve been at it for decades, and we are just starting. We also don’t have the same resources available that maybe some other places do, but we have enough to make progress and that’s what we’re about. As someone from King County told me in Baltimore at last year’s JEMS conference, it might take a lot to get to where King County is now, but it won’t take an unreasonable amount of work to make a measurable jump in survival rates from where we currently are.

Some of the strategies we are implementing in the near term involve changing our culture. Raising the awareness of what is possible, how we are going to try to get there, and what the implications are to our community. We are going to utilize more data from our monitor/defibrillators about how efficiently our codes are run, we are going to train in teams using the “pit crew” model that has been well publicized of late, and of course our priority was to implement structured and supported debriefings after each code.

There are a couple of reasons structured and supported debriefings rose to the top as a priority. First, we could get a huge return with a minimal investment in resources and time. What I specifically mean by that is that they are easy to implement, with a small investment in time by both the facilitators and providers. What we are getting back is a huge change in culture, and a huge amount of hard and anecdotal information to help us get better. It has been nothing short of a “home run”.

Hiltz: Sound reasoning, David. As you know, Part 16: Education, Implementation, and Teams: 2010 American Heart Association Guidelines for Cardiopulmonary Resuscitation and Emergency Cardiovascular Care state:

“Debriefing is a learner-focused, nonthreatening technique to assist individual rescuers or teams to reflect on, and improve performance. In manikin-based studies, debriefing as part of the learning strategy resulted in improved performance in post-debriefing simulated scenarios, and it improved adherence to resuscitation guidelines in clinical settings. Debriefing as a technique to facilitate learning should be included in all advanced life support courses (Class I, LOE B).”
They go on to say “Debriefing of cardiac arrest events, either in isolation or as part of an organized response system, improves subsequent CPR performance in-hospital and results in higher rate of return of spontaneous circulation (ROSC). Debriefing of actual resuscitation events can be a useful strategy to improve future performance (Class IIa, LOE C). Additional research on how best to teach and implement post event debriefing is warranted.”

Did you do any additional reading or training to prepare yourself (and others in your agency) to maximize the effectiveness of your debriefing efforts and strategy?

**Baumrind:** I found “Resuscitate! How Your Community Can Improve Survival from Sudden Cardiac Arrest” by Mickey Eisenberg. In this book, Dr. Eisenberg talks about fifty factors associated with improving care and outcomes for cardiac arrest and describes twenty-five specific steps associated with improving a community's cardiac arrest survival rate. The book offers recommendations for both immediate and long-term improvement of EMS services including actions that can be taken at all levels.

I spent a good deal of time speaking with people from King County to get ideas on how best to apply some of what they have accomplished to our system. We are spending time with our Monitor/Defibrillator company to maximize the useful raw data we can get off of our monitors for use in our debriefings. We have acquired high quality (instrumented) CPR manikins, on periodic loan, to aid in our CPR and teamwork skills. Additionally, the Structured and Supported Debriefing course by the American Heart Association has been extremely helpful to us. The principles of that course were immediately applied to our debriefings.

**Hiltz:** I recently completed the Structured and Supported Debriefing program myself and like you, found it to be an efficient means of improving my intuitive debriefing skills. The course has helped me to conduct a structured and supported debriefing using a directed debriefing approach. The Structured and Supported Debriefing course covers debriefing methods, creating a supportive environment, establishing roles and goals of the interaction along with information and insight on genuine inquiry, active listening/organized communication, generating accurate records and dealing with obstacles and challenges.

**Baumrind:** We are at somewhat of a disadvantage in that we don’t have a large number of cardiac arrests per year and therefore we don’t have the opportunity to gather information and practice what we are trying to apply very often. That makes it imperative that we get the most out of debriefing the cardiac arrests that we do run, to drive our resuscitation training and education. In the immediate term, our goal is to debrief as soon as practicable, no more than 48 hours after the arrest.

**WE USE ICE CREAM DIPLOMACY!**

When we meet, we do so in a non-threatening manner, so that the crew knows the purpose is not to judge performance, but rather to gather information about that performance to better ourselves for the next one. It may seem like semantics, but it really isn’t. The person running the debriefing is an ALS provider who did not participate in the actual call, but is trained in running debriefings.
That person essentially acts as a “facilitator”, to draw out the information and experiences from the providers on the call. The debriefing is essentially learner-focused, with the content of the debriefing directed by the crew. This promotes a safe environment for sharing of experiences, without the fear of being judged. This is not necessarily easy to do, but is the cornerstone of the structure we are using, and imperative for the success of our program.

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**Continuous Quality Improvement for Resuscitation Programs**

2010 (New): Resuscitation systems should establish ongoing systems of care assessment and improvement.

**Why:** There is evidence of considerable regional variation in the reported incidence and outcome of cardiac arrest in the United States. This variation is further evidence of the need for communities and systems to accurately identify each instance of treated cardiac arrest and measure outcomes. It also suggests additional opportunities for improving survival rates in many communities.

Community and hospital-based resuscitation programs should systematically monitor cardiac arrests, the level of resuscitation care provided, and outcome. Continuous quality improvement includes systematic evaluation and feedback, measurement or benchmarking and interpretation, and efforts to optimize resuscitation care and help to narrow the gaps between ideal and actual resuscitation performance.

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Essentially, we are trying to identify what would be the “ideal” performance for how we run a cardiac arrest and through teamwork, training, and education trying to get our actual performance as close to our ideal as possible.

-Baumrind
Hiltz: It sounds like your debriefing efforts have been going well. Could you describe your experience with the Structured and Supported Debriefing program? What do you see as the essential features and benefits? Additionally, who would you recommend the program to?

Baumrind: Well, we are a work in progress, and I suppose we always will be. The Structured and Supported Debriefing program gave us a great framework to start with. We have been using the G-A-S approach, Gather-Analyze-Summarize, with great success.

During the Gather phase of the debriefing, the person running the debriefing facilitates a group discussion from the crew that ran the arrest. The crew talks about their experiences during the arrest. They talk about anything from what they found when they arrived on scene, to which arrest algorithm they entered and why...they share their perceptions of the event, and any logistical challenges that they may have faced. They address what they thought went well, and what didn’t. Basically, in this phase the crew is addressing their perceptions and feelings of the event, and how it went. Also during this time, we collect any raw data from both the cardiac defibrillator, as well as the AED if one was used prior to EMS arrival.

In the Analyze phase, analysis of the performance is facilitated. We review the raw data and events and the crew reflects, in their own words, on what could be improved on and why. We talk about compression fractions, how they could be improved and how to be more efficient in general with respect to time. We review the “Pit Crew Model”, how it was applied, and how we can tweak it to better meet our needs. Basically anything that can be identified to help us improve going forward is addressed here.

In the Summarize phase, we review and identify the “key points” that came out of the discussion. We talk about how we can use these key points to implement changes going forward for our agency as a whole. We talk about how we can best structure trainings to practice what we are trying to do. “Green light” thinking is encouraged, to come up with any idea that can help us take what we identify during the debriefing and using it to improve.

You see Dave, we may be debriefing a single cardiac arrest, but we are talking about every cardiac arrest that will follow. It is not about the six or seven providers in the room, but the community as a whole.

I can tell you that since we started the debriefings, there has been a notable improvement in efficiency and performance. Our compression fractions have improved. Our providers are talking about arrests in a different way, not being satisfied with the status quo of resuscitation. In a very short time, we are seeing measurable improvement in performance that over time will translate into more survivors of sudden cardiac arrest in our community. This has created some momentum for our program, and has motivated us even more.

I would recommend the Structured and Supported Debriefing program to any agency that wants to improve their resuscitation efforts. To any agency that isn’t afraid to set the bar higher, to look in the mirror and ask “how can we do better”.
HOT LINK TO VIDEO DEMO: http://www.slideshare.net/Hiltz/structured-and-supported-debriefing-demo

Hiltz: That is terrific, David! It sounds like that in addition to successfully incorporating a debriefing strategy into your QI plan, you have also observed several unintended (and positive) consequences. Your comments lead me to believe that you are well on your way in developing the elusive “culture of excellence”.

Baumrind: I would say that you never know how good you can be until you try! Sudden Cardiac Arrest is a major issue here and everywhere else, and not only do we want to do the best job we can, we want to do what is necessary (Brent Myers, MD).

I suppose time will tell how well our efforts translate into increased survival, but we remain optimistic. We know what’s possible from King County and other places, and we know that from the time we instituted our Structured and Supported Debriefing program we have started to see some really positive changes.

It’s not necessarily easy to make changes, but it doesn’t have to be overly difficult either. Change is an essential facet of the iterative process associated with quality improvement. Change requires a commitment and a vision. At the end of the day, we want to provide the very best resuscitation care that we can for our community.

For others that want to improve their resuscitation care, I would say that the Structured and Supported Debriefing program is a great place to start. We were fortunate to have had some great help when we got started, and in turn we would be happy to help others. I can be reached at Sky63@optonline.net. Thank you David!

Hiltz: It has been my distinct pleasure to have met David and to have had so many productive discussions with him. This one, about debriefing seemed to grow some teeth and I am privileged to share his perspective and experience.

Debriefing has distinctive merits, appears to be easily implemented by virtually any EMS agency, and has yielded not only predictable results, but also a variety of unintended consequences that led to localized adaptation and implementation of strategies to improve outcomes from sudden cardiac arrest.

Many thanks to David Baumrind and all those who endeavor, on a daily basis, to improve response, care, systems, and outcomes for cardiac arrest patients. I, along with the American Heart Association continue to acknowledge and share in the EMS community’s goal of improving patient outcomes through the development and delivery of the highest quality prehospital care available.

We are grateful for our interaction and collaboration with EMS agencies and providers across the globe.
How to connect with David Baumrind

David’s email is Sky63@optonline.net.

About David Hiltz

David has over 25 years experience in the healthcare industry with a special interest in emergency medicine and resuscitation. His current full time occupation is with the American Heart Association’s Emergency Cardiovascular Care Program—Public Safety Team. David is a member of the Massachusetts Department of Public Health’s Emergency Medical Care Advisory Board and current Vice Chair of the Board’s EMS Education and Public Education and Information and Resource Committees.

David is also well known for his work with the HEARTSafe Community concept and was recently recognized by JEMS and Physio-Control as an Innovator in EMS. Visit David on Facebook or email him david.hiltz@heart.org.