CHAPTER 2

Shocks at the High School Track

The time was 3:03 p.m. on April 7, 1995, and Alan Douglass was on duty at the Bath fire station when the call came in that someone had collapsed at the high school track. He and his driver, Robbie Stailing, were off in seconds. It was now 3:04. Alan prides himself on being ALS (Advanced Life Support) trained and certified. He is a full paramedic which means he has the most experience and highest possible ALS rating, and he treats every call as if it needs every bit of that training. The Bath Fire Department ambulance arrived at the track at 3:07 and was waved through the gates by some of the kids. The ambulance lapped the track to the spot where Kara was lying, her coach kneeling beside her and a small knot of kids clustering around her. Alan's first shock was rolling over what he thought was a young boy to see it was a girl. Then a series of other shocks followed. There was the shock of seeing the horrible bluish color of her face, which showed she had not been breathing and was probably in full cardiac arrest. There was the shock of recognizing this girl as Kara Anglim, whom he had known for years. Another shock registered when out of the corner of his eye he caught the expression on the coach's face. The coach had suddenly realized that Kara's life was in danger.

Allowing no time for emotions, Alan acted swiftly. He cleared her airway with his finger, and operating on instinct, he gave her two mouth-to-mouth breaths while Robbie got the Ambu bag out of his pack. Alan then gave Kara a couple of deep chest compressions and put his Lifepac 5 portable monitor/defibrillator on her chest. This device can both read the electrical activity of the heart—the electrocardiogram, or ECG—and deliver a large shock to convert any detected abnormal heart rhythm. Robbie breathed for her with the ventilator bag via a

mask. The monitor revealed Kara was in ventricular fibrillation. This rhythm makes the heart behave in a way that produces no coordinated contraction and thus it pumps no blood. It must be converted to normal quickly, otherwise death will soon follow. Alan took a quick tracing for the records and began to charge the defibrillator's capacitor when he realized he did not have a fully charged battery. He had a sinking feeling as he gave Kara a couple more chest compressions and Robbie ventilated her. "Things are not going well," he thought as he changed the battery, "and we need more help." Robbie is an EMT or emergency medical technician. EMTs know basic life support and are trained to assist. Alan realized that they would need more than the two of them if they were going to save Kara.

Alan charged the new battery and delivered the usual 200 joule countershock across Kara's chest. On the monitor her rhythm still showed ventricular fibrillation. She had not converted back to a normal cardiac rhythm. He gave her a couple more chest compressions as he charged the capacitor for another countershock. As he delivered the second shock to Kara, his and her luck changed. Kara came out of ventricular fibrillation and, simultaneously, Mike Drake and David Hudson arrived at the scene. Both were off-duty but had heard the call on their scanners which they keep open for emergencies. Mike has intermediate ALS qualifications. David is a full paramedic. Now David and Alan, the two most experienced men in the town of Bath, were there to help Kara.

Mike laid out the kit Alan would need to place a tube in Kara's trachea to better ventilate her. Robbie took over the chest compressions as Alan moved to Kara's head and smoothly and easily put an endotracheal tube in Kara's trachea. At the same time David slipped a 16-gauge angiocath (a large bore intravenous catheter) in Kara's arm and hooked her up to an intravenous solution of normal saline. Now they had a controlled airway as well as IV access for administering fluids and medications. Alan breathed for Kara through the tube, watching her chest rise with each respiration as he squeezed the Ambu bag. Although she was out of ventricular fibrillation, her heart rhythm between chest compressions was bad. She had a wide, poorly formed ECG, known as an agonal complex, at forty beats per minute, half of the normal rate. This rhythm is only electrical and Kara's heart still was not pumping any blood on its own. David gave her an intravenous injection of epinephrine to try to convert this rhythm to one that would effectively pump

blood through Kara's body as Alan and Robbie continued the chest compressions and bag ventilation. Epinephrine, or adrenalin, should have stimulated her heart to return to a normal beat but Kara's rhythm remained agonal. A couple of minutes passed as David prepared a second epinephrine injection and also gave Kara a bolus of atropine, a drug that should speed up the heartbeat.

A second ambulance arrived with more help. Kennie Desmond relieved Robbie on chest compressions and the new members of the team began to prepare the stretcher and ambulance to transport Kara to the hospital emergency room. Her rhythm, between chest compressions still showed the agonal complex at a rate of forty. David gave her a third IV injection of epinephrine. After a minute more of chest compressions and bagging they checked the monitor once more. Kara still maintained an agonal rhythm at forty beats per minute. Alan thought to himself, "I am not sure that we are doing Kara and the Anglims any favors," as they lifted Kara, still lifeless without a real cardiac rhythm and blood pressure, into the ambulance. What he was thinking was that he and David had done thirty full cardiac resuscitations in one year and the six people who survived neurologically intact had all been resuscitated successfully prior to being transported to the hospital. If Kara were to have hope for a meaningful recovery, she needed to respond before transport.

But Alan's final shock came after loading Kara into the ambulance. She suddenly converted to a normal sinus rhythm at one hundred sixty beats per minute. She had a blood pressure and she took a couple of breathes on her own! As the ambulance pulled out of the track, Alan and his team now had some hope that the Anglim's daughter would recover.