What are some of the misconceptions about cardiac arrest?

Myth: The survival rate from cardiac arrest is high.

**Reality:** The survival rate from cardiac arrest is dismal. The national average survival rate from cardiac arrest is 7.9%. This means that more than 9 out of 10 persons die from cardiac arrest with our current treatments.

**Myth:** The current treatments for cardiac arrest are well-established because of their proven effectiveness.

**Reality:** The standard treatments for cardiac arrest are, for the most part, untested. Because of this, survival rates are dismal. Further, it is unknown whether some standard treatments currently used are beneficial or harmful. Research needs to be conducted to evaluate promising interventions that hold significant potential to improve cardiac arrest survival rates in Milwaukee County and the nation.

does not pump blood, immediately causing no blood flow to the entire body, resulting in instant collapse and loss of consciousness. The survival rate is dismal. Treatment (calling 911, performing bystander CPR, defibrillation (shocking the heart), and delivery of advanced life support) must begin immediately if there is any hope for survival.

Myth: Cardiac arrest is not very common.

**Reality:** It is estimated there are approximately 450,000 cardiac arrests each year in the United States. To get an understanding of this number, it is similar to 2 full 747 airplanes crashing and killing everyone on board each day in the United States! It is the 3

## Why are these studies on cardiac arrest being conducted?

It is unsatisfactory that approximately nine out of ten cardiac arrest victims will die before discharge from the hospital. Some current cardiac arrest treatments are suspected to be harmful (rather than beneficial) and alternative and promising new interventions have been developed that hold potential to improve survival above and beyond our current therapies. Research needs to be conducted to improve cardiac arrest survival rates.

## Is Milwaukee County the only location this research is being performed?

No. Milwaukee County and the Medical College of Wisconsin are participating in national research studies funded by the National Institutes of Health to improve the survival of cardiac arrest victims. Because of its commitment to and success in improving survival from cardiac arrest, Milwaukee County was one of 11 sites in the United States and Canada chosen by the National Institutes of Health to participate in these studies. Milwaukee County's Emergency Medical Services system has been dedicated to improving survival of citizens who have cardiac arrest through partnership with the Medical College of Wisconsin. As a result, Milwaukee County has one of the highest survival rates in the nation. The cardiac arrest survival rate in Milwaukee County is 12.5%. Nationwide, the survival rate for cardiac arrest is 7.9%.

## What do you hope to gain by conducting these studies?

By participating in cardiac arrest research, Milwaukee County Emergency Medical Service (EMS) providers have developed high-performance resuscitation protocols that improve survival in general practice outside of research. Further, by participating in cardiac arrest research, we also hope to identify current treatments that may be harmful or helpful as well as identify promising new interventions that are more effective than our current therapy. Rapid adoption of these proven findings in clinical practice will continue to improve survival rates from cardiac arrest for the citizens of Milwaukee County.

## Do these studies do any good? Have previous studies on cardiac arrest improved the survival rates?

Absolutely! Milwaukee County participated in the Public Access Defibrillation Trial (automated external defibrillators [AEDs] ts1([)-2(A)(r)-2(s )12(i)8(b)2o(ar)-2(d)13(i)-pimi1(p)2( f)-2(i)8((A)7(r)-2( cu)13(r)) + (absolute) + (absolute)

Milwaukee County EMS immediately adopted this technology, leading to the ability to provide high-performance CPR at every resuscitation and improve survival.

A new biomedical device, the impedance threshold device, was evaluated for the first time in a research study in Milwaukee County, demonstrating a doubling of blood pressure during CPR

I don't want to wear a bracelet or necklace all the time on the off-

• Interrupted chest compressions in which 30 compressions are administered followed by two breaths

Both approaches are accepted treatments for cardiac arrest. It is unknown whether one chest compression approach provides better outcomes. Research is needed to identify which procedure will result in the best outcomes.

Is it possible that both cardiac arrest studies may be performed on the same person with a cardiac arrest?

If a cardiac arrest patient requires CPR and has a cardiac arrest rhythm that does not respond to a shock, it is possible they might be entered into both studies. These studies are integrated into the EMS providers' sd(e)-2( ad7(i)-1dd)13(i-bsbpTd [(I152 Td [nd [(I152 T)-2( ad7(i)-1,m (6)Tj 1())Tu(3co)2( ae tIf a car(o)13(ssas )est pat 2(e) 8(t)-3(e)1c2(e)11(q)13(ess3(e)]TJj EM9.77)7(ed)2( v(d)2(i)-1