

Heart and Stroke's New CPR Protocols

By Rocky Galletta, Area ECC Representative

Reference: This is a partial extract from the "HSFC Guideline for CPR and ECC".
Comparison chart of key changes.

2005 Recommendation - Basic Life Support	Explanation
Increased emphasis on delivery of effective chest compressions	When chest compressions are interrupted, blood flow stops. Limiting interruptions to chest compressions will result in greater survival. In any given series (cycle) of chest compressions, earlier compressions are less effective than later ones. Therefore, fewer interruptions increase the percentage of effective chest compressions. Allowing the chest wall to fully "recoil" or return to its normal position between compressions results in better re-filling of blood in the heart, which then results in more blood available to be pumped to the rest of the body during the next compression.
Single CPR compression-to-ventilation ratio: 30:2 for all rescuers responding alone to victims of any age, except newborns	A single ratio will make learning the correct procedure for responding to all ages of victims easier and increase the likelihood that a rescuer will remember the steps of CPR during an emergency. The new ratio also reduces interruptions in chest compressions (see explanation above).
After giving two rescue breaths, lay rescuers no longer check for signs of circulation before beginning chest compressions.	Lay providers cannot reliably detect the presence of circulation in a victim. Great harm can be done when rescuers <i>don't</i> do chest compressions when they're needed. Relatively minimal harm can be done by providing chest compressions when they <i>aren't</i> needed. Therefore, the new guidelines do <i>not</i> recommend that lay rescuers look for "signs of circulation" before delivering chest compressions. This eliminates the chance that lay rescuers might not recognize true cardiac arrest, and reduces delays to chest compressions. Eliminating instructions to look for signs of circulation and for delivering "rescue breathing without chest compressions" reduces the number of skills required for lay rescuers. This reduces the number of skills required for lay rescuers. This makes it more likely that the lay provider will learn and remember the steps of CPR.
AED programs in public locations where there's a relatively high likelihood of witnessed cardiac arrest (eg, airports, casinos, sports facilities and businesses) are recommended.	Some AEDs do not require a prescription, so healthcare provider oversight of AED programs is not mandatory. The Public Access Defibrillation trial reinforced the importance of planned and practiced response. Lay rescuer programs in airports and casinos and by police officers have reported survival rates as high as 49 percent to 74 percent when responding to sudden cardiac arrest caused by ventricular fibrillation.
A single shock from a defibrillator, followed by immediate CPR for two minutes, beginning with chest compressions, should be used to treat cardiac arrest caused by ventricular fibrillation (VF-the abnormal heart rhythm responsible for most cardiac arrests).	Repeated cycles of rhythm analysis and shock result in delays of up to 37 or more seconds before the first post-shock chest compressions are delivered. Most defibrillators eliminate VF more than 85 percent of the time. If the first shock fails, immediate CPR (before trying another shock) is likely to contribute to the success of a subsequent shock. Even when a shock eliminates VF, it may take several minutes for the heart to pump blood effectively, even if a normal heart rhythm returns. A brief period of chest compressions can deliver oxygen to the heart during this post-shock period, increasing the likelihood that the heart will begin to effectively pump blood on its own.

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The Regional Heart Saver Committee

An Update for the C.P.R. Community

Spring 2006

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Inside this issue...

- ♥ How do 2005 Changes to CPR Guidelines Translate into New Cause Content
- ♥ Effect of the New 30:2 CPR ratio on Fatigue and CPR Quality
- ♥ Rescuers Awards
- ♥ Ottawa Base Hospital Program
- ♥ Heart and Stroke's New CPR Protocols



To receive your own free, personalized action plan to reduce your risk of high blood pressure, visit www.heartandstroke.ca and click on the *Your Blood Pressure Action Plan* icon.

Our main goal is to promote the "Chain of Survival".

CPR Changes: How They Happen

By Brian Chisamore, Regional Heart Saver Committee Co-Chair

As almost everyone has heard, the New CPR Guidelines were released last November 2005. The Heart and Stroke Foundation Canada (HSFC) has teamed up with the American Heart Association (AHA) to provide seamless CPR guidelines for North America.

In Canada, the HSFC has teamed up with the major National Teaching Agencies to ensure Canadians receive the same CPR training. The National Teaching Agencies Working Group consists of a representative from the Canadian Ski Patrol System (Brian Chisamore), the Canadian Red Cross (Tracey Braun), the Lifesaving Society (Suzanne Gorman), St. John Ambulance (Les Johnson) and Heart and Stroke Canada (Carolyn Pullen). The group is working from two documents - ILCOR (International Liaison Committee on Resuscitation) and CoSTR (Consensus on Science and Treatment Reconditions). These documents can be found on the HSFC website at www.heartandstroke.ca.

Working Group tasks included identification of new CPR certification levels; ensuring Public or Lay Rescuer CPR training is the same across Canada, and ensuring training timelines are the same for each Agency. June 1st is the roll out date for the New CPR changes to be taught to the public by all Member Agencies. (Instructor training or Instructor workshops could take place before the June 1st roll out date.)

The group has met frequently since the guidelines have been released to make sure all the Agencies work from the same material. Each group will now ensure the public learn the same CPR course. The new CPR/First Aid and AED Guidelines can be found at www.heartandstroke.ca and go to the heart disease icon.

Effect of the New 30:2 Chest Compression to Ventilation International Guideline on Fatigue and CPR quality

By Christian Vaillancourt MD, MSc, FRCPC, CSPQ, DABEM, Ed Attending, The Ottawa Hospital

Background:

Cardiac arrest is the number one cause of mortality in the Canadian population. Out-of-hospital bystander cardiopulmonary resuscitation (CPR) is associated with a 3 to 4 fold increase in survival for cardiac arrest. Any interruption in the delivery of chest compressions to cardiac arrest victims is detrimental on survival. In an effort to minimize interruptions in chest compressions, the new International Guidelines changed the long-recommended 15:2 compression to ventilation ratio to 30:2. Although the 30:2 ratio is meant to increase survival for cardiac arrest, the ability of rescuers to deliver the new CPR ratio intervention has never been studied.

Objectives:

We intend to determine the effect of the new 30:2 CPR ratio on fatigue and CPR quality. More specifically, we will compare the 30:2 and 15:2 CPR ratio with regard to:

- 1) Participant's lactic acid levels after multiple cycles of each CPR ratio
- 2) Survey the participants for their perceived level of fatigue
- 3) And measure the frequency and depth of chest compressions using each ratio

Methods:

We will use a randomized cross-over design. Participants of various age groups and fitness status will be asked to perform several cycles of CPR using the 15:2 and/or the 30:2 ratios as recommended by the new Guidelines. Lactic acid levels will be determined before and after the completion of each CPR ratio cycle. Participants will be asked to provide information on their level of fitness, and perceived fatigue using each CPR ratio. The frequency and depth of each chest compressions will be measured using the Resusci Anne Monitoring manikin. We will perform descriptive and multiple regression analysis.

Red Cross Rescuer Award and Babysitting Hero Award

By Anita Snelgrove, Community Services Coordinator, Canadian Red Cross

The Canadian Red Cross wants to recognize members of the public who render assistance to people in need and have therefore created two types of recognition awards. The Rescuer Award is open to the general public (please contact your local Red Cross branch office to nominate someone) and the Babysitter Hero Award for young babysitters (nominations are processed online through our website www.redcross.ca).

To be eligible for the Rescuer Award, a person must meet these criteria:

- 1) has gone out of their way to save a life, prevented further injury and/or provided comfort to the injured
- 2) children who were not trained, but provided help (e.g. activated EMS)
- 3) must be non-professional rescuers or off-duty first responders like police, fire, ambulance, ski patrol, lifeguard

Note: Success in the rescue is not mandatory

The Red Cross Babysitter Hero Award acknowledges babysitters who use their Red Cross Babysitter course training to provide a safe environment for the children in their care. The award criteria include persons who:

- 1) have successfully completed the Red Cross Babysitting course
- 2) have acted in a responsible and safe manner, as defined in the Red Cross Babysitting course
- 3) have acted in accordance with the Red Cross Fundamental Principles
- 4) are residents of Canada
- 5) must have acted in one or more of the following cases:
 - a) provided a safe environment for themselves and the children they babysit
 - b) shown a true interest in the children they babysit
 - c) demonstrated professionalism, trustworthiness, caring and leadership
 - d) saved a life or prevented further injury

HBC is a supporter of this award and recognizes outstanding individuals who have taken the Red Cross Babysitter Course by awarding a \$500.00 gift card to each recipient of the award. The nomination deadline is December 2006.

Ottawa Base Hospital Program

The Ottawa Base Hospital Program was established in 1987 by the Ontario Government. Now located at the Ottawa Hospital General campus, the base hospital medical director certifies local paramedics to perform The Delegation of Controlled acts as they are defined by the Ontario College of Physicians and Surgeons policies.

While the focus is on pre-hospital patient care, Ottawa Base Hospital roles and responsibilities can be summarized as providing patient care focused:

- ♥ Medical authority and direction to paramedics
- ♥ Quality assurance / improvement activity
- ♥ Continuing medical education programs

The Ottawa Base Hospital Program administers two Associate Base Hospital Programs in Cornwall and Pembroke, thus providing out-of-hospital care to most of Eastern Ontario. For more information visit www.ottawabasehospital.ca.