

# A Cardiac Arrest Policy

By Judi Tyndall

Imagine yourself as the circulating nurse in the following scenario. You have worked in the Operating Room for twelve years. Today is just another routine day, and your next case is a fifty-two year old lady who is scheduled for an abdominal hysterectomy. As you bring Mrs. Smith into the case room, she tells you she is "scared to death of being put to sleep". How many times have you heard that? You reassure Mrs. Smith that "everything will be okay".

Approximately thirty minutes into the procedure, the anaesthetist comments that the patient is "a little hypotensive". The intravenous rate is increased. A few moments later, he requests an arterial line set-up. Before you have had a chance to prime the line, the anaesthetist says, "I've given her 75 mgm. of Lidocaine; I want a Lidocaine drip infusing at 2 mgm./minute". Seconds later he shouts, "I want Dopamine infusing at 10 mcg/kg". Your eyes glance at the ECG monitor. "Oh my God, she's in ventricular fibrillation!"

The scene that follows is chaos. The anaesthetist calls a code. Within minutes the room is full. There are three anaesthetists, two surgeons, five residents, five O.R. nurses and a cardiac arrest cart. Each physician is screaming orders. Three O.R. nurses are running to obtain the same item. You're not certain who is documenting the resuscitation. Imagine the noise. No one medical person has taken control. Nursing is totally disorganized.

Forty-seven minutes after the cardiac arrest is initiated, the patient is pronounced dead. The crowd seems to dissipate, almost as quickly as it had arrived. The surgeon and anaesthetist are in the O.R. Nurse Managers office. Four O.R. nursing colleagues re-

turned to their assignments. All who remains in the room are yourself, the scrub nurse, the O.R. nurse clinician and "your" patient. As you attempt to recall how to proceed with an O.R. death, your eyes fill with tears. You were the person who reassured the patient "everything would be okay".

Obviously, in the aftermath of such a scenario such as the one described there would be a number of medical and nursing issues to be resolved. Of prime significance, is the question, "Who should respond to a cardiac arrest in the O.R.?"

## Responding to an O.R. arrest

In our hospital, multidisciplinary meetings were held to consider alternatives in responding to an O.R. arrest. Present were representatives of every department that could possibly be involved in a patient's resuscitation. This included medical representatives from the Departments of Anaesthesia, Surgery, Cardiology, (chairperson of the CPR Protocol Committee) Intensive Care and the hospital's Senior Medical Resident, (S.M.R.) who is the designated captain of the hospital's cardiac arrest team. Nurse managers and clinicians from the O.R., Intensive Care Unit and Coronary Care Unit were present, as was the Chief Respiratory Therapist.

Three alternatives were considered for an O.R. arrest. These were:

1. The O.R. medical and nursing staff independently manage their own arrests;
2. Selective medical and/or nursing assistance could be summoned (ie. a stat call to ICU for Critical Care Nursing assistance); or,
3. The hospital's cardiac arrest team would respond to the O.R.

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The group agreed that one consistent approach that was viable twenty-four hours a day was needed.

Initially, members of the group believed that the first option was the most appropriate. However, guaranteeing sufficient staff around the clock for both medicine and nursing was a problem, as was the unavailability of the Respiratory Therapist.

The second option was disregarded for two main reasons. First, anyone summoned to the O.R. would not, respond with the same urgency as when they were responding to a cardiac arrest elsewhere. Secondly, the nurses strongly believed this option was too vague and might leave a resuscitation decision up to the individual medical staff involved and would not guarantee nursing support.

Finally, in order to provide the highest quality of care, the group agreed on the appropriateness of summoning the cardiac arrest team. This decision forced us to carefully re-evaluate past cardiac arrest experience. The following problems were identified:

- There was no designated medical leader during an arrest;
- There were no guidelines regarding roles and equipment;
- There were no guidelines indicating when a cardiac arrest should be called in the O.R.;
- Clarification regarding which members of the cardiac arrest team would respond to the O.R. was required, and
- There were potential infection control risks resulting from the cardiac arrest team's response.

## Developing the Guidelines

Appendix A outlines the cardiac arrest guidelines for the Operating Room developed at our hospital. In developing the guidelines, it was our goal to provide a mechanism, to enable the nursing staff to have as much control as possible, and to organize themselves efficiently during a crisis situation where emotions are high. The O.R. nursing staff's input was continually sought during the development of the guidelines. This communication not only improved the quality of the guidelines, but it also conveyed to the staff that we were addressing problems that they had encountered during actual patient crises.

The entire multidisciplinary group, previously identified, were continuously involved in discussions and critiquing of the guidelines throughout their six month development period. Finally in January, 1989, the proposed guidelines were taken to the hospital's CPR Protocol Committee for final approval. The guidelines

were accepted as presented to this committee.

Following this meeting, the physicians representing the Departments of Anaesthesia and Surgery were responsible for communicating with their colleagues regarding the specific guidelines and the necessity of consistency in the implementation of the guidelines.

## Formal Access to Critical Care Staff

The O.R. nurses were informed of the approved guidelines. The O.R. nurses were reassured to know that the guidelines provided them with a means to obtain Critical Care Nursing assistance when necessary, for example during a malignant hyperthermia crisis on nights. In addition the O.R. and Critical Care Nurse Clinicians recognized that the O.R. nurses required additional education to competently manage either a pre-arrest crisis, or those first few minutes prior to the cardiac arrest team's arrival. In collaboration with the anaesthetists, the following skills were identified as being necessary for O.R. Nurses:

- the preparation and/or assembly of cardiac arrest medications;
- the set up and regulation of cardiac arrest infusions (Dopamine, Xylocaine);
- preparation for defibrillation and the patient for countershock and documentation of the events

Wherever possible preassembled and/or premixed medications were purchased, an easy reference system was compiled, to provide the nurses with step by step instructions to the location, assembly and regulation of the I.V. infusions. An example is provided in Appendix B. These reference sheets hang on a pole on top of the cardiac arrest cart.

A form was developed to provide the O.R. nurse with a method of charting activities during any crisis, not only for cardiac arrests. This chart form is available in every Operating Room. Appendix C is a copy of the O.R. Nurses Record.

An essential step in the implementation of the O.R. Cardiac Arrest Guidelines, was the O.R.'s duplication of the I.C.U.'s and C.C.U.'s cardiac arrest carts. The O.R. nurses felt very reassured to know the guidelines provided them with a means to obtain Critical Care Nursing assistance for a particularly critical patient, as for example during a malignant hyperthermia crisis. The I.C.U. and C.C.U. nurse would be of the greatest assistance if they were working with a cardiac arrest cart identical to the system they use on a daily basis.

The final stage in the implementation of the above guidelines has been the use of mock arrests. Pre-scheduled cardiac arrest drills are conducted by the

## Abstract

The following article describes the process in the development and implementation of an Operating Room's Cardiac Arrest Policy. The actual guidelines and forms developed are presented.

**Appendix A**

O.R. Policy & Procedure Manual Revised: January, 1989 Henderson General Hospital Dept of Nursing-Operating Room

**Cardiac Arrest Policy**

**A. Cardiac Arrest Policy During Surgery**

1. A Code 55 will be called when:

- (a) the Anaesthetist requests an arrest to be called
- (b) the patient is to be defibrillated
- (c) the Anaesthetist agrees to the OR nurses' request to call a "code 55" for Critical Care Nursing assistance

2. The circulating nurse:

- (a) calls the code by Dialing 5555 and stating "Cardiac Arrest OR room # \_\_\_\_" (Repeat three times)
- (b) reports to the desk that a cardiac arrest has been called in Room # \_\_\_\_
- (c) assume responsibility for the nursing organization of the room. She must remain at the scene to:
  - i) organize the nursing staff
  - ii) delegate staff to obtain the cardiac arrest cart and additional equipment, etc.
  - iii) monitor and control traffic flow
  - iv) document the proceedings on the OR Crisis Record until the ICU/CC nurses assume the documentation

(d) On arrival of the ICU/CCU nurses, the circulating nurse:

- i) identifies herself as the nurse in charge of the room
- ii) identifies the Anaesthetist in charge of the arrest
- iii) gives the ICU/CCU nurses a brief history
- iv) ensures the O.R. cardiac arrest cart is taken out of the room.
- v) continues to delegate requested items
- vi) ensures ICU is notified ASAP if the patient is to be transferred to the ICU

3. The Charge Nurse will be responsible for:

- (a) ensuring the Cardiac Arrest Team Members are only allowed in the room.

The Cardiac Arrest Team responding to the O.R. consists of the following staff:

- A. The Senior Medical Resident
- B. 1 - ICU Nurse
- C. 1 - CCU Nurse
- D. Respiratory Technologist
- E. Critical Care Clinician

(b) reassigning necessary staffing

(c) monitoring traffic control

**Anaesthesia Policies:**

- 1. The Anaesthetist in charge of the case is responsible for determining who is the arrest captain. He/ she may:

- (a) assume responsibility himself/herself
- (b) delegate responsibility to another anaesthetist; or
- (c) delegate responsibility to the SMR.

2. If an anaesthetist leaves a room with a patient under anaesthesia to assist in an arrest:

- (a) the patient must be stable
- (b) a competent person shall be delegated to monitor the patient's vital signs in his absence

3. No new surgical cases shall proceed during the arrest period unless the patient has been stabilized and/or permission has been given by the "arrest room"

**If The Patient Expires:**

- 1. Investigate whether or not it is a Coroner's Case. In the event of a Coroner's Case do not remove any equipment (i.e. I.V.'s Foley Catheters, NG Tubes, Drains, E.T.T.'s) unless notified by the Coroner to do so.
- 2. If it is not a Coroner's Case proceed with the usual care after death - see O.R. Policy under "D"
- 3. Refer to the Hospital Information Manual regarding the Policy on completing the appropriate death forms

**B. Cardiac Arrest Policy Other Than Surgery**

This policy refers to the situation when surgery is not in progress (ie a patient awaiting surgery, hospital personnel,..)

1. The person discovering the arrest:

- (a) initiates basic C.P.R.
- (b) initiates a "Code 55" by yelling for help.

Note: Once you have established the Patient has arrested do not leave your patient-basic C.P.R. must be maintained.

2. The second person on the scene is responsible to:

- (a) ensure a "Code 55" is called - Dial 5555, State: Cardiac Arrest O.R. and Room #.
- (b) report to the desk that a cardiac arrest has been called.
- (c) if the patient is on a stretcher quickly move the patient into the closest available case room.
- (d) if the victim is unable to be transferred to a case room, the second person must ensure the portable oxygen, suction and arrest cart are obtained.

(e) proceed as the "Circulating Nurse" as outlined in the "Cardiac Arrest Policy During Surgery"

3. Refer to "Cardiac Arrest Policy During Surgery"

anaesthetist in conjunction with the SMR (Senior Medical Resident) and the O.R. and Critical Care Nurse Clinicians. The cardiac arrest team is unaware that the "code" is a drill. Following the exercise, the entire staff involved discuss the strengths and weaknesses of the resuscitation. Problems were identified and resolved as appropriate.

It has been over two year since the implementation of our O.R. Cardiac Arrest Policy. The Cardiac Arrest Data Form, (see Appendix D), provides an ongoing means to identify and pursue problems encountered.

This article has described both the actual O.R. Cardiac Arrest guidelines and the process by which the guidelines were developed and implemented in a University teaching hospital. Our goal throughout this project has been to improve the quality of patient care.

**Appendix B  
Xylocaine**

Dosage mg/min.	mL/hr
.5	8
1	15
2	30
3	45
4	60

**2 grams/500 ml**

Approved: May 1986 K.A. Ockenden, B.Sc., M.D.  
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**Appendix C Hamilton Civic Hospitals - Henderson General Division**

**Operating Room Nursing Record**

**Nursing Assessment**

**Medications**

Time	Name of Drug	Dosage	Site	Ordered By	Given By
	Atropine				
	Epinephrine				
	Sodium Bicarbonate				
	Xvlocaine				

**I.V. Solutions**

Time	Site	Solution	Medication	Ordered By	Given By	Initial Date	Time	New Time	New Rate
		250 D5W	Dopamine(400mgm)						
		500 D5W	Xylocaine(2g)						

**Procedures**

Time	Procedure	Size	Site	Performed By
	Arterial Line			
	Central Line			
	Swan Ganz			
	Peripheral I.V.			
	Foley Catheter			
	N.G. Tube			

**Code 55 called at \_\_\_\_ hours.**

**Signatures:** \_\_\_\_\_ RN's \_\_\_\_\_ Nurse's Notes \_\_\_\_\_ CPR Record \_\_\_\_\_ OR Record

**Appendix D  
Cardiac Arrest Data Form**

Place of Arrest: \_\_\_\_\_ Problem Description: \_\_\_\_\_  
 Date: \_\_\_\_\_ Time: \_\_\_\_\_ Action Taken: \_\_\_\_\_  
 Problems With:  Equipment  Personnel Recorder: \_\_\_\_\_ Team Captain: \_\_\_\_\_  
 No Problems

(Not a Chart Form)