Patient Education Teaching Packet for Cardiac Catheterization Patients

Liberty University Online
NURS 608 - ACUTE CARE
Final Project Presentation
Funmilayo Whitaker, RN, BSN
Cardiovascular disease (CVD) is a major cause of morbidity and premature mortality in men and women in the United States, most of the industrialized world, and many developing countries. Primary prevention of CVD beginning in early childhood is supported by extensive evidence culled from epidemiological, clinical, and laboratory studies. Autopsy studies (after the unexpected deaths of people) document significant positive associations between established risk factors and the presence and extent of atherosclerotic lesions in the aorta and coronary arteries. (Hayman, et.al. 2004).
What Is Heart Disease?

Bring up heart disease, and most people think of a heart attack. But there are many conditions that can undermine the heart's ability to do its job. These include coronary artery disease, cardiomyopathy, arrhythmia, and heart failure. Keep reading to find out what these disorders do to the body and how to recognize the warning signs.

Image Source: MedicineNet, Inc

Hayman, et.al. (2004). *Cardiovascular Health Promotion in the Schools*. American Heart Association, Inc.
Inside a Heart Attack

- The plaque deposited in your arteries is hard on the outside and soft and mushy on the inside. Sometimes the hard outer shell cracks. When this happens, a blood clot forms around the plaque. If the clot completely blocks the artery, it cuts off the blood supply to a portion of the heart. Without immediate treatment, that part of the heart muscle could be damaged or destroyed.

Image Source: MedicineNet, Inc
What is a Heart Attack?

Every year, more than 1 million Americans have a heart attack – a sudden interruption in the heart’s blood supply. This happens when there is blockage in the coronary arteries, the vessels that carry blood to the heart muscle. When blood flow is blocked, heart muscle can be damaged very quickly and die. Prompt emergency treatments have reduced the number of death from heart attack in recent years. 

Image Source: MedicineNet, Inc

Heart Attack Symptoms

- A heart attack is an emergency even when symptoms are mild. Warning signs include:
  - Pain or pressure in the chest.
  - Discomfort spreading to the back, jaw, throat, or arm.
  - Nausea, indigestion, or heartburn.
  - Weakness, anxiety, or shortness of breath.
  - Rapid or irregular heartbeats.

Image Source: MedicineNet, Inc
Illustration of CAD

A. Coronary artery (supplies blood and oxygen to heart muscle)

B. Blocked blood flow
   - Plaque buildup in artery
   - Blood clot blocks artery
   - Healthy heart muscle
   - Dead heart muscle
Applicability of Project to Advanced Nursing Practice

One of the responsibilities of Cardiology Advanced Practice Nurses is to educate cardiac patients about cardiac procedures, explaining and providing pre and post management options that are available for patients after cardiac procedures. In the process of delivering care, APNs are coaching patients, families, staff, colleagues and even themselves. (Hamric, 2009). Coaching can be viewed as a relational, multidimensional process that involves all aspect of being human-cognitive, affective, behavioral, physical, social and spiritual. APNs integrate self-reflection and the technical, clinical and interpersonal competencies they have acquired through graduate education and experience with patients’ understanding, experiences, and goals to shape transitional experiences and accomplish therapeutic and educational goals. (Hamric, 2009)

One of my Goals and Objectives for my practicum is as follows:

- Demonstrate advanced expertise and knowledge of CAD through staff and patient education. Work with preceptor to implement and coordinate a project that will benefit patients with heart disease after discharge from the hospital. This program will help to decrease or prevent incident of readmission to the hospital.
- Collaborate and educate health care professionals on the development and creation of individualized heart disease action care plans to ensure continuity of care is maintained.
- Provide members of the health care team with access to available resources and the latest research on the management and prevention strategies related to CAD. (Including but not limited to the following: Intra-aortic balloon pump, cardiac catherization, Endovascular therapy for aortic emergencies, Management of advanced heart failure, Alcohol and the heart, EKG and interpretations, Cardiovascular and rheumatologic disorders)

APN during teaching educate patients & Families on Healthy Lifestyle such as Proper Nutrition, Smoking Cessation and Exercise.
APN during educate Patients & Families on Healthy Lifestyle such as Proper Nutrition, Smoking Cessation and Exercise.

Quitting smoking, a healthy diet and exercise may reduce your risk of heart disease.

Source: http://www.patient.co.uk/heart/Cardiac-Catheterisation.htm.


### Teaching Tools Currently in Use at the Hospital

**Lower Bucks Hospital, Bristol, PA**

#### Operative/Procedure Instruction Sheet

<table>
<thead>
<tr>
<th>Date of Surgery</th>
<th>Time Patient to Arrive At Facility</th>
<th>Date/Time Attempted Call(s)</th>
<th>Nurse's Initials</th>
<th>Nurse's Message Left</th>
<th>Date of Surgery</th>
<th>Date Attempted Call(s)</th>
<th>Procedure</th>
<th>Home Phone</th>
<th>Work Phone</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tbody>
</table>

**Items as they are reviewed with patient**

#### Patient Informed

- Name
- Date of Birth
- Procedure verified
- NPO after midnight
- Arrive time to facility
- Parking
- Medication instructions
- Clothing attire - suggest loose-fitting clothing, flat shoes, no makeup, no jewelry, wear glasses not contact lenses.
- Instructed not to bring money, jewelry, valuables.
- Health survey completed?
- Does patient have a cold?
  - If yes, accompanied by fever, excessive drainage, cough?
  - If yes, nurse may need to review with anesthesiologist for clearance.
- Has patient any health changes since seeing the surgeon?
- Has patient made arrangements for someone to take them home?
- Name of individual
- Remind patient someone must be in attendance before discharge or must be available by phone when ready for discharge.
- Has patient made arrangements for a responsible adult to be with them in the evening of the surgery?
- Informed patient of waiting areas or keepers available when finished.
- If having knee or foot surgery, instructed patient to bring crutches to the center.

**NURSING NOTES/INSTRUCTIONS**

- MRSA
- C-Diff
- VRE
- TB

**Patient Comments/Concerns**

- Was the prescribed medication required?
- Was it helpful?
- What were patient's overall concerns/comments about experience?

- Where can patient be reached the next working day?
  - Early Admission
  - Not Applicable

Nurse completing interview (signature):
Teaching Tools Currently in Use at the Hospital

Lower Bucks Hospital, Bristol, PA. Discharge Instructions Post Procedure
### Teaching Tools Currently in Use at the Hospital

**Lower Bucks Hospital, Bristol, PA. Post Cardiac Catheterization orders.**

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**Post Cardiac Catheterization Orders**

**Lower Bucks Hospital**
501 Bath Road • Bristol, PA 19007

**Post Cardiac Catheterization Orders**

**Anchorage**

**Date/Time**

<table>
<thead>
<tr>
<th>ALLERGIES</th>
<th>ORDERS</th>
<th>Nurse Signature</th>
</tr>
</thead>
<tbody>
<tr>
<td>Check groin site for bleeding or hematoma when patient transferred to bed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>VS: Check groin site and distal pulse every 15 minutes x 1 hour, every 30 mins x 2 hours, every 1 hour x 4 hours, then every shift.</td>
<td></td>
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</tr>
<tr>
<td>Sheath removal per policy. * If a closure device is not used, the sheath should not be removed for at least 6 hours after the last dose of Lovenox given.</td>
<td></td>
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<tr>
<td>Manual Pull - keep patient flat x 1 hour then head of bed at 30° x 5 hours.</td>
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<tr>
<td>Sand Bag - keep patient flat x 1 hour, head of bed at 30° x 5 hours.</td>
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<td></td>
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<tr>
<td>Femostop at ______ mm/hg, titrate down every 10 mins by 10 mm/hg until reaching 40 mm/hg. Leave at 40 mm/hg x 3 hours then discontinue and place band-aid and bio occlusive dressing. Head of bed less than or equal to 30° after hemostasis obtained while Femostop in place.</td>
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<tr>
<td>Angio-Seal - keep patient flat x 1 hour, head of bed at 30° x 1 hour</td>
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<tr>
<td>Safe Guard dressing check site through plastic window every 15 minutes x 1 hour, then every hour until removal. Deflate bulb in 3 hours. Re-inflate with 40 cc air if oozing noted to a maximum of 24 hours. If no oozing leave deflated x 1 hour, then remove. Apply band-aid and bio-occlusive dressing.</td>
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<tr>
<td>Activated Clotting Time at ___________</td>
<td>call results to 215-785-9690</td>
<td></td>
</tr>
</tbody>
</table>

**Medications**

<table>
<thead>
<tr>
<th>Date/Time</th>
<th>ORDERS</th>
<th>Nurse Signature</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetaminophen (Tylenol®) 650 mg by mouth every 4 hours pm for mild pain</td>
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<td></td>
</tr>
<tr>
<td>Clopidogrel (Plavix®) 300 mg by mouth x 1 now</td>
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<tr>
<td>Folic Acid 1 mg by mouth daily</td>
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<tr>
<td>Enteric coated Aspirin 81 mg by mouth daily</td>
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<tr>
<td>Ace inhibitor __________ mg by mouth every night</td>
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<tr>
<td>Metoprolol (Lopressor®) __________ mg by mouth every night</td>
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<tr>
<td>Statin ______________</td>
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</tbody>
</table>

* Lovenox is to be held for 8 hours after sheath removal.

**Other:**

<table>
<thead>
<tr>
<th>Date/Time</th>
<th>ORDERS</th>
<th>Nurse Signature</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal Saline at 100 ml/hr x 1 liter</td>
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<tr>
<td>Encourage PO fluids (1 liter over 8 hours)</td>
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<tr>
<td>Diet: Clear liquids until sheath removed then advance to cardiac diet following sheath removal</td>
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<tr>
<td>Dietary Consult re: Heart Healthy Diet</td>
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<tr>
<td>Smoking Cessation Education</td>
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<tr>
<td>Remove dressing in a.m. and gently wash site daily with soap and water daily</td>
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<tr>
<td>Out of bed at</td>
<td></td>
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</tr>
<tr>
<td>Discharge (Date) ___________ (Time)</td>
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</tr>
<tr>
<td>Insert foley catheter now and discontinue when out of bed.</td>
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</tr>
</tbody>
</table>

**Physician Signature:**
Pamphlets currently given to Patients pre/post Cardiac Catherization

Source: www.LowerBucksHospital.org & Freedom From Smoking Clinic. www.lungusa.org/ffs
Patient Education Teaching Packet for Cardiac Catheterization Patients

- Patient Education Teaching Packet for Cardiac Catheterization Patients was developed to help patient understand the implication of CAD and provide them with pre & post cardiac teachings, allowing them information to influence their cardiovascular health. This will eventually prevent hospital re-admission.
Reducing Patient Anxiety Pre-cardiac Catherization Through Education

- Over the years there has been a great deal of research supporting the contention that the majority of cardiac catheterization patients suffer from anxiety prior to invasive procedures. Anxiety has been shown to lead to high levels of stress, creating delays in recovery and increased length of stay within the hospital. One area in which evidence-based practice can offer great value is in addressing this problem for patients prior to cardiac catheterization. The need for pre and post teaching to reduce anxiety and for better patients outcome. (Reed, T. 2008). This was why this teaching tool is very important for cardiac catheterization patients. At this hospital such packet was not in place for educating patients prior to invasive procedures such as cardiac catheterization.

Teaching packet designed to provide patients with overview of what to expect before, during and after cardiac related procedures
Contents of the Developed Teaching Packet

Cardiac Catheterization
Risk Factors
Cardiac Interventions
Cardiac Rehabilitation
Common Cardiac Medications
Lifestyle Management
Home Care After Cardiac Cath.
Discharge Preparation Checklist
Important Information

Medication Fact Sheets
Antiplatelet Medicines

QUIT SMOKING
LOWER BUCKS HOSPITAL
SAVING LIVES. EVERY DAY.
LOWER BUCKS HOSPITAL
SAVING LIVES. EVERY DAY.
Contents of the Developed Teaching Packet
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CARDIAC CATHETERIZATION

A medical procedure used to diagnose and treat certain heart conditions. Doctors use a long thin, flexible tube called a catheter into a blood vessel in your arm, groin (upper thigh) or neck and threaded to your heart.

For example, your doctor may put a special dye in the catheter. This dye will flow through your blood system to your heart. Once the dye reaches your heart, it allows the inside of your coronary (heart) arteries to show up on an x-ray. This test is called coronary angiography. This dye will show whether a substance called plaque has narrowed or blocked any of your coronary arteries and in time may restrict blood flow. When plaque builds up in your coronary arteries, it is called coronary artery disease.

Cardiologists do this procedure (Cardiac Catheterization) in a special laboratory. Your heart and blood pressure is monitored throughout the procedure.

Risk Factors

The risk factors for Coronary artery disease (when plaque builds up in your coronary arteries) are:

1. Increase age especially people older than 65 years
2. Male gender
3. Family History
4. Cigarette Smoking
5. High Cholesterol
6. Overweight/Obesity
7. Inactive lifestyle
8. Diabetes

What are the sign people get?

In most cases chest pain
- Middle of the chest or crushing chest pain
- Pressure, tightness, heaviness, cramping, burning aching sensation.
- Unexplained indigestion, blenching, epigastric pain
- Radiating pain in the neck, jaw, shoulder, back or one or both arms.

CARDIAC REHABILITATION

1. Monitored Exercise Program. Accomplished through individualized exercise and education that is supervised by a multi disciplinary team of experienced nurses and exercise physiologists.
2. Education to support nutritional needs, stress reduction, smoking cessation and life style management.
Benefit Includes:
  - Decreased blood pressure
  - Increased strength
  - Reduced stress
  - Increased energy
  - Decreased cholesterol
  - Increase HDL (Good cholesterol)
  - Improve blood sugar control

Source: Cardiac Rehabilitation Program. Lower Bucks Hospital, Bristol, PA.
Common cardiac medications your doctor may prescribe for you are:

1. **Statins** (Lipitor, Pravachol, Mevacor, Zocor, Crestor or Lescol).
3. **ARB/Diuretic** (Losartan and HCTZ, Irbesartan and HCTZ, Candesartan and HCTZ, Valsartan and HCTZ).
4. **ACE/Diuretic** (Benazepril and HCTZ, Capotopril and HCTZ, Enalapril and HCTZ, Lisinopril and HCTZ, Moexipril and HCTZ).
5. **Antiplatelet** (Plavix, Effient, ASA).

Please make sure your health care provider and pharmacist know all the medication you take. When you go home it is important to know the name of each medication * What they do * How much to take * When and how to take them and * side effects, if any.

Source: Common Cardiac Medications, PCNA- Preventive Cardiovascular Nurses Association.
LIFESTYLE MANAGEMENT

The cornerstone of treatment is prevention. Follow these tips for a healthier heart.
• Do not use tobacco products, if you do get help to quit.
• Have your blood pressure checked regularly. If on blood pressure medication take it as prescribed by your doctor.
• Eat foods low in saturated fat and cholesterol.
• Eat five servings of fruits and vegetables each day.
• Stay physically active. Try to exercise for 30 minutes every day.
• Maintain proper weight. If you are overweight you are at a higher risk.
• Have regular medical checkups.

HOME CARE AFTER CARDIAC CATHETERIZATION

1. Limit your activity after this test will help your recovery and help prevent problems. You must have someone stay with you overnight after your procedure. Go home without making any stops along the way.

2. Drink plenty of fluids unless your doctor tells you not to. Drinking fluids will help flush the dye through your system. You should drink about twice the amount you usually drink.

3. If you want to clean up your procedure, take a sponge bath. Wait until the next day to shower. Do not take a tub bath, swim in a pool or sit in a hot tub for 14 days after the procedure.

4. Remove your band-aide the morning after the test. As you shower, wash the puncture site gently and pat it dry. Do not scrub the site.

5. Limit your activity after you are discharged from the hospital:
   - Do not drive for 24 hours
   - Do not climb stairs or lift heavy objects for 48 hours
   - Limit bending at the waist for 48 hours

6. Before leaving the hospital, ask your doctor if your normal activities are safe for you and when you may return to work.

7. If you feel that you are going to cough, sneeze or if you need to bear down for a bowel movement, apply gentle pressure to the puncture site with your hand.

8. Call the cardiologist if you develop chest pain, especially if you had any devices placed in your heart, such as a stent or other device to close a hole in your heart wall.

Ross Heart Hospital, (2009). Post Procedure Recovery Unit, The Ohio State Medical Center.
DISCHARGE PREPARATION CHECKLIST

I have been involved in decisions about what will take place after I leave the hospital.

I understand where I am going after I leave this hospital and what will happen to me once I leave.

I understand what my medications are, how to obtain them and how to take them.

I understand the potential side effects of my medication and whom I should call if I experience them.

I understand how to keep my health problems from getting worse.

My doctor or nurse has answered my most important questions prior to leaving the hospital.

My Family or someone close to me knows that I am coming home and what I need once I leave the hospital.

If I am going directly home, I have scheduled follow-up appointment with my doctor.

Reference: Dr Coleman, Eric (2009). Discharged Preparation Checklist. UCHSC.
IMPORTANT INFORMATION
Write Down Important Phone # and Keep them handy
Cardiologist: ____________________________________________
Primary care Provider: ___________________________________
Pharmacist: ____________________________________________
Emergency Contact: _________________________________
Various Fact Sheets of Common Cardiac Medications available inside packet and given to patients as needed.

Source: Medication Fact sheets, PCNA- Preventive Cardiovascular Facts Nurses Association.