“Impact of a multi-media based patient education program on rate of 30 day readmissions after Percutaneous Coronary Intervention”

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PATIENT EDUCATION MANAGER
“How can we help our patients stay out of the hospital after Percutaneous Coronary Intervention?”

~ Dr. Ziada, Professor of Interventional Cardiology, Director Cardiac Catheterization Lab
Impact of A Multi-Media Based Patient Education Program on Rate of 30-Day Readmission After Percutaneous Coronary Intervention

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Background & Objective:
• Reducing 30 day readmission following coronary intervention (PCI) is a national healthcare system goal.
• Readmissions maybe caused by medication non-compliance or poor patient understanding of their medical condition
• The role of patient education in this setting and whether it can influence readmission rates is unclear.
• We sought to study the impact of a modern dedicated patient education program on the 30 day readmission rate after PCI

Methods: The Education Program
• A comprehensive multi-media education program for PCI patients and their families
• Designed by a patient education specialist, cath lab/ recovery nurses and interventional operators as a low health literacy tool-kit.
• It included: video clips on portable tablets, plain language pamphlets, pill organizers, business cards/magnets with phone numbers to cath lab nurses.
• Videos focused on concepts of angioplasty and stents, importance of medical compliance, cardiac risk factor modification, and value of cardiac rehabilitation.

Methods: Implementation and Endpoints
• Initially, cath lab recovery nurses received training on evidence-based teaching techniques (plain language, use of multi-media and “teach-back” technique).
• Nurses introduced video clips to patients, answered questions, ensured correct understanding by asking patients to “teach-back” after viewing material.
• “Teach-back” was used before discharge and during follow-up phone call.
• We allowed 6 months for gradual implementation then examined readmission data in the 6 months following full implementation.
• Readmission rates in the 6 months prior to implementation were used as control.

Results:
• In the 6 months following full implementation of the education program, and compared to the 6 months prior to initiation of the program, there was a statistically significant reduction in 30-day readmission rates (Table)

Conclusions
• Comprehensive evidence-based patient education implemented by experienced nurses and utilizing multimedia led to significant reduction in readmission rates following PCI.
• Larger multi-center prospective studies of patient education are needed to confirm its value in improving outcomes of this patient population.
TOP REASONS PATIENTS ARE READMITTED:

1. Medications
2. Signs & symptoms of when to call the doctor
3. Patient misses follow up appointment
HEALTH LITERACY OF U.S. ADULTS

12% ABLE TO FOLLOW HEALTH INSTRUCTIONS.

(NAAL, 2005)
HEALTH LITERACY OF U.S. ADULTS

88% Below Proficient
(9th grade reading level)
Health Literacy of U.S. Adults

- Proficient: 12%
- Below Basic: 14%
- Basic: 22%
- Intermediate: 52%
- Basic or Below: 36% (3rd grade reading level)
LOW HEALTH LITERACY IS PREVALENT IN KENTUCKY

54%

Basic or Below

(3rd grade reading level)

Population 2,838,709
SOME REGIONS OF KENTUCKY

82%

Below Basic

(3rd grade reading level)

Population 15,917
PCI PATIENT DEMOGRAPHICS

- 87% Caucasian
- 55% 45-64 yrs. old
- 68% Male
- 78% South Eastern Kentucky (Appalachia)
MISSION

REDUCE RATE OF 30-DAY READMISSION AFTER PERCUTANEOUS CORONARY INTERVENTION
FOR BEST PATIENT OUTCOMES

- Create trust / build rapport
- Comprehensive learning needs assessment
- Teaching tailored to needs & preferences of the patient
- Multi-media resources/video clips
- Use of plain language & teach back
- A combination of interventions
- Multiple teaching sessions
- Include the family
OUR GOAL:

THE PATIENT/FAMILY

“TEACHES BACK”

KEY SELF-MANAGEMENT CARE:

• Medications
• When to call the doctor
• Lifestyle Changes
• Importance of Cardiac Rehab
ENGAGING STAFF TO ENGAGE PATIENTS AND FAMILIES

• Chair communicates goals and readmission rates
• Evidence-based practice teaching techniques
• Show patient & family Video Clips
• Teach-back technique
PATIENT EDUCATION

EVIDENCE-BASED

TEACHING TECHNIQUES

• Plain, non-medical Language
• Asking them to teach-back
• Use of multi-media
• Support patients efforts to improve their health
A comprehensive multi-media program for PCI patients and their families.

- Video clips on iPads
- Plain language pamphlets
- Pill organizers
- Business cards/magnets with phone numbers
- Videos focused on key concepts
THE TEAM PLANNED
THE PROCESS

- “What are your concerns?”
- “How will you implement?”
- Validate staff competency
- Respected RN led interdisciplinary team
- RN made follow-up calls
THE INTERVENTION

NURSES’ ROLE

• Assess patient/family current knowledge & concerns

• Introduce how video clips can help

• Ensure understanding by using teach-back technique

• Discuss common home care scenarios
THE INTERVENTION

• Cardiac RN phone call to patients 48 hour post-discharge

• Use of “teach-back” technique to validate patient understanding

• Provide clarification and education

• Obtain medical follow-up if needed
RESULTS: NURSE FOLLOW-UP PHONE CALL
October 2013 - March 2014

- Verbalized an understanding of medicines: 89%
- Confirmed cardiac rehab & explained its importance: 34%
- Verbalized 3 reasons to call the doctor: 57%
- Verbalized at least 1 reason to call 911: 87%
- Found iPad teaching helpful (if used): 87%
- Named 3 actions to make heart healthier: 93%
RESULTS: NURSE FOLLOW-UP PHONE CALL
April 2014 - August 2014

- **90%** Verbalized an understanding of medicines
- **40%** Confirmed cardiac rehab & explained its importance
- **56%** Verbalized 3 reasons to call the doctor
- **91%** Verbalized at least 1 reason to call 911
- **86%** Found iPad teaching helpful (if used)
- **100%** Named 3 actions to make heart healthier
RESULTS

READMISSION RATES 6 MOS.
PRE-AND POST INTERVENTION

<table>
<thead>
<tr>
<th></th>
<th>Before Education</th>
<th>After Education</th>
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<tbody>
<tr>
<td>No Readmission</td>
<td>92.3%</td>
<td>97.8%</td>
</tr>
<tr>
<td>30-Day Readmission</td>
<td>7.7%</td>
<td>2.2%</td>
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</table>
## RESULTS

### READMISSION RATES 6 MOS. PRE-AND POST INTERVENTION

<table>
<thead>
<tr>
<th></th>
<th>Total</th>
<th>No Readmissions</th>
<th>30-day Readmissions</th>
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</thead>
<tbody>
<tr>
<td><strong>Before Education</strong></td>
<td>150</td>
<td>144 (92.3%)</td>
<td>12 (7.7%)</td>
</tr>
<tr>
<td><strong>After Education</strong></td>
<td>139</td>
<td>136 (97.8%)</td>
<td>3 (2.2%)</td>
</tr>
</tbody>
</table>

*p value 0.035*
Nurses trained in EBP teaching techniques who utilized multi-media led to significant reductions in readmission rates following PCI.

Interdisciplinary team involved with a physician champion was key.

Engaged nurses already doing a good job of educating patients – were willing to implement evidence-based practice techniques

- Expert cardiac RN was paid extra 4-hours/wk to make follow-up calls
- Data collection personnel and statistician available for analysis and reporting
CONCLUSIONS

MULTI-MEDIA

Physician Champion

Engagement

Resources

Experienced nurses utilizing multi-media led to significant reductions in readmission rates following PCI.

Interdisciplinary team involved with a physician champion was key.

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NEXT STEPS

Health information technology

PATIENT ENGAGEMENT SYSTEM

Integrated with the EMR & patient portal
NEXT STEPS

KATS PLEDGE PROGRAM

Free 30-day supply of medications at discharge

1 week follow-up clinic visit with cardiology pharmacist

UK HealthCare Barnstable Brown Diabetes Center
Transition of Care Coordinator

Educate inpatient cardiac patients & make an appointment for cardiac rehab

Provides initial cardiac rehab visit
NEXT STEPS

IPAD, VIDEO PROGRAM

Cardiology clinic
QUESTIONS?

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References


2014 AF Treatment Guidelines: 10 Things to Like and Only One to Dislike. *Medscape*. March 31, 2014


