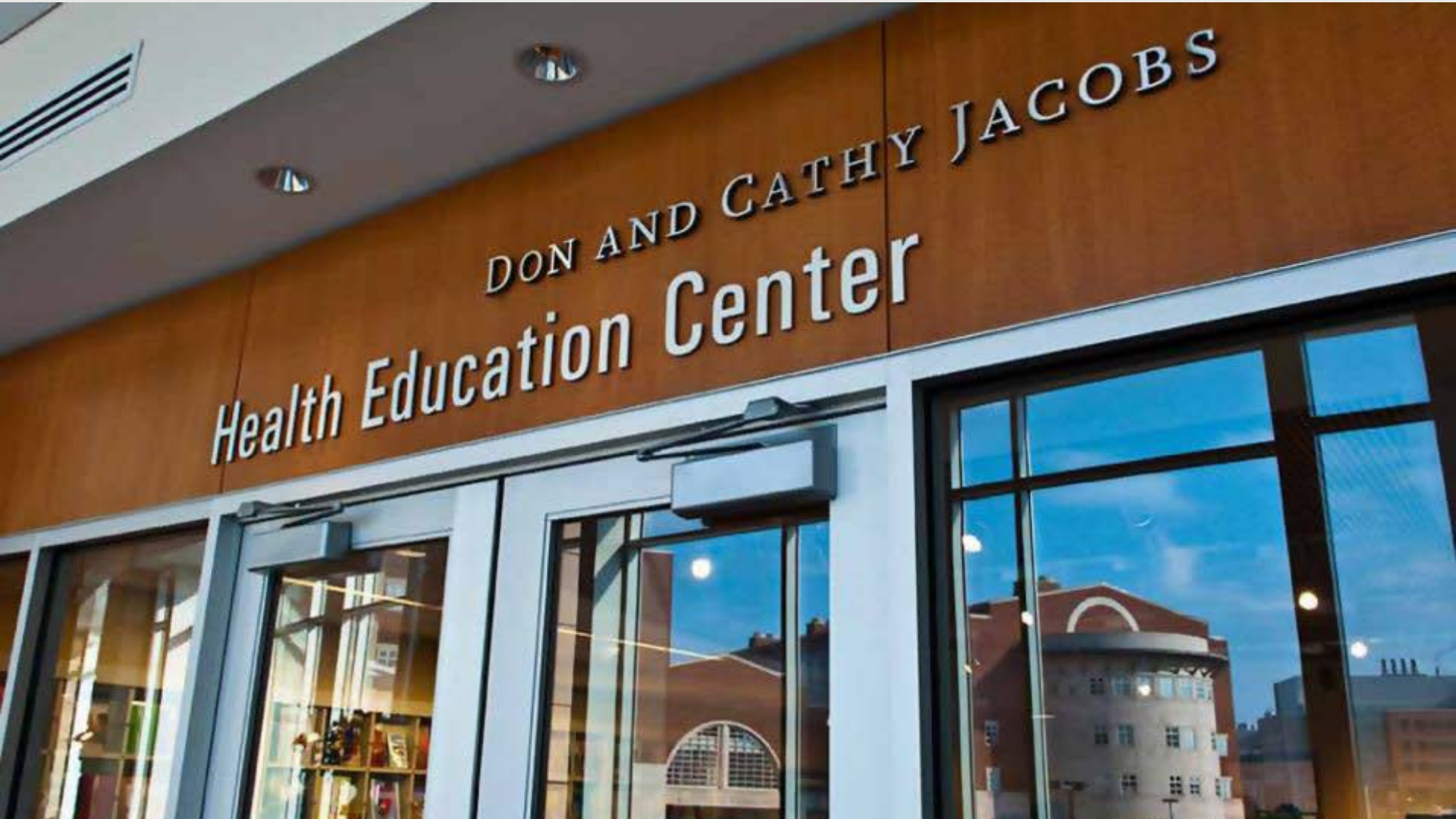


# “Impact of a multi-media based patient education program on rate of 30 day readmissions after Percutaneous Coronary Intervention”

**JUDI DUNN, DNP, RN**  
**PATIENT EDUCATION MANAGER**

DON AND CATHY JACOBS  
Health Education Center



DON AND CATHY JACOBS

Health Education Center

Health Education Center

Monday - Friday  
9:00am - 4:30pm  
No Food or Drink













### Consequence

Without physical activity, you may experience weight gain, high blood pressure, and other health problems. You could even die from a heart attack or stroke.



### Benefit

#### Reduced body fat

Physical activity burns calories. By burning more calories than you take in, you can significantly reduce your body fat.



### Benefit

Physical activity improves your mood and helps you manage stress. It can also improve your sleep and help you live longer.









**“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



Teaching tool-kit

## 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

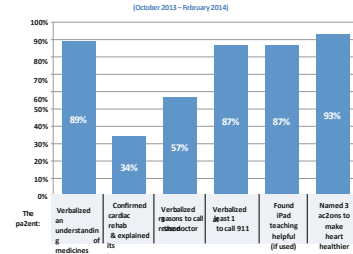
- Initially, cath lab recovery nurses received training on evidence-based teaching techniques (plain language, use of multi-media and “teach-back” technique).
- Nurses introduced video clips to patients, answered questions, ensured correct understanding by asking patients to “teach-back” after viewing 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)

|                          | Total Number of Patients | 30-Day Readmission (%) | P value |
|--------------------------|--------------------------|------------------------|---------|
| Before Educa/001 Program | 156                      | 12 (7.7%)              | 0.035   |
| After Educa/001 Program  | 139                      | 3 (2.2%)               |         |

Post-PCI Call-Back Results



## 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.

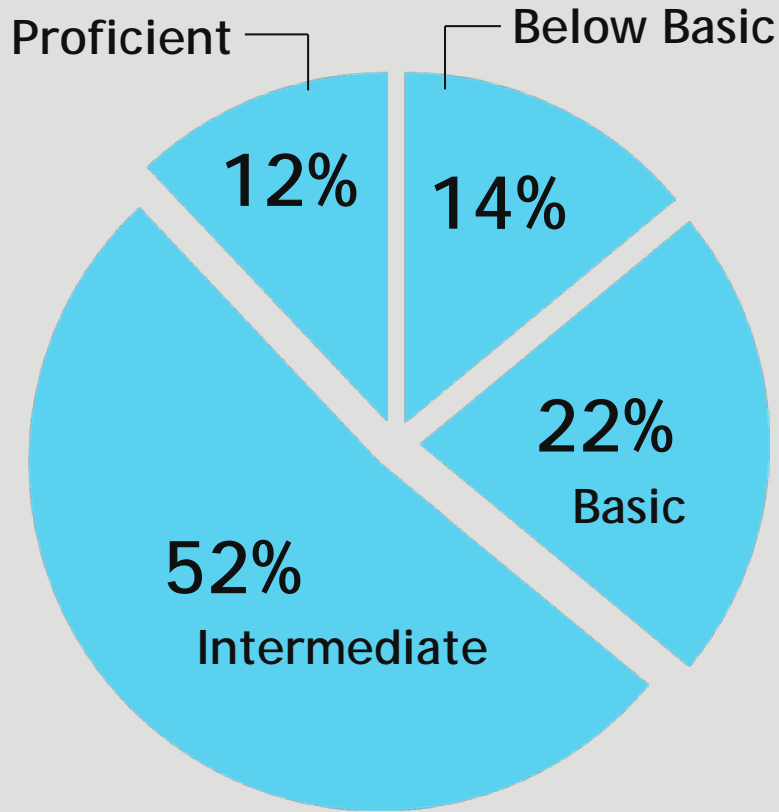


## TOP REASONS PATIENTS ARE READMITTED:

1. Medications
2. Signs & symptoms of when to call the doctor
3. Patient misses follow up appointment



# HEALTH LITERACY OF U.S. ADULTS

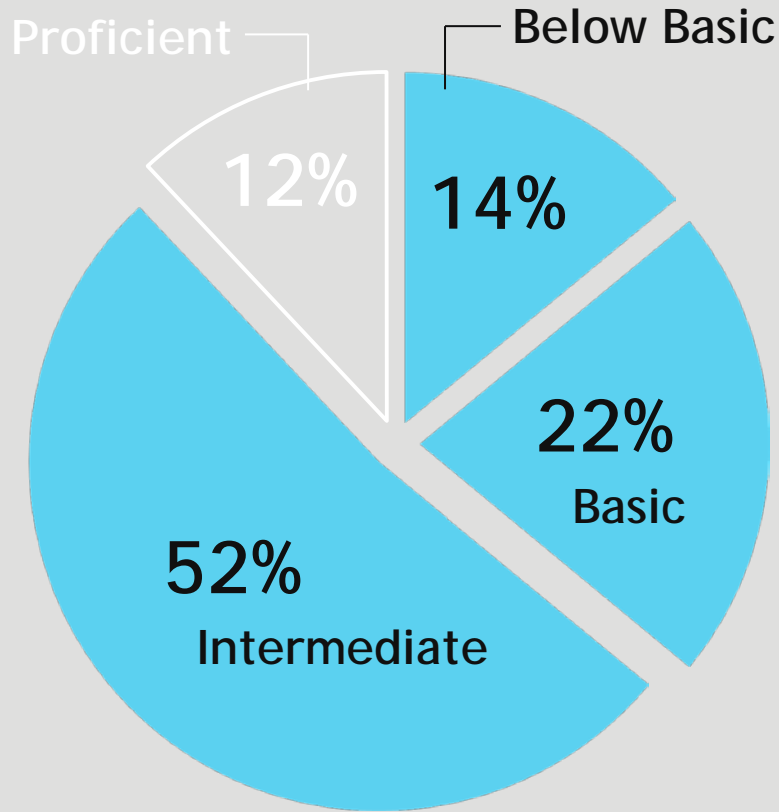


# 12%

ABLE TO FOLLOW  
HEALTH INSTRUCTIONS.

(NAAL, 2005)

# HEALTH LITERACY OF U.S. ADULTS

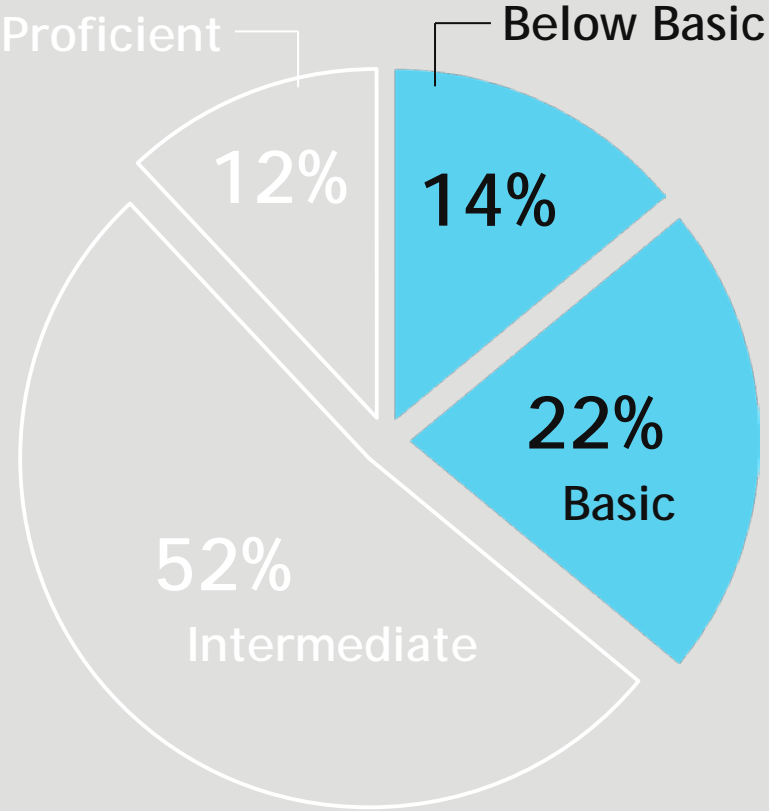


**88%**

**Below Proficient**  
(9<sup>th</sup> grade reading level)



# HEALTH LITERACY OF U.S. ADULTS



# 36%

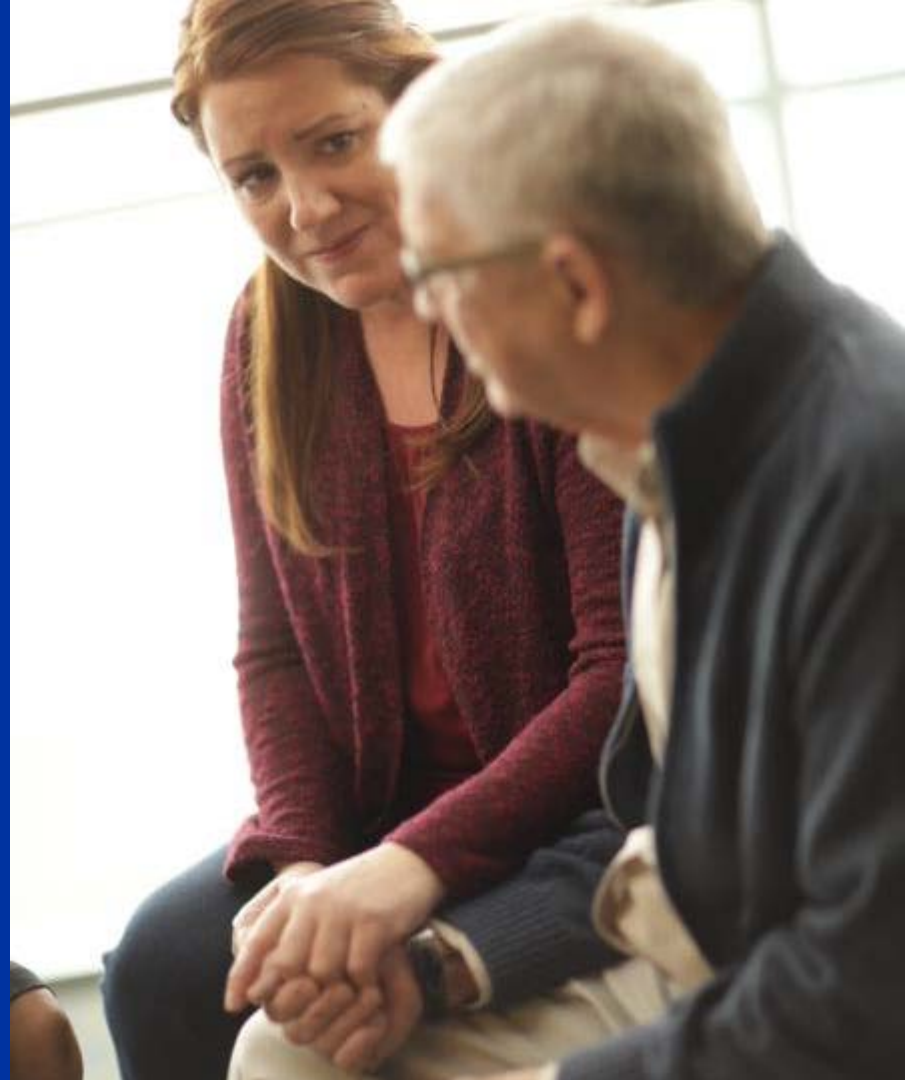
**Basic or Below**  
(3<sup>rd</sup> grade reading level)

# LOW HEALTH LITERACY IS PREVALANT IN KENTUCKY

# 54%

## Basic or Below

(3<sup>rd</sup> grade reading level)





# SOME REGIONS OF KENTUCKY

# 82%

## Below Basic

(3<sup>rd</sup> 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

# TRAINING

## 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





# TRAINING

EVIDENCE-BASED

## PATIENT EDUCATION

TEACHING TECHNIQUES

- Plain, non-medical Language
- Asking them to teach-back
- Use of multi-media
- Support patients efforts to improve their health



A collegial, interactive Lunch & Learn



# METHODS

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

# TRAINING

## 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



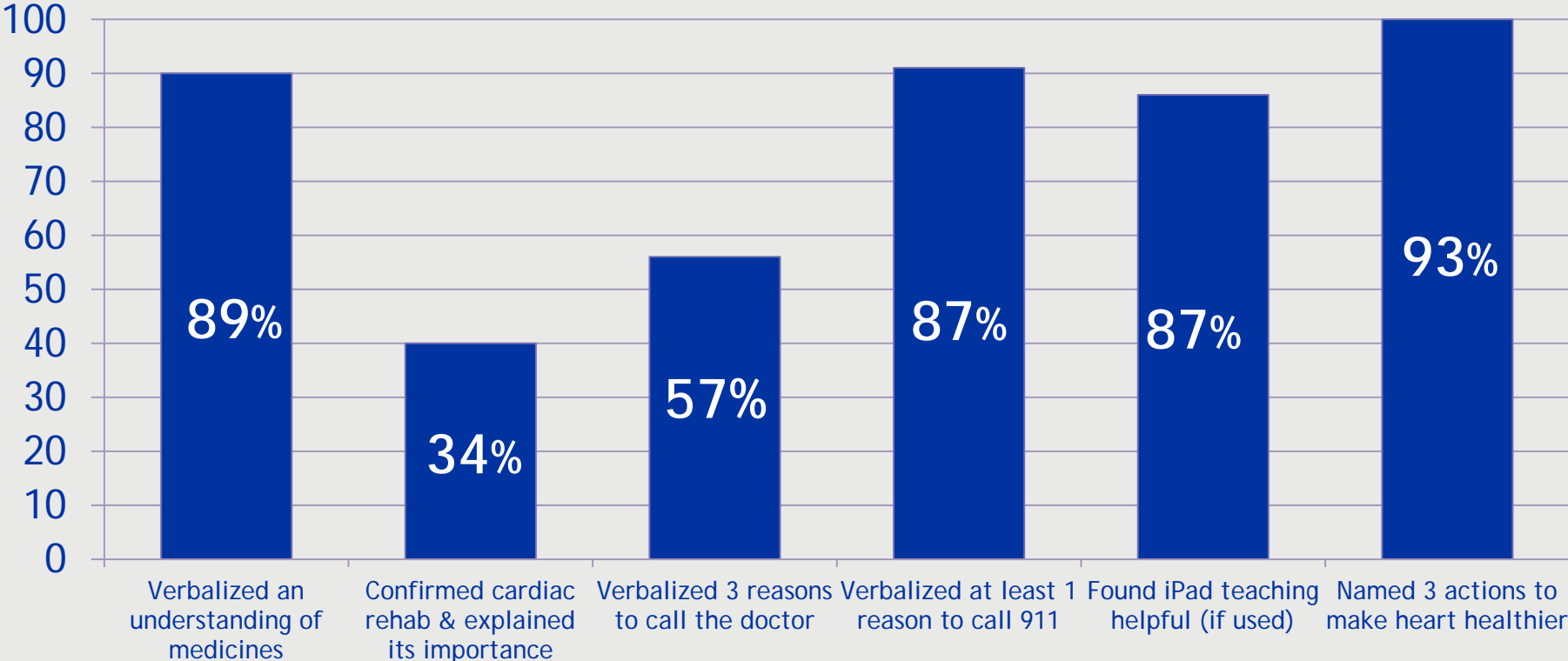
# THE INTERVENTION

- 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



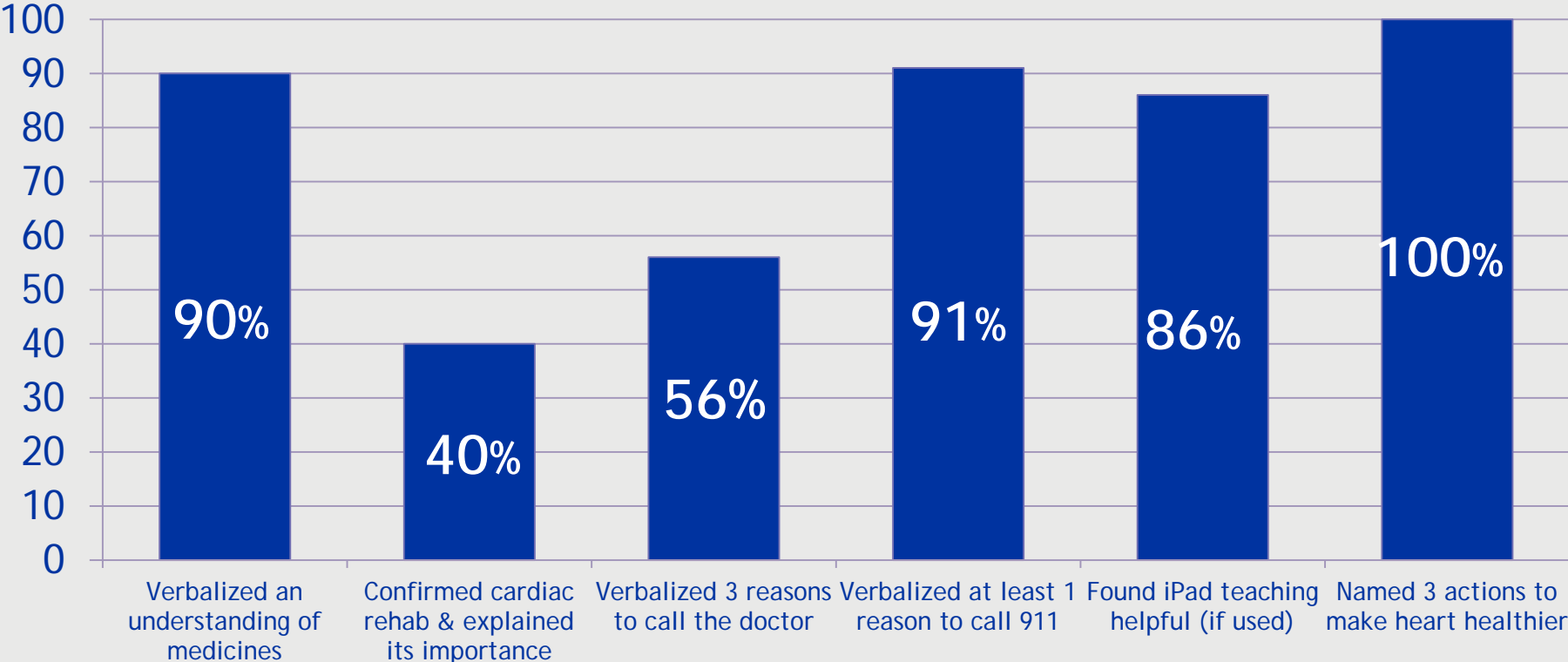
# RESULTS: NURSE FOLLOW-UP PHONE CALL

October 2013 - March 2014



# RESULTS: NURSE FOLLOW-UP PHONE CALL

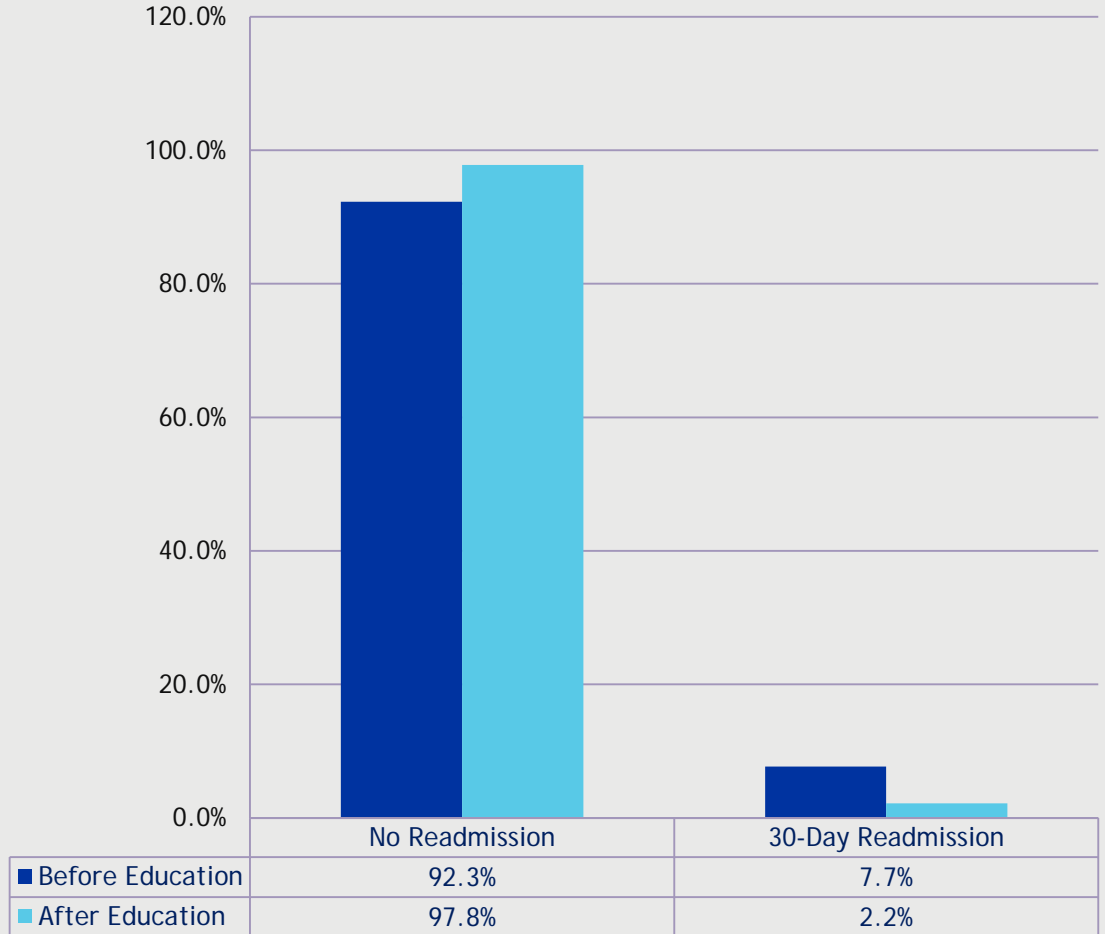
April 2014 - August 2014





# RESULTS

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



# RESULTS

READMISSION RATES 6 MOS.

## PRE-AND POST INTERVENTION

|                  | Total | No Readmissions | 30-day Readmissions |
|------------------|-------|-----------------|---------------------|
| Before Education | 150   | 144 (92.3%)     | 12 (7.7%)           |
| After Education  | 139   | 136 (97.8%)     | 3 (2.2%)            |
|                  |       |                 | *p value 0.035      |

# CONCLUSIONS

## MULTI-MEDIA

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

## PHYSICIAN CHAMPION

Interdisciplinary team involved with a physician champion was key.

## ENGAGEMENT

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

## RESOURCES

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

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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





# NEXT STEPS

## 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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