



# Changing Clinical Practice to Optimize Provider Performance in an ACO

The ProHealth-QURE Experience

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**April 12, 2016**

# Logistics

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# ▶ Partnering to Elevate Clinical Care

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## Opportunity

Directly engaging clinicians to reduce variation from evidence-based guidelines can improve outcomes, safely reduce costs and drive success in new payment models.

## Solution

QURE's unique CPV platform identifies quality improvement opportunities, standardizes clinical practice and safely reduces unnecessary costs.



## Why Were QURE and ProHealth a Good Fit?

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### Ideal Partners:

- Are **confident, self-aware and data-oriented**.
- Prioritize **quality improvement** and **cost reduction**.
- Want to **lower unit costs** and **achieve practice efficiency** to succeed in a **value-based payment** world.
- Are directed by **strong leadership** that fully supports **reducing unwarranted variation**.

# ▶ QURE Healthcare: Elevate Clinical Practice

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- Founded in 2012
- Innovative Clinical Performance and Value (CPV) vignette clinician engagement platform
- Built upon 17 years published academic and clinical research
- Customers include hospitals, payers and life science firms
- 30,000 clinicians have used the QURE approach
- Strong partnership with Premier since 2015

# ProHealth Physicians: Connecticut's Leading Primary Care Physician Group

- Cares for over 360,000 people across the state of Connecticut
- Includes 350 primary care and specialty providers at 85 practice locations
- Part of Medicare Shared Savings Program since 2013
- Also care for over 100,000 commercial ACO patients



# Presentation Overview

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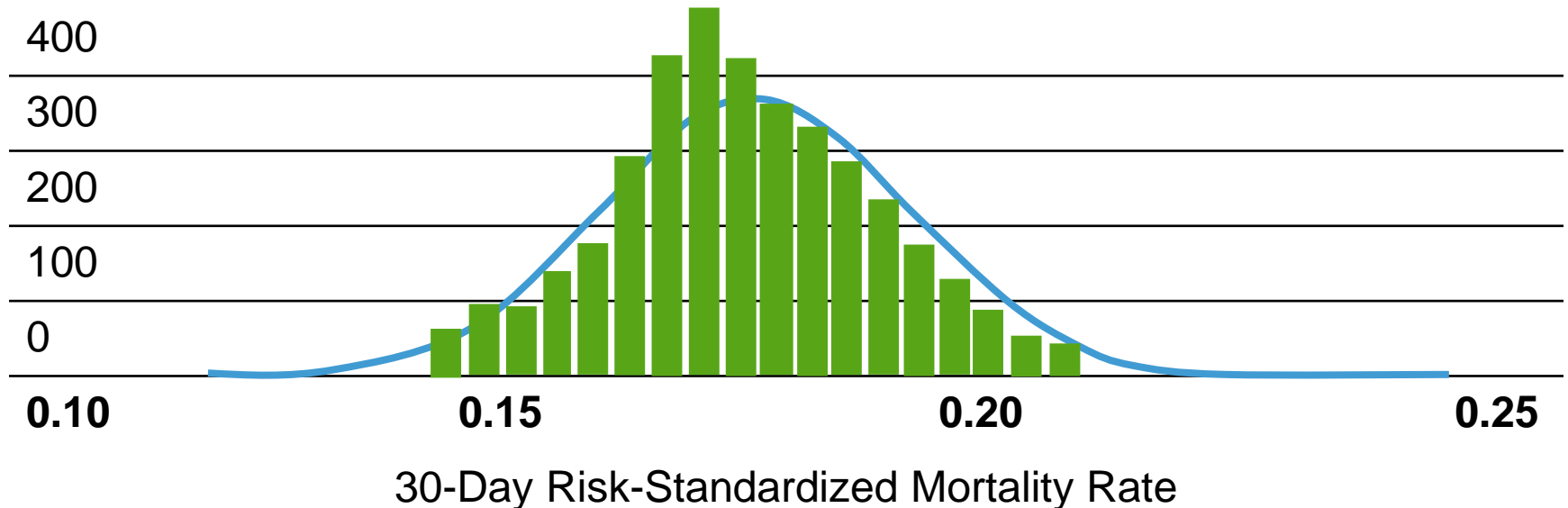
- ▶ **The Why: Quality, Variation and Value**
- ▶ The How: QURE CPV<sup>®</sup> Vignettes
- ▶ The What: QURE Results



# Clinical Variation and Low Quality Care is an Enormous Challenge and...It is Significant

## Distribution of Risk-Standardized 30-Day Mortality Rates for Patients With Heart Attacks

### Number of Hospitals



Harlan M. Krumholz, Sharon-Lise T. Normand, John A. Spertus, David M. Shahian, and Elizabeth H. Bradley, Measuring Performance For Treating Heart Attacks And Heart Failure: The Case For Outcomes Measurement, Health Aff January 2007 26:175-85; doi:10.1377/hlthaff.26.1.75





# Reducing Unwarranted Variation... Leads to Clinical and Financial ROI

## Intermountain Healthcare: Impact of Variance Reduction

 **Variance**

**Acute Respiratory  
Distress**

**Elective  
Inductions**

**From 59%  
to 6%**

**From 28%  
to 2%**

 **Clinical  
ROI**

**Mortality  
drops 4.6X**

**C-sections  
decline 34%**

 **Financial  
ROI**

**25%  
Savings**

**\$50M  
annually**

Source: James B and L Savitz. Health Aff June 2011 vol. 30 no. 6 1185-1191

# ProHealth Has a Strong Quality Record and Opportunity to Build on That Record in ACOs

## Select ProHealth Clinical Quality Performance Reports

Measure	2014 Performance	2015 Year-End Targets
ACE Inhibitor/ARB for CAD and Diabetes and/or LVSD	63%	92%
CHF Beta Blocker for (LVSD)	72%	90%
Aspirin for Ischemic Vascular Disease	70%	90%
Breast Cancer Screening	65%	90%
Tobacco Use Screen/Plan	81%	90%

CAD = Coronary Artery Disease, LVHD = Left Ventricular Systolic Dysfunction

# ProHealth-QURE Quality Standardization Project

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## Collaboration with: ProHealth Physicians QURE Healthcare Aetna Accountable Care Solutions

### Goals of the PQQS:

- Measure common ways of caring for **diabetes** and **heart failure** patients across ProHealth.
- Provide forum for clinicians to discuss clinical variation.
- Improve quality and reduce unneeded variation for patients.
- Support ProHealth's success in MSSP and other ACOs



## Presentation Overview

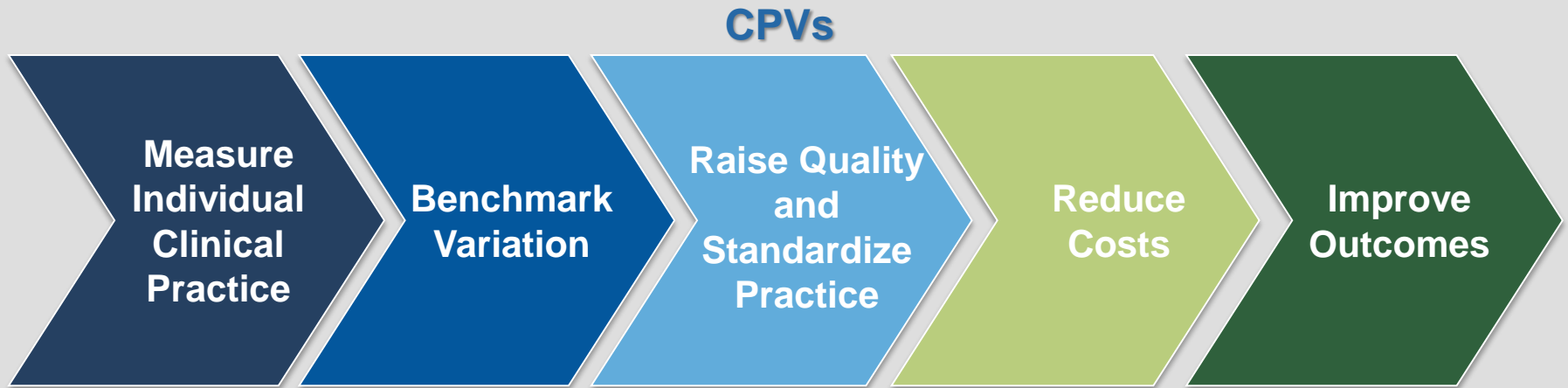
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- ▶ The Why: Quality, Variation and Value
- ▶ **The How: QURE CPV<sup>®</sup> Vignettes**
- ▶ The What: QURE Results





# The QURE Clinical Performance and Value (CPV<sup>®</sup>) Vignette Solution



QURE and ProHealth focused on ambulatory care for  
Adult Diabetes and Heart Failure



# CPV® Vignettes Are a Standard Measure of Practice That Is Accurate and Efficient

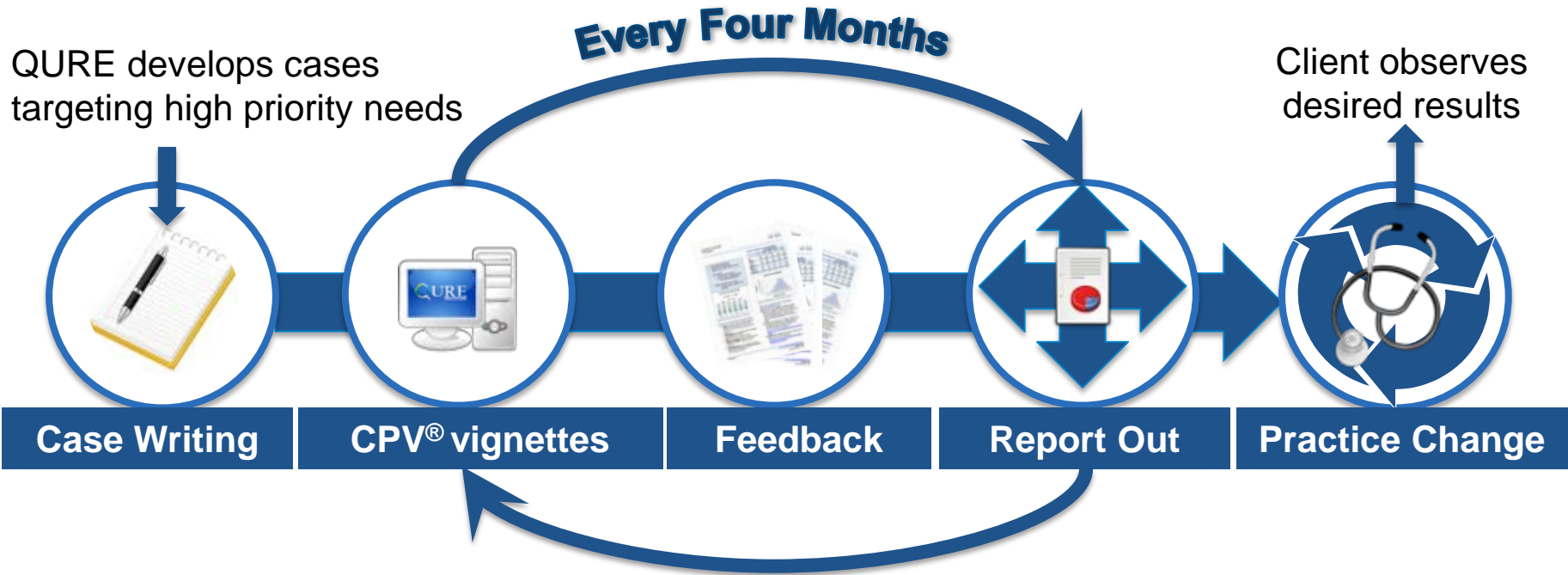
- 1 **CPV® cases** were co-developed with ProHealth clinical leaders
- 2 **Virtual patients present** with symptoms on each providers computer.
- 3 **Clinician cares for patient**, completing open-ended questions regarding:



- Taking a history
- Conducting a physical examination
- Ordering tests
- Making a diagnosis
- Providing treatment



# The QURE Approach: Serially Implementing CPV® Measurement and Feedback



Every three rounds, participating providers receive:

20 Category I CME credits

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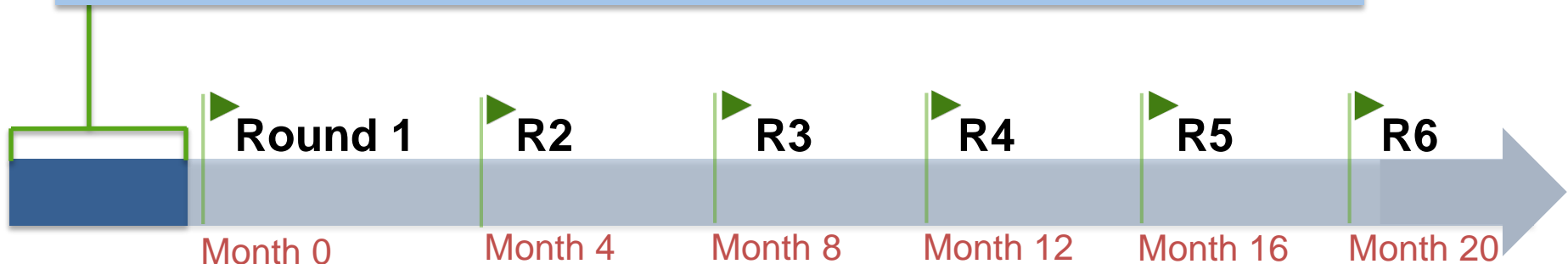
20 ABIM Part II MOC points



# QURE Engages Clinicians Over Six Rounds of Measurement and Feedback

## Six rounds shown to be an adequate 'inoculation':

- Persists long after the project is completed
- Launch to completion only 20 months



## After each round:

- Individual feedback to each clinician
- Aggregate CPV Quality and Variation Reports

Source: Quimbo S, Wagner N, Florentino J, Solon O, Peabody JW. "Do Health Reforms to Improve Quality Have Long-term Effects? Results of a Follow-up on a Randomized Policy Experiment in the Philippines." *Health Economics*. In Press.





# CPVs® Work Because Users Are Engaged in Familiar, Meaningful and Collaborative Learning

The most effective learning method...  
for changing physician practice patterns:

Active

+

Multi-  
faceted

- Based in clinical practice
- Supported by peer discussions
- Delivers relevant feedback
- Involves local opinion leader support



# CPV<sup>®</sup> Vignettes Use a Realistic Online Simulation...



Instructions

Mr. Stevens, 65 years old, comes to your clinic complaining of palpitations.

Begin Vignette

## Taking the History (Step 1 of 5)

What are the 5 to 7 most important questions that you want to ask about the **patient's chief complaint or symptoms**?  
(Please list.)





# ...That Unfolds the Clinical Encounter

Mr. Stevens, 65 years old, comes to your clinic complaining of palpitations.

He tells you that in the past month he has been having short episodes of rapid heartbeat. These were inconsistently aggravated by coffee intake, smoking, and eating his meals. These episodes were not accompanied by chest discomfort, dyspnea, light-headedness, dizziness, or flushing. However, he tells you that in the past 6 months, he has been having difficulty performing his usual chores at home and feeling short of breath when he climbs about 1 to 2 flights of stairs. He complains of dry cough, especially at night, which makes him use about 3 pillows when he sleeps. He does not have any episodes of waking up at night and feeling short of breath. He reports weight gain of a few pounds but does not complain of chest heaviness, edema, abdominal pain, fever, urinary or bowel movement changes. He tells you that he has limited his physical activity around the house due to fear of causing the palpitations and shortness of breath.

He was diagnosed with congestive heart failure a year ago, secondary to hypertension, for which he takes lisinopril 5mg and furosemide 20mg once daily. A few months back, he was diagnosed with erectile dysfunction for which he takes sildenafil 50mg as needed. His usual BP ranges from 140 to 160/70 to 80. He had a laparoscopic cholecystectomy about 6 years ago for gallstones. He is allergic to penicillin. His wife tells him he has been snoring a lot recently and he also mentions that he has been falling asleep during meetings as well.

Otherwise, his review of systems is unremarkable.

Mr Stevens is Caucasian. His mother died of massive ischemic stroke while his father died of lung cancer. Relatives on both parents' sides have hypertension. He is a current smoker (1-2 cigarettes/day) and has completed 10-pack years, occasionally drinks red wine and has no history of illicit drug use. He eats out a lot and does not monitor his sodium intake. He is a retired accountant and has recently remarried. This past year he enrolled in Medicare.

His vital signs: Blood pressure 140 over 80, pulse rate 72, respiratory rate 24, temp 99.0 deg F

Weight 205 lbs Height 66 in BMI 33 kg per m<sup>2</sup>

Abdominal circumference 36cm Neck circumference 17cm

## Conducting the Physical Examination (Step 2 of 5)

*What are the 5 to 7 most important elements of the physical examination that need to be performed on this patient?*

*(Note: **Please be specific.** For example, do not say you would "examine the knee." Instead, report what you would look for when you examine the knee, e.g. "examine the knee for redness, swelling, and point tenderness" or "evaluated knee for ligaments laxity and range of motion.")*





# Order Tests to Work Towards a Diagnosis and Treatment

× CBC/Complete Blood Count with differential

× CMP/Comprehensive Metabolic Panel/Serum chemistry

echo

echo

2D echo/transthoracic echocardiogram/TTE

Stress echocardiogram (dobutamine)

Stress echocardiogram (exercise)

Transesophageal echo (TEE)

Virus titers - coxsackie virus, echovirus, influenza virus

## Results

- CBC: Hemoglobin 12.7 g/dL (normal value 12.0-16.0 g/L), hematocrit 45% (normal 40-52%), white blood cells  $5.9 \times 10^9/L$  (normal 5-10), platelets 143 K (normal 140-450).
- Sodium 141mEq/L (135-144), Potassium 4.0 mEq/L (3.6-5.5), Chloride 102 mEq/L (99-110), Glucose 95 mg/dL (60-99), BUN 9.0 mg/dL (6-23), Creatinine 0.78 mg/dL (0.60-1.30), eGFR 95 ml/min, Calcium 8.5 mg/dL (8.3-10.4), Alkaline Phos 102 IU/L (32-110), AST (SGOT) 37 IU/L (11-39), ALT (SGPT) 41 IU/L (6-42), Albumin 4.4 g/dL (3.2-4.9).



# Providers Arrive at a Diagnosis and Outline a Treatment Plan

## Diagnosis (Step 4 of 5)

At this point, what is your primary diagnosis?

CHF FC II non-ischemic heart disease

What is the severity and what is this patient's risk for future cardiovascular events?

FC II, ARIC 17.6%

## Treatment and Follow-Up (Step 5 of 5)

List the 8 to 10 key interventions, investigations or treatments this patient needs.

- Include non-pharmacological and pharmacological management, noting any changes to drug therapy (include dose, schedule and duration of therapy).
- If patient counseling is included in the management, write down what you will advise the patient including risks and benefits.

Discontinue furosemide  
Start beta-blocker with bisoprolol 1.25mg OD  
Aspirin  
Statin (moderate dose)  
Weight loss counseling  
Low salt diet  
Smoking cessation advice/referral

What **referrals (if any)** would you make for this patient?

Please use the drop down menu to select any referrals you feel are most appropriate for treatment or follow-up. Begin typing the type of referral you would like to trigger the drop down. If you would like to make a referral that is not on the menu, please type the name and simply press "ENTER."

If you do not wish to make a referral, please type or select "NONE" and hit ENTER.

× Nurse case manager

Cases typically take 20  
to 30 minutes



# CPV® Vignettes Are Written and Scored Against Evidence Based Guidelines

Cases are heavily informed by guidelines and designed to address areas of high variation:

- Work-up challenges
- Diagnostic challenges
- Therapeutic challenges
- Support adoption of established guidelines/pathways/protocols

Cases were reviewed by ProHealth clinical leadership and specialty councils



CPV outputs are percentage scores of items marked in accordance with EBM





# Individual Feedback: Customized for Each Case and Participant

## Case Summary: Mr. Stevens

This is the case of a 65-year-old male smoker and with hypertension, complaining of palpitations, dyspnea on exertion and nocturnal cough who is later diagnosed to have congestive heart failure from non-ischemic heart disease and coincident mild aortic stenosis.

Clinical Area: Internal Medicine

Completed July 2015

My Case Score **70.8%**  
Group Round Avg. **64.9%**

## My Improvement Opportunities

### Top Priority Feedback

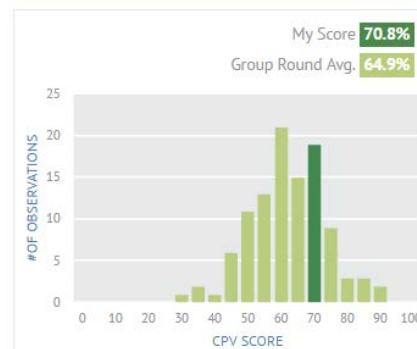
1. The patient appears to be normovolemic and daily furosemide may be discontinued.
2. Consider starting this patient on daily low-dose aspirin to reduce his coronary heart disease risk.
3. This patient should be started on a high-dose statin in accordance with current lipid guidelines.
4. The most recent guidelines recommend a target BP < 150/90 among hypertensive patients 60 years old and older.
5. In patients with mild aortic stenosis, yearly history, physical examination, echocardiogram (more frequent if changes in functional status occur) is appropriate.
6. Holter monitoring is useful for identifying potential rhythm abnormalities that may be causing symptoms in this case.

## Case Relevant References

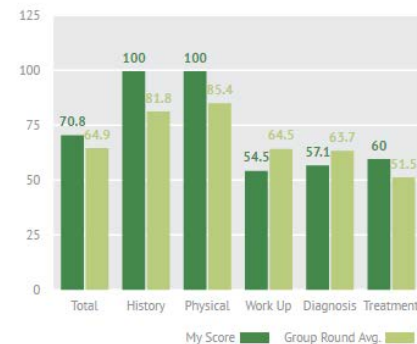
- Nishimura RA, et al. 2014 AHA/ACC guideline for the management of patients with valvular heart disease: a report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines. J Am Coll Cardiol. 2014;63:e57-185.
- Yancy CW, et al. 2013 ACCF/AHA guideline for the management of heart failure: a report of the American College of Cardiology Foundation/American Heart Association Task Force on Practice Guidelines. Circulation. 2013;128:e240-e327.
- Stone, Neil J. et al. 2013 ACC/AHA Guideline on the Treatment of Blood Cholesterol to Reduce Atherosclerotic Cardiovascular Risk in Adults. Journal of the American College of Cardiology (2013).
- James, Paul A et al. 2014 Evidence-Based Guideline for the Management of High Blood Pressure in Adults Report From the Panel Members Appointed to the Eighth Joint National Committee (JNC 8). JAMA. 2014;311(5):507-520.

## Group Benchmarks

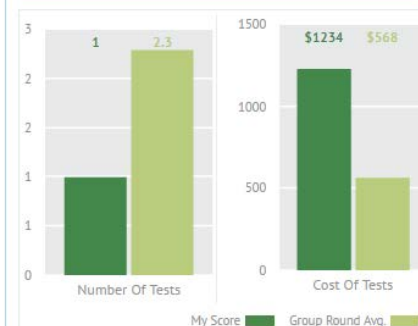
### Distribution Of All CPV® Scores



### CPV® Score Comparison By Domain



### CPV® Unneeded Tests



### Unneeded Tests Ordered

1. Nuclear myocardial perfusion imaging

### Scores By Provider Type

	Obs	Mean	Std Dev	Min	Max
All	106	64.9	11.3	32.7	91.1
APPs	28	65.3	9.9	45.5	90.5
Physicians	78	64.8	11.8	32.7	91.1



## Group Feedback:

# ▶ 'Focus on Seven' Group-wide Areas of Variation

- 1 **Nuclear testing** is not needed for every IHD work-up.
- 2 **Cardiology referrals** are overused.
- 3 **Blood pressure targets** should be explicit (and based on patient risk).
- 4 Ask about **prior treatments**, document **review of systems**
- 5 **Lipid testing** needs to align with guidelines.
- 6 **Aspirin, statin, beta blockers and ACE inhibitors** are often under prescribed.
- 7 **Cancer screenings and vaccinations** should always be up to date.





# CPV Data Guides Patient Management Reference

## Cards

Group-wide Opportunities Addressed in *Patient Management Reference Guide* cards with recommendations and guideline references

**PATIENT MANAGEMENT REFERENCE GUIDE: CARDIOLOGY**

**Imaging work-up for patients with an intermediate risk for IHD presenting with HF symptoms.**

**Preferred Ischemic Heart Disease Work-Up: To evaluate patient for ischemic and/or structural issues**

	Addresses both issues	Stress Echo only OR Treadmill AND 2D Echo	Typical Medicare Cost*
<b>Cost-effective</b>			\$489 OR \$531
<b>Not Sufficient</b>	Does not address both issues	2D Echo ONLY OR Treadmill ONLY	\$454 OR \$77
<b>Wasteful</b>	Addresses both issues, but not cost-effective	Nuclear Study OR 2D Echo AND Nuclear study OR Treadmill AND Nuclear study	\$1,177 OR \$1,631 OR \$1,254

Note: For patients with adequate exercise capacity. \*Combined 2016 HOPPS (hospital) and MPFS (physician) Medicare reimbursement rates.

Guideline: 2012 ACC/AHA/AACR/AATS/PCNA/SCA/STS guideline for the diagnosis and management of patients with stable ischemic heart disease

**Avoid Unneeded Referrals to Cardiology**

Consider avoiding referral if patient is stable, has **NO acute or worsening** valvular, arrhythmic, ischemic or functional findings, or you have **NO questions** about:

- Initiation or adjustment of meds.
- A need for invasive or intensive monitoring.
- Any need for coronary intervention, ablation, pacing or other procedure.

**Specify Blood Pressure Goals**

Target BP	Previous MI, stroke or TIA*	CAD risk equivalents (carotid artery disease, PAD, or abdominal aortic aneurysm)*
<130/80		
<140/90	Stable IHD <sup>†</sup> OR	Diabetes <sup>†</sup> OR Age 30-59 <sup>‡</sup> (without other risk factors)
<150/90		Age 60 & above <sup>‡</sup> (without other risk factors)

Guidelines: <sup>†</sup>2015 ACC/AHA Guidelines on Treatment of Hypertension in Patients with Coronary Artery Disease <sup>‡</sup>2014 Evidence-Based Guideline for the Management of High Blood Pressure in Adults (JNC 8)

Note: SPRINT trial results emphasizing stricter BP targets in non-diabetes have not yet been evaluated in guidelines.

Approved by ProHealth Cardiology Committee, March 2016

**PATIENT MANAGEMENT REFERENCE GUIDE**

**Reduce CVD Risk with Aspirin**

Daily aspirin (75-162 mg) should be continued indefinitely (in the absence of contraindications) for patients with:

- Prior MI or ACS\*
- Stable ischemic heart disease\*\*
- Diabetes (age 40 or greater) with 10-year risk (ARIC) > 10%†
- Men age 45-79 to reduce risk of MI and women age 55-79 to reduce risk of ischemic stroke when a net benefit is present\*\*

**TIP**  
Use the CV Risk calculator in the E-calc section of the EMR to assess risk

Guidelines: \*Class I Recommendation ACC/AHA Guidelines on STEMI 2007, \*\* Class I Recommendation ACC/AHA Guidelines on Stable Ischemic Heart Disease 2012, † ADA Standards of Care 2015, ACC/AHA Class IIa recommendation, †U.S. Preventive Services Task Force recommendation 2009

**Get Suitable Patients on Statins**

**Statins for patients with CHD risk factors:**

- Presence of ASCVD
- LDL >190
- Diabetes
- 10-year risk of heart attack (ARIC) >7.5%

**Statins not indicated for:**

- Lipid lowering in those with low risk for CHD

Guidelines: 2013 ACC/AHA Guideline on the Treatment of Blood Cholesterol to Reduce Atherosclerotic Cardiovascular Risk in Adults.

**Use Beta Blockers Where Appropriate**

Beta blockers proven to reduce mortality (carvedilol, bisoprolol, sustained release metoprolol succinate) and recommended for patients with:

- Symptomatic HF with reduced EF (HFREF)†
- History of MI or ACS and reduced EF†
- HF with preserved EF (HFpEF) to control blood pressure\*†
- Coronary or other vascular disease as chronic therapy††

Guidelines: †Class I recommendation, ACC/AHA Guidelines on Heart Failure 2013, ACC/AHA Guidelines on Stable Ischemic Heart Disease 2012, ††Class IIa recommendation, ACC/AHA Guidelines on Heart Failure 2013, ††Class IIb recommendation ACC/AHA Guidelines on Stable Ischemic Heart Disease 2012

**Review ACE Inhibitor Use**

**ACE inhibitors recommended for patients with:**

- Symptomatic LV dysfunction (LVEF < 40%)\*
- Diabetes with proteinuria†
- Diabetes with BP >140/90†

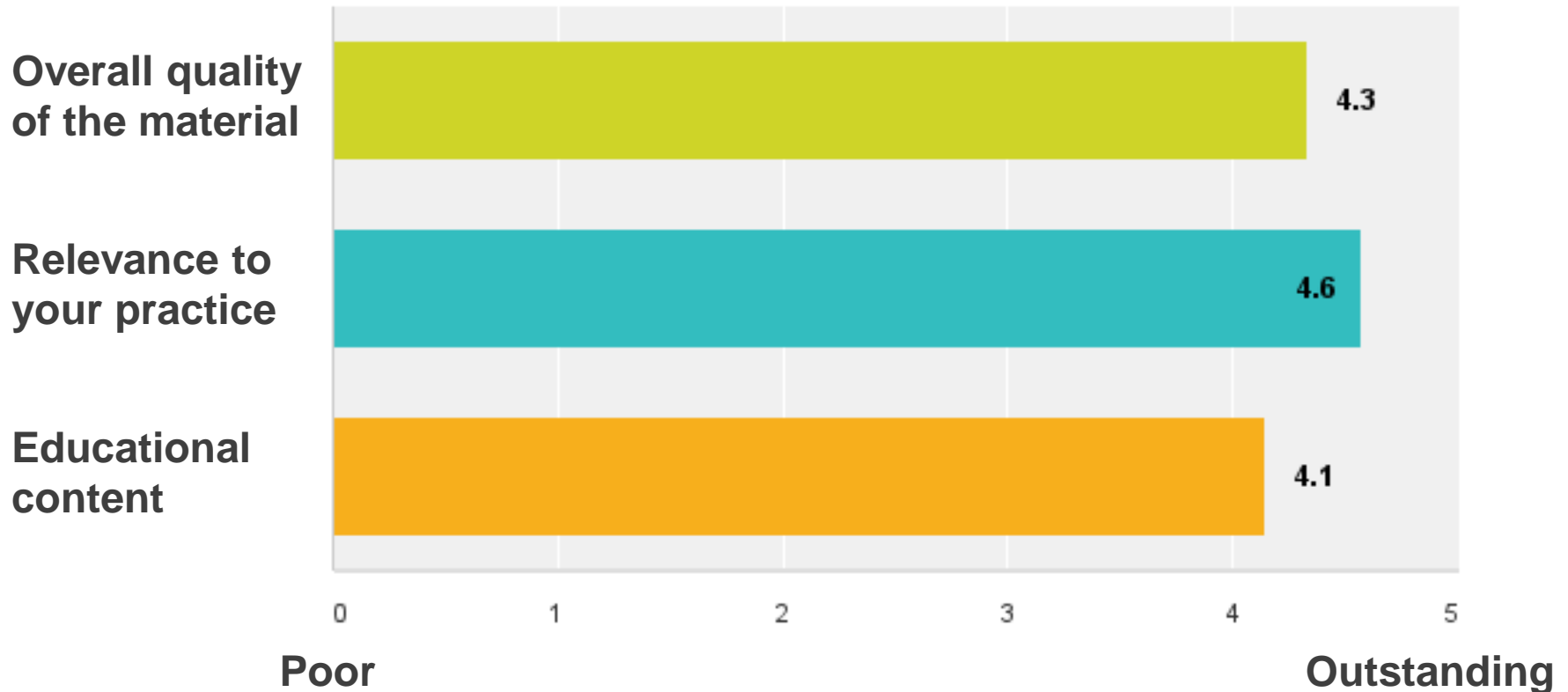
**TIP**  
Remember to titrate ACE inhibitor to optimize dose

Guidelines: \*Class I recommendations, ACC/AHA Guidelines on Heart Failure 2013  
† ADA Standards of Care 2015, 2014 Evidence-Based Guideline for the Management of High Blood Pressure in Adults (JNC8)

# ▶ ProHealth Physicians Find Value in the QURE System

ProHealth QURE Physician Survey, Jan 2016

**Question: Please rate the following aspects of this activity**



# Presentation Overview

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- ▶ The Why: Quality, Variation and Value
- ▶ The How: QURE CPV<sup>®</sup> Vignettes
- ▶ **The What: QURE Results**





# Results: CHF Decreasing Unneeded Testing

Potential work-ups for patients with an intermediate risk for Ischemic Heart Disease presenting with HF symptoms\*:

## Cost Effective:

- 2D Echo **AND** Treadmill (total cost \$636)  
or
- Stress Echo only (total cost \$681)

Round 1

38%  
of participants



Round 3

48%  
of participants

## Insufficient:

- 2D Echo **ONLY** (total cost \$560)  
or
- Treadmill **ONLY** (total cost \$76)

20%  
of participants



28%  
of participants

## Wasteful:

- 2D Echo **AND** Nuclear study (total cost \$1,793)  
or
- Treadmill **AND** Nuclear study (total cost \$1,309)  
or
- Other combination of tests (total cost varies)

42%  
of participants



24%  
of participants

\*2012 ACCF/AHA/ACP/AATS/PCNA/SCAI/STS guideline for the diagnosis and management of patients with stable ischemic heart disease

Note: Cost estimates based on combined 2014 HOPPS (hospital) and MPFS (physician) Medicare reimbursement rates





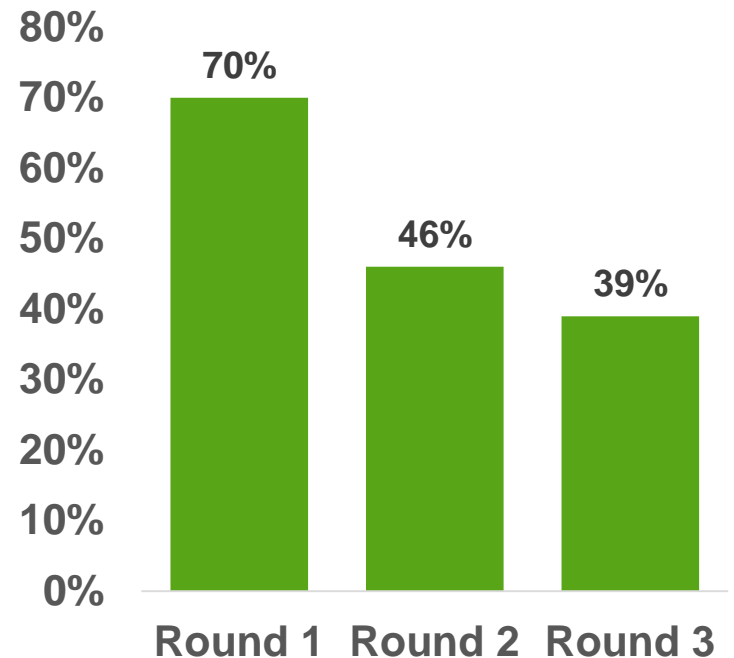
# Results: Dramatic Reduction In Unneeded Referrals to Cardiology

## Recommendation:

Consider avoiding a referral if **patient is stable and has no new valvular heart disease and you have no questions regarding:**

- Initiation or adjustment of meds.
- A need for invasive or intensive monitoring.
- Any need for coronary intervention, ablation, pacing or other procedure.

## Percent of cases with unneeded Cardiology referral





# Results: ACE Inhibitors Well Utilized in DM, Opportunities for CHF Patients

## Guidelines:

ACE inhibitors recommended for patients with: (N)

- Symptomatic LV dysfunction (LVEF < 40%)\*
- Diabetes with proteinuria<sup>†</sup>
- Diabetes with BP  $\geq$ 140/90<sup>†</sup>

## CPV Practice Result:

- **47% of CHF patients** were prescribed **ACE inhibitor** when guideline recommended (e.g., LV dysfunction, diabetes).
- **88% of DM patients** were prescribed **ACE inhibitor** when risk factors were present.

### TIP:

Remember to  
titrate ACE  
inhibitor to  
optimize dose

HFrEF= heart failure with reduced ejection fraction

\*Class I recommendations, ACC AHA Guidelines on Heart Failure 2013

† ADA Standards of Care 2015, 2014 Evidence-Based Guideline for the Management of High Blood Pressure in Adults (JNC8)



# Results: A Closer Look at Screenings/Vaccinations, Recommendation to Leverage ProHealth EMR

## Guidelines:

- **Screening FOBT, sigmoidoscopy or colonoscopy**, for those age 50-75
- **Biennial screening mammogram** for women aged 50-74
- **Referral to GYN for pap smear**, for women aged 21-65 every 3 years
- **Influenza** annually for all adults
- **Pneumococcus (PPSV23)** for those with chronic heart disease and diabetes
- **Shingles vaccine** for ages > 60

## CPV Practice Results:

- Only **50% of providers** identified needed cancer screenings.
  - +5% improvement from Round 2
- Only **45% of providers** identified needed vaccinations.
  - +8% improvement from Round 2

### TIP:

Consult your QIS report in the ProHealth EMR, mentioned QIS review in CPV



# ▶ Performance on Key Quality Measures Improved Across the Organization

## Select ProHealth Clinical Performance Reports

Measure	2014 Performance	2015 Performance	2015 Year-End Target
ACE Inhibitor/ARB for CAD and Diabetes and/or LVSD	72%	76%	92%
CHF Beta Blocker for (LVSD)	72%	95%	90%
Aspirin for Ischemic Vascular Disease	70%	90%	90%
Breast Cancer Screening	65%	75%	90%
Tobacco Use Screen/Plan	81%	93%	90%

2 of the 3 regions participating QURE program had the highest compliance percentage across ProHealth's 11 regions







# Engage, Measure and Change Clinical Practice



 Please submit your questions now

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**Thank you for your time and attention!**

**For more information please contact  
Premier's Solution Center at**

**1-800-805-4608**

**or**

**[solutioncenter@premierinc.com](mailto:solutioncenter@premierinc.com)**

**or**

**Your Premier Field representative**

