Using quality improvement as a tool to reduce health disparities

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Organized Care May Reduce Literacy-related Health Disparities

- People with low literacy skills are at risk for adverse health outcomes\(^1,2\)
- Usual environment is sub-optimally organized to deliver high-quality care
- Better “resourced” patients can better overcome the barriers in usual care
- Appropriate interventions may reduce literacy-related health disparities\(^3,4\)

Heart Failure (HF) Epidemiology

- 4.8 million people in US have HF
- Leading cause of hospitalization among elderly
- Of those hospitalized, 25% to 50% are readmitted within 3-6 months
- Half of HF admissions are preventable
- Good self-care required for effective management
- 13% of Medicare enrollees, 37% of Medicare expenditures
Information Recommended by Guidelines

- General topics
- Explanation of heart failure
- Expected symptoms vs symptoms of worsening heart failure
- Psychological responses
- Self-monitoring with daily weights
- Action plan in case of increased symptoms
- Prognosis
- Advanced directives
- Dietary recommendations
- Sodium restriction
- Fluid restriction

- Alcohol restriction
- Compliance strategies
- Activity and exercise
- Work and leisure activities
- Exercise program
- Sexual activity
- Compliance strategies
- Medications
- Nature of each drug and dosing and side effects
- Coping with a complicated regimen
- Compliance strategies
- Cost issues

Information We Included

- Explanation of heart failure
- Expected symptoms vs symptoms of worsening heart failure
- Self-monitoring with daily weights
- Action plan in case of increased symptoms
- Sodium restriction

- Compliance strategies

DeWalt et al. PEC 2004;55:78-86
Congestive Heart Failure

With congestive heart failure, the heart cannot pump the blood well. As a result, blood doesn’t flow well.

Fluid leaks out of your blood vessels and backs up in the lungs and the legs.

Salt makes it harder for your body to get rid of fluid. You should avoid salt.

Fluid in lungs

Fluid in legs
How Bad Is Your Congestive Heart Failure?

You can tell how well your heart is doing by how you feel and what you can do.

**SWELLING**
- Good – No Swelling
- OK – Swelling in Ankle or Shin
- Bad – Swelling in Knee Area

Call the UNC Clinic / 919-843-6480

**WALKING**
- Good – You can walk easily with no shortness of breath
- OK – Shortness of breath when walking fast
- Bad – Short of breath at rest

Call the UNC Clinic / 919-843-6480

**SLEEPING**
- Good – Sleeping flat, no shortness of breath
- OK – Needing 2 pillows or more to avoid shortness of breath
- Bad – Have to sleep upright to avoid shortness of breath

Call the UNC Clinic / 919-843-6480
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If you weigh 178, you should call UNC Clinic 919-843-6480.
Our Intervention Reduced Hospital Admission or Death Incidence Rate in a Randomized Trial

Adjusted IRR – all participants:
0.56 [0.32, 0.95]

Adjusted IRR – low literacy participants:
0.38 [0.16, 0.88]
Similar Pattern in Diabetes

Overall Results:

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* Difference 0.7%, 95% CI (-0.08, 1.51)
** Difference 0.8%, 95% CI (-0.09, 1.73)
Glycemic Control: Results for Patients with Literacy Above 6th Grade Level

Difference = 0.55  (p=0.20)
Glycemic Control:
Results for Patients with Literacy at or Below 6th Grade Level

Worse Control

Better Control

A1C

Time (mos)

Difference = 1.4  (p=0.052)
Moving to a health care system-wide program: challenges

- Organizational structure: decentralized, lack of strong focus on clinical QI
- Financing: need way to compensate for calls, non-physician encounters
- Lack of political advocacy: low literacy patients stigmatized, not organized
- Many quality efforts inpatient focused, but inpatient setting may not be sufficient to teach self-care skills well
Vision

• Universal recognition of barriers to high-quality care
• Routine tracking of process and outcome measures with public reporting
• Integrate systems-based approach into all work (will require leadership and training) and link inpatient and outpatient efforts
• Purchasers leverage payers to re-organize method of reimbursement to allow non-procedural care