2011 National Quality Forum Award

Sandra E Brooks, MD, MBA
System Vice President
Research and Prevention
Norton Healthcare
Louisville Kentucky

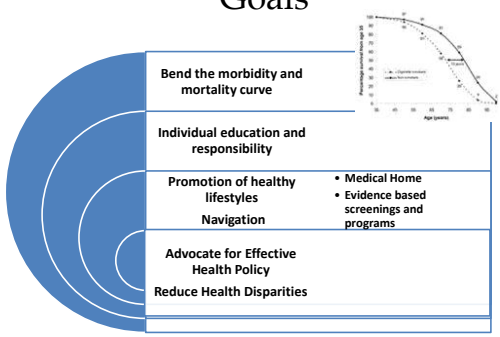
Focusing on Prevention
A Matter of Survival

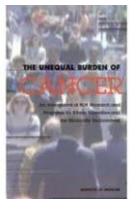
- 75 % of healthcare $$$$$$ are spent on preventable diseases
- < 5% of healthcare $ are spent on prevention

We have evidence that we can prevent the onset and progression of diseases….

Thorpe and Lever CDC/WHO

Goals





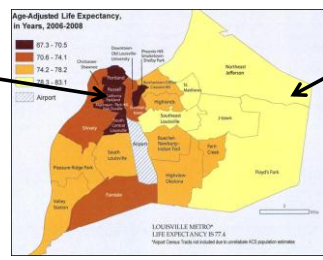
"Health Equity is not an issue but a framework.
Apply a health equity lens to the issues you already tackle"

Unequal Burden
Factors Related to Health Disparities

- **Social Determinants**
  - Employment
  - Living conditions
  - Public policy
  - Bias
  - Institutional barriers
  - Cultural factors
- **Access to care**
- **Lifestyle factors**
- **Difficulty navigating the health care system**

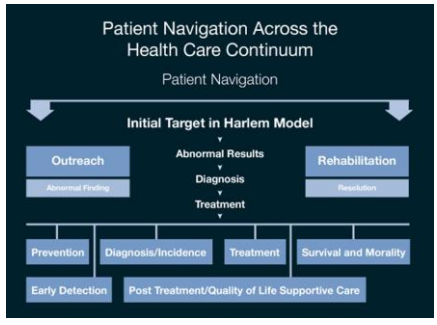
Life Expectancy – Depends on where you live

Life Expectancy in West Louisville is 8-10 years lower here



Than Here

The discovery-delivery disconnect. From Freeman HP. Voices of a Broken System: Real People, Real Problems. Bethesda, MD: National Cancer Institute. March 2002.



http://www.hpfreemanpni.org/resources

Rationale for Expanding Patient Navigation

- Timely and appropriate follow up is effective in reducing mortality
- Low income, ethnicity or racial minorities experience barriers and are less likely to receive recommended/timely care
  - SES, provider, race, age, health system
  - Documented efficacy in improving adherence
    - *Battaglia et al. Cancer 2011 Assessing the impact of patient navigation: Prevention and early detection metric*
- Patient navigation is efficacious for underserved populations of women who face barriers to receiving timely care
  - Inner city, urban communities have more late stage cancer populations
  - Metrics and time to diagnostic resolution may vary by disease
  - Navigation benefits patients with complex barriers
  - Important to target the highest risk pts
    - *-Hendren et al, Randomized controlled trial of patient navigation for newly diagnosed cancer patients: effect on quality of life*
    - *-Markossian, TW, et al, Follow up and Timeliness after an abnormal cancer screening among underserved urban women in a patient navigation program.*

Cancer Epid Biomarker, Prev 2012

Goals for Patient Navigation

- A system - not a person
- Navigators work w/medical team to facilitate access
- From the community or culturally similar
- Identify sources of health care
- Link patients w/providers for dx follow-up or rx
- Guide patients through health care system
- Assess needs, identify barriers to follow-up
- Improved adherence

Fouad et al, Ethnicity and Disease 2010, Vargas et al 2008

A Patient's right to understand

- **No right is held more sacred, or more carefully guarded, by the common law, than the right of every individual to the possession and control of his own person, free from all restraint or interference of others, unless by clear and unquestionable authority of law.**
  The U.S. Supreme Court, 1891
- **The right of a patient to determine what will or will not happen to his or her own body**
- **The rights of patients to receive accurate information, participate in the treatment decision-making process and control the course of their own medical treatment**
- **Courts have consistently described informed consent as a process of educating patients so they understand their diagnosis and treatment**
- **Exercising the right of self-determination is contingent on a patient's right to understand information about his or her own body**
- **It is neither just nor fair to expect a patient to make appropriate health decisions and safely manage his or her care without first understanding the information needed to do so**
- **Patients have the right to understand health care information that is necessary for them to safely care for themselves, and the right to choose among available alternatives**
- **Health care providers have a duty to provide information in simple, clear and plain language, and to check that patients have understood the information before ending the conversation**

U.S. high school dropout rate is 30%

EPE Research Center (2008). "Cities in Crisis"

What is health literacy?

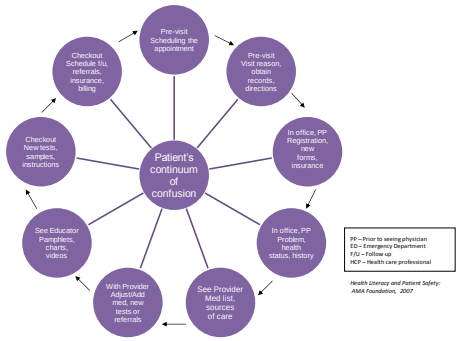
"The degree to which individuals have the capacity to obtain, process and understand basic health information and services needed to make appropriate health decisions." —

Healthy People 2010

Our Expectations of Patients are Increasing…

- ✓ **Prevention (eating, exercise, sunscreen, dental)**
- ✓ **Immunization**
- ✓ **Self Assessment of Health Status**
  - **Peak flow meter**
  - **Glucose testing**
- ✓ **Self-treatment**
  - **Insulin adjustments**
- ✓ **Health Care Use**
  - **When to go to clinic/ER**
  - **Referrals and follow-up**
  - **Insurance/Medicare**

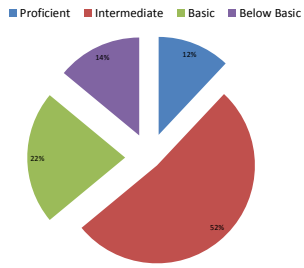
And the Process is Becoming More Complex



"Health literacy is needed to make health reform a reality,"

HHS Secretary Kathleen Sebelius

Health Literacy Scores NAAL



The CDC estimates that almost 9 out of 10 Americans have difficulty using everyday health information the way it is currently presented in our communities.

How Kentucky literacy compares to neighboring states

	Population	Percent lacking basic literacy skills
Kentucky	3,202,516	12
Tennessee	4,439,666	13
Missouri	4,321,763	7
Illinois	9,507,861	13
Indiana	4,633,843	8
Ohio	8,715,916	9
West Virginia	1,418,672	13
Virginia	5,522,625	12

Human Costs

- Premature mortality
- Avoidable morbidity
  - Less preventive care
  - Lower compliance with treatment regimens
  - Medication or treatment errors
  - More hospitalizations
  - Worse disease outcomes
  - Unable to navigate the healthcare system
- Socioeconomic health disparities

Correlates of low health literacy

- Elderly
- Low income
- Unemployed
- Did not finish high school
- Minority ethnic or racial group
- Recent immigrant to US not speaking English
- US born, English second language

Six steps to improving interpersonal communication with patients

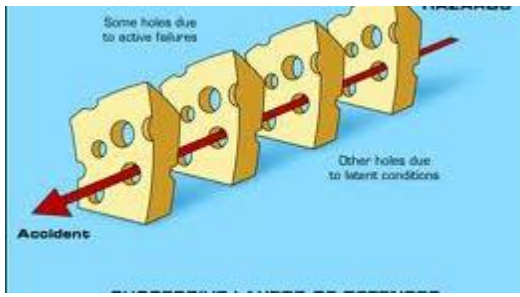
1. Slow down
2. Use plain, non-medical language
3. Show or draw pictures
4. Limit the amount of information provided-and repeat it
5. Use the teach-back technique
6. Create a shame-free environment: Encourage questions.

Poor Communication Costs Billions

- Non adherence
- Unnecessary testing
- Decreased job productivity
- Higher costs, readmissions, deaths
  - -10% of all hospital admissions
  - -23% of nursing home admissions
- 112 million unnecessary medical visits
- $300 billion per year in excess spending

Peterson et al. Am J Health-Syst Pharm. 2003;60:657-665.
DiMatteo MR. 2004;42:200-209.

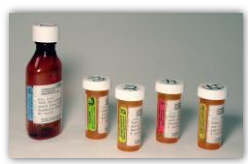
Patient Navigation
The Swiss Cheese model and patient-provider communication:
The relationship between patient safety and health literacy



Patient Safety: Medication Errors

"How would you take this medicine?"

395 primary care patients in 3 states



- **46%** did not understand instructions ≥ 1 labels
- **38%** with adequate literacy missed at least 1 label

Davis TC , et al. Annals Int Med 2006

Red Flags for Low Literacy

- → Frequently missed appointments
- → Incomplete registration forms
- → Non-compliance with medication
- → Unable to name medications, explain purpose or dosing
- → Identifies pills by looking at them, not reading label
- → Unable to give coherent, sequential history
- → Ask fewer questions
- → Lack of follow-through on tests or referrals

SOAP- UP

A method to assist providers to improved understanding

- S – Subjective
- O – Objective
- A – Assessment
- P – Plan
- U – Use teach-back to check for understanding
- P – Plan for health literacy help

Business Model

- Complexity of care increased requires
  - Coordination
  - Patient centered approach to care
- Results
  - Cost savings
  - Decreased ER visits
  - Reduced inappropriate admissions/readmissions
  - Reduced unnecessary dx testing
  - Standard rx protocol
  - Increased appropriate use of hospice care
  - Patient satisfaction, loyalty, ROI

Hopkins- J Onc Practice

NORTON CANCER INSTITUTE

NCI Community Cancer Centers Program

2012 NCCCP Hospitals

$2.4 million/4 years
S.E. Brooks, MD, MBA, Principal Investigator

NORTON CANCER INSTITUTE

NORTON HEALTHCARE

Community Prevention





Building a Health Literacy Toolkit

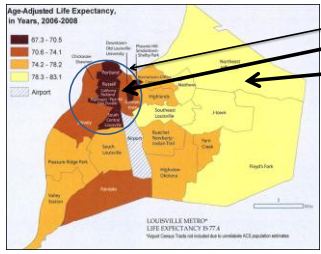
Jenita Terzic, M.Ed., CHES; Phil Schervish, Ph.D.; Tina Hembree, MPH; Sandra E. Brooks, M.D., MBA
Louisville, Ky.

- 2009-2010 baseline REALM assessment showed that 34% of mobile prevention center patients (N=187) scored below the 9th grade reading level.
- An audit of patient education materials indicated all were ≥9th-12th grade reading level
- Materials were revised to reflect a 6th-8th grade reading level

Kentucky Health Literacy Summit 2012

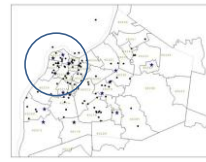
Incorporating Disparities Metrics into Program Planning:
Focusing Outreach on Underserved Areas

NORTON CANCER INSTITUTE



Life Expectancy in West Louisville is 8-10 years lower here than here

Mobile Screening Sites

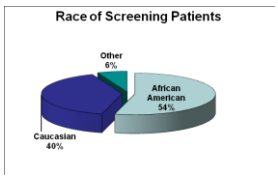


50% of Screenings Occur in Underserved Communities
1/3 have never had a screening or have not had one in 5 years

NORTON HEALTHCARE

Screening Statistics

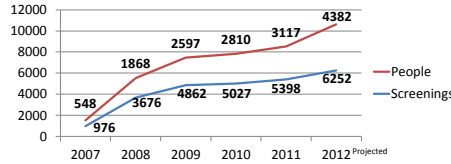
Demographic Data



- **Mean age: 52**
- **15% Hispanic/Latino**
- **50% Uninsured**
- **46% Reside in Medically Underserved Communities**
- **45% with household income <$10,000**
- **30% Never or Rarely Screened**

Incorporating Disparities Metrics into Program Planning

Focusing Outreach on Underserved Areas



~20% of patients require Diagnostic Navigation
76 Cancers (Breast, Cervix, Prostate)- 1/07-9/12/12
Breast Cancer Specific Data
N= 53

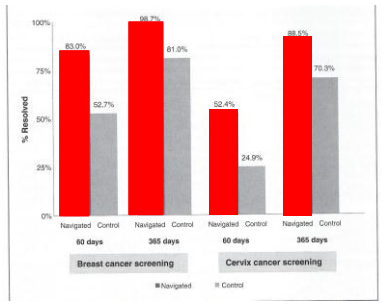
Median Age: 52	0-I	II-IV
African American/Black:	52%	48%
Caucasian/ White	60%	40%
Hispanic:	25%	63%
Non-Hispanic	75%	37%

75% uninsured, 33% no PCP

Chicago Cancer Navigation Project

Patient Navigation Reduces Time to Diagnostic Resolution

Markossian et al.



Boston Patient Navigation Research Program:

The Impact of Navigation on Time to Diagnostic Resolution after Cancer Screening *Battaglia et al, 2012*

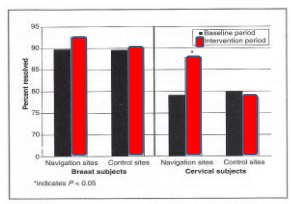
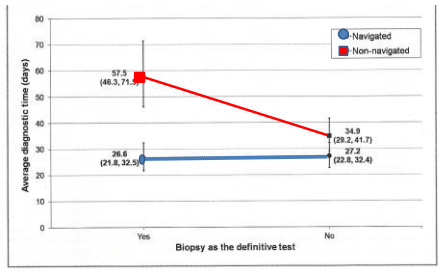


Figure 1. Percent of subjects in the Boston Patient Navigation Research Program who complete diagnostic resolution by 365 days by Study Period (baseline vs. intervention) within each Study Site Group (navigation vs. control sites), for both breast and cervical subjects.

Lay navigators integrated into a medical team decrease time to diagnostic resolution after abnormal screening. The greatest impact seen with underserved women, those that lacked social support.

Patient navigation reduces delays in breast cancer diagnosis
DC - Patient Navigation Research Program *Hoffman et al 2012*



Cancer Epidemiol Biomarkers Prev; 21(10) October 2012 1

Patient Navigation for Breast and Colorectal Cancer in 3 Community Hospital Settings: An Economic Evaluation

Donaldson, Holgrave, Duffin, Feltner, Funderburk, Freeman Cancer 2012

Objective:

1. Reduce the time interval between abnormal cancer finding, dx resolution & initiation of rx.
2. Assess the assessed the incremental cost effectiveness of adding patient navigation to standard cancer care.

Methods: A decision-analytic model was used to assess the cost effectiveness of a colorectal and breast cancer patient navigation program over the period of 1 year compared with standard care.

Results: Patient navigation resulted in 78 of 959 (breast) and 21 of 411 (colon) additional individuals to reach timely diagnostic resolution.

Costs saved, the cost-effectiveness ratio:

$511 to $2080 per breast cancer diagnostic resolution achieved

$1192 to $9708 per colorectal cancer diagnostic resolution achieved

CONCLUSIONS: The current results indicated that implementing breast or colorectal cancer patient navigation in community hospital settings in which low-income populations are served may be a cost-effective addition to standard cancer care.

Impact of Patient Navigation

- **Outreach to rarely/never screened populations**
- **>90% follow up on abnormal screening tests**
- **More timely diagnostic resolution**

Davis, ET, Hembree, TM, Beache, SC, Ballard, D, Brooks, SE. Reaching Underserved Women with Mammography: 15 month experience with a Mobile Prevention Unit and Prevention Program. *Cancer Epidemiology, Biomarkers and Prevention*, American Society of Preventive Oncology 2010;19:894-895

Manson, J, Brooks, SE, Lewis, AL, Hembree, TM, Contralateral Prophylactic Mastectomy Study in Women with Breast Cancer: Role for Preoperative Genetic Counseling. Journal of the KMA. *September* 2012

Brooks et al. Mobile Mammography in Underserved Populations: Analysis of outcomes of 3,923 Women. *J Community Health submitted*

Freeman et al.
Donaldson, et al.
Battaglia, et al.

Beneficial Effects of a Combined Navigator / Promotora / approach for Hispanic women diagnosed with breast abnormalities *Dudley, et al. 2012*

- Benefits of navigation, benefit underserved populations most
- Combined Promotora/navigator approach successful
- Hispanic/Latino women successfully navigated
- Diagnostic resolution within 60 days 62.6% vs. 47.5%
- Treated within 60 days of diagnosis 80% vs. 56.4%

Hispanic/Latino outreach in Louisville, KY



2012 NCCCP DELIVERABLE DASHBOARD

NORTON CANCER INSTITUTE

Goal: To design and implement programs to reduce disparities, promote cancer screening, clinical trials, and improve quality of care

Reducing Disparities

Community Cancer Screenings [1]

Site	Screenings	Events
Breast	941	53
Prostate	47	1
Colon	84	20
Skin	75	4
Cervical	302	14
Total	**1499**	**93**

Patient Navigation [2]

- **4** Outreach Navigators
- **2** Bi-lingual
- **1** Diagnostic Navigator
- **12 oncology** Nurse Navigators
  - 4 general for all disease sites
  - 7 specialized for breast, gastro, hepatic arterial, thoracic and neuro
- 1 survivorship
- Navigation Interactions Across Continuum
  - Breast: **505** Prostate: **24**
  - Colon: **117** Other: **1210**
  - **Total : 1856**
  - **26-60-% of patients navigated**
- **15** Outreach Staff Harold P. Freeman Patient Navigation Certified

Collection of Race/Ethnicity Data

Departments Collecting Race & Ethnicity using OMB Categories [3]

Hospital Admitting
Outpatient Registration (Lab, Radiology)
Cancer Institute:
Patient Navigation Program Norton Cancer Institute offices
Survivorship Program
Clinical Trials Database
Prevention Program

- **61-99% of cancer center physicians track race/ethnicity using OMB guidelines**

Clinical Trial Training-Pilot [4]

Enhancing Clinical Trials Access Through Cultural Competence Training for Oncology Professionals. Cancer Health Disparities Program Meeting

NCI CRCHD, Bethesda, Maryland, July 2011

Michaels M, Blakeney , Limones-Isenor J,, Hoffman R, Brooks SE.

What Will it Take To Ensure Equal Access to Quality Cancer Care: Using a Comprehensive Approach to Foster Community Engagement in Cancer Clinical Trials

ICC panel- Houston, TX June 30-July 2 2012.

Michaels, M, Tsark, J, Wujcik, D, Horton, S ,Brooks, SE, Green, N, Richmond, A, Corbi-Smith, G.

Clinical Trials Education and Events [4]

Gaining Essentials About Research (GEAR) Session

- **"Practical Applications in Screening, Recruitment, and Enrollment,"** Karriem S. Watson, MD, MPH, MS
  - **78** in attendance

The Susan G. Komen for the Cure Tissue Bank at IU Simon Cancer Center Collection Event [1,4]

- **125** participants
  - **85%** White
  - **15%** African American
  - **2%** Hispanic
  - **1%** American Indian/Native Alaskan

Outreach Events

Health Equity Summit II [1]*Setting a Vision for Tangible Change: Moving from Awareness to Action Speakers: SE Brooks, MDA Troutman, MD, MPH B Smedley, PhD ,B Gibbons PhD, A Arno, PhD, M Harris, PhD-***180** in attendance

Men's Health: A Family Affair [1,3,4]
>400 screenings:
Cancer, chronic disease, tobacco control

[1] **Community Outreach Deliverable**
[2] **Evidence Based/Informed Practice Deliverable**
[3] **Tobacco Control Deliverable**
[4] **Underserved Accrual Deliverable**

Quality/Navigation Metrics

- Wait time to appts, treatment, and satisfaction
- Timeliness of Care
- Appropriateness of Care
- Family Feedback
- Adherence to Evidence Based Guidelines
- Insurance Denials
- Hospitalizations
- Referrals to PCP
- Stage of Disease

Petrielli et al, Desimini et al, Frelick et al, Battaglia et al.

Incorporating Disparities Metrics into Program Planning Research, Grants, and Contracts

Get Healthy Access Program
Brooks PI, Hembree Project Manager
Navigation of patients at risk for cardiovascular disease to health promotion activities and a primary care physician
Social Innovation Fund, Foundation for a Healthy Kentucky and NHC
$200,000

Rubbertown Screening Project
Brooks, PI, Hembree Project Manager
Navigate uninsured men and women living in the Rubbertown neighborhood(3 zip codes) to mammography, paps and colonoscopy
Louisville Metro Department of Public Health and Wellness
$125,000

CBE	221
Mammogram	218
PAP Test	50
PSA	0
FOBT	12
Colonoscopy**	22

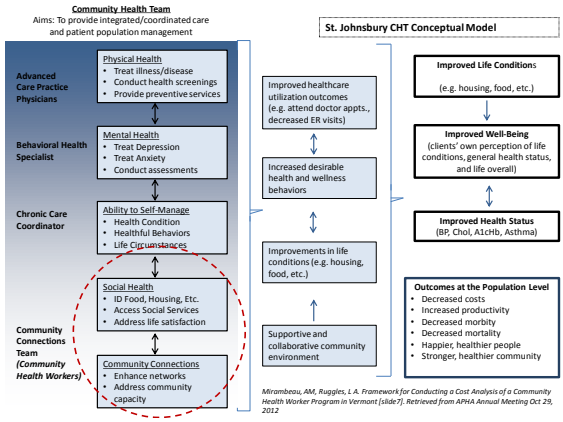
Patient Navigation Improves Cancer Diagnostic Resolution for abnormal screening tests for breast, colorectal and prostate cancers in a medically underserved population, Raich, et al. 2012 - 15% higher diagnostic resolution rate in navigated patients

"Hard Wiring" Incorporation of Disparities Metrics and Navigation into a Multi-Hospital Health System

- High Level Support and Commitment
- Training
- Strategic Approach
- Formalized Access for Underserved Patients
  - Collaborate with Department of Public Health
  - Formalized Institutional Processes
    - Patient Access / Accounting / Finance / Charity Care Application
    - Community benefit reporting
    - MOA with private practices
  - Grants/Contracts
- Downstream revenue calculation

Sustainability: 2011 Downstream Revenue

- 5,714 patients had 9,590 visits
- >2,949
  - Hospital
  - Diagnostic Center
  - Oncology
  - >95% were for outpatient services

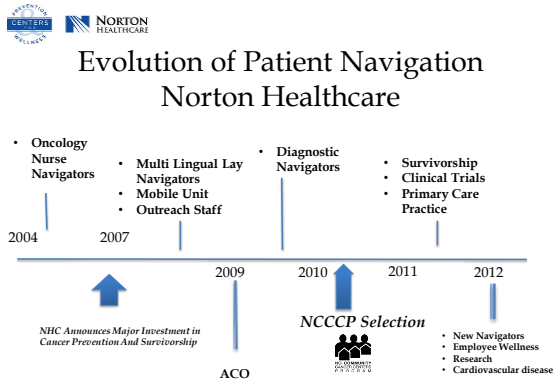


Mirambeau, AM, Ruggles, L A. Framework for Conducting a Cost Analysis of a Community Health Worker Program in Vermont [slide7]. Retrieved from APHA Annual Meeting Oct 29, 2012

CHW Cost Analysis Framework: Cost Categories

Cost Categories	Data sources	Cost assignment
Personnel		
• CHWs	Hospital general ledger, time study	**Actual salary, time study**
• Supervisory Staff	Hospital general ledger, time study	Actual salary, time study
• Volunteer	N/A	Bureau of Labor, time study
• Administrative support (e.g. human resources, payroll, technology support)	Hospital general ledger	Standard NVRH overhead rate
Program Costs		
• Training/Professional Development	Training records	Actual costs, local rates/national averages
• Mileage	Hospital general ledger	Actual cost
• Travel reimbursement to participants	Hospital general ledger	Actual cost
• Marketing/promotional material	Hospital general ledger	Actual cost
Operational costs		
• Workspace	Building floor plan	Commercial real estate averages
• Office space	Hospital general ledger	Actual cost
• Miscellaneous: housekeeping, heating, electricity, snow removal, professional dues, copier lease, recycling fee	Hospital general ledger & subsidiary journal	Actual cost
Start-up Costs		
• Furniture (e.g. desks, chairs, tables, etc.)	Hospital general ledger	Actual cost
• Computer desktops/monitors	Hospital general ledger	Actual cost
• Office telephones	Hospital general ledger	Actual cost

Mirambeau, AM, Ruggles, L A. Framework for Conducting a Cost Analysis of a Community Health Worker Program in Vermont [slide15]. Retrieved from APHA Annual Meeting Oct 29, 2012



Patient Navigation a role in development of ACO's

Norton Healthcare: A Strong Payer–Provider Partnership for the Journey to Accountable Care

Josette N. Gbemudu The Commonwealth Fund, January 2012

Brookings-Dartmouth ACO Learning Network

Pilot Sites (e.g. Norton Healthcare)
In-depth consultation, technical assistance, and data analysis for participating health systems and payers

Community Initiatives
Serves as strategic support for regions interested in piloting ACOs at the community level

Policy Support
Serves as a resource for legislative and executive staff on delivery system reform

ACCOUNTABLE CARE ORGANIZATION
LEARNING NETWORK
WWW.ACOLEARNINGNETWORK.ORG

ACCOUNTABLE CARE ORGANIZATION
LEARNING NETWORK
WWW.ACOLEARNINGNETWORK.ORG

Private-Sector ACO Examples

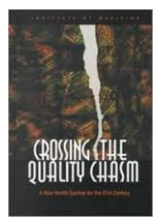
Carilion Clinic Roanoke, VA	Norton Healthcare Louisville, KY	Tucson Medical Center Tucson, AZ
• ~900 Providers • 60,000 Medicare Patients Assigned	• ~400 Providers • 30,000 Medicare Patients Assigned	• ~80 Providers • 10,000 Medicare Patients Assigned
Large Group ⟷		Small Group
Low Competitive Environment ⟷		Highly Competitive Environment
Fully Integrated System ⟷		Multiple Independent Provider Groups

Mark McClellan
Engelberg Center for Health Care Reform

Pilot ACO

The goal of the ACO model is to increase quality and efficiency, better coordinate patient care, eliminate waste, and reduce the overuse and misuse of care by establishing incentives

- Facilitate exchange of patient medical information through integrated EMR
  - Shared data with Humana and Norton Healthcare
- Reduce variation
  - Analysis
  - Targeted intervention
- Value based purchasing
  - Reducing readmissions
- Mange utilization
  - Checklists
  - Review case variation
- Discharge planning
- Implement evidence based guidelines
  - Personalize care and disease management/reversal
  - Employee wellness program
  - Disease management/reversal
- Incentive doctors to meet quality metrics
- Reduce pharmacy costs



ACO's- Promise not Panacea
Donald Berwick, MD , MPP JAMA Sept 12 2012

"In these days of difficulty, we Americans everywhere must and shall choose the path of social justice…, the path of faith, the path of hope, and the path of love toward our fellow man."

Franklin D. Roosevelt

Questions