Collaborative Partnership

Meharry Medical College (1876)

- Academic health center
- Health care for minority and underserved communities
- Medical/Dental/Health programs
  - People of color and individuals from disadvantaged backgrounds
- Elimination of health disparities

Mathew Walker Comprehensive Health Center (1968)

- Medical/Dental/Diagnostic facility
- Serves the uninsured/underinsured
- Majority: Low-income African-Americans
- 20,000 patients in 2006
  - Over 2000 men ≥50 years

Study Goals

Improve prostate cancer screening behavior among non-compliant low-income African-American men

Aim

Improve knowledge & attitude of African-American men towards early detection of prostate cancer

Objectives:

1) Evaluate prostate cancer knowledge and attitudes
2) Identify prostate cancer screening barriers
3) Develop a culturally sensitive prostate cancer educational intervention for low-income African-Americans
   - Focus Groups
   - Community Advisory Board
4) Evaluate the efficacy and impact of the intervention
   - Level of knowledge
   - Attitude
   - Prostate cancer screening behavior

US TOO PROSTATE CANCER EDUCATION & SUPPORT

Community Participation

Three 10-Person Focus Group Discussions

FG 1: Men ≥40 years who screened for prostate cancer
Including prostate cancer survivors

FG 2: Family members

4 Wives/Partners	≥30 years old
3 Females	25 – 39 years old
3 Males	25 – 39 years old

FG 3: Men ≥35 years never screened

Community Advisory Board

7 Lay African-Americans
5 men + 2 women
2 Community leaders
1 MWCHC physician/health provider

Focus Group Report

- List of prostate cancer screening barriers
  - Classified under Themes of Influence/Barriers by researchers
    1. Individual
    2. Doctor
    3. CHC
    4. Church
    5. Family/Friends
    6. Prostate Cancer Support Group
- List of solutions to address/remove barriers
- Description of suitable advertisement pictures

CAB Report

- Recommended an Education Intervention
  - Format: Brochure & Discussion session
  - Duration: 15 – 20 minutes
- Selected Pictures & Quotes for brochure and posters
- Suggested language and reading level of Messages

STUDY PROTOCOL

- Recruit 520 men: Posters, Flyers, Word of mouth
- Informed Consent
- Pre-Intervention Survey: 5-page survey booklet

Section 1:	Demography, Screening History/Intent
Section 2:	Prostate Cancer Knowledge & Screening Barriers
Section 3:	Decisional Conflict & Religion

- Education Intervention
- Post-Intervention Survey: 2-page survey

Section 1:	Identity, Screening Action
Section 2:	Prostate cancer Knowledge
Section 3:	Decisional Conflict

Education Intervention

- By Community navigator in private
- Read culturally appropriate brochure with the participant
- Answer questions & address concerns raised by participant
- Open dialogue about myths surrounding prostate cancer, sexuality, and DRE
- Carefully describe research procedure
  - -Process for redeeming the screening coupon
  - -Process for the 3-month study follow-up visit
  - -Follow-through of abnormal screening results

Results

539

Enrolled
Completed Pre-Intervention Survey

392

(72.7%)

Follow-up
Completed Post-Intervention Survey

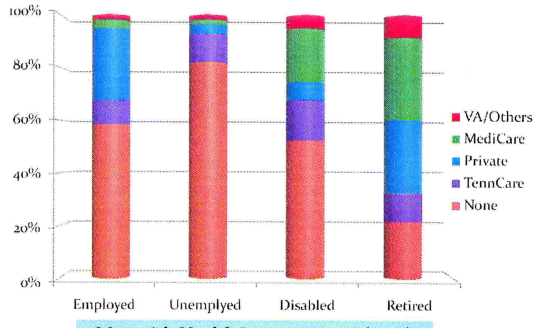
Program staff
3 Community Navigators
1 Meharry Medical Student
6 Fisk University Summer Interns

Health Insurance Coverage

- 321 (59.6) do not have health insurance
- Cost constraint for doctor visits:
  - Men with health insurance: 25 (11.5)
  - Men without health insurance: 182 (56.9)

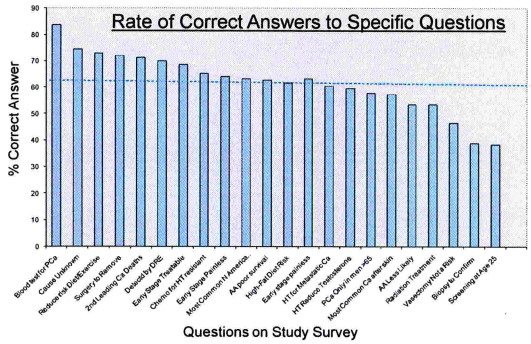
- Type of health insurance
  - Private insurance 93 (17.3)
  - Tenncare 56 (10.4)
  - Medicare 49 (9.1)
  - Others 17 (3.2)
  - Not stated 3 (0.6)

Type of Health Insurance by Work Status



Men with Health Insurance: 218 (40.4)

Prostate Cancer Knowledge:



PSA Screening by Demographics: Pre- & Post-Intervention

Demographics	PSA Screening: N (Rate) Pre-Intervention	Post-Intervention
Family History		
Yes	28 (22.0)	59 (62.1)
No	89 (22.8)	179 (62.2)
Don't know	4 (19.0)	4 (55.6)
Health Insurance	**	
Yes	72 (33.0)	103 (66.5)
No	49 (15.3)	140 (59.1)
Age	**	
42 – 49	26 (14.3)	88 (61.1)
50 – 64	59 (27.4)	84 (57.5)
≥65	36 (25.4)	71 (69.6)
Marital Status	*	
Married	51 (29.5)	84 (65.6)
Divorced/Separated	43 (22.2)	86 (61.9)
Widowed	9 (26.5)	18 (69.2)
Single	17 (13.3)	51 (55.4)

* p < 0.01 ** p<0.001

PSA Screening by Demographics: Pre- & Post-Intervention

Demographics	PSA Screening: N (Rate) Pre-Intervention	Post-Intervention
Education	**	**
Less than High School	55 (30.2)	53 (47.7)
High School	36 (18.7)	89 (60.1)
Some College/College	30 (18.9)	96 (75.0)
Work Status	**	*
Employed	42 (19.4)	119 (69.6)
Unemployed	28 (16.7)	55 (47.4)
Disabled	15 (25.4)	23 (63.9)
Retired	34 (40.0)	40 (65.6)
Income	**	**
<$25,000	88 (25.8)	125 (53.4)
$25-$49,999	28 (17.6)	94 (74.6)
≥$50,000	3 (10.7)	17 (70.8)
Not Stated	2 (18.2)	7 (87.5)

* p<0.01 ** p<0.001

PSA Screening by Knowledge: Pre- & Post-Intervention

PCA Knowledge	Pre-Intervention	Post-Intervention
Epidemiology		**
Poor	18 (16.7)	35 (59.3)
Good	68 (23.0)	58 (46.4)
Excellent	35 (25.9)	150 (72.1)
Screening		**
Poor	19 (22.4)	25 (40.3)
Good	68 (23.6)	82 (55.8)
Excellent	34 (20.5)	136 (74.3)
Treatment		**
Poor	15 (23.1)	15 (40.5)
Good	45 (19.1)	70 (49.3)
Excellent	61 (25.6)	158 (74.2)
Risk	*	**
Poor	24 (14.0)	46 (44.7)
Good	51 (25.5)	92 (65.2)
Excellent	46 (27.4)	105 (70.9)

* p<0 01 ** p<0.001

Multivariate Associations of PSA Screening among Study Participants: Adjusted‡ OR (95% CI) Estimates

Characteristics	Pre-Intervention	Post-Intervention
No Health Insurance	0.39 (0.24 - 0.64)***	0.72 (0.43 – 1.20)
Older Age	1.82 (0.93 - 3.55)	0.87 (0.45 – 1.68)
High School Education [a]	0.56 (0.28 - 1.11)	1.21 (0.58 – 2.53)
Unemployment	1.69 (0.90 - 3.20)	1.41 (0.76 – 2.61)
Income [a]	0.25 (0.06 – 0.96)*	0.58 (0.19 – 1.79)
Married	2.26 (1.22 – 4.22)**	1.14 (0.66 – 1.99)
Good PCa Knowledge [a,f]	2.28 (1.13 – 4.61)*	5.71 (2.74 – 11.9)***

Pre- OR p_{trend} [a]<0.05 [b]<0.01 [c]<0.001 OR: *p<0.05 **p<0.01 ***p<0.001
Post- OR p_{trend} [d]<0.05 [e]<0.01 [f]<0.001

‡Health Insurance, Age, Education, Employment, Income, Marital Status, PCa Knowledge

Summary 1

- 539 men, mean age 56 years, received prostate cancer education intervention. 392 returned for follow-up.
- Knowledge about prostate cancer at baseline
  - Excellent 22%, Good 52%, Poor 26%.
  - Most knowledgeable about prostate cancer treatment. Least knowledgeable about risk
- Major perceived barriers to screening
  - Lack of health insurance 41%
  - Concern about DRE 32%
  - Fear of cancer diagnosis 30%

Summary 2

- Education intervention was effect
  - Knowledge score increased significantly: 13.3 to 15.0
  - PSA screening increased 3-fold: 22.3% to 62.0%
- Most important predictor of PSA screening post-intervention was prostate cancer knowledge.
  - Health insurance, age, marital status, income, and prostate cancer knowledge were all significant predictors of PSA screening pre-intervention.
- Impact on screening rate was highest
  - Annual income ≥$50,000 (6-fold)
  - College education, No health insurance (4-fold)
  - Young, Single (4-fold)
- Impact on screening rate was lowest
  - Men with less than high school (1.6 fold)
  - Lowest post-intervention PSA screening rate 47.7%

Lessons Learned

CBPR using focus groups & community advisory board is an appropriate approach for developing an effective prostate cancer education intervention for this population.

More than one education intervention session might be necessary to reduce confusion and reinforce accurate perception of prostate cancer screening risks and benefits.

Future research plans:

-Modify study protocol
  -Ascertain knowledge by mixed methods; Not only T/F response
  -Review survey answers at the end of education intervention
  -Cash incentive only for completing surveys & transportation cost
-Propose larger study to recruit at least 1,000 men
  -PSA & DRE offered within annual physical visit
  -3 years follow-up to evaluate sustained intervention effect

Policy Implications

Providing health insurance for low-income families will overcome the major barrier to PCa screening.

1. Eligibility criteria for Medicaid/TennCare should be revised to include persons in households below 400% poverty.
2. Federal funds for annual physicals that include prostate cancer screening by PSA & DRE.
   - Viable strategy to improve access to preventive health services.
3. Federal funds for cost of resolving abnormal screening results for those without health insurance.
   - Will ensure continuity of care.
4. Health insurance companies should cover PSA & DRE as part of routine physicals for men starting at age 40.
   - Will improve compliance by physicians
   - Increase familiarity with the tests; minimize patient apprehension.

Acknowledgement

Meharry Medical College

D. Beech, M.D.
K. Patel, Ph.D.
K. Taher, MBBS.
M. Hargreaves, Ph.D.

Matthew Walker Comprehensive Health Center, Nashville

K. Beard, M.S.

Vanderbilt University

R. Davis, M.D.

Nashville Community
African-American Men
& Family Members
Metropolitan Development and Housing
Agency: Ms. Peaches Manning

Patients & Staff
Matthew Walker Comprehensive
Health Center, Nashville, TN.

Medical Student
Natasha Lowe

Community Navigators
Pastor Sean Henderson
Mr. Byron Brown
Rev. John T. Vine, II

Research Interns
Summer 2009
Curtis Fields
Marico Cheeks
Charlotte Goodin
Liana Geddes

Summer 2010
Pierre Moton
Ogaga Bomadi

Funded by the Centers for Medicare and Medicaid Services