

Abstract Podium Presentations: Health Maintenance and Prevention in Special Populations

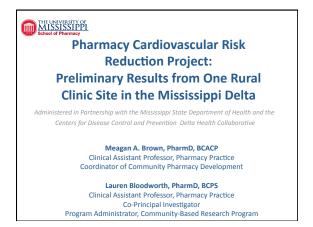


This session will include abstract presentations discussing health maintenance and prevention strategies in special populations across disciplines.



Jill H. White, EdD, RD, LDN
OPENING REMARKS







Objective

- Implement pharmacist medication therapy management (MTM) services in clinic settings in the Mississippi Delta region to improve patient outcomes related to diabetes and cardiovascular disease (ABCS)
 - -HbA1c, aspirin use
 - -Blood pressure
 - -Cholesterol

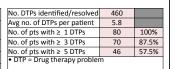
THE UNIVERSITY OF MISSISSIPPI

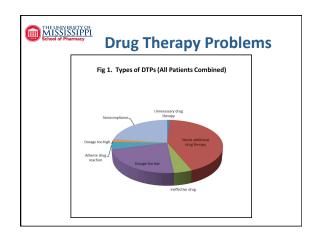
Smoking cessation



Clinical Outcomes

No. of patients	80
No. of	182
encounters	102
% Female	56.3%
% Male	43.7%
Mean age (yrs)	49.9
Mean no. of	
medical	6.0
conditions	(range 1-10)
Mean no. of	6.4
meds (Rx & OTC)	(range 2-14)





Clinical Outcomes - ALL

	Number of Patients	First value (mean)	Most recent value (mean)	Change	p-value*
Hemoglobin A1C (%)	48	11.8	9.9	(1.9)	<0.001
Systolic blood pressure (mmHg)	47	133.4	125.1	(8.3)	<0.05
Diastolic blood pressure (mmHg)	47	83.3	77.9	(5.4)	<0.005
Total cholesterol (mg/dL)	32	197.3	186.1	(11.2)	0.103
High-density lipoprotein (mg/dL)	32	49.9	50.2	0.3	0.799
Low-density lipoprotein (mg/dL)	32	114.7	103.2	(11.5)	0.061
Triglycerides (mg/dL)	32	162.7	157.0	(5.7)	0.711
Weight (lbs)	38	209.9	209.6	(0.3)	0.839



Clinical Outcomes –

Subset with initial values elevated

	Initial values elevated	Number of Patients	First recorded value (mean)	Most recent recorded value (mean)	Change	p-value*
Hemoglobin A1C (%)	HbA1c > 9%	48	11.8	9.9	(1.9)	<0.001
Systolic blood pressure (mmHg)	SBP > 130 mmHg	27	145.7	129.9	(15.8)	<0.001
Diastolic blood pressure (mmHg)	DBP > 80 mmHg	29	89.9	79.5	(10.4)	<0.001
Total cholesterol (mg/ dL)	TC <u>></u> 200 mg/dL	15	245.7	220.7	(25.0)	<0.05
High-density lipoprotein (mg/dL)						
Low-density lipoprotein (mg/dL)	LDL <u>></u> 100 mg/dL	19	145.7	125.2	(20.5)	<0.05
Triglycerides (mg/dL)	TG > 150 mg/dL	6	394.2	333.2	61.0	0.461



Conclusions

- Identifying a strategy to curb disease progression and the associated economic burden is critically important
- Preliminary data suggest a decrease in HbA1c, SBP, DBP, TC, and LDL for the targeted population (subset)
- Implementation of successful pharmacy MTM services that decrease the risk of cardiovascular complications in underserved populations can enhance patient care in similarly challenging rural areas throughout the nation



Pharmacy Cardiovascular Risk Reduction Project: Preliminary Results from One Rural Clinic Site in the Mississippi Delta

We would like to acknowledge our PI, Dr. Leigh Ann Ross, BCPS and the Mississippi State Department of Health (MSDH) is also gratefully acknowledged for the $support\ of\ this\ project\ through\ Grant\ Number\ 5U50DP003088-03.$

> Meagan A. Brown, PharmD, BCACP Clinical Assistant Professor, Pharmacy Practice

Coordinator of Community Pharmacy Development Lauren Bloodworth, PharmD, BCPS

Clinical Assistant Professor, Pharmacy Practice Co-Principal Investigator Program Administrator, Community-Based Research Program



Coping with Type 2 Diabetes:
The Experiences of Black Men
Living in Georgia

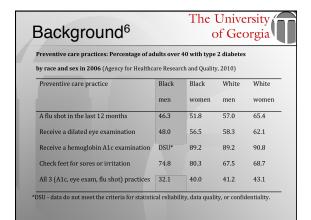
Apophia Namageyo Funa, PhD, MPH
Jessica Muilenburg, Phd, MPH
Mark Wilson, HSD
March 8, 2013

The University

Background The University of Georgia The prevalence of type 2 diabetes today is 25.8

- The prevalence of type 2 diabetes today is 25.8 million (diagnosed and undiagnosed) and has doubled since 2000¹
- 18.8 million individuals have type 2 diabetes (diagnosed) ¹
 - Blacks (12.6%) compared to Whites (7.1%) are disproportionately affected by type 2 diabetes¹
- · Compared to Black women, Black men
 - Lower prevalence of type 2 diabetes²
 - die earlier³
 - engage less in health seeking behaviors^{4,5}

Rates of hospital admissions per 100,0	000 of adult	s with type	e 2 diabe	tes 18 and
over by race and sex in 2006 (Agency for Type of admission	or Healthcar Black	e Research Black	and Qual White	ity, 2010) White
Type of duminosion	men	women	men	women
Uncontrolled type 2 diabetes without				
complications	67.9	63.1	13.0	11.4
Type 2 diabetes with short-term complications	170.2	132.9	47.0	46.7
Type 2 diabetes with long-term complications	330.0	319.0	108.5	73.6



Background

The University of Georgia

- Managing type 2 diabetes can be complex and challenging
- Few studies have focused on the experiences of living with type 2 diabetes among Black men⁷
- No studies have focused on the coping mechanisms used by Black men with type 2 diabetes.
- Understanding the coping mechanisms used by Black men can guide the development of interventions to help them live with and manage type 2 diabetes.

Purpose

The University of Georgia

To examine and explore the experiences of Black men with type 2 diabetes with an emphasis on the coping mechanisms used to manage the disease

Methods

The University of Georgia

- · In-depth semi-structured interviews
- Purposive sample of 30 men from Grady Diabetes Clinic
- Approved Institutional Review Board from
 - University of Georgia
 - Grady Health System
- Participants signed consent forms and received \$20 incentive

Methods

The University of Georgia

- Eligibility criteria
 - Ages 45 65 years
 - Black men (African, African American, African Caribbean descent)
- · Ineligibility criteria
 - Individuals with type 1 diabetes
 - Individuals with type 2 diabetes for < 1 year
 - Individuals who have lived in Atlanta < 1 year

Methods

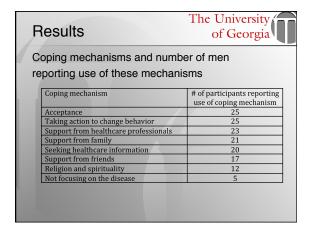
The University of Georgia

- Interviews transcribed by Verbal Ink
- Data organized for analysis using HypeRESEARCH version 3
- Transcripts reviewed and coded according to themes related to the research question
- Findings reported for only 25 of the 30 Black men

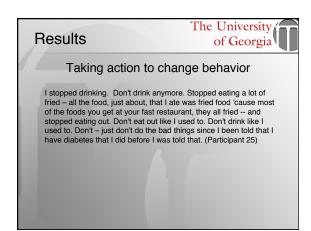
Results	Т	The University of Georgia		
Demographic Variable		n	Valid %	
Age Range				
46 - 50		3	12.0	
51 - 55		6	24.0	
56 - 60		9	36.0	
61 - 65		7	28.0	
Family History of Diabetes				
Yes		19	76.0	
No		5	20.0	
Unknown		1	4.0	

		he Univer of Geo	
Demographic Variable		n	Valid %
Duration of Type 2 Diabet	es		
Less than 5 years		12	48.0
More than 5 years		13	52.0
Marital Status			
Married		6	24.0
Single		9	36.0
Single (Divorced)		3	12.0
Single (Widowed)		3	12.0
Single (Separated)		3	12.0
Unknown		1	4.0

Results The U	Jnive f Geo	
Demographic Variable	n	Valid %
Uses Insulin to Manage Type 2 Diabetes		
Yes	18	72.0
No	7	28.0
Insurance Type Medicaid/Medicare/ Supplemental Security Income Income based insurance from Grady Diabetes Clinic No insurance Unknown	16 3 4 2	64.0 12.0 16.0 8.0
Has Other Health Illness or Injury		
Yes	19	76.0
No	6	24.0

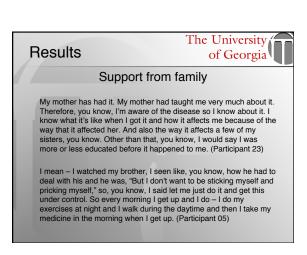


Results Acceptance I mean, I've learned to accept that I got the diabetes, you know. Like I said, most of my family got it. It's something that we accepted... You can manage it and you come off the medicine, but it's really not going to go away. (Participant 24) I put in my mind saying, well hey, if I want to continue to live and be healthy about it, this is what I got to do. I just basically put one foot in front of the other and went for it. (Participant 23)



Results The University of Georgia Support from healthcare professionals They are helping me by giving me prescription[s], writing me a prescription, giving me, what you call it, some kind of lectures and I say, "Man". Like that lady, the nurse today told me "Mr. [Participant 19] your sugar is so high. I don't want you to come in here having your kidney's shut down." You know. That's getting me be a ware that this can happen or that can happen. I mean, they talk to you depending on if you are doing okay, ... they say "Oh man your sugar is down Mr. [Participant 19], that's very good. The doctor there just told me that my blood pressure is down, that is very good, you know, I mean, they encourage you, talk to you and encourage you.

(Participant 19)



Results

The University of Georgia

Seeking healthcare information

Yeah, the classes, they really educational. I advise anybody to go to your class. Go to your class and go to your diabetic visit. Go to your doctor to see about your diabetes on a regular basis and you check on it. You learn yourself. You learn what your diabetes is doing to yourself. You learn what you can and can't do with food, what type of food. You learn to eat what you know you can get by with without raising your sugar level. You have to learn yourself. Physician, heal thyself. (Participant 15)

Results

The University of Georgia

Support from friends

The only thing I know of is like when we be out, you know what I am saying, picking up donations or something and we have to get something to eat. They look at me right and now, what they start doing, they start thinking of healthier ways of eating so they start suggesting Subway, like I said, so that's how they help me out. So they can eat Subway also, so they take me there. They help me with my diabetes. That's the way I see it, they help me. (Participant 18)

Results

The University of Georgia

Religion

I pray to Him to heal me, but I know that in order to heal me, heaven helps those who help themselves. In order for Him to heal me, I have to try to heal myself and that's what I want. You understand what I am saying? So that's the way - I am not going to go blind, acting blind and say, oh I am going to pray to God, because I pray to Him, He's going to heal me. He's going to send somebody. He's going to send me somewhere to get treatment. That is the way God works, to the best of my knowledge. (Participant 19)

Results

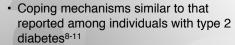
The University of Georgia

Not focusing on the disease

It [reading] helps me relax. It's no longer the need to just put something in your face. It's like a smoker, a smoker will constantly smoke. I had got to the point where I was substituting cigarettes for food. So I was constantly eating and I was eating the wrong things. Reading makes me more relaxed where I no longer need to smoke as much or eat as much. (Participant 30)

Summary

The University of Georgia



- · Coping mechanisms were interrelated
- Use of problem solved coping versus emotion based coping mechanisms8
- · Positive coping mechanisms were reported by the men which aligns with recommendations by diabetes educators12-13

Limitations

The University of Georgia



- Self report data
- · Data is not generalizable
- Interviewer and participant bias
- Duration of diabetes impacts experience
- Personal events impact reporting of experience

Implications

The University of Georgia

- Healthcare providers and professionals:
 - working with Black men in different settings where they live, work, play, and pray should be aware of the different coping mechanisms used among men with type 2 diabetes
 - working in faith based settings should consider how to creatively include Black men with type 2 diabetes in these
 - tailoring interventions to meet the coping needs of the Black men should consider that not all men with type 2 diabetes are the same e.g. those with a family history versus those without a history of type 2 diabetes

Implications

The University of Georgia

- · Additional research should be done in the following areas:
 - Coping mechanisms among low income Black men with type 2 diabetes in different settings
 - Role of different family members in the management of type 2 diabetes
 - Reaching Black men who do not attend church

References



- Disease Control and Prevention. (2010b). Age-adjusted percentage of civilian, no with diagnosed diabetes, by race and sex, United States, 1980-2008. Retrieved from
- for Disease Control and Prevention. (2008). QuickStats: Age-adjusted death rates for United States, 1979-2006. MMWR, 57(31), 855. Retrieved from

- aid, C. F., Isacco, A., & Rogers, T. E. (2008). A review of men's health and massive Medicine, 2(6), 474-487.
 n, S. L. (2005). The third world health status of black American males. J Natl N (2014). The third world health status of black American males. J Natl N (2014). 2010. 2009. National healthcare quality of the healthcare Research and Quality. (2010). 2009. National healthcare quality of the healthcare Research and Quality. (2010). 2010.
- m min. www.atm.com/author/fd/2/ citebetes/12.1.3-2b.htm

 Namageyo-Funa, A., & Jack, L., Jr. (2007). Understanding "maculinity" and the challenges of pe2-diabetes among African-American men. J Natl Med Assoc, 99(5), 550-552, 554-558.

 A. # Quarmines S. (2004). Coolino with type 2 diabetes: do race and gender matter? Soc Wo

- Degazon, C. E. (1995). Coping, diabetes, and the older African-American. *Nurs Outlook*, 43(6), 254-259. Degazon, C. E., & Parker, V. G. (2007). Coping and psychosocial adaptation to Type 2 diabetes in older Black born in the Southern US and the Caribbean. *Res Nurs Health*, 30(2), 151-163. doi: 10.1002/mrz.20192

References



- Samuel-Hodge, C. D., Watkins, D. C., Rowell, K. L., & Hooten, E. G. (2008). Coping styles, well-being, and sel care behaviors among African Americans with type 2 diabetes. Diabetes Educ, 34(3), 501-510. doi: 34(3501) [pii]01.1177/01457/270851694 [doi) White, N. E., Richter, J. M., & Fry, C. (1992). Coping, social support, and adaptation to chronic illness. West J. Mux Res, 14(2), 211-224.

 American Association of Diabetes Educators, (2011). AADE Self-care behaviors handouts. Retrieved from

Acknowledgements





- · Black men who participated in the study
- · University of Georgia (Dr. Jessica Muilenburg, Dr. Judith Preissle, Dr. Mark Wilson, and Dr. Mary Ann Johnson)
- · Grady Diabetes Clinic (Dr. Catherine Barnes, Ms. Stephanie Shaw, and Dr. David Ziemer)
- · Grady Health System



Thank you and questions



Effectiveness of Cardiovascular Risk Reduction Clinic in Perry County, Alabama

XULA 6th Health Disparities Conference March 2013

Pilar Z. Murphy, Pharm.D.
Assistant Professor of Pharmacy Practice
Samford University McWhorter School of Pharmacy
Site: Perry County Health Department/Sowing Seeds of Hope
pmurphy@samford.edu

Disclosure Statement

Disclosure statement: these individuals have the following to disclose concerning possible financial or personal relationships with commercial entities (or their competitors) that may be referenced in this presentation.

- Investigator: Pilar Z. Murphy—Nothing to disclose
- Advisors: Charles Sands, Roger Lander, Dan Halberg, Frances Ford—Nothing to disclose

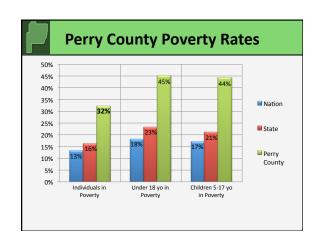
Perry County, Alabama Overview

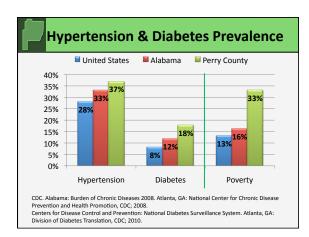
- Rural community of 10,373 people (2011)
- · Majority African American population
- · High rates of hypertension and diabetes
- High poverty level
- · Limited access to healthcare
 - Four local physicians
 - Two local pharmacies
 - Nearest hospital 25 miles away in neighboring county





Perry County, Alabama Overview Perry County Alabama Nation Unemployment Rate¹ 12.0% 7.1% 7.8% (Dec 2012) Median Household \$26.513 \$42,586 \$52,029 Income² (2008) % High School 85.4% 71.7% 81.9% Graduate or higher (2007-2011)3 Bachelor's or higher 12.6% 22% 28.2% $(2007-2011)^3$





Alabama's Chronic Disease Burden

Area	HTN	DM	Overweight / Obesity
State of Alabama	27.2%	12.2%	68.1%
Bibb County	37	11	71
Jefferson County	38	10	66
Chilton County	31	11	69
Perry County	47%	17%	78%

Percentages presented by Public Health Areas from The Risk of Heart Disease and Stroke in Alabama: Burden Document 2010

Our Approach: Free Pharmacist-Enabled Classes/Clinics Clinics

- · Body Love Radio Show
 - Wednesday mornings at 8:30am
- Hypertension Clinic (weekly)
 - Wednesday afternoons 2-4pm
- Diabetes Classes (monthly)
 - Thursday afternoons 2-3:30pm (Uniontown)
- Patient Assistance
- · Medicare Part D



Free Cardiovascular Risk Reduction Clinics

- Collaboration between Sowing Seeds of Hope and McWhorter School of Pharmacy
- Free pharmacist-enabled Cardiovascular Risk Reduction Clinics at the Perry County Health Department



Free Cardiovascular Risk Reduction Clinics

- Clinic Goals:
 - Improve health outcomes for HTN, diabetes, obesity, dyslipidemia, and chronic kidney disease
 - Improve communication and coordination of various health care workers in Perry County
 - Improve overall health and minimize health disparities

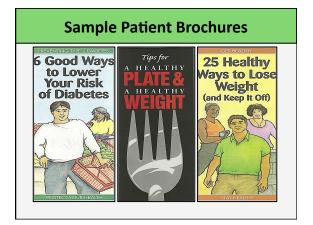


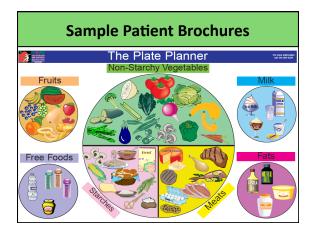
Clinic Format

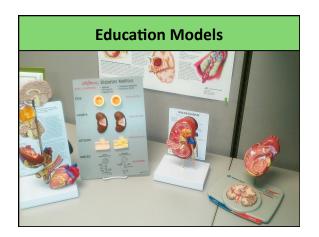
- · Patient History (new patients)
 - Health Status Interview, Disease States, Family History, Medications
 - Medication list from local pharmacy*
- Review Past Visits and Medication List with Patient
- Measurements: Weight, BP, HR, BG, Waist/Hip Ratio, BMI
- Interventions/Counseling
 - Weight Reduction, Diet, Exercise, Tobacco Use, Drug Therapy/Compliance
 - Prevention of Disease Complications
- Recommendations faxed or taken directly to physician's office

Clinic Format

- · Review blood sugar logs
- · Review diet
- Indicate foods that increase blood sugar the most
- Foot exams
- Wound healing information and referrals
- Self-monitoring of blood glucose
 - Does patient SMBG?
 - Signs and Symptoms of Hypo & Hyperglycemia
 - What should you do?
- · Counseling on regular physician exams and labs
 - A1C, Lipid Panel, Dilated Eye Exam, Kidneys
 (microalbumin), Influenza & Pneumococcal Vaccinations







Purpose

 To investigate the effectiveness of the pharmacist-enabled hypertension and diabetes clinics in Perry County and their impact on reducing modifiable cardiovascular risk factors in patients utilizing the clinical services provided

Objectives

- Primary objective: To detect a clinically significant difference in reduction of systolic blood pressure
- Secondary objectives: To detect reductions in diastolic blood pressure and body mass index

Methodology

- Single-center, Samford University IRB-approved, retrospective chart review
- Compare baseline blood pressure, body mass index, and weight to the most recent measurements recorded during cardiovascular clinic visits prior to July 1, 2010
- · Inclusion criteria:
 - Patients must be age 19 years and older
 - At least two clinic visits prior to July 1, 2010
 - Visits must be at least one month apart

Methodology

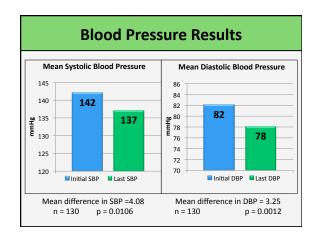
• Study: Two-sample t-test for unequal variances

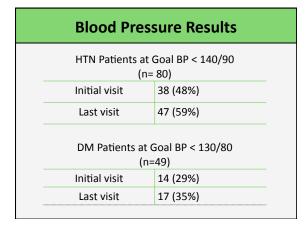
Design: Paired dataAlpha: 0.05

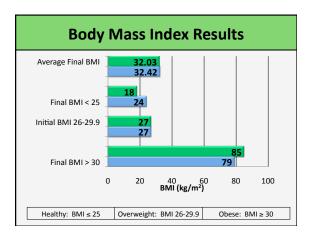
Power: 0.8 (80%)Sample size: 130

 Difference considered clinically significant is 10 mmHg decrease in systolic blood pressure

Patient Demographics				
Patient Characteristics (n=130)				
		Number	Percentage	
Race/ethnicity	African American	116	89%	
	White	14	11%	
Sex	Female	90	69%	
	Male	40	31%	
Age	Average: 61 years	19 min	92 max	
Reported Disease	Hypertension	80	62%	
States	Diabetes	3	2%	
	Hypertension & Diabetes	46	35%	
	Other/None	1	<1%	
402 patient files review	ed 130 patie	nts met inclu	sion criteria	







Discussion

- Primary objective to detect a clinically significant difference in reduction SBP was not reached
 - Small decreases in both systolic and diastolic blood pressure
- Statistically significant drop in SBP of 4.08 mmHg
 - Diastolic blood pressure decreased an average of 3.25 mmHg
- Average Body Mass Index remained constant
 - 6 patients moved from obese category

Discussion					
Reduction in Stroke Death Rate					
	1991-1998	2000-2006	% Decrease		
US National Rate	166	140	15.7		
Alabama Rate	180	168	6.7		
Perry County	190	153	19.5		
Perry County (Whites)	163	133	18.4		
Perry County (AAs)	244	193	20.9		

Stroke rate = avg. annual age-adjusted rate (deaths/100,000) for people ages 35 years and older $\,$

Discussion

- Perry County residents are working to close the gap in cardiovascular health disparities
- · Increased awareness about disease states
- · Working to control risk factors
- Controlling and maintaining weight
- Increased counseling on proper medication use and compliance

Discussion

- · Study weaknesses and limitations:
 - Inconsistencies in documentation
 - Lack of a control group
 - Limited comparison data parameters
- · Future directions
 - Additional statistical analysis
 - Formal article presentation
 - Consistent scheduling of follow-up appointments
 - Incentive program to encourage regular attendance
 - Increased medication patient assistance enrollment
 - Electronic medical record

Acknowledgements

I would like to acknowledge the following people who have not only assisted me, but shown me the value of conducting this study:

Charles Sands, PharmD
Roger Lander, PharmD
Edgar Brown, MD
Frances Ford, RN
Michael Hogue, PharmD
Dan Halberg, PharmD
Jamil Akhtar, MD
Patricia A. Murphy

Effectiveness of Cardiovascular Risk Reduction Clinic in Perry County, Alabama

Pilar Z. Murphy, Pharm.D.
Assistant Professor of Pharmacy Practice
Samford University McWhorter School of Pharmacy
Site: Perry County Health Department/Sowing Seeds of Hope
pmurphy@samford.edu

03/08/13



