Influence of Gender and Race on Diagnostic Delay in Colorectal Cancer

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Disparities evident in cancer incidence and outcomes

- Compared to white Americans, African American have higher incidence rates of many cancers, including colorectal cancer (Irby, et al., 2006)

- African Americans are more likely than whites to be diagnosed at an advanced stage of colorectal, lung, breast, cervical and prostate cancers (Silverstein, et al., 2003; Schwartz, et al., 2003)

- African Americans are 34% more likely to die of cancer than whites (Lee, 2000)
Appraisal delay may partially explain diagnostic delay

- Appraisal delay is delay in seeking medical advice *generated by the patient*, who fails to act on suspicious symptoms

- Appraisal delay is influenced by:
  - Difficulties with initial symptom identification
  - Inaccurate symptom interpretation and/or attribution
  - Psychosocial factors
Diagnostic delay may partially explain disparities

- Diagnostic delay is influenced by:
  - Appraisal delay
  - Structural barriers that prevent access to healthcare
  - Ineffective physician-patient communication
    - Relational communication behaviors
    - Race and gender of patient and physician
    - Patient psychosocial characteristics
    - Lack of culturally-sensitive care
FIGURE 1. Model of the Production of Diagnostic Delay

Pt. Health Related Characteristics
- Health Literacy
- Health Care Experiences
- Family Cancer History
- Health Decision-Making
- Coping Style
- Trust

Social Support:
Communications with Confidantes

Social & Demographic Factors
- Race/Ethnicity
- Gender
- Age
- Education
- Religiosity
- Employment/Income

Symptom Observed

Patient Explanatory Model

Health Care Seeking Pathway

Health Care Consultation Communication

Diagram labeled:
- Diagnosis Delayed or Timely
- Structural Access to Medical Care
  - Insurance
  - Childcare
  - Transportation

*Includes the decision to seek conventional medical care

APPRAISAL DELAY

CLINICAL DIAGNOSTIC DELAY
Methods: Study I

- **Sample**: 200 recently diagnosed CRC patients
  - 50 patients of each group: AA male, white male, AA female, white female
- **Sites**: VCU in Richmond, VA and CWRU in Cleveland, OH
- **Instruments**
  - Semi-structured, qualitative, cognitive interview
  - Questionnaires
    - Trust in Health Care System
    - Decision Making
    - Relational Communication Scale
    - Brief COPE
    - Lukwago Religiosity/Spirituality Scale
    - MOS Social Support Scale
- Verification of physician encounters via chart review
Methods: Study I

- Semi-structured open-ended interview questions assess:
  - Symptom recognition and appraisal
  - Influence of family and friends
  - Social support
  - Ease of access to care
  - Communication with health care provider
  - Socio-demographic and psychological factors

- Interview piloted in 14 patients diagnosed within the past ~6 months (at VCU)
Methods: Study II

- Stimulated patient experiment to measure the effects of patient characteristics on physician behavior
- **Sample**: 110 primary care physicians (50% male) from community practice-based research networks
- **Procedure**: Each physician will see each of four patient types presenting with CRC
  - African American male
  - African American female
  - White male
  - White female
- Interaction will be tape-recorded and coded
Pilot results: Sample (n = 14)

- 4 males (50% AA), 10 females (30% AA)
- Mean age = 57.5 yrs. (range: 30-85 yrs.)
- Median time between diagnosis and interview = 5 months (range: 2-24 months)
Pilot results:
Subject Recall (self-reported clarity and accuracy)

- On a scale from 1 to 7:
  - How clearly do you remember the events that led up to your diagnosis? Mean = 5.7
  - How sure are you that you accurately remember the events leading to your diagnosis? Mean = 6.2

- An 85-year old participant had the lowest self-reported scores (1 and 4, respectively) and was the only one to rate herself less than average

- 11/14 participants (78%) reported high clarity and accuracy reporting 6 and 7’s on both questions

- Subjects reported symptoms with great detail and vividness and without hesitation
An 85-year-old white woman interviewed 4 months after her diagnosis and 1 year after recognizing her symptoms:

“Well, I had this **terrible burning sensation across my intestines** and it was a **particular spot on the right side** and it just seemed to be like hot or on fire or something. And I had diarrhea for **10 days straight** – it was just horrible and just I was tired all the time and I would sit at my computer and go to sleep. And I would go to bed early. Normally I’m an 11 or 12 o’clock night owl and I’d go to bed early. I wasn’t doing a lot of sleeping but just resting in bed. And this…. I was just totally wiped out.”
Pilot results: Diagnostic delay

- Time between first visit to medical provider and CRC diagnosis ranged from 0-13 months
  - 2/5 African Americans vs 1/8 whites first presented their symptoms at the ER and received their diagnosis at that same visit
  - 3/5 African Americans waited 3-13 months to receive a diagnosis after first presenting symptoms to a physician compared to 1-6 months for 7/8 white patients
- Patients first noticed symptoms 1-14 months prior to diagnosis
  - No clear trends by gender, race, or age
A 45-year-old white woman interviewed 5 months after her diagnosis and 1 year and 2 months after recognizing symptoms:

“I didn’t think anything was wrong until it got real bad and then I realized that something wasn’t right… When I had a bowel movement there was a lot of blood in the bowels… Otherwise six months prior to that it was like a little tiny spot here and there and I just thought it was my hemorrhoids… Well actually the little spots were here and there and they kind of stopped right where I didn’t notice them and then six months later, seven months later it was really bad…. But I kind of brushed it off at first cause I was thinking it was my hemorrhoids for about a week. Then I was thinking it was tomato sauce. Tomatoes. It’s summer time, you know, you eat all those strawberries and tomatoes. And then finally, probably the second week, when it was real bad I just actually got it out of the toilet and looked at it and realized that something was wrong.”
Pilot results:
Symptom description and appraisal

- A 51-year-old African American woman interviewed 2 months after her diagnosis and 6 months after recognizing symptoms reports:

  "Well, see, I never thought about no cancer. You know that didn’t even rested on my mind. I was going there for a bladder infection, really thinking that I had female problems….I wasn’t having pain…I was just peeing and it was just burning a little bit…so when I…find time enough to go and take care of myself, that’s when all the other problems that I was having - abdominal pain that was hurting so bad that I couldn’t button up my pants. The bottom of my abdomen was getting hard, you know. But other than that, and that was, you know there was blood….The only thing I thought was serious was the fact that I was pissing out clouds of blood. You know, that’s the only thing that was serious to me, that was really worrying me ‘cause it was something I had never experienced before. You know, but it’s fine having pain in my abdomen and stuff like that. I mean I didn’t experience that before, you know, it wasn’t that bad. But then it was bad enough, I mean as time went on it got bad enough to where I couldn’t button up my pants. You know, because my abdomen was risen, I guess my bladder was protruding into my…whatever.”
Pilot results: Diagnostic delay

- Some participants waited up to 8 months to tell someone about their symptoms.
- Many (6/14), but not all, told someone about their symptoms immediately upon recognition.
  - Almost all (4/5) African American patients interviewed told someone immediately.
- Half of the participants went to a medical provider within the first month of noticing symptoms, while others waited up to 11 months.
A 54-year-old white male interviewed 2 months after being diagnosed and 1 year after noticing symptoms:

“Uh, I think I told him [physician] about the same things it was before. About having the loose bowl and uh blood in the stool and uh and lets see my stomach was, I was getting nauseated and uh just like I’d drink coffee and stuff I couldn’t keep no, it would just go right straight through me. Stuff like that. He [physician] kind of looked at me and said how long has this been going on? Like he gave me a look like (laughs)…. They, they said that was all right, my blood count. And, uh, then they went on and checked some other stuff, you know how they do, and then they gave me a uh, rectal exam. And he saw just a little fluid on his glove on his finger. So uh, he said it was a fissure. Either him or, up in there, and that’s when they set me up with a colonoscopy… I told him that I had, you know, I had been having that trouble a long time…. I told him I said look Doc, I said, something is wrong. I want you all to put me in the hospital tonight…He wouldn’t do it. He said by the test we took and everything and your blood count, we can not find a reason to put you in the hospital at that time. He sure did. And I forgot that Doctor’s name. He sure did, and I told him off. Because I asked them to put me in the hospital. I knew it was something…..”
Next Steps

- Cognitive interview schedule development has been completed.
- CRC patients have no difficulty recalling their symptoms and actions. Interviews were vivid and detailed.
- Subjects have more difficulty reconstructing their conversations with their health care providers.
- We are now beginning to collect data for study 1. Study 1 data will enable us to construct the simulated patients for study 2.
Thank you for your attention

- Questions?