Title of Project
Racial and Ethnic Variations in Medical Interactions

Principal Investigator and Team Members
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Inclusive Dates of Project
September 2000-August 2006

Federal Project Officer
David Hsia, MD

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Structured Abstract
Purpose: The purpose of this 5-year, ten-program project was to assess the extent to which remediable problems in doctor-patient communication result in racial and ethnic variations in the use of medical services and in health outcomes. Scope: To measure racial and ethnic differences in doctor-patient communication patterns across various disease processes (n=4: osteoarthritis, lung disease, breast cancer risk, and peripheral arterial disease), patient affective outcomes (n=2: trust and satisfaction), and drug policy implementation (n=1: to examine the impact of the Drug Addiction Treatment Act, 2000); to implement and evaluate the effectiveness of a community-based intervention to improve patient communication efficacy (n=); and to test the generalizability of single-study findings with commonly shared definitions and measures across research projects within this program project (n=1). Methods: Facilitated by three support arms, the Administrative, Data, and Information Dissemination cores, this program collected and analyzed three types of data (i) doctor-patient communication data from medical interactions; (ii) qualitative data from focus groups and structured interviews; and (iii) quantitative data from surveys, chart reviews, and direct assessment of physiological parameters such as walking ability. Results: Problems in doctor-patient communication are a significant source of health disparities, with minority populations being disproportionately impacted. The identified problems, however, are remediable and can lead to improved health outcomes.
Key words: Doctor-Patient Communication, Racial/ethnic Disparities, Health Outcomes.

Purpose: Members of different racial and ethnic groups use preventive, diagnostic, and surgical services at different rates, *even when access to care, diagnosis, and severity of illness are the same.* This suggests that racial and ethnic disparities exist in patients' use of services that require prescription by doctors and that disparities in use are emerging within the context of the doctor-patient interaction. The effectiveness of doctor-patient communication is known to affect health outcomes, and the evidence suggests that doctors have poorer communication skills with minority patients.

Scope: Based on the premise that aspects of communication *during* the medical interaction are directly correlated with observed racial and ethnic differences in the process of care, this research program assessed the nature and extent to which remediable problems in doctor-patient communication result in racial and ethnic variations in the use of medical services and in outcomes. The program included six research projects and three support cores and had four major objectives: (1) Etiology: To determine whether poor communication during the medical interaction and medical relationship causes racial and ethnic variations in the use of services in health outcomes; (2) Intervention: To develop and test interventions with both patients and clinicians, with a goal toward improving communication patterns as a means of reducing racial and ethnic disparities in use and outcomes; (3) Information dissemination: To disseminate information to various local and national audiences about racial and ethnic disparities in healthcare and outcomes, about doctor and patient communication skills, and about this research program, in order to translate research findings into practice; and (4) Research capacity building: To build capacity for health services research in racial and ethnic disparities by means of a scholars' program that spans secondary school through post-doctoral training. A seventh research project, a policy component, was added via supplemental funding for a minority investigator to explore the impact of racial and ethnic differences in the implementation of the Drug Addiction Treatment Act (DATA, 2000). Building on findings of the originally proposed work, two additional research projects evolved: (i) a public service community outreach component, the "How to Talk to Your Doctor" (HTTTYD) program, with the stated goal of improving patient communication efficacy in the medical interaction, and serving a theory-testing purpose that examines perceived communication effectiveness in patients who are taught simple communication strategies; and (ii) a meta-analysis project that examines the use of common definitions and measures of constructs used across research projects in this program project as a means of testing the generalizability of single-study findings across multiple to assess the reliability, validity, and applicability of concepts applied in measurements across various racial/ethnic groups.

Methods: With a shared conceptual framework couched within the anthropological context of "explanatory models of illness," this program collected and analyzed three types of data: (i) doctor-patient communication data from medical interactions; (ii) qualitative data from focus groups and structured interviews using some combination of interaction analysis and perceptual measures, as well as direct assessment of physiological parameters such as walking ability; and (iii) quantitative data from surveys, and chart reviews. The work of the research projects in this program project was facilitated by three divisions or cores providing primary and supplemental support through administrative (Administrative Core: providing fiscal, administrative, and personnel oversight), data analysis (Data Core: providing statistical expertise and support and spearheading the meta-analysis project), and information dissemination and research translation (Information Dissemination and Education/Academic Liaison Core: providing research translation, information dissemination, and public service outreach; also spearheading the "How to Talk to Your Doctor…and get your doctor to talk to you!" program) activities.

Results: Individually and collectively, the Houston-EXCEED research program has demonstrated that problems in doctor-patient communication are a significant source of health disparities in minority populations. As equally important as elucidating the context, nature, and extent of these inequities is that this work has yielded many actionable findings that lay the groundwork for future scientific inquiry and implementation projects. Interventions that address the gaps in doctor-patient communication can be expected to lead to better health outcomes. To date, this research program has led to 17 publications in the peer-reviewed literature (another six in press, nine under review, and 19 in preparation) 15 abstracts, and in excess of 200 presentations or publications in the non-peer-reviewed or lay press.

Title of Project

Health Values and Preferences in Osteoarthritis (OA Study)

Project Investigator and Team Members

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Inclusive Dates of Project

September 2000-August 2005

Structured Abstract:

Purpose: The purpose of the study was to evaluate the role of patient ethnicity, physician preferences, and the medical interaction on surgical recommendations for patients with osteoarthritis. Scope: Knee osteoarthritis (OA) is among the most prevalent musculoskeletal disorders. It is a major cause of disability in older Americans. Methods: This study was conducted in four phases. Phase I entailed face-to-face interviews of the public, OA patients, and physicians to examine their attitudes and beliefs toward OA health states. In phase 2, six patient focus groups were conducted to explore patients' and physicians'

beliefs and preferences for total knee replacement. Phase 3 examined the medical interaction between patients with OA and their physicians. Phase 4, a pilot study, used computerized survey instruments designed to assist patients in their decision-making process regarding joint surgery. Conclusion: The analysis of the patient data showed that ethnic variation in willingness to undergo total knee replacement (TKR) is attributable in part to expectations about efficacy, familiarity with the procedure, and trust in physicians. Overall, results suggest that disparities in treatment decisions and quality of care may be more related to communication variables than to race.

Key words: Osteoarthritis, Total knee replacement (TKR), Utilities.

Purpose: The purpose of this study was to explore the role of patient ethnicity on patients' and physicians' values for health states, communication patterns, and surgical preferences for osteoarthritis (OA) of the knee. Physicians, patients, and members of the public were surveyed to inquire about their views, attitudes, and preferences toward the surgical treatment of osteoarthritis.

Scope: The study's specific aims were (1) to evaluate the role of ethnicity in values and preferences for arthritis-related health states in the general public and in patients and physicians using hypothetical scenarios (phase 1); (2) to explore ethnic differences in patients' and physicians' explanations, beliefs, and attitudes in relation to the causes, symptoms, and cures of OA (explanatory models) (phase 2); (3) to relate communication during the medical interaction to cultural explanations of illness, valuation of health status, and OA treatment preferences in patients from different ethnic backgrounds (phase 3); and (4) to develop and test the efficacy of a culturally sensitive decision aid for OA (phase 4) surgical decisions

Methods: Phase 1: Public, Patients, and Physicians: Face-to-face interviews were conducted with the general public (n=193), patients with knee OA (n=198) from different ethnic backgrounds (African American [AA], Mexican American [H], White [W]) and with physicians (n=105) to inquire about their views, attitudes, and preferences toward the surgical treatment of osteoarthritis. Members of the public were recruited through random-digit dialing of adult residents of Harris County. Patients were recruited at Kelsey Seybold Clinics in Houston, Texas. The public and the patients were asked to imagine that they have OA as depicted in the scenarios and to rate them using preference-based methods: rating scales, standard gamble, and time trade-off. Conjoint analysis and willingness to pay instruments were also used to elicit preferences for knee surgery. The physicians (n=105) were sequentially presented with nine different scenarios to evaluate and rate. Phase 2: Focus Groups: We conducted six patient focus groups, each divided by ethnicity: two Hispanic groups, two African American groups and two White non-Hispanic groups (n=37). The focus groups were conducted to explore patients' beliefs and preferences for total knee replacement. Phase 3: Medical Interaction: The study examined the medical interaction between patients (n=85) with OA and their physicians. Medical encounters were audiotaped, transcribed, and subjected to interaction analysis. Patients were recruited at the Michael E. DeBakey VA Medical Center and Harris County Hospital District/Ben Taub Joint Clinics, Houston, Texas. Phase 4: Medical Decision-Making Survey: Patients (n=12) and a physician completed computerized survey instruments designed for patients and physician to strengthen the process of reviewing and documenting the clinical treatment pathways and to help patients better understand their treatment options by incorporating patient's personal factors.

Results: Phase1: Patients, Public, and Physicians: Analysis of the public-generated data revealed significant differences across ethnic groups in the ratings of the scenarios and the respondents' own health. In general, results indicated less willingness in AA populations compared with W and H populations to trade off time in an unhealthy state for perfect health and less willingness to take risks to attain health. Age also had a statistically significant independent effect on ratings, with older individuals rating their health worse but less willing to risk death. There were significant differences between the patients and the public with respect to demographic characteristics: patients were older, had slightly more years of schooling, had higher income, and were more often married or living with a partner. Our findings showed that elicitation of utilities and preferences from scenarios can be dependent on sociodemographic characteristics and disease experiences. Specifically, it is possible that some of the ethnic variation observed in healthcare utilization was attributable to differences in risk tolerance and in trade-offs between benefits and harms. Conjoint analysis data revealed that African Americans were significantly less likely than Whites or Hispanics to choose a surgical scenario for the condition of knee OA. Thus, at least part of the disparity in rates among racial/ethnic groups may be due to differences in preferences. Data on willingness to pay provided evidence of shifts in preferences once a disease was acquired and showed that these shifts may vary in direction by racial/ethnic group. The analysis of the data also revealed that ethnic variation in willingness to undergo TKR was attributable in part to expectations about efficacy, familiarity with the procedure, and trust in physicians. However, ethnicity remained an independent predictor of preferences after controlling for these variables. With the physician survey, significant variation was observed among physicians in their ratings of the scenarios and recommendation for TKR. Analysis of the physician data revealed that ethnic variation was not attributable to PCP bias. Older patient may be less likely to receive a recommendation for TKR independent of their OA severity or comorbidities. Phase 2: Focus Group: Analysis of the focus group data revealed that the attitudes and beliefs of patients with knee OA about TKR are largely based on personal experiences and individual expectations and fears and are largely influenced by their close social environment. These findings emphasized the need for open doctor-patient communication around individual experiences to achieve satisfactory shared decision making for TKA. Phase 3: Medical Interactions: The preliminary results suggest that disparities in treatment decisions and quality of care may be more related to communication variables than to ethnicity. Phase 4: Medical Decision-Making Survey: The computerized decision aid for OA surgical preferences worked well with patients but added substantial time to the clinical encounters. The decision aid would work best as an integrated component of the electronic medical record.

Title of Project
Doctor-Patient Communication in Patients with Lung Disease

Project Investigator and Team Members
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Inclusive Dates of Project
September 2000-August 2005

Structured Abstract:

Purpose: The purpose of this study was to determine whether doctor-patient communication patterns differ by race/ethnicity in patients diagnosed with pulmonary nodules or lung cancer. Scope: Racial/ethnic disparities in lung cancer treatment are well documented but poorly explained. Methods: Patients eligible for inclusion in this study had biopsy-confirmed lung cancer or radiology results suspicious for lung cancer and included a total of 178 patients who were mostly men (170 of 178); three were Hispanic, 38 were Black, and 137 were White. Doctor-patient consultations were audiotaped, and both participants were surveyed about their perceptions of communication. Data were compared by patient race/ethnicity using t-tests or chi-square tests, as appropriate, and were analyzed with mixed linear regression. Patients who declined treatment recommendations were interviewed, and transcribed text was analyzed using qualitative methodology. Results: Patient age, gender, marital status, clinical site, and health status were not statistically different by race/ethnicity. Patients who declined lung cancer treatment provided multidimensional explanations for their decisions. When compared with White patients, Black patients (i) had less education and were less likely to bring a companion to the visit, (ii) were less active in the medical encounter and received significantly less information from doctors, and (iii) had lower trust in physicians.

Key words: Lung neoplasms, Patient physician relationship, Patient participation, Treatment refusal, Communication, Trust.

Purpose: To assess whether doctor-patient communication differs by race/ethnicity in patients with pulmonary nodules or lung cancer

Scope: Racial/ethnic disparities in treatment of lung cancer are well documented but poorly explained.

Methods: Eligible patients had pulmonary nodules or lung cancer and were seen in surgery or oncology clinics for initial treatment recommendations at a large southern VA from 2001-2004. Questionnaires were used to determine patients' perceptions of the quality of physicians' communication and were used to assess patients' pre- and post-visit trust in physician and in healthcare system. Doctor-patient consultations for initial treatment recommendations were audiotaped, and patients completed questionnaires. Audiotapes were transcribed and unitized into utterances. Utterances were coded into categories, including doctors' information giving (e.g., diagnoses, treatments, rationales, instructions, options, risks, benefits) and patients' and companions' active participation (e.g., questions, assertions, concerns). Data were compared by patient race/ethnicity using t-tests or chi-square tests, as appropriate. Mixed linear regression modeling was used to determine the independent predictors of doctor's information giving after controlling for clustering of patients by physician. In-depth interviews were conducted with patients who refused doctors' recommendations for lung cancer treatment, and the resulting data were analyzed using qualitative methodology. Based on the study findings, a video intervention was developed to teach patients about communication skills conducive to facilitating active participation in their interactions with their physicians.

Results: In our analysis of pre-visit and post-visit patient trust in physician, we found that pre-visit trust in physician was statistically similar in Black and White patients, but Black patients had lower post-visit trust in physician than White patients did. In addition, compared with White patients, Black patients judged their physicians' communication as less informative, less supportive, and less partnering. In regression analysis, post-visit trust was predicted by patients' perceptions of physicians' informativeness, partnering, and supportiveness, whereas patient race/ethnicity, pre-visit trust, and other factors were not significant predictors. Thus, perceptions that physicians' communication was less supportive, less partnering, and less informative accounted for Black patients' lower trust in physicians. Our findings raise concern that Black patients may have lower trust in their physicians in part because of poorer physician-patient communication.

Analysis of audiotaped medical interactions revealed that Black patients received significantly less information from doctors and produced significantly fewer active participation utterances than White patients did. In mixed regression analyses, performed to determine the independent predictors of physicians' information giving, patient race/ethnicity was not a significant predictor of physicians' information giving after adjusting for patients' and companions' participation, among other factors. Findings also indicate that Black patients tended to participate less in the medical interaction and this racial/ethnic difference in active participation behaviors fully accounted for the differences by race/ethnicity in information giving. The results indicate a pattern of communication that may perpetuate patient passivity and limited information exchange in which Black patients, compared with White patients, do less to prompt doctors for information, and doctors in turn provide less information to Black patients.

In the qualitative analysis of in-depth interviews with patients who refused treatment recommendations, patients' explanations of their decisions reflected several ways of coping with an undesirable situation, including strategies for reducing, sustaining, and increasing uncertainty. Based on these findings, a video intervention was developed to teach patients to actively participate in consultations with their physician. Six video vignettes were produced along three primary issues most commonly confronted by patients in the medical interaction. These issues were (1) being prepared with a written list of prioritized questions and asking the questions, (2) communicating concerns when there's an issue of trust in the doctor or tests, and (3) sharing personal needs or values with the doctor. For each identified issue, active and passive patient strategies were demonstrated juxtaposed against physician responses to patients' active or passive behaviors. This intervention, by design, is slated toward encouraging active patient participation. The videos were piloted within a small sample of 10 patients who met the inclusion criteria of this study and were refined based on feedback provided by these patients. Future research is needed to test these videos more.

Title of Project

Intervening to Increase Follow-Up to Abnormal Mammograms

Principal Investigator and Team Members

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Inclusive Dates of Project

September 2001-August 2005

Structured Abstract

Purpose: To increase timely follow-up to abnormal mammography in ethnic minority women ≥ 50 years of age. Scope: To ascertain perceived barriers to follow-up to abnormal mammograms in ethnic minority women ages ≥ 50 years and to increase follow-up rates within this population. Methods: Record reviews, focus group interviews, and a randomized controlled trial (RCT) of a self-assessed tool about barriers to follow-up at two community-based clinics in Houston, Texas, were used. Results: Clinical record reviews of 386 women revealed that White women were twice as likely to return for follow-up to an abnormal mammogram than non-White women were. Family history of breast cancer did not play a role in timely follow-up to abnormal mammogram. RCT participants (n=1326) were randomly assigned to either the control (n=664) or intervention (n=662) arm of the study. When asked to characterize their level of concern about follow-up on a five-point Likert scale, only 21% said that they were "not very concerned" about following up on an abnormal mammogram. A delineation of types of concerns expressed by the intervention group revealed that the most commonly expressed concern was fear of having cancer (43%). When asked about barriers to follow-up, the highest rated barrier was work hours (13%). Overall, the majority of the women (73%) noted that nothing would prevent them from following up on an abnormal mammogram. Follow-up to abnormal mammogram was close to 100% for both the intervention and control groups. In total, 43 of 47 women asked to follow-up on an abnormal mammogram result did so before a 3-month interview.

Key Words: Mammography, Follow-up, Barriers to care, Breast cancer.

Purpose: The aims of the project included (1) characterizing the perceptions of women ≥ 50 years old concerning follow-up to abnormal mammograms; (2) developing a self-assessment survey instrument that would provide a tool for ascertaining barriers to follow-up of abnormal mammography; and (3) testing, in a randomized controlled trial, the efficacy of this communication-based survey intervention to increase the proportion of women who follow up within 3 months of an abnormal mammogram.

Scope: Too many women fail to follow up on their abnormal mammograms and, in doing so, may reduce their chances of surviving breast cancer. Ethnic-minority women with breast cancer have poorer survival rates than White women do, even when they have similar access to care. Barriers to follow-up are most significant in women older than age 50 years. In order to assess the scope of the problem, the project studied the experience of mammography and follow-up in White, African American, and Latina women ages ≥ 50 years who were seeking care at two community-based clinic sites in Houston, Texas.

Methods: Initially, records of 386 women requiring follow-up were reviewed for follow-up status. Focus groups (n=23 women) and subsequent qualitative data analysis of the transcripts were used to characterize women's perceptions about follow-up to abnormal mammography (Aim 1). Findings from focus groups (n=23 women), literature review, and record review for women ages ≥ 50 years attending the community-based clinics where the randomized clinical trial was conducted were used to design a self-assessment survey tool for ascertaining barriers to follow-up of abnormal mammography (Aim 2). The self-assessment tool was pilot-tested and employed in a randomized controlled trial of 1326 women who were age ≥ 50 years and seeking mammograms at two community-based clinics. Based on random assignment, 664 were assigned to the control group and 662 were assigned to the intervention group. All participants in the RCT provided demographic information and a brief description of their experience with mammography. The intervention was designed to prime women to consider (and to discuss) barriers to follow-up on an abnormal mammogram with their healthcare providers. Records of RCT study participants were assessed at 3 months to determine which women were asked to return for additional testing (Aim 3);

semi-structured telephone interviews were conducted with women who were asked to follow up on an abnormal mammogram.

Results: Clinical records review of 386 women revealed that 293 women had returned for follow-up on an abnormal mammogram, and 93 had late or no follow-up. Additionally, White women were twice as likely to return for follow-up to abnormal mammogram (p=.003) than were non-White women (African Americans and Latinas). Family history of breast cancer did not play a role in timely follow-up to abnormal mammogram (Aims 1 & 2). In total, 1477 women were approached to participate in the RCT, and 1326 women (~90%) agreed. Latinas were more likely not to participate due to family obligations or “someone waiting”; that is, they did not want to keep their “ride” waiting. All the women who participated in the study provided some demographic information and a brief description of their experience with mammography (Aim 3). Six hundred sixty-two women, assigned to the intervention group, also described their level of concern about follow-up and then provided reasons behind the concern and a list of potential barriers to follow-up. Of 1326 women surveyed, only 21% reported that they were “not very concerned” about following-up on an abnormal mammogram. The most common concerns about follow-up to an abnormal mammogram were the fear of having cancer (43%), followed by a concern about what to do if confronted with decisions about how to proceed with treatment (29%) and understanding medical options about what to do next (23%). Support from family, friends, or medical staff (each listed as a separate item) ranked lowest among women’s concerns related to follow-up. When asked what would prevent them from follow-up, women stated work hours (13%), family responsibilities (7%), ability to pay for care (6.7%), and transportation (6.7%) would provide potential barriers to follow-up care. The majority of the women (73%), however, noted that nothing would prevent them from following up.

Focus group interviews suggested that most women felt that they would follow-up on an abnormal mammogram in a timely manner if asked to do so. The randomized trial portion of our study primed women to consider potential barriers to follow-up, *prior to being asked to follow up* on an abnormal mammogram. The majority of women participating in the trial expressed on the Barriers to Follow-up Tool at least some concern about potential follow-up on their mammogram, yet 43 of 47 women asked to follow up did so within the recommended time period. Thirty (64%) of the 47 women were intervention patients, and 17 (36%) of the control patients had an abnormal mammogram. In both groups, timely return for follow-up was nearly 100%, so we were unable to detect any effect from the Barriers to Follow-up Tool (27 of the 30 in the intervention group did follow up, and 16 of the 17 in the control group did follow up). Novel procedures and new diagnostic equipment were instituted by the clinics between the time of our initial focus group interviews and the conduct of our RCT. Therefore, changes in the institution may have decreased the rate of inconclusive mammograms requiring follow-up and increased the likelihood of detection upon first screening.

Title of Project
Self-Management Improves Life Enjoyment (SMILE)

Principal Investigator and Team Members
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Inclusive Dates of Project
September 2002-February 2005

Structured Abstract
Purpose: The objectives of this project were to (1) develop an instrument to facilitate physician-patient communication to ultimately increase adherence to an exercise regimen for patients diagnosed with peripheral arterial disease (PAD) and (2) to pilot-test the instrument. Scope: In fulfillment of aim 1, to explore, among a racially diverse patient population, perceptions of the benefit of exercise for PAD and the role of patient-physician communication to motivate patients to exercise; for aim 2, to compare our patient-derived communication intervention with a physical activity educational video on subsequent levels of activity over 12 weeks among patients with PAD. Methods: For aim 1, up to two facilitators

conducted five focus groups that were each 90 minutes in duration. Using grounded theory methodology, emerging themes were identified and confirmed by group consensus. For aim 2, a randomized trial was conducted comparing the PAD communication instrument with a PAD educational video. Results: For aim 1, based on 30 emerging codes, primary themes that constitute patients' perceptions of the outcomes of PAD and the factors that would lead to their exercise participation were identified. From this information, a conceptual model that addressed the patient's behavior prior to the diagnosis of PAD and the factors that shape a patient's overall assessment of the role of exercise for PAD was developed. For aim 2, 51 patients with PAD were randomly assigned to a visit with a trained medical student using our communication guide (instrument) for the interaction or to watch a video that provided an overview of PAD and its management. No statistically significant differences were found between the two groups in the change in reported activity level or walking ability when comparing 12-week assessments to baseline assessments. Of note, patients within the video-watching group improved their walking speed.
Key words: PAD, Physician-patient communication, Communication intervention.

Purpose: The objectives of this project were 1) to develop an instrument, based on patient interviews and focus groups, that would facilitate physician-patient communication to increase adherence to an exercise regimen for patients diagnosed with peripheral arterial disease (PAD); and 2) to pilot-test the instrument using a randomized trial.

Scope: To explore, among a racially diverse patient population, perceptions of the benefit of exercise for PAD and the role of patient-physician communication to motivate patients to exercise. Given that little information is available on the association of physician-patient communication and the use of physical activity or on functional outcomes for patients with PAD, we also sought to determine the role of a communication guide to improve the use of physical activity among patients with PAD.

Methods: For aim 1, up to two facilitators conducted five 90-minute focus groups with 35 participants (14 White, 12 AA, and nine Hispanic). To accommodate PAD-diagnosed patients who were older and limited in their options for transportation, 13 one-on-one interviews, each ranging from 45 to 60 minutes in duration, were conducted by one English-speaking interviewer and by one bilingual (English/Spanish) interviewer. Both focus group discussions and interviews were transcribed from audiotaped recordings. Translation of Spanish-language interviews to English was performed during the process of transcription. Themes were derived through repeated individual readings and more than 30 hours of discussion among the authors. Members of the study team read the transcripts independently. Working in teams of two, investigators agreed on codes generated from each transcript. Using grounded theory methodology, emerging themes were identified and confirmed by group consensus. The study team reviewed the codes and discussed commonalities and differences that led to the organization of themes. The team's final step was to organize the themes into families. Data coding and sorting into families was facilitated using Atlas.ti, a qualitative software program. For aim 2, a randomized trial was conducted with 51 patients to compare a patient-derived communication intervention versus an educational video on the use of physical activity at 12 weeks among patients with PAD (as defined by an ankle-brachial index of ≤ 0.955). Twenty-two patients were assigned to the communication intervention arm; 29 were assigned to the video intervention arm. The study intervention was the communication guide developed in aim 1: a nine-item questionnaire with questions that both encouraged patients to think about PAD and to work through an exercise management plan that was appropriate for their lifestyle, with walking encouraged as the form of exercise. Trained clinician study consultants used this questionnaire as a guide during face-to-face interactions with patients to develop a plan for the use of unsupervised exercise therapy. The comparison group watched a video that included an overview of PAD and the appropriate management, including a small discussion on the importance of exercise. Outcomes included the change from baseline to follow-up in mean reported time of participation in various levels of physical activity, as captured by the Physical Activity Recall Questionnaire (PAR) and the National Health Interview Survey (NHIS-Part B-Physical Activity). In addition, mean reported walking distance, speed, and stair climbing scores were captured.

Results: For aim 1, based on focus group (n=35 participants) and one-on-one interviews (n=13), a total of 30 codes emerged from which primary themes were identified that constituted patients' perceptions of 1) the causes and outcomes of PAD, 2) the importance of patient-physician communication, and 3) the factors that would lead to their exercise participation to treat PAD. From this information, a conceptual model was developed that focused on addressing the patient's behavior prior to the diagnosis of PAD and the factors that shape a patient's overall assessment of the role of exercise for PAD. For aim 2, with 51 enrolled patients and a mean age of 67.4 years (SD 8.9), there were no differences between the two groups in any baseline characteristics. For the PAR results, comparing baseline to 12-week follow-up times, patients in the intervention group had no significant change in their mean time of participation in moderate, hard, and very hard activity. Similarly, patients in the video group did not increase their mean time of participation in moderate, hard, or very hard activity. Patients in the video group did increase their walking speed (mean change, 8.5; SD 4.1; P=0.05). There was no statistically significant difference between groups in the change in use of physical activity from baseline to 12 weeks. Based on the NHIS-Part B-Physical Activity results, there were no differences between or within groups in the change in use of the three levels of physical activity. Based on results from the 7-day PAR and NHIS, participants were commonly involved in activity that equated to 3 to 5.9 METS compared with higher levels of physical activity. Activity status and leg symptom subtypes were not different between the two groups at either baseline or 12 weeks. For both groups at baseline and again at 12 weeks, most participants reported atypical (non-Rose) leg symptoms and not classic intermittent claudication (Rose claudication). Though we found no difference between the two groups in the changes in the use of physical activity, possibly due to the small sample size of this pilot study, there were improvements in walking speed at follow-up when compared with baseline within the video group. Also, the number of participants engaged in moderate-level activity increased for both groups.

Title of Project

Patients' Attitudes Concerning Trust (PACT Study)

Principal Investigator and Team Members

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Inclusive Dates of Project

September 2000-February 2003

Structured Abstract

Purpose: The objectives of this project were to (1) develop an instrument capable of measuring racial/ethnic differences in the nature and intensity of patient trust in patient-physician medical interactions and (2) determine whether there are racial/ethnic differences in the nature and intensity of patient trust in patient-physician medical interactions. Scope: Ethnic-minority patients' experiences of trust in physician, facility, and the general healthcare system differ from that of White patients. Assessing the nature and extent of these differences is an important goal toward improving patient trust. Methods: In fulfillment of aim 1, we (a) conducted a literature review and (b) conducted 18 focus groups (n=82) stratified by ethnicity and type of healthcare utilization. In fulfillment of aim 2, we collected data from 504 participants and conducted a psychometric evaluation of the trust measures and the measures of trust determinants, tested for ethnic differences in these measures, and evaluated for differences in "trust" across healthcare settings. Results: The concept of trust is multifaceted and dependent on several key issues. Analysis of racial/ethnic differences in the nature and intensity of patient trust in physicians reveal a complex dynamic and a significant impacted from patients' life experiences.
Key words: Patient Trust, Trust Measurement, Trust in Physician/Facility/Healthcare System.

Purpose: The objectives of this project were to (1) develop an instrument capable of measuring racial/ethnic differences in the nature and intensity of patient trust in patient-physician medical interactions and (2) determine whether there are racial/ethnic differences in the nature and intensity of patient trust in patient-physician medical interactions.

Scope: Ethnic-minority patients' experiences of trust in physician, facility, and the general healthcare system differ from that of White patients. Assessing the nature and extent of these differences is an important goal toward improving patient trust.

Methods: In fulfillment of aim 1 (qualitative component), we summarized the state of the science in trust research by conducting a literature review of studies that included "trust" as an independent variable (n=48) and that were related to the "trust" construct (n=39), and we conducted 18 focus groups (n=82) stratified by ethnicity and type of healthcare utilization (g=government, p=public, pr=private). We had five AA groups (3 g, 1 p, 1 pr), four Mexican American groups (2 g, 1 p, 1 pr), four Vietnamese American groups (1 g, 1 p, 1 pr), four White American groups (2 g, 1 p, 1 pr), and one mixed-ethnic group with people who prefer alternative medicine to traditional medicine. In fulfillment of aim 2 (quantitative component), using items derived under aim 1, we surveyed 504 participants (including 82 participants recruited for aim 1) and conducted a psychometric evaluation of the trust measures and the measures of trust determinants, tested for ethnic differences in these measures, and evaluated for differences in "trust" across healthcare settings.

Results: Analysis of data from aim 1 activities yielded three main "trust" determinant themes: *Humanistic Behavior* (refers to the clinician's, facility's, or system's values and actions that demonstrate the extent to which they have interest in and respect for the patient's concerns), *Technical Competency* (refers to the level of skills of the practitioner – clinicians, facilities, and systems – in choosing and implementing the appropriate processes so as to achieve the most acceptable outcome for a given situation), and *Organization of Care* (refers to the impact of the structural arrangement of services on the availability, efficiency, and coordination of care delivered by clinicians, facilities, and the US healthcare system). Based on these themes, a survey instrument was developed that included 280 trust-determinant test items, including validity measures and demographic items. Three important findings were made regarding the measurement of patient trust in patient-physician medical interactions. (1) It is incorrect to conceive of a single trust-distrust measurement continuum that incorporates the construct of trust occupying the positive or “harder-to-endorse” half of the continuum, the continuum midpoint representing a neutral measurement zone or state of neither-trusting-nor-distrusting and the construct of distrust occupying the negative or “easier-to-endorse” half of the continuum. Rather, the constructs of trust and distrust are truly distinct constructs, each of which is better conceived of - and measured - on its own unique continuum. (2) The construct of trust has multiple facets, appearing to center on, for example, patient perception of physician skill and competence; patient perception of physician care and concern; and patient perception of physician honesty and respect for the patient, etc. The existence of multiple facets, rather than implying trust as a composite construct, suggests that expressed trust may be a reflection of that subset of specific trust-facets relevant to or called into play during the course of particular patient-physician interactions. (3) The significance of trust in a patient’s overall assessment of a patient-physician medical interaction depends to a considerable extent on how much is at stake in the interaction for the patient. In a high-risk situation (e.g., the patient is in considerable pain or is in a life-threatening state), trust becomes a more important factor in that patient’s assessment of a physician and the quality of the medical interaction experienced by the patient.

In fulfillment of aim 2, five findings are relevant to the determination of racial/ethnic differences in the nature and intensity of patient trust in physicians. 1) Because the association between race/ethnicity and physician trust is complex, interactions of patient characteristics and experiences with race/ethnicity should be investigated when examining patients’ pre-existing levels of physician trust. Some patient groups are more vulnerable to having low physician trust than others. Therefore, a trust model incorporating interactions among patients’ predisposing circumstances can (a) help identify the most vulnerable patient groups as regards trust and (b) help address challenges to establishing improved trust. 2) Patients tending to lack physician trust possess multiple proxies for previous life experiences known to influence trust, including racial/ethnic status; the percent of patients lacking trust escalates as the number of these patient-predisposing characteristics increases. Thus, identifying patients lacking trust can be accomplished by developing a count of patients’ predisposing characteristics. 3) A patient group five times more likely than another to report low physician trust was identified. However, to identify such distinct patient groups that are highly vulnerable to beginning physician encounters at low levels of trust may require the investigation of complex, multi-level interactions among patients’ predisposing characteristics and experiences that are beyond more typical two-way race/ethnicity interactions. 4) Patient characteristics, including race/ethnicity, were found to be associated with low validity trust scores, thereby rendering inferences about patient groups’ trust status dependent on the analytic inclusion/exclusion of low-validity measurements. 5) Investigation of differential item functioning (DIF) across measures of physical functioning, mental health, and physician trust revealed a varying potential for measurement bias, some attributable to race/ethnicity. Study measurements should be routinely screened for bias, and the interpretation of study results should account for the potential effects of cultural differences manifesting as differential measurement functioning or differential construct meaning.

Title of Project

Title of Project
Ethnic Variation in Doctor-Patient Communication (Project CONNECT)

Principal Investigator and Team Members
Paul M. Haidet, MD, MPH (PI), Alicia Gladney, MS, Anthony Greisinger, PhD, Kimberly J. O'Malley, PhD, Barbara F. Sharf, PhD, Richard L. Street, PhD

Inclusive Dates of Project
September 2000-February 2003

Structured Abstract

Purpose: The purpose of this project is to explore differences in patient and physician perspectives of illness in primary care settings and to examine associations between racial/ethnic concordance and differences in patient and physician perspectives and patient-physician communication. Scope: This project recruited 270 patients and 31 physicians at 10 primary care sites in Houston, Texas. Methods: A combination of qualitative and quantitative data collection methods, including semi-structured interviews, survey methods, and audiotapes of patient-physician encounters, was used. Data were analyzed using a combination of qualitative and quantitative analysis strategies. Results: Patients and physicians differed in their perspectives in terms of 1) the cause of the illness, 2) the degree to which the patient was at fault, 3) the amount of control the patient had over the illness, 4) the degree to which alternative therapies were seen to be effective, 5) the meaning that the illness held for the patient's life, and 6) the preferred roles in the patient-physician relationship. Physicians misunderstood patients' perspectives in all six of these areas, but patients understood physicians' perspectives. African American patients were less active in the medical encounter and were perceived more poorly by their physicians than White or Hispanic patients were.

Key words: Patient-physician relations, culture, patient-centered care, patient-physician communication.

Purpose: The growing body of research on racial and ethnic disparities in healthcare suggests that patient-physician communication is an important influence on the quality of care in cross-cultural medical encounters. Patients of ethnic minority background, compared with White patients, report that doctors use a less participatory style and are less patient centered. An important source of communicative difficulty in such encounters may be that different cultural backgrounds lead such patients and doctors to have different perspectives on the illness experience. Such different perspectives, when they go unnoticed and are not negotiated, have been hypothesized to lead to poor outcomes through mechanisms of decreased patient trust, decreased patient satisfaction, and poor patient adherence to recommended treatment plans. The purpose of this project was to explore differences in patient and physician perspectives of illness in primary care settings and to examine associations between racial/ethnic concordance and differences in patient and physician perspectives and patient-physician communication.

Scope: This was a cross-sectional study of patient-physician perspectives and communication at 10 primary care clinics (representing a mix of private and publicly insured patients) in Houston, Texas. The study used a combination of qualitative and quantitative survey and observation-based data collection methods.

Methods: The project was conducted in three phases. In Phase 1, the investigators conducted 16 qualitative open-ended, semi-structured interviews with primary care patients of varied socioeconomic and racial/ethnic backgrounds who were experiencing a variety of common chronic illnesses. The purpose of these interviews was to understand patients' perspectives of illness and to generate domains to be used in Phase 2 design of a survey tool to measure differences in patients' and doctors' perspectives. Interviews were analyzed using a narrative qualitative framework, which examines from common themes embedded in the stories that research participants tell during the course of the interview. In Phase 2, the investigators created and tested a survey instrument to measure differences in patients' and physicians' perspectives of illness, using the following procedures: 1) the investigators wrote 195 items in eight domains identified from the Phase 1 qualitative study; 2) the investigators reviewed the list of items and eliminated poorly worded or redundant items; 3) the investigators assembled a working group of 10 patients to complete the item pool and identify problematic items for elimination or re-wording – after this step, the item pool contained 116 items; 4) the investigators distributed the item pool to 300 primary care patients (100 each Hispanic, African American, and White) to complete, along with demographics questions and a battery of previously validated instruments; 5) the investigators factor analyzed the items and refined the item pool to create a final instrument with 19 items in six domains. The six domains on the final instrument contained items about a participant's perspective of illness in terms of cause, fault, meaning, efficacy of alternative treatments, control, and preferences for partnership in the medical encounter. In Phase 3, the investigators enrolled 31 physicians and 270 patients to complete the CONNECT survey instrument after a regularly scheduled primary care visit. In addition, the visit was audiotaped, and study participants completed a number of other survey tools to measure preferences for the patient-physician relationship, time pressure, patient satisfaction, trust, perceptions of each other as communicators, relational similarity, adherence, and perceptions of the extent of disparities in healthcare. The audiotapes were coded using several established analytical schemes for classifying patterns of communication in primary care settings. These data were analyzed in a series of steps to examine a) differences in patient and physician perspectives of illness; b) differences in patient and physician understanding of each others' perspectives; c) patients' perspectives on participation in their own care; and d) ethnic differences in patient-physician communication.

Results: Patients and physicians differed in their perspectives in terms of 1) the cause of the illness, 2) the degree to which the patient was at fault, 3) the amount of control the patient had over the illness, 4) the degree to which alternative therapies were seen to be effective, 5) the meaning that the illness held for the patient's life, and 6) the preferred roles in the patient-physician relationship. Physicians misunderstood patients' perspectives in all six of these areas, but patients understood physicians' perspectives. African American patients were less active in the medical encounter and were perceived more poorly by their physicians than White or Hispanic patients were.

Title of Project

Meta-Analysis of Study Findings of the Houston-EXCEED Program (Data Core)

Principal Investigator and Team Members

David H. Kuykendall, PhD, MBA (PI: 2003-2005), and Nelda P. Wray, MD, MPH (PI: 2000-2002), Michael A. Kallen, PhD, Carol M. Ashton, MD, MPH

Inclusive Dates of Project

September 2000-August 2006

Structured Abstract

Purpose: To (1) test the generalizability of individual study findings across multiple studies sharing common research constructs and (2) explore over multiple studies research questions arising from individual studies. Scope: An analysis of common research constructs across the Houston-EXCEED studies was conducted. Methods: (1) Identify constructs common to the greatest number of studies. (2) Review construct and construct-related variables per study to identify data for meta-analysis. (3) Assess the psychometric characteristics of instrument usage when measuring common constructs. Results: (1) The association between race/ethnicity and physician trust is complex. (2) The percent of patients lacking trust escalated as their number of predisposing characteristics increased. (3) One patient subgroup was five times more likely than another to report low trust. (4) Patient characteristics were associated with low validity trust scores. (5) Investigation of DIF across instrument measurements revealed a potential for bias dependent on data source and effect studied, ranging from slight to great and involving race/ethnicity. Key words: Health disparities, Measurement bias, Race/ethnicity interactions.

Purpose: The primary objective of the EXCEED meta-analysis is to test the generalizability of single-study findings across multiple EXCEED studies that measure common disparity-related research constructs. Generalizability is testable as follows: Statistical power to detect construct effects can be enhanced by combining construct-related data across multiple studies; constructs can be examined across varying clinical conditions; and constructs can be assessed for differential item functioning (DIF) across clinical conditions and race/ethnicity. For example, trust is measured in four individual studies: the PACT Study (O'Malley PI), the Congruence Study (Haidet PI), the Lung Disease Study (Gordon PI), and the OA Study (Suarez PI). Thus, it is possible to enhance statistical power by combining trust-related data across four studies; examine trust across clinical conditions varying in type/severity; and assess trust for DIF across the varying clinical conditions and the races/ethnicities represented in the combined studies.

Scope: EXCEED investigators developed a common, uniform set of 14 health-related constructs that included race, ethnic identity, social class/SES, health status, c-morbidity, perception of communication, trust, internal decisional conflict, acculturation, communication self-efficacy, doctor-patient similarities, self-regulation/management behavior, congruence between doctor and patient explanatory models of illness, and patient satisfaction of care. By combining data from individual studies sharing common constructs, it is possible to comprehensibly explore the importance of cultural differences on disparities in healthcare and to develop imperatives for future measurement practices impacting disparities research.

Methods: (1) Identify key disparity-related research constructs common to individual EXCEED studies. (2a) Review individual study questionnaire responses associated with the most widely used constructs, assessing data quality (i.e., accuracy and missingness) and item-level response scale distributions. (2b) Review available demographic, psychosocial, and outcome data generated per study as related to the common construct of interest. (2c) Determine the extent of data amenable to meta-analysis. (3a) Using confirmatory factor analysis and Rasch item analysis, assess the psychometric characteristics of instruments used to measure the most widely employed key EXCEED research constructs. These analyses will determine if a measurement instrument functions uniformly when used with different racial/ethnic groups; if a measured construct has uniform meaning across different racial/ethnic groups; and if particular items comprising a specific measurement instrument display important DIF in their use with different racial/ethnic groups. (3b) Identify the most potent examples of the use of EXCEED's emphasized research constructs in which the imperative of cultural sensitivity to racial/ethnic differences exists. (3c) Assess the reliability and validity of that subset of frequently employed key research constructs as used in the EXCEED program across different racial/ethnic groups, identifying the potential impact of cultural concepts and response differences.

Results: (1) The association between race/ethnicity and physician trust is complex. For example, little/no pain had a significant enhancing effect on physician trust for White patients but not for African American patients, whereas low income had a significant detrimental effect on physician trust for African American patients but not White patients. Patient characteristics and experiences therefore should be considered in conjunction with race/ethnicity to better understand pre-existing levels of physician trust. In studies of physician behavior and trust, interactions of race/ethnicity with other factors should be included when examining pre-existing levels of physician trust. (2) Logistic regression identified patient characteristics associated with beginning a physician encounter with low physician trust; similar accuracies were achieved using the number of predisposing patient characteristics present as the sole predictive variable. The percent of patients lacking physician trust escalated as number of predisposing characteristics increased. Overall, 25% of the patient sample lacked physician trust; with one predisposing characteristic, 32% lacked physician trust; with three, 50% lacked trust; and with five, 67% lacked trust. Disparities in quality of care can result from a lack of physician trust that exists prior to scheduled medical encounters. Patients with a propensity toward lack of trust possess multiple proxies for previous life experiences known to influence trust (e.g., low income, African American, low education, poor health, men, older). Identification of patients lacking physician trust can be achieved by counting a patient's predisposing characteristics, determined by readily available measures, thus helping providers address special concern patients. Understanding their concerns would be a first step toward addressing root causes of low physician trust and improving delivery processes for vulnerable populations. (3) Although 20% of this patient sample expressed low physician trust, there was considerable variability in trust when the sample was broken down by combinations of patient characteristics: low physician trust was reported by 44% of male, lower-income patients with at least moderate pain but by only 9% of patients with mild pain or less who had had at least some college education. Thus, it was possible to identify a patient subgroup five times more likely than another to report low physician trust .These two patient subgroups were numerically large, representing more than 50% of the sample. Identifying distinct patient subgroups vulnerable to commencing physician encounters at low trust levels may require investigations of multi-level interactions among patients' predisposing characteristics. (4) Several patient characteristics were associated with low validity trust scores: pain status, education, and income. Inferences about subpopulations' trust status were highly dependent upon whether low validity measurements were included in analyses. To better understand and interpret score meaning and effect, inquiries into measurement validity should be made, and valid-measurement-only analyses should be conducted to confirm findings. Some patient subgroups may experience conditions of low validity trust measurement. Disparities research needs to distinguish between what is effect and what is simply inappropriate measurement in subpopulations of interest. High-quality measurement is the sine qua non of disparities research. (5) Investigation of race/ethnicity-, gender-, and education-related DIF across measures of physical functioning, mental health, and physician trust revealed a widely varying potential for measurement bias. Bias potential ranged from slight to great and involved race/ethnicity. It is recommended that study measurements be screened routinely for differential functioning. Interpretation of study results involving EXCEED constructs, in individual EXCEED studies and in the broader health disparities research world, should account for the potential effects of cultural differences manifesting as differential measurement functioning, or, on a larger scale, as differential construct meaning.

Title of Project

Information Dissemination and Education/Academic Liaison (IDEAL) Core

Principal Investigator and Team Members

Frank Martin, MS (Core leader till 2002); Nelda P. Wray and Coreen B. Domingo, MPH (Core Leaders 2003-2006); Paul M. Haidet, MD, MPH, Kimberly J. O'Malley, PhD, Richard L. Street, PhD, Ann N. Tran, MPH, Darrel Zeno, MS, Carol M. Ashton, MD, MPH

Inclusive Dates of Project

September 2000-August 2006

Structured Abstract

<u>Purpose</u>: To serve as the point of contact between the Houston-EXCEED research program and the lay, academic, and scientific communities. <u>Scope</u>: To liaison with the lay, academic, and scientific communities through four components: (1) Information Dissemination; (2) Research Capacity Building by Means of Educational-Academic Liaisons; (3) Outreach and Training for the Recruitment of Study Participants; and (4) Conducting Community Forums on Ethnic Minority Health and the Medical Interaction (the "How to Talk to Your Doctor…and get your doctor to talk to you!" Program). <u>Methods</u>: In fulfillment of component 1, provide (i) community, (ii) scientific, and (iii) media outreach and networking and (iv) professional and academic dissemination. In fulfillment of component 2, develop (i) a health services research academy, (ii) a high school enrichment program, (iii) cultural competency training program, and (iv) a community advisory board. In fulfillment of component 3, facilitate (i) the development of study-related materials specific to various racial/ethnic groups and (ii) advertising and marketing techniques for recruitment of minority patients. In fulfillment of component 4, (i) develop curricula and program materials, (ii) conduct community education forums, and (iii) implement ongoing program monitoring and evaluation. <u>Results</u>: Efforts in fulfillment of specified objectives were diverse and multi-faceted and, as appropriate, were successfully implemented at the local, national, and international levels through various combinations of community, media, and scientific conduits.

<u>Key words</u>: Doctor-patient communication, Community intervention, Patient communication efficacy.

Purpose:

To serve as the point of contact between the Houston-EXCEED research program and the lay, academic, and scientific communities.

Scope:
To liaison through four components: (1) Information Dissemination; (2) Research Capacity Building by Means of Educational-Academic Liaisons; (3) Outreach and Training for the Recruitment of Study Participants; and (4) Conducting Community Forums on Ethnic Minority Health and the Medical Interaction (the "How to Talk to Your Doctor…and get your doctor to talk to you!" Program).

Methods:
In fulfillment of component 1, provide (i) community outreach and networking, (ii) scientific outreach, (iii) media outreach, and (iv) professional and academic dissemination. In fulfillment of component 2, develop (i) a health services research academy, (ii) a high school education and enrichment program, (iii) a cultural competency training program, and (iv) a community advisory board. In fulfillment of component 3, facilitate (i) the development of study-related materials specific to various racial/ethnic groups and (ii) advertising and marketing techniques for recruitment of minority patients. In fulfillment of component 4, (i) develop curricula and program materials and (ii) conduct community education forums (the HTTTYD program) to teach patients communication skills for the medical interaction and (iii) evaluate the HTTTYD program through a pre-post survey format measuring communication efficacy from baseline to post intervention.

Results:
Component 1: (i) Our community outreach and networking (n=~50,000) occurred through (a) participation in local and national health fairs (Veterans' Day, Take a Loved One to the Doctor Day, etc.), (b) conferences (Kelsey Seybold Annual Health Services Research Conf., APA Annual Meeting, etc.), and (c) participation on various minority health boards (African American Health Coalition, Asian American Health Coalition, etc.). (ii) Scientific outreach (n=~108) occurred through various responses to inquiries received at the local, national, and international level regarding the work of the Houston-EXCEED program. (iii) Media outreach (n=~100,000) occurred through (a) print articles/bulletins distributed through media outlets through various parts of the US (Reuters, Washington, DC; Houston Chronicle, Houston, TX; The Skanner, Portland, OR; The Sun, Cleveland, OH, etc.), (b) web-based media (n=~40,000) (AMA's online journal: www.ama-assn.org; National Women's Health Resource: www.healthywomen.org; EXCEED website: www.bcm.edu/medicine/exceed, etc.), (c) radio and television spots (n=~14) (includes public service announcements and television and radio interviews at the local and national level); and (iv) professional and academic dissemination, including manuscripts, abstracts, and oral and poster presentations (n=~ 80). Component 2: (i) Our health services research academy hosted three visiting scholars (Sherrie Kaplan, PhD; Marsha Lillie Blanton, DrPH; Lisa Cooper, MD). (ii) The high school education and enrichment program developed (a) a "career day" speakers' bureau that presented at local area high schools and (b) a paid summer internship program in health services research for HS and undergraduate students. (iii) Cultural competency training programs (n=4) were developed for health services research professionals and lay community health workers. (iv) The program convened an 11-member community-based advisory board to direct and guide the program's community-based research efforts. In fulfillment of component 3, we facilitated the (i) development of various study-related materials through (a) participation in a local community health information kiosk project providing doctor-patient communication information in five languages (English, Spanish, Chinese, Korean, and Vietnamese) through 12 kiosks placed throughout the Houston/greater Houston area (n=~10,000), (b) development of posters and flyers specific to particular ethnic groups for recruitment purposes, and (ii) advertising and marketing techniques for recruitment of minority patients by establishing collaborations with community brokers and advertising in ethnic venues (grocery stores, radio stations, etc.). In fulfillment of component 4, (i) we developed curricula and program materials (handbook, advertising posters and flyers, trainers' bio-sketches, etc.) for a community-based communication intervention, the "How to Talk to Your Doctor…and get your doctor to talk to you!" (HTTTYD) program. Based on the premise that patients who are active communicators achieve better health outcomes, the HTTTYD program teaches patients simple communication strategies appropriate for the medical interaction: **A**: Ask Questions; **B**: Be Prepared; and **C**: Communicate/Express Your Concerns. Data were collected in two phases: (i) across seven sites with 110 participants over the period of June 2001-February 2002 and (ii) across 22 sites with 357 participants over the period of March 2002-August 2005. Demographic data from phase 1 revealed that participants were 73% female, had an average age of 53 (±19.1) years, and ranged in age from 20 to 91 years. Their self-reported ethnicities were 52% African American, 24% White, 20% Hispanic, < 1% Asian, and 3%

other. Sixty-one percent reported having attended some college, 55% reported working full-time, and 35% reported their general health as Very Good or Excellent. The number of participants at each site ranged from four to 30. In total, 11 educators participated in the community education forums, presenting in groups of two, with one MD and one other doctoral-trained or masters-level health educator. Findings from the repeated-measures ANOVA revealed that the group-by-time interaction was not statistically significant (F(6, 63) = 2.0, p=0.09), indicating that the mean pre-post intervention improvement was not statistically different for the participants at the seven centers. The test of the main effect of time was statistically significant (F(1, 63) = 35.1, p<0.001), indicating that patients' communication efficacy, as measured from pre-intervention to post-intervention, improved. Findings also indicated a significant main effect of group (F(6,63) = 3.2, p=0.08).

Demographic data from phase 2 revealed that participants were 72% female, had a mean age of 65.3 (±16.7) years, and ranged in age from 18 to 95 years. Their self-reported ethnicities were 31.1% White, 38.2% African American, 7.1% Hispanic, 21.4% Asian, and 2.3% other. Forty-eight percent reported having attended some college. Sixty-six percent of participants reported being retired or not working, and 62% percent of participants reported their general health as Good to Very Good. The number of participants at each site ranged from five to 55. In total, 10 educators participated in the community education forums, typically presenting in groups of two, with one MD and one other doctoral-trained or masters-level health educator. Preliminary results of repeated measures ANOVA showed a significant time-by-site interaction (F (16,155) = 34.622, p=0.003), indicating that the mean pre-post intervention change was statistically different for the participants at the 16 sites. There were also significant main effects of site (F (16,155) = 2.125, p=0.010) and time (F (1,155) = 39.856, p<0.0001). Analysis is ongoing and will examine, in more detail, the characteristics of each site in an effort to explain changes in repeated measures ANOVA results between phase 1 and phase 2 data. Importantly, through both phases, the How to Talk to Your Doctor intervention proved successful in the stated goal of improving patients' ability to communicate with their doctors, as measured by pre-post data analyses.

In conclusion, the IDEAL core successfully met all of its objectives and established diverse avenues through which these objectives were met.

Title of Project
Variation In Office-Based Opiate Treatment (OBOT Study)

Principal Investigator and Team Members
LeChauncy Woodard, MD, MPH (PI), Loralee Capistrano, MPH, Vanessa Cox, MS, Paul M. Haidet, MD, MPH, Jennifer Kramer, PhD, MPH, Robert Morgan, PhD, Barbara Sharf, PhD, Richard L. Street, PhD

Inclusive Dates of Project
September 2001-August 2005

Federal Project Officer
David Hsia, MD

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Grant Award Number
3 P01 HS10876-04S1

Structured Abstract
Purpose: This goal of this project was to explore whether the impact of the Drug Addiction Treatment Act (DATA; 2000) varied by the race or ethnicity of the target populations (patients with opiate addiction and their physicians). Scope: Despite the efficacy of narcotic replacement for the treatment of opiate addiction, access to this treatment has been limited. To expand access to opiate replacement therapy, Congress passed the Drug Addiction Treatment Act. The success of office-based treatment under the Act will

depend on how effectively physicians communicate with and screen patients for opiate addiction, inform patients about effective and available treatment options, and confer with patients to make appropriate treatment choices.

Methods: This project comprised three components (1) policy analysis; (2) analysis of national and state survey data; and (3) online discourse analysis. Results: In fulfillment of component 1, we identified four themes: (i) barriers to DATA implementation, (ii) financial implications of buprenorphine treatment, (iii) feasibility of treatment, and (iv) potential benefits of office-based treatment. In fulfillment of component 2, we found that (i) of patients who reported non-medical use of pain relievers, 23.1%, 46.1%, and 46.0% reported co-use of heavy alcohol, marijuana, and other ilicit substances, respectively; and (ii) patients who reported discussing their substance abuse with a doctor were two times more likely to report ever receiving treatment than people who did not discuss their use with their doctor (OR = 2.14; 95% CI:1.2-3.8, p=0.01). In fulfillment of component 3, (i) the study identified patients' views regarding the meaning of addiction, (ii) the impact of addiction on their daily lives, (iii) their experiences with recovery, and (iv) their perception that addiction is a health problem similar to other chronic illnesses.

Key Words: Opiate Addiction, Drug Addiction Treatment Act, Substance Abuse.

Purpose: This study was composed of three components: (1) Policy Analysis: *Aim 1*- Characterize the policy implications of federal and state (Texas) legislation/regulations issued in response to the Act. *Aim 2*- Identify potential policy strategies for local implementation (Houston metropolitan area) of the Act and characterize the feasibility, potential benefits, and potential risks/costs associated with key strategies. *Aim 3*- Identify potential barriers to local implementation of the Act, with an emphasis on determining if barriers to implementation vary by the race/ethnicity of the target population. (2) Epidemiology of Opiate Addiction: *Aim 2*- Determine the prevalence of opioid analgesic abuse and prevalence of co-use of other illicit substances among abusers of opioid analgesics, and determine if the prevalence of such use varies by race/ethnicity. *Aim 2*- Explore and characterize treatment-seeking patterns among abusers of opioid analgesics. (3) Explanatory Models of Addiction: *Aim 3*- Explore patient explanatory models of opiate addiction, and determine if explanatory models vary by race/ethnicity.

Scope: Substance abuse has emerged as a critical public policy and public health issue, particularly in large urban areas. Despite convincing scientific evidence about the efficacy of narcotic replacement maintenance for the treatment of opiate addiction, access to this treatment has been severely limited by federal laws prohibiting physicians from providing this treatment outside of federally licensed programs. In an effort to expand access to opiate replacement therapy, Congress passed the Drug Addiction Treatment Act of 2000. This act, signed into law in October 2000, includes provisions that allow physicians to dispense Schedule III, IV, or V narcotic drugs for maintenance or detoxification treatment (e.g., buprenorphine has gained FDA approval in October 2002). The success of office-based opiate replacement treatment under the Act will depend on how effectively physicians communicate with and screen their patients for opiate addiction, inform their patients about effective and available treatment options, and confer with patients to make appropriate treatment selections. This goal of this project was to explore whether the impact of the Drug Addiction Treatment Act varies by the race or ethnicity of the target populations (patients with opiate addiction and their physicians).

Methods: Component 1: Qualitative interviews with key informants (n=15) to define the political, fiscal, and health policy framework relevant to implementation of the Drug Addiction Treatment Act in Houston. Component 2: Analysis of National Household Survey on Drug Abuse (NHSDA) data set to assess the prevalence of opioid analgesic abuse, estimate the prevalence of co-use of other illicit substances in this population, and examine the treatment seeking patterns among abusers of opioid analgesics (n=56,680). Component 3: Examination of racial/ethnic variations in patient explanatory models of addiction using online discourse analysis of an internet discussion group (composed of five online chat-room folders with 180 pages of discourse text that occurred during the period of 7/13/2004-7/24/2004).

Results: Component 1: We identified four themes: (1) barriers to DATA implementation, (2) financial implications of buprenorphine treatment, (3) feasibility of buprenorphine treatment, and (4) potential benefits of office-based buprenorphine treatment. Component 2: (a) We used data from the 2000 National Household Survey on Drug Abuse to identify users of prescription pain medication (93% of which were opioid analgesics) for non-medical purposes within the prior year and to determine predictors of use of heavy alcohol, marijuana, and other illicit substances among users of pain relievers. Approximately 2.9% of Americans reported non-medical use of pain relievers during the prior year. Of these, large percentages reported heavy alcohol, marijuana, and other illicit substance co-use (23.1%, 46.1%, and 46.0%, respectively). Controlling for other predictors in the model, younger age, White race/ethnicity, and single status were all broadly associated with heavy alcohol, marijuana, or other illicit substance co-use ($p \leq .001$). Men were more likely than women to co-use heavy alcohol and marijuana ($p \leq .0001$ and $p \leq .001$, respectively) but not other illicit substances, whereas individuals with a college education were more likely than those with less education to co-use other illicit substances ($p \leq .001$). (b) We subsequently used data from the Texas Commission on Alcohol and Drug Abuse´s 2000 Texas Survey of Substance Use Among Adults (n=10,227) to assess the impact of patient-physician communication on substance abuse treatment among patients who abuse opioid analgesic medications. Approximately 4% of Texans reported non-medical use of pain relievers. Of those who had at least one alcohol and drug problem in the past 12 months, 34% reported discussing their use of drugs or alcohol with their doctor. Patients who reported discussing their substance abuse with a doctor were two times more likely to report ever receiving treatment than were people who did not discuss their use with their doctor (OR = 2.14; 95% CI: 1.2-3.8, p=0.01). Of those who discussed their substance use with their physician, 83% felt the doctor provided helpful advice regarding this issue. Component 3: (a) We conducted a thematic analysis of postings by an Internet discussion group for people actively using or recovering from opiate addiction. We identified patients' views regarding the meaning of addiction, the impact of addiction on their daily lives, their experiences with recovery, and their perception that addiction is a health problem similar to other chronic illnesses. These findings provide valuable insight into patients' views of opiate addiction and reveal a complexity and depth that is often not solicited or understood by physicians.

Houston-EXCEED (ExCellence Centers to Eliminate Ethnic/racial Disparities) Program

Carol M. Ashton, MD, MPH (Principal Investigator)
September 2000-August 2006

Select Publications

1. Ashton CM, Haidet P, Paterniti DA, Collins TC, Gordon HS, O'Malley KJ, Petersen LA, Sharf BF, Suarez-Almazor ME, Wray NP, Street RL. Racial and Ethnic Disparities in the Use of Health Services: Bias, Preferences, or Poor Communication? *Journal of General Internal Medicine* 2003 Feb;18(2):146-52.

2. Byrne MM, Souchek J, Richardson M, Suarez-Almazor ME. Racial/Ethnic Differences in Preferences for Total Knee Replacement Surgery. *J Clin Epidemiol* 2006 Jun 23;59(10):1078-86.

3. Byrne MM, O'Malley K, Suarez-Almazor, ME. Willingness to Pay per Quality-Adjusted Life Year in a Study of Knee Osteoarthritis. *Med Decision Making* 2005 November-December;25(6):655-66.

4. Byrne MM, O'Malley KJ, Suarez-Almazor ME. Ethnic Differences in Health Preferences: Analysis Using Willingness to Pay*. J Rheum* 2004 Sep;31(9):1811-8.

5. Collins TC, Kroll TL, Krueger PN, Wilson P, Ashton CM, Sharf BF. A Qualitative Approach to Developing a Patient-Derived Intervention to Increase Exercise in Peripheral Arterial Disease. *Journal of Cardiopulm Rehab* 2006 March/April;26(2):92-100.

6. Gordon HS, Street RL, Sharf BF, Souchek J. Racial differences in doctors' information-giving and patients' participation. *Cancer* 2006 Sep 15;107(6):1313-20.

7. Gordon HS, Street RL, Sharf BF, Kelly PA, Souchek J. Racial differences in trust and lung cancer patients' perceptions of physicians communication. *J Clin Oncol* 2006 Feb 20;24(6):904-9.

8. Gordon HS, Street RL, Kelly PA, Souchek, J, Wray NP. Physician-patient communication following invasive procedures: an analysis of post-angiogram consultations. *Soc Sci Med* 2005 Feb 17;61(5):1015-25.

9. Haidet P, Kroll TL, Sharf BF. The Complexity of Patient Participation: Lessons Learned from Patients' Illness Narratives. *Patient Education and Counseling* 2006 Aug 2;62(3):323-9.

10. Haidet P, O'Malley KJ, Sharf BF, Gladney AP, Tran AN, Greisinger AJ, Ashton, CM, Street, RL. Associations between the Impact of Terrorism and Health Perceptions of Patients. *The International Journal of Psychiatry in Medicine* 2005;35(3):249-58.

11. Jodlowski, D., Sharf, B.F., Capistrano Nguyen, L., Haidet, P., & Woodard, L.D. "Screwed for life": Examining identification and division in addiction narratives. *Communication & Medicine.* (In Press).

12. Sharf BF, Stelljes LA, Gordon HS. "A little bitty spot and I'm a big man": patients' perspectives on refusing diagnosis or treatment for lung cancer. *PsychoOncology* 2005 Aug;14(8):636-46.

13. Sharf BF, Haidet P, Kroll T. “I want you to put me in the grave with all my limbs”: The meaning of active health participation. In: E.B. Ray (Ed.). *Health Communication in Practice: A Case Study Approach*. Mahway: Erlbaum; 2005. p. 39-53.

14. Souchek J, Byrne MM, Kelly PA, O’Malley K, Richardson M, Pak C, Nelson H, Suarez-Almazor ME. Valuation of Arthritis Health States Across Ethnic Groups and Between Patients and Community Members. *Medical Care* 2005 Sep;43(9):921-8.

15. Street RL, Gordon HS, Ward MM, Krupat E, Kravitz RL. Patient Participation in Medical Consultations: Why Some Patients are More Involved Than Others. *Med Care* 2005 Oct;43(10):960-9.

16. Street RL. Gender differences in health care provider-patient communication: Are they due to style, stereotypes, or accommodation? *Patient Educ Couns* 2002 Dec;48(3):201-6.

17. Suarez-Almazor ME, Souchek J, Kelly PA, O'Malley K, Byrne MM, Richardson M, Pak C. Ethnic Variations in Knee Replacement: Patient Preferences of Uninformed Disparity? *Archives of Internal Medicine* 2005 May 23;165(10):1117-24.

18. Tran AN, Haidet P, Street RL, O’Malley KJ, Martin F, Ashton CM. Empowering Communication: A Community-Based Intervention for Patients. *Patient Educ Couns* 2004 Jan;52(1):113-21.

19. Woodard LD, Hernandez MT, Lees E, Petersen LA. Racial Differences in Attitudes Regarding Cardiovascular Disease Prevention and Treatment: A Qualitative Study. *Patient Educ Couns* 2005 May; 57(2):225-31.

Select Abstracts and Non-Peer-Reviewed Publications

1. Kuykendall DH, Kallen MA. Race, proxies for life experiences, and physician trust [abstract]. *Society of General Internal Medicine’s 28th Annual Meeting*; 2005 May 11-14; New Orleans, LA.

2. Kuykendall DH, Kallen MA. Understanding physician trust: The importance of considering interactions among patient characteristics [abstract]. *Society of General Internal Medicine’s 29th Annual Meeting*; 2006 Apr 26-29; Los Angeles, CA.

3. Kallen MA, Kuykendall DH. Interpreting physician trust: Patient characteristics and the validity of responses [abstract]. *AcademyHealth’s 2006 Annual Meeting*; 2006 Jun 25-27; Seattle, WA.

4. Haidet P, Street RL. From the field: project CONNECT. Medical Encounter 2006;20:33-34.

5. Kelly PA, Gordon HS, Haidet P. A method for on-the-fly coding of doctor-patient verbal data. *Medical Encounter*. 2004; 18(4); 1; 28-29.