

Health Disparities Research Collaborative
Research Report
Issued January 2009

Health dis-par-i-ty | helth di-spar-i-tee |

“Health disparities are the persistent gaps between the health status of minorities and non-minorities in the United States. Despite continued advances in health care and technology, racial and ethnic minorities continue to have more disease, disability, and premature death than non-minorities.” ¹

“...differences that occur by gender, race or ethnicity, education or income, disability, living in rural localities or sexual orientation.” ⁶

“Persistent differences in health indicators by race and ethnicity across multiple categories (chronic disease, communicable disease, intentional and unintentional injuries and maternal and child health indicators).” ²

“A health disparity should be viewed as a chain of events signified by a difference in 1) environment, 2) access to, utilization of, and quality of care, 3) health status, or 4) a particular health outcome that deserves scrutiny. Such a difference should be evaluated in terms of both inequality and inequity, since what is unequal is not necessarily inequitable.” ³

“....a population-specific difference in the presence of disease, health outcomes, or access to care.” ⁴

“...differences in the incidence, prevalence, mortality, and burden of diseases and other adverse health conditions that exist among specific population groups in the United States. Research on health disparities related to socioeconomic status is also encompassed in the definition.” ⁵

¹ *Office of Minority Health Resources Center.*
<http://www.omhrc.gov/npa/>

² *Office of Health Disparities, Colorado Department of Public Health and Environment.*
<http://www.cdphe.state.co.us/ohd/index.html>

³ http://www.publichealthreports.org/userfiles/117_5/117426.pdf

⁴ *Health Resources and Services Administration (2000)*

⁵ *National Institutes of Health (2000)*

⁶ *Healthy People 2010*

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Director's Statement



Research has and will continue to make a significant contribution to the elimination of racial and ethnic disparities in health care. The goal of the Health Disparities Research Collaborative (HDRC) is to provide Henry Ford Health System investigators with the intellectual support necessary to conduct high-quality research that will push forward the edge of science with regard to disparities in health care, and allow Henry Ford Health System to maintain our position of leadership in this mission. The Henry Ford Health System research described in this report illustrates our interdisciplinary approach to identifying and understanding the underlying reasons for health and health care disparities, touching upon hereditary, social, and environmental factors. HDRC researchers are not only seeking to identify the racial differences in morbidity and mortality for specific diseases, but to understand how the type, timing, or quality of care delivered might alter these patterns. Included are studies that promote a more personal, or tailored, approach to delivery of care, employing strategies such as cultural tailoring and learning how patient/physician communication can influence patient behavior, as well as the care delivered.

The assembling of this report has also drawn our attention to opportunities for expansion of the HDRC research portfolio to include more Henry Ford Health System patient populations, such as Hispanic/Latino, Asian-American and Middle Eastern patients. The diversity of the Henry Ford Health System patient population is a strength of our health care system, and HDRC is currently working to develop new tools and methodologies for our investigators in order to better describe and celebrate this diversity.

I am excited about the response to the HDRC and our progress in this our first year. The establishment and rapid growth and productivity of the HDRC in 2008 are a testament to the Henry Ford Health System commitment to equity in health care.



“One of the aspects of Henry Ford Health System that distinguishes us from other health care organizations around the country is the size and scope of our academic program, including both medical education and research. At Henry Ford we are committed to diversity, not just because it’s the right thing to do, but because it is rooted in our values as an organization and it reflects who we are.”

Nancy M. Schlichting
President and CEO
Henry Ford Health System

Dr. Henry Lim, Vice President and Chair of Dermatology and a lead physician researcher in the Multicultural Dermatology Center, along with Dr. Margot LaPointe, Vice President and Director of Research, provided the impetus and support for establishing the Health Disparities Research Collaborative (HDRC).

According to Dr. LaPointe, the HDRC falls within the Research Administration mission, which is “To improve the human condition through excellent basic, clinical and public health research.” States Dr. LaPointe, “With our large patient population and its diversity, along with our electronic medical records, HAP pharmacy records and other research resources, HFHS is well positioned to expand its research activities in racial disparities and provide meaningful solutions to care for its diverse patient population.”

Dr. Henry Lim and Dr. Margot LaPointe



Health Disparities Research Collaborative Goals and Membership

Goals of the Health Disparities Research Collaborative

The Health Disparities Research Collaborative (HDRC) provides a platform for the support and collaboration of Henry Ford Health System investigators working to understand racial and ethnic health disparities.

- Goal 1: HDRC will support research aimed at identifying and understanding the underlying causes and contributing factors to observed racial and ethnic disparities in health care and disease
- Goal 2: HDRC will support intervention studies aimed at eliminating racial disparities in health care and disease
- Goal 3: HDRC will consult with Henry Ford Health System providers and leaders in the translation of research findings into clinical practice and in the implementation of strategies to address and eliminate disparities
- Goal 4: HDRC will act as a clearinghouse for research on racial and ethnic health disparities being conducted at Henry Ford Health System

HDRC Membership

Membership in the HDRC is open. All Henry Ford Health System staff members interested in health disparities research are encouraged to become members. Resources available to members include:

- Assistance with grant submissions, including grant development consultation, project start-up support, and assistance in the execution of funded projects
- The opportunity to apply for pilot and supplemental funding
- Updates regarding national and local health disparities - related funding opportunities, seminars, conferences and workshops
- Waived registration fees for any HDRC sponsored events



Health Disparities Research Collaborative Sponsored Events

The HDRC hosts events that highlight innovative research and research methodology relevant to understanding health disparities. These events provide the opportunity to consult with nationally and internationally renowned researchers.

2008 Health Disparities Research Collaborative First Annual Reception

In January 2008, the HDRC hosted its first Annual Reception, bringing together Henry Ford Health System leaders, clinicians and researchers. Two influential researchers, Dr. Marvella Ford, PhD, and Dr. Rick A. Kittles, PhD, presented the following topics:

Conceptualizing and Categorizing Race and Ethnicity in Health Services Research

Presented by Dr. Marvella Ford, PhD. Dr. Ford is Associate Professor of Biostatistics, in the Department of Bioinformatics and Epidemiology, at the Medical University of South Carolina, and Associate Director of Cancer Disparities at Hollings Cancer Center, Charleston, South Carolina.

Genetic Ancestry and Disease: Implications for Health Disparities Research

Presented by Dr. Rick A. Kittles, PhD. Dr. Kittles is Associate Professor of Medicine in the Department of Medicine, Section of Genetic Medicine and in the Department of Human Genetics, and The Cancer Research Center at the University of Chicago.

Other Sponsored Talks:

Epidemiology Methods Seminar Series, March 2008

Race, Ethnicity and Health: Implications of Terminology for Examining Health Disparities

Presented by Dr. Derek M. Griffith, PhD. Dr. Griffith is Assistant Professor of Health Behavior and Health Education, Associate Director of Evaluation in the Prevention Research Center of Michigan, and Assistant Director for Research and Research Training in the Center for Research on Ethnicity, Culture and Health, at the University of Michigan.

Henry Ford Health System Distinguished Seminar Series, April 2008

The Genetics of Asthma in Hispanics

Presented by Dr. Juan Celedón, MD, PhD. Dr. Celedón is Associate Professor of Medicine at Harvard Medical School and Associate Physician at Brigham and Women's Hospital, Boston, Massachusetts.

Epidemiology Methods Seminar Series, October 2008

Social Determinants of Health and Equity: The Impacts of Racism on Health

Presented by Dr. Camara Jones, MD, PhD. Dr. Jones is the Research Director on Social Determinants of Health in the Division of Adult and Community Health, at the National Center for Chronic Disease Prevention and Health Promotion, Centers for Disease Control and Prevention, Atlanta, Georgia.

Highlighted Research and Selected Publications

Henry Ford Health System HDRC members are involved in a broad range of funded research including, but not limited to: prevention, diagnosis, treatment, and management of diseases that disproportionately affect underserved populations and communities of color.

HDRC Investigator: Gwen Alexander, PhD

Cultural and Motivational Dietary Tailoring

Funding: National Cancer Institute, National Institute of Health

Like most Americans, African-Americans, on average, consume fewer than the recommended 5-9 fruit and vegetable servings per day. Ethnic identity, or “the extent to which one identifies with a particular ethnic group”, is separate from one’s personal identity as an individual, although the two may reciprocally influence each other. Ethnic identity involves an understanding of one’s own and other groups’ labels used for one’s own group, feelings about one’s own group, and behavior patterns specific to a race and/or ethnic group. These factors contribute to health choices and behaviors but little research has been conducted on how to incorporate ethnic identity into health messages. Eat for Life is a randomized trial testing whether tailoring a print-based newsletter fruit and vegetable intervention on individual ethnic identity may enhance intake of fruits and vegetables beyond that of tailoring on demographic, behavioral and social cognitive variables alone. Social cognitive variables include how people process social information. Confirming the diversity within this population, this study suggests that tailoring dietary messages on ethnic identity may improve intervention impact, especially in some subgroups.

Resnicow K, Davis RE, Zhang G, Konkel J, Strecher

VJ, Shaikh AR, Tolsma D, Calvi J, Alexander G, Anderson JP, Wiese C. **Tailoring a fruit and vegetable intervention on novel motivational constructs: results of a randomized study.** *Ann Behav Med.* Apr 2008; 35(2):159-169. PMID 18401673

HDRC Investigators: Charles Barone, MD; Christine Cole Johnson, PhD; Christine Joseph, PhD

National Children’s Study (NCS)

Funding: National Institute of Child Health and Development and National Institute of Environmental Health Science, National Institutes of Health, Centers for Disease Control, and The Environmental Protection Agency

The National Children’s Study is a national longitudinal study of environmental influences on children’s health and development with plans to follow 100,000 children from before birth until age 21. The study will examine asthma, obesity, pregnancy outcomes, neurodevelopmental disorders, physical injuries and infertility. Children will be enrolled while mothers are pregnant, with a special effort toward recruiting women prior to becoming pregnant. Wayne County is one of the 105 counties in the United States, carefully chosen to represent the entire country,

through the work of the Michigan Alliance for the National Children’s Study. The Michigan Alliance for the National Children’s Study comprises Henry Ford Health System, Wayne State University, University of Michigan, Michigan State University, Michigan Department of Community Health and other partners such as the Detroit Department of Health and Wellness Promotion and the Michigan State University Extension Offices. The National Children’s Study will be able to address many health disparities already existing in the United States and to collect sufficient data to address others not yet recognized, as specifically directed by the Children’s Health Act of 2000.

Lyman WD, Barone C, Castle V, Davies HD, Stanton B, Paneth N; The Michigan Alliance for the National Children’s Study.

Making the National Children’s Study a real partnership with academic pediatrics. *J Pediatr.* Nov 2005; 147(5):563-564. PMID 16291338



HDRC Investigator: Evelyn Barrack, PhD



Chromosome 8 gene copy number changes in aggressive prostate cancer in African-American men.

Funding: Department of Defense

Although prostate cancer is the most commonly diagnosed non-skin cancer and the second leading cause of cancer deaths in US men, this cancer occurs more frequently in African-American men and death rates are higher for this group. Prostate specific antigen screening has made early detection of prostate cancer possible and therefore more amenable to cure by surgery. However, many men who undergo radical prostatectomy for what appears to be organ-confined prostate cancer actually have undetectable metastatic disease that will subsequently recur and lead to relapse. The goals of this study are to (1) identify hereditary factors predisposing individuals to a more aggressive form of prostate cancer, and (2) identify molecular features of those cancers with indications that metastases may have already occurred. Such patients could then be treated more aggressively, with the goal of treating both the local and systemic disease.

HDRC Investigator: Andrea Cassidy-Bushrow, PhD

Racial Disparities in Childhood Health: Role of Chronic Stress and Inflammation

Funding: The Fund for Henry Ford Hospital Mentored Scientist Development Grant

More African-American children have elevated blood pressure than European American children. Chronic psychosocial stress is a potential etiological factor in the development of hypertension and levels of psychosocial stress appear higher in African-American children and adults. Several studies show that chronic stress is related to inflammatory biomarkers in children; however, these studies have largely been in highly-selected populations (e.g. asthmatic children) and in racially and ethnically homogenous groups. 300 African-American and European American children ages 14-18 will be examined to study the relationship between chronic stress, inflammation and blood pressure.

Maternal Coping with Environmental Stress: Influences on Pregnancy and Child Health Outcomes

Funding: Institute for Population Studies, Health Assessment, Administration, Services and Economics (INPHAASE)

Birth outcomes tend to be worse among African-Americans and experiences of stress are also similarly higher among African-American populations. The purpose of this project is to examine if maternal stress during pregnancy, maternal coping style for dealing with stress, and the emotional response as a result of maternal stress and coping are associated with birth outcomes (low birth weight and prematurity). The study will recruit 200 pregnant women being seen for prenatal care at Henry Ford Health System; all women will be recruited during their second trimester.

HDRC Investigator: Robert Chapman, MD



Cancer Prevention and Treatment Demonstration for Ethnic and Racial Minorities

Funding: Centers for Medicare and Medicaid Services

The American Cancer Society recommends that even people without symptoms should see a physician for cancer screening. This demonstration project will show that the racial disparity in cancer screening, diagnosis, and treatment between African-American and Caucasian Medicare recipients in Southeast Michigan can be substantially and significantly reduced. Our Information Technology Systems will allow us to readily create a database of high risk patients in addition to individuals referred from our partnering organizations (American Association of Retired Persons, Adult Well-Being Services, and our Faith Based Initiative). Once individuals at high risk are identified, additional outreach efforts will be designed and implemented to enhance cancer-screening rates through provider-directed as well as patient-directed interventions.

HDRC Investigator: Melody Eide, MD

Physician Scientist Career Development Award: Melanoma

Funding: Dermatology Foundation

While melanoma is more prevalent in Caucasians, melanoma is both understudied and has worse prognosis in African-American and Hispanic populations. This study proposes to examine melanoma survival in a large cohort with health coverage and thus presumable equal opportunity for melanoma detection, treatment and survival. Goals of this proposal are to identify a cohort of malignant melanoma patients and estimate epidemiologic measures, including incidence and mortality, within sociodemographic groups. An additional goal is to establish that the sociodemographic disparities exist and establish a hypothesis for future studies while examining health care variables and utilization factors that may relate to survival.

Eide MJ, Weinstock MA, Clark MA. **The association of physician-specialty density and melanoma prognosis in the United States, 1988 -1993.** J Am Acad Dermatol. published online Oct 2008. PMID: 18937998

HDRC Investigator: Christine Neslund-Dudas, MPH



Residential Segregation, Housing Status and Prostate Cancer in African-American and White Men

Funding: Department of Defense

Studies suggest social factors such as racial-residential segregation may be fundamental causes of race disparities in health. This important concept is being considered in the context of racial disparities observed in prostate cancer. This study will determine whether selected area housing and individual housing status (homeownership, housing density, and other housing factors such as age of structure and heating sources) are associated with prostate cancer risk and tumor aggressiveness and whether housing status is associated with observed racial differences in these prostate cancer outcomes. Housing is one of several factors known to be affected by racial-residential segregation.

HDRC Investigator: Iltefat Hamzavi, MD

Prospective, controlled study of the efficacy of the neodymium-doped yttrium aluminium garnet (Nd:YAG) laser for Acne Keloidalis Nuchae

Funding: HFHS Dermatology Department

Acne Keloidalis Nuchae is a disease of the hair follicle, which results in the development of keloid-like papules and plaques on the back of the head and neck area. It can be a disfiguring condition and it is observed almost exclusively in African-American men. No treatment, to-date, has provided a satisfactory combination of established high efficacy and low morbidity. Henry Ford Dermatology has had excellent success with the use of the neodymium-doped yttrium aluminium garnet laser (a hair -removal device) in the management of a number of inflammatory disorders of hair follicles, including Acne Keloidalis Nuchae. This study will evaluate the efficacy and safety of neodymium-doped yttrium aluminium garnet (Nd:YAG) laser in the treatment of Acne Keloidalis Nuchae. Participants will attend eight monthly treatment visits and two monthly follow-up visits. At each visit, physician evaluators will record their global assessments and will assess the extent of Acne Keloidalis Nuchae using a novel, disease-specific tool that uses the number and type of Acne Keloidalis Nuchae lesions, and assessment of the skin between lesions.

HDRC Investigator: Christine Cole Johnson, PhD

Wayne County Health, Environment, Allergy, and Asthma Longitudinal Study (WHEALS)

Funding: National Institute of Allergy and Infectious Diseases, National Institutes of Health

African-Americans suffer disproportionately from allergic asthma. The overall objective of this research is to relate early life environmental factors associated with microbacterial exposure to biological markers associated with risk for pediatric allergy and asthma. Researchers will measure environmental variables theorized to reflect the “Hygiene Hypothesis” (our contemporary “cleaner” environment leads to greater asthma risk); and establish a large, multi-ethnic and socio-economically diverse new birth cohort. The long-term goal is to evaluate these factors and their relationship to clinical allergy and persistent asthma in these children as they grow older. Researchers will store biological samples to develop molecular epidemiologic studies of genetic-environmental risk factors. This study will provide valuable information toward understanding racial differences observed in allergy and asthma morbidity.

Nicholas C, Wegienka G, Havstad S, Ownby DR, Johnson CC. **Influence of cat characteristics on Fel d 1 levels in the home.** *Ann Allergy Asthma Immunol* Jul 2008; 101(1):47-50. PMID 18681084

HDRC Investigator: Christine Joseph, PhD

Tailored Asthma Management Program for Urban Teenagers (Puff City)

Funding: National Heart, Lung, and Blood Institute, National Institutes of Health

In Detroit, urban teenagers aged 15-19 experience higher rates of asthma-related mortality than younger children did and adolescents of other races. Puff City is a unique, multi-media, web-based program to motivate urban teenagers to adapt positive behaviors related to asthma management. Puff City software uses “tailoring” in conjunction with theoretical models of behavior change, to personalize health messages according to the beliefs, attitudes, and barriers of students with asthma. Students access the program through computers at school. A healthcare referral coordinator provides assistance in addressing barriers to effective asthma management.

Joseph CL, Peterson E, Havstad S, Johnson CC, Hoerauf S, Stringer S, Gibson-Scipio W, Ownby DR, Elston-Lafata J, Pallonen U, Strecher V; Asthma in Adolescents Research Team. **A web-based, tailored asthma management program for urban African-American high school students.** *Am J Respir Crit Care Med.* May 2007; 175(9):888-895. PMC1899296

HDRC Investigator: Steven Keteyian, PhD



ACTION – A CHF (Congestive Heart Failure) Trial Investigating Outcomes of Exercise

Funding: National Heart, Lung, and Blood Institute, National Institutes of Health

Heart failure occurs at an earlier age for African-Americans compared to Caucasians, and hospitalization and mortality for heart failure in African-Americans is markedly increased. This randomized controlled trial, examines the effects of exercise training in patients with heart failure versus a non-exercising control group. The combined primary endpoint is all-cause mortality and all-cause hospitalization. An integral part of this study is to promote and support evidenced-based medical therapy in accordance with guidelines from the American College of Cardiology, the American Heart Association and the Heart Failure Society of America.

Whellan DJ, O'Connor CM, Lee KL, Keteyian SJ, Cooper LS, Ellis SJ, Leifer ES, Kraus WE, Kitzman DW, Blumenthal JA, Rendall DS, Houston-Miller N, Fleg JL, Schulman KA, Piña IL; HF-ACTION Trial Investigators. **Heart failure and a controlled trial investigating outcomes of exercise training (HF-ACTION): Design and rationale.** *American Heart Journal.* Feb 2007; 153(2):201-211. PMID 17239677

HDRC Investigator: Paul Kvale, MD



National Lung Screening Trial (NLST)

Funding: National Cancer Institute, National Institutes of Health

Grave disparities in cancer prevention, treatment, and survival exist. The National Lung Screening Trial is a lung cancer screening trial comparing two ways of detecting lung cancer: spiral computed tomography and standard chest X-ray. Results of this study will show if either test is better at reducing deaths from this disease. The trial is slated to collect and analyze data for eight years, and will examine the risks and benefits of spiral computed tomography scans compared to chest X-rays at study end. To date, over 53,000 patients nationwide are enrolled.

McCann J, Artinian V, Duhaime L, Lewis JW Jr, Kvale PA, DiGiovine B. Evaluation of the causes for racial disparity in surgical treatment of early stage lung cancer. *Chest*. Nov 2005; 128(5):3440-3446. PMID 16304297

Prostate, Lung, Colorectal and Ovarian Cancer Screening Trial (PLCO)

Funding: National Cancer Institute, National Institutes of Health

The Prostate, Lung, Colorectal and Ovarian Cancer Screening Trial is a large-scale clinical trial (over 100,000 patients nationwide) to determine whether cancer screening can reduce deaths from prostate, lung, colorectal and ovarian cancer. The underlying rationale for the trial is that screening for cancer may enable doctors to discover and treat the disease earlier and perhaps reduce racial disparities in cancer mortality.

Morton LM, Wang SS, Bergen AW, Chatterjee N, Kvale P, Welch R, Yeager M, Hayes RB, Chanock SJ, Caporaso NE. DRD2 genetic variation in relation to smoking and obesity in the Prostate, Lung, Colorectal, and Ovarian Cancer Screening. *Pharmacogenet Genomics*. Dec 2006; 16(12):901-910. PMID 17108814

HDRC Investigator: Jennifer Elston-Lafata, PhD



Colorectal Cancer Screening Recommendations

Funding: National Cancer Institute, National Institutes of Health

African-Americans are disproportionately affected by colon cancer. The study proposes to use a mixed-method approach that includes both qualitative and quantitative data collection and analyses to understand the use and utility of different aspects of shared decision-making when physicians recommend colorectal cancer screening in primary care. Results from these efforts will allow researchers to distinguish when and how colorectal cancer screening discussions occur in primary care. By linking details on these discussions derived from direct observation of primary care physician-patient interactions with patient preference information from surveys and colorectal cancer screening utilization from claims and laboratory databases, researchers will be in the novel position of being able to determine what aspects of the discussions result in colorectal cancer screening use for what types of patients. In particular, the racial diversity of the Henry Ford Health System insured patient population combined with the racial and gender diversity of the Henry Ford Health System physician population will enable explorations into the role of race and gender, and race and gender concordance, in the translation of physician-patient discussions into colorectal cancer screening use. Project findings will enable the grounding of future interventions in an in-depth understanding of colorectal cancer screening decision-making in the real world of primary care.

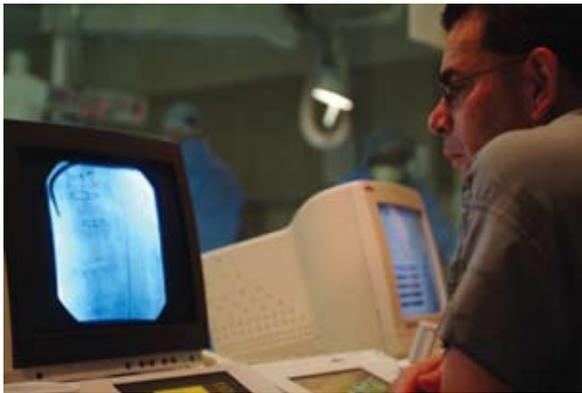
HDRC Investigator: Lois Lamerato, PhD

Disparities and Survival among Breast Cancer Patients

Funding: Department of Defense

In the United States, studies have shown that African-Americans have lower breast cancer survival rates than Caucasians. This project will analyze the association of race and survival with duration of treatment and number of treatment cycles among women receiving chemotherapy for early-stage breast cancer.

HDRC Investigators: David Lanfear, MD and Aaron Kugelmass, MD



Translational Research Investigating Underlying disparities in recovery from acute Myocardial Infarction: Patients' Health Status (TRIUMPH)

Funding: National Heart, Lung, and Blood Institute, National Institutes of Health

The TRIUMPH project is an observational, multi-center prospective registry that will address significant gaps in current knowledge about racial disparities in the context of acute myocardial

infarction (heart attacks) by: (1) focusing on health status outcomes; (2) examining which patient characteristics are most associated with outcome, appreciating that race is a complex social construct (including skin color, socioeconomic factors, and genetics); (3) identifying differences in inpatient and outpatient care that may be modified to eliminate racial disparities; (4) exploring the metabolic consequences of co-morbidities, such as diabetes; and (5) examining genetic mechanisms for a higher rate of poor outcomes in African-American patients compared to that of other race/ethnic groups.

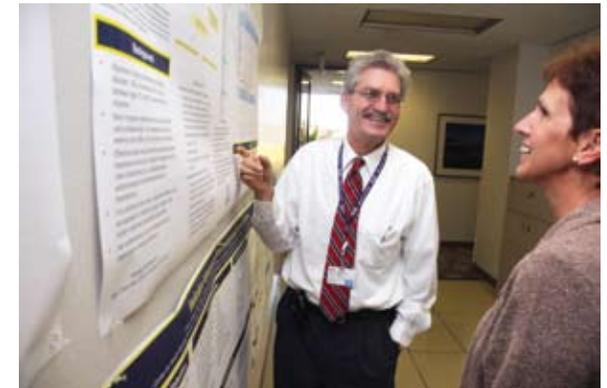
HDRC Investigator: Norman Markowitz, MD

Prevention and Management of Human Immunodeficiency Virus (HIV) in Urban Detroit

Funding: National Institute of Allergy and Infectious Disease, National Institute of Health

African-Americans communities suffer disproportionately from HIV. Previous studies have suggested racial and ethnic differences in response to HIV infection and likelihood of HIV related complications. This project draws upon our experience and our diverse patient population to assemble a cohort of African-American patients with HIV to identify epidemiological characteristics and response to treatment. Through this study, researchers hope to be able to identify patient characteristics that may best determine optimal therapy and prevention measures.

HDRC Investigator: David Nerenz, PhD



Reanalyzing Data Sets with Path Analysis & Structured Equation Modeling to Reduce Racial/Ethnic Health Care Disparity

Funding: Robert Wood Johnson Foundation

Many questions regarding the contribution of race/ethnicity and socioeconomic factors, such as income, to health care disparities remain unanswered. This project involves a reanalysis of several existing data sets that have been analyzed and interpreted as showing a significant racial/ethnic disparity in care that is then “explained” by one or more other factors. The hypothesis is that the estimated effects of race/ethnicity on quality of care will be larger in the path analysis/Structural Equation Modeling than in the regression models, since the former models take indirect effects into account. Preliminary analyses from three data sets indicate that this is exactly what occurs - indirect effects of race/ethnicity (mediated through racial differences in income, for example) are detected and quantified in path analysis. In addition, the method allows for a more precise specification of causal mechanisms underlying racial/ethnic disparities in care.

HDRC Investigator: Manel Pladevall, MD

The Clinical Effectiveness of Pharmacy Adherence Information for Diabetes Control

Funding: National Institute of Diabetes and Digestive and Kidney Diseases, National Institutes of Health

African-American patients with diabetes are less likely than Caucasian patients to achieve long-term control of their blood sugar. This is a clinical trial to test the effectiveness of providing primary care physicians with both adherence measurements and an adherence clinic to improve adherence to diabetic and lipid-lowering drugs. The study uses qualitative methods to guide intervention design and implementation and will include both process evaluation and treatment fidelity measures. The intervention is tailored to patients' adherence and goal levels. The study also will evaluate the cost effectiveness of the intervention.

Pladevall M, Williams LK, Potts LA, Divine G, Xi H, Lafata JE. **Clinical outcomes and adherence to medications measured by claims data in patients with diabetes.** *Diabetes Care.* Dec 2004; 27(12):2800-2805. PMC1262687

HDRC Investigator: Benjamin Rybicki, PhD

Admixture Mapping of Sarcoidosis Genes in African-Americans

Funding: National Institute of Allergy and Infectious Diseases, National Institutes of Health

Sarcoidosis is a relatively rare autoimmune disease that can affect the skin, lungs, heart, brain and nervous system, eyes, and other organs. Little is known about the causes of the disease and there is no cure. The incidence of Sarcoidosis in African-Americans is approximately three times that of Caucasians in the United States. The study involves

a multistage scan of the complete human genome targeting specifically those genes of African origin in African-Americans that predispose to Sarcoidosis susceptibility and radiographically persistent disease. Using deoxyribonucleic acid (DNA) samples and DNA previously collected, researchers will conduct analyses to identify Sarcoidosis genes related to this inflammatory disease that are potentially linked to African ancestry.

Judson MA, Hirst K, Iyengar SK, Rybicki BA, El-Ghormli L, Baughman RP, Donohue JF, Elston RC, Kavuru MS, Moller DR, Newman LS, Rabin DL, Rossman MD, Teirstein AS, Iannuzzi MC; SAGA Study Consortium. **Comparison of sarcoidosis phenotypes among affected African-American siblings.** *Chest.* Sep 2006; 130(3):855-862. PMID 16963686

HDRC Investigator: Keoki Williams, MD



Genetic Determinants of Inhaled Steroid Response in African-Americans with Asthma

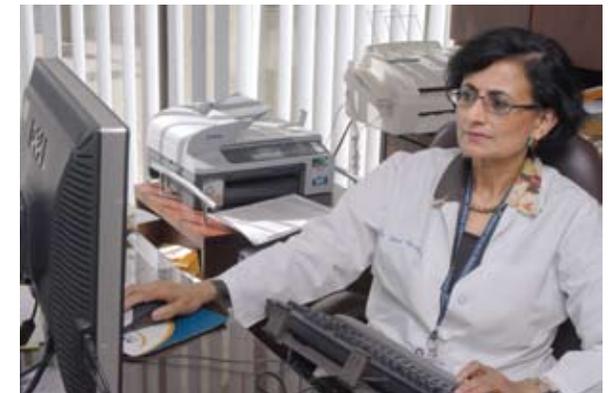
Funding: Sandler Program for Asthma Research

Previous studies have suggested racial and ethnic differences in response to certain asthma medications. This project will draw upon our experience and our diverse patient population to assemble a cohort of African-American patients

with asthma to elucidate the genetics of inhaled corticosteroid medication response. These medications are considered to be the cornerstone of asthma treatment and control. Through this study, researchers hope to be able to identify genetic markers related to both medication response and lung function in patients with asthma.

Yang JJ, Burchard EG, Choudhry S, Johnson CC, Ownby DR, Favro D, Chen J, Akana M, Ha C, Kwok P, Krajenta R, Havstad SL, Joseph CL, Seibold MA, Shriver MD, Williams LK. **Differences in allergic sensitization by self-reported race and genetic ancestry.** *J Allergy Clin Immunol* 2008;122:820-827. PMID 19014772

HDRC Investigator: Maria Worsham, PhD



Benign Breast Disease and Breast Cancer: Emerging Findings in a Diverse Population

Funding: National Cancer Institute, National Institutes of Health, and American Cancer Society

African-American women are diagnosed with breast cancer at earlier ages, at more advanced stages, and experience a higher mortality than Caucasians. The understanding of risk factors in the African-American population is limited by the lack of ethnically diverse benign breast disease cohorts. A

benign breast disease cohort (case-cohort study) was developed from a multi-ethnic population to address this issue and evaluate epidemiologic risk factors as predictors for progression to breast cancer from benign breast disease.

Worsham MJ, Abrams J, Raju U, Kapke A, Lu M, Cheng J, Mott D, and Woman SR. **Breast cancer incidence in a cohort of women with benign breast disease from a multiethnic primary health care population.** *Breast J.* Mar-Apr 2007; 13(2):115-121. PMC1828132

HDRC Investigator: Dakara Rucker Wright, MD

Hair and Scalp Disorders and Hair Care Practices Among African-American Girls

Funding: Henry Ford Resident Research Grant

Certain hair disorders that disproportionately affect African-American women such as traction alopecia, acquired trichorrhhexis nodosa (hair breakage) and trichoptilosis (hair splitting), have been associated with, but not proven, to be a cause of many years of certain cultural hair care practices that usually began during childhood or adolescence. Few studies have quantitatively or qualitatively examined hair care practices in African-American women, and none have examined these practices among African-American children in the United States specifically. Therefore, the goals of this study are to: (1) determine the prevalence and frequency of certain hair care practices performed on African-American children and adolescences' hair and (2) to examine those hair care practices that may be associated with risk of hair and scalp disorders and symptoms.

HDRC Investigator: Marcus Zervos, MD

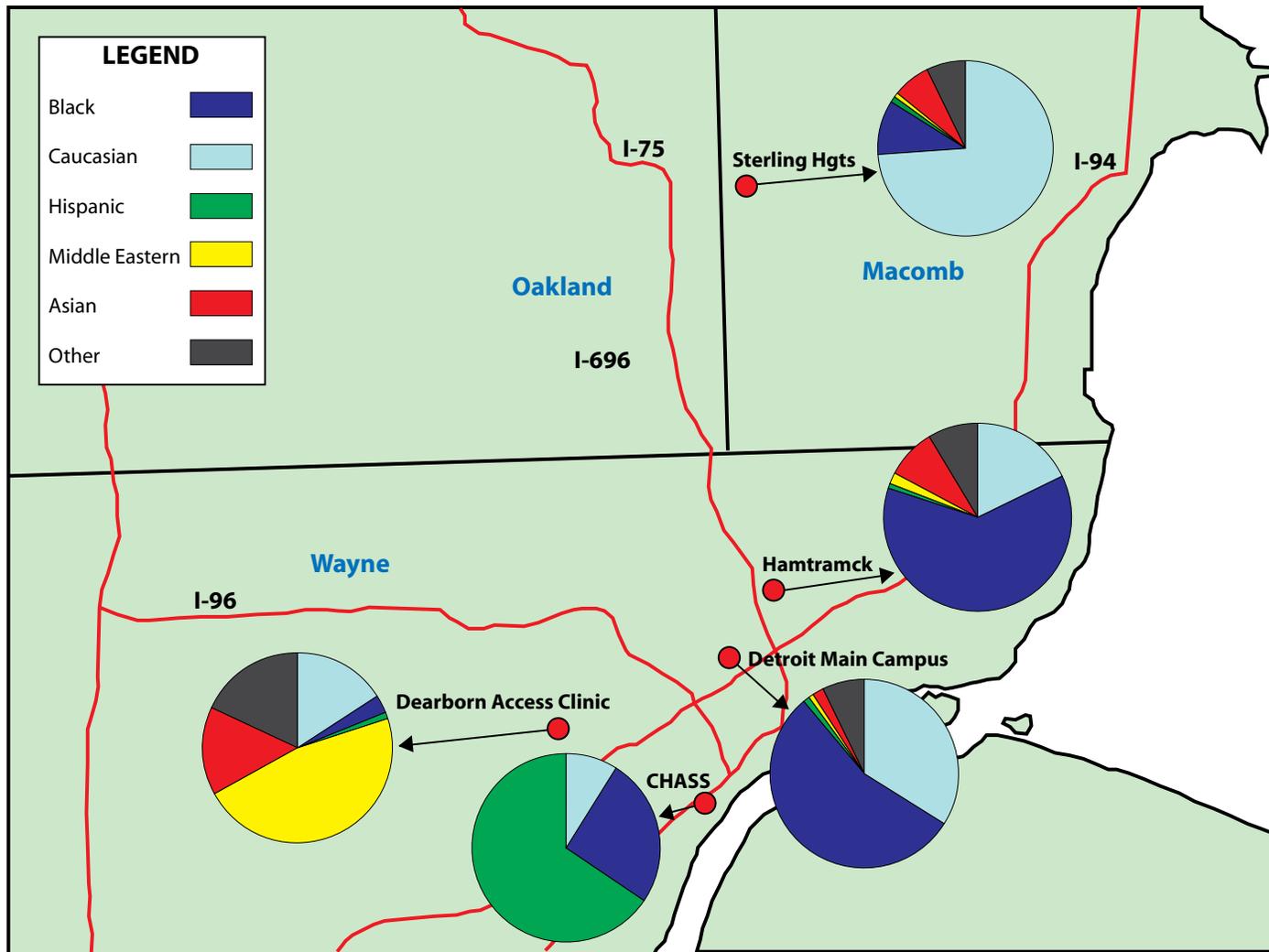
Epidemiology of Methicillin-resistant Staphylococcus aureus (MRSA) in Urban Detroit

Funding: Centers for Disease Control

African-American communities suffer disproportionately from methicillin-resistant Staphylococcus aureus (MRSA). Previous studies have suggested racial and ethnic differences in response to MRSA infection and likelihood of recurrent disease. This project draws upon our experience and our diverse patient population to assemble a cohort of African-American patients with MRSA to identify epidemiological characteristics and response to treatment. Through this study, researchers hope to identify those patient characteristics that may best determine optimal therapy and control measures.



Patient Diversity at Henry Ford Health System



The Henry Ford Health System serves a diverse patient population. Clinic and hospital sites provide health care opportunities in four major southwestern Michigan Counties (Wayne, Oakland, Macomb and Washtenaw Counties). In addition to the Henry Ford Hospital, clinic sites located throughout Metro Detroit area provide primary and specialty care to our patient population. Our diverse patient population uniquely positions Henry Ford Health System as a national leader in the study of racial and ethnic disparities in health and health care. Here we highlight the diversity of the Henry Ford Health System patient population by presenting patient characteristics from five of the many sites throughout Metro Detroit (Comprehensive Health and Social Services (CHASS) Clinic, Dearborn Arab Community Center for Economic and Social Services (ACCESS), Sterling Heights, Hamtramck and Henry Ford Main Hospital) providing primary and specialty care.



Task Force for the Collection of Patient Race, Ethnicity and Primary Language

Collecting race, ethnicity and primary language information from patients is a critical part of reducing health care disparities. Reasons for collecting this information include: the increasing diversity of the United States and the Henry Ford Health System patient population, the alarming disparities evident in health status of United States citizens, and the need to monitor and track our progress. In 2008, Henry Ford Health System established a Task Force for the Collection of Patient Race, Ethnicity, and Primary Language. The goals of the Task Force are to assess and enhance the collection of this data at Henry Ford Health System.

Members of the Task Force include Dr. Kimberlydawn Wisdom, Vice-President of Community, Health, Education and Wellness, Christine LM Joseph, PhD, Director, HDRC; Denise White-Perkins, MD, Director, Institute on Multicultural Health; and Nancy Sammons, RN, Director, Clinical Care Design, Office of Clinical Quality & Safety.

Henry Ford Health System Programs, Departments, Centers and Initiatives Supporting Research on Racial and Ethnic Health Disparities

Biostatistics and Research Epidemiology

The Department of Biostatistics and Research Epidemiology at Henry Ford Health System conducts and promotes population and clinical research studies to advance biomedical knowledge that will result in disease prevention and overall improved health status. In particular, Biostatistics and Research Epidemiology specializes in applied and theoretical statistics and epidemiology, with special emphasis on cancer, genetics, respiratory and neurological diseases. HDRC is able to support members through the expertise of Biostatistics and Research Epidemiology staff members who provide consultation on grant development, study design and statistical analysis.

Center for Health Services Research

Much of the work within the Center for Health Services Research focuses on explorations related to the prevention, diagnosis, treatment, and management of chronic conditions, and cancer. The former includes cardiovascular diseases (such as hypertension and lipid disorders), neurological disorders (such as migraine and multiple sclerosis), as well as asthma and diabetes. These diseases often disproportionately affect underserved populations and/or communities of color. Center for Health Services Research racial disparities research includes projects on provider and patient adherence and quality improvement, including patient safety. Epidemiological studies, clinical trials, cost-effectiveness analyses, and demonstrations and evaluations are used to achieve research goals. The primary research laboratory consists of the many diverse populations and settings of the Henry Ford Health System.

Community-Oriented Primary Care

The three-year residency-training program in the Department of Family Medicine in the Henry Ford Health System is designed to prepare family physicians for successful careers in a rapidly changing health care environment. Henry Ford Health System is one of the largest and most progressive integrated health care delivery systems in the country, thus through Community Oriented Primary Care Henry Ford Health System residents learn the most up-to-date approaches to clinical practice, such as evidence-based medicine, disease state management, population health, managed care, use of computers in medicine, and quality improvement methods.

Community Oriented Primary Care has been uniquely strong in attracting faculty and residents with a special interest in urban practice. Community Oriented Primary Care requires residents to develop their own research study after conducting several home care visits of patients that they have previously cared for. These visits allow residents to witness their patients in a real life setting and also allow them to examine the environment, social barriers and their patient's access to resources. The practices, which have become the primary ambulatory training sites, are vital to the Detroit community for their roles in improving health status where morbidity and mortality rates often exceed national norms. Residents are primarily working in the Detroit's North West Side and Detroit's East side, where 90% of patients are African-American.

Josephine Ford Cancer Center

The Josephine Ford Cancer Center is one of the largest cancer centers in Michigan and is consistently ranked by U.S. News and World Report as one of the top cancer centers in the nation. Josephine Ford Cancer Center treats more than 14,000 cancer patients each year, and more than 15 percent of all people in southeast Michigan diagnosed with cancer are treated at Henry Ford Health System. Each year, more than 3,000 newly diagnosed cancer patients visit the center for treatment.

The Josephine Ford Cancer Center has a multidisciplinary research program including basic and population scientists and clinician researchers committed to studying the prevention, early detection, and treatment of cancer. Researchers of the Josephine Ford Cancer Center have a strong focus on research that will address and eliminate observed racial disparities in cancer incidence, treatment and outcome.

Multicultural Dermatology Clinic

The Multicultural Dermatology Clinic, established in 2007, is one of the few clinics of its kind in the nation. Darker skin reacts differently to medications and cosmetic treatments. This creates unique skin-care challenges requiring the attention of dermatologists who specialize in ethnic skin care. The Multicultural Dermatology Clinic dermatologists specialize in treating skin and hair conditions for people of Asian, East Indian, African-American, Hispanic and Middle Eastern descent. Dermatology Department Chair Dr. Henry Lim, along with Dr. Diane Jackson, Dr. Raechele Cochran Gathers, and Dr. Iltefat Hamzavi, form the cornerstone of the Multicultural Dermatology Clinic.

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