

## Disparities and How They Affect Patients with Pain

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### 2008 National Healthcare Disparities Report

- Disparities remain prevalent across many care settings including: primary care, home health care, hospice care, emergency departments, hospitals, and nursing homes.
- For sizable proportions of measures of quality, racial and ethnic minorities and the poor receive lower quality care.

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### 2008 National Healthcare Disparities Report - Race

- In 2005, 33% of the US population identified themselves as minorities. By 2050, it is projected that this number will be almost 50% .
- For Blacks, Asians, American Indians/Alaska Natives (AI/ANs), Hispanics, and poor people, at least 60% of measures of quality of care are not improving.
- Blacks received poorer quality care than Whites for 50% (19/38) of core measures.
- Blacks received better quality care than Whites for 11% (4/38) of core measures.

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**2006 National Healthcare Disparities Report - Income**

- Poor people received lower quality of care than high income people for 65% (11/17) of core measures
- and better quality care for 6% (1/17) of core measures

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**Access to care**

- Blacks had worse access to care than Whites for half (3/6) of core measures
- Asians had worse access to care than Whites for 20% (1/5) of core measures
- AI/ANs had worse access to care than Whites for 33% (1/3) of core measures.
- Hispanics had worse access than non-Hispanic Whites for 100% (6/6) of core measures.
- Poor people had worse access to care than high income people for all 6 core measures.

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**Poor**

- "Poor" is defined as having family incomes less than 100% of the Federal poverty level (\$10,400 annually) and "high income" is defined as having family incomes 400% or more of the Federal poverty level.

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### Poor

- The number of poor people in America rose from 31.6 million in 2000 to 36.5 million in 2006 and the rate of poverty increased from 11.3% to 12.3% during the same period.
- Living below the poverty level
  - 24.3% of Blacks
  - 20.6% of Hispanics
  - 10.3% of Asians
  - 8.2% of Whites(US Census Bureau 2007)
- Poor people had higher rates of requiring treatment for illicit drug use.

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- For poor people, disparities remain in communication with health care providers. The percentage of children whose parents reported communication problems with their health providers was nearly four times as high for poor children as for high-income children.
- Poor adults were also more than twice as likely not to get timely care for an illness or injury.

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### 2008 National Healthcare Disparities Report

- Of disparities in quality experienced by Blacks, Asians, American Indians, Alaskan Natives, and Hispanics, about a quarter were improving and about a third were worsening.
- Two-thirds of disparities in quality experienced by poor people (8/12) were worsening.

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**Disparities in access to health care that are getting worse for selected groups**

- Black vs. White
  - Usual primary care provider
  - Unable or delayed in receiving care due to financial or insurance problems
- Poor vs. high income
  - Source of ongoing care
  - Usual primary care provider
  - Unable or delayed in receiving care

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**Reduced Access to Medical Care During the Past 12 Months Due to Cost - 2005**

Race	Did not get medical care due to cost	Delayed medical care due to cost	Did not get Rx drugs due to cost
White	5.1%	7.6%	7.0%
Black	6.4%	7.3%	8.9%
Hispanic	6.0%	7.7%	8.8%

National Center for Health Statistics , 2007

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**Reduced Access to Medical Care During the Past 12 Months Due to Cost - 2005**

Poverty Level	Did not get medical care due to cost	Delayed medical care due to cost	Did not get Rx drugs due to cost
<100%	10.3%	12.2%	14.1%
100%-200%	9.0%	11.6%	11.6%
≥200%	3.2%	5.4%	4.6%

National Center for Health Statistics , 2007

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### **Pain-related Disparities**

- **Seen in all types of pain**
  - Pain in the Emergency room
  - Cancer pain
  - Chronic noncancer pain
  - Pain in the Primary care setting
- **Based on**
  - Race
  - Income
  - Gender
  - Age
  - Access

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### **Treatment of Pain in the ED**

- **Quality improvement initiatives were instituted in the late 1990s following studies identifying lack of effective pain treatment**
- **National Hospital Ambulatory Medical Care Survey identified pain-related ED visits from 1993-2005**
- **42% of the 374,891 ED visits were pain-related**
- **Opioid prescribing for pain-related visits increased from 23% in 1993 to 37% in 2005**
  - More pronounced in 2001-2005  
(Pletcher et al., JAMA 2008)

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### **Treatment of Pain in the ED**

- **White patients with pain were more likely to receive an opioid (31%) than Black (23%), Hispanic (24%), or Asian/other patients (28%)**
  - **Trend did not diminish over time with 40% of White patients and 32% of all other patients in 2005**
- **Differential prescribing**
  - More pronounced with increasing pain severity
  - Evident in long bone fractures, nephrolithiasis, and among children
- **Opioid prescribing for pain-related visits to the ED improved, but differences in opioid prescribing by race/ethnicity have not diminished**

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### Treatment of Cancer Pain

- In a study of 108 African American and Hispanic patients with metastatic or recurring cancer
  - 28% of Hispanic and 31% of African American patients received analgesics inadequate to manage their pain
  - Although the majority of patients received appropriate analgesics, 65% reported severe pain
- In a second study of 55 physicians and nurses who treated the above patients
  - Physicians underestimated pain severity in 64% of Hispanics and 74% of African American patients
  - Physicians were more likely to underestimate the pain of female than male patients (Anderson, 2000)

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### Treatment of Cancer Pain

- In the ambulatory outpatient cancer setting, 281 patients who reported having pain in the last month
- Black patients were found to have significantly higher pain levels, more distress, and lower functional status than White patients
- When perception of control over pain was statistically controlled, disparities in pain-related distress and functional status became insignificant  
(Vallerand et al., 2005)

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### Hospice Care – Receiving the Right Amount of Medicine for Pain

- 5.7% of hospice patients families reported that they did not receive the right amount of medicine for pain
  - Significantly higher for Blacks (7.6%) and Asian or Pacific Islanders (11.3%) than for Whites (5.7%).
  - Also higher for Hispanics than for non-Hispanic Whites (6.9% compared with 5.7%).

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### Differences in Chronic Pain

- Nationally represented probability telephone survey
  - 454 White subjects
  - 447 African American subjects
  - 434 Hispanic subjects
- 1/3 in each group reported frequent or persistent pain lasting 3 months or longer in the previous year
- 1/3 in each group of the final sample reported disabling pain
- Physician visits in the last year – Hispanic 68%, Caucasian 82%, African American 85%
- Prescription medications – Hispanic 63%, Caucasian 75%, African American 81%

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### Differences in Chronic Pain

- No differences in pain severity by race or ethnicity
- Characteristics that predicted disabling pain:
  - Income of \$25,000 or less annually (OR 2.54)
  - Less than a high school education (OR 1.59)
  - Being unemployed (OR 1.5)
- Minorities had more characteristics identified as predictors
- Race and ethnicity contribute to clinical diversity, but social disadvantage is the more important predictor of disabling pain

(Portenoy et al., 2004)

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### Chronic Pain Clinic Setting

- Retrospective analysis of 3669 charts in a multidisciplinary pain clinic patients 18-50 years
- Found Black patients reported more pain, depression, symptoms consistent with PTSD, and sleep disturbance than White patients

(Green et al., 2003)

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### Community Based Chronic Pain

- National telephone sample of 2407 (214 African Americans, 214 randomly selected Caucasians)
- Interviewed about:
  - Pain experience – severity, interference, emotional burden
  - Psychosocial outcomes – coping, attitudes and beliefs, catastrophizing, social support and hindrance, pain's interference with daily life activities, treatment status, and medication taking
- No significant differences in pain severity, emotional burden, or treatment status

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### Community Based Chronic Pain

- Differences found in psychosocial functioning
- Compared to Caucasians, African Americans reported
  - Greater pain-related interference with daily living
  - Deficiencies in coping
  - Counterproductive attitudes and beliefs
  - Greater impatience and insensitivity from the most important person in their lives

(Ruehlman et al., 2005)

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### Pain in the Primary Care Setting

- Pain is a complaint heard in 50% - 70% of primary care office visits
- Prevalence of chronic pain in the general population 10% - 40%
- Pain impacts physical and psychological functioning
- People at risk for receiving inadequate pain management include patients with a history of substance abuse and people of color

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### Concerns of a Low-Income Primary Care Population

- ⊙ Study of 500 consecutive patients (18-64 years) in a primary care clinic serving only uninsured, low-income patients
- ⊙ Patients reported their most common chronic medical problems were headaches, chronic back problems and arthritis.
- ⊙ Most common concern was problems with mood
- ⊙ Illness content is dominated by emotional distress and physical pain (Mauksch et al., 2003)

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### PAIN AND FUNCTIONAL STATUS IN A PRIMARY CARE CLINIC FOR INDIGENT ADULTS

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### Co-investigators

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- Ellen DiNardo, MSN, RN
  - Detroit Receiving Hospital, University Health Center
- Cheryl Nordstrom, PhD (Statistician)
  - Wayne State University College of Nursing
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**Research Assistants**

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**Purpose**

- Describe the characteristics of pain and its relation to
  - Functional status
  - Perception of control
  - Coping
  - Depression
  - Self treatment of pain in patients seen in an urban primary care clinic for low income adults.

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**Eligibility Requirements**

- 18 yrs or older
- Receiving treatment at the clinic
- Cognitively intact
- Not pregnant
- Income of \$250/month or less
- Pain in the past 2 weeks

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### Participant Characteristics (n=301)

- ⊙ Age - Mean 48 yrs (SD=8)  
Range 22-64
- ⊙ Gender -  
Male 159 (53%) Female 142 (47%)
- ⊙ Race: Black 278 (92%)  
White 16 (5%)  
Hispanic 2 (<1%)  
Asian 1 (<1%)  
Native American 1 (<1%)  
Other Race 6 (2%)

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### Participant Characteristics (n=301)

- Education
  - Less than HS graduation - 90 (30%)
  - GED or HS graduate - 93 (31%)
  - Trade, technical training, college - 118 (39%)
- Marital Status & Living Situation
  - Single/never married - 159 (53%)
  - Lived in own home or apt - 189 (63%)
- Hours Worked/Week
  - 0 hours - 220 (73%)
  - 40 hours - 25 (8%)

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### Methods & Procedures

- ⊙ Exploratory cross-sectional design
- ⊙ Data were collected during clinic hours, with RAs in clinic every day to obtain a representative sample
- ⊙ Interview rooms were provided by the clinic
- ⊙ Instruments were read to participants to prevent problems with literacy
- ⊙ Interviews lasted 20-60 minutes

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**Measures**

- ⊙ **Pain & Pain-related function** - Brief Pain Inventory (BPI)
- ⊙ **Depression** - Center for Epidemiological Studies Depression Scale (CESD)
- ⊙ **Perception of control over pain** - Survey of Pain Attitudes Control Scale (SOPA) & Life Control Scale of the Multidimensional Pain Inventory (MPI)
- ⊙ **Coping** - Pain Catastrophizing Scale
- ⊙ **Purpose in Life** - Purpose In Life Questionnaire
- ⊙ **Self-Treatment of Pain** - Self-Treatment of Pain Questionnaire
- ⊙ **Demographic Data**

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**Self-reported Health Conditions**

- ⊙ **Hypertension** - 61%
- ⊙ **Arthritis** - 54%
- ⊙ **Breathing problems** - 33%
- ⊙ **Mental illness** - 31%
- ⊙ **Leg ulcers** - 23%
- ⊙ **Neuropathies** - 23%
  
- ⊙ **Self-rated health mean score** - 5.5 (SD=2.3); range 1-10

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**Sites of Pain (n = 301)**

Site	Number	Percentage
Legs	230	76%
Back	143	48%
Feet	131	44%
Pelvic	128	43%
Arms	118	39%
Head	93	31%
Hands	68	23%
Chest	46	15%

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### Pain Characteristics

- Mean number of pain sites = 4 ± 2 sites
- 80% take prescription pain medication
- Worst pain in past 2 weeks = 8.4 (0 to 10)
- Least pain in past 2 weeks = 4.2 (0 to 10)
- Average pain = 6.5 (0 to 10)
- Pain now = 5.8 (0 to 10)
- Pain relief from current treatment = 46.2%
- Disabled due to pain = 48%

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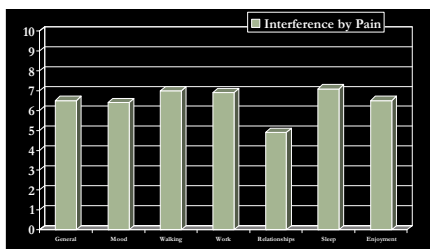
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### Effects of Pain on Function



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### Pain Treatments

- Prescription Medications
  - Opioid - 52%
  - Non-opioid - 41%
  - Adjuvant - 20%
- OTC Medications
  - Non-opioid - 57%
  - Adjuvant - 7%
- Herbal Therapy - 15%
- Alcohol - 13%
- Illicit drugs - 10%

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### Questionnaires Scores

Questionnaire	Mean	SD	Range
CES-Depression	27.0	9.6	9 to 60
Purpose in Life	97.8	21.0	23 to 139
Brief Pain Inventory (Functioning)	6.5	2.5	0 to 10
Perception of Control	13.8	8.5	0 to 40
Life Control	13.0	5.8	0 to 24
Pain Catastrophizing	43.7	12.3	18 to 65

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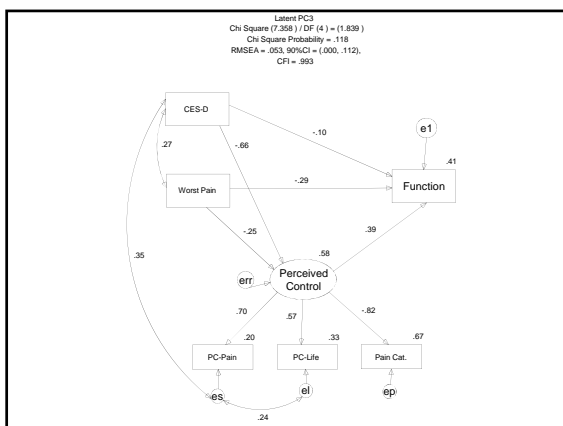
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### Study Conclusions

- ⊙ Pain is a significant problem for indigent patients in primary care
- ⊙ Treatment of pain and depression are essential to improve functional status
- ⊙ Access to pain specialists and adequate medications are concerns for this population
- ⊙ Perception of control over pain and coping with pain are potential areas of intervention to improve pain

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### **Implications**

- The primary care setting is particularly vulnerable to unmanaged and ineffective pain care across socioeconomic status and racial groups
- Primary care providers, as the gatekeepers, must recognize the existence and effects of pain-related disparities in these populations

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### **Race, Income, and Access**

- National telephone survey of 454 whites, 447 African-Americans, and 434 Hispanics
- Blacks were more likely than Whites to report feeling discriminated against in an attempt to get pain care
- Factors significantly associated with low access to pain care included being 18 to 34 years old, being single, having an annual family income below \$25,000, being male, not finishing high school, being unemployed

(Nguyen et al., 2005)

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### **Race, Income, and Access**

- Surveys of pharmacies in urban areas found access to opioid analgesic medications was limited in communities with a high proportion of minority inhabitants

(Morrison et al., 2000, Green et al., 2006).

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### **Patient Attitudes**

- 2007 Harvard School of Public Health/Robert Wood Johnson survey of 14 minority ethnic subgroups' perceptions of the quality of their physician care (n=4334) compared with the perceptions of Whites
- Dimensions of quality
  - Overall care
  - Wait times
  - Time spent with respondents by physicians
  - Physician listened carefully
  - Physician explained things in an understandable way
  - Problems communicating with physician
  - Respondents felt uncomfortable asking questions

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### **Patient Attitudes**

- Substantial disparities were found in the perception of physician care received
  - At least 5 and as many as 11 subgroups perceived their care to be significantly worse than Whites perceived their care to be
- Results suggested that if circumstances and policies changed to provide minority groups with
  - Better health insurance coverage
  - More adequate language skills
  - Higher incomes
- Many of the disparities with between minority subgroups and Whites would be narrowed

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### **Factors Presenting Barriers to Adequate Pain Management in Minorities**

- Communication between patients and health care providers
- Concerns about risk of addiction, abuse or diversion
- Lack of training of health care professionals in pain medicine and addiction medicine

(Sullivan & Engel, 2005)

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### **Healthy People 2010**

- An initiative of the U.S. Office of Disease Prevention and Health Promotion
- Provides an overarching agenda to improve health-related quality of life and eliminate racial and ethnic disparities in health and health care
- Does not address disparities in pain experience or care among racial and ethnic groups
- Poverty, food insecurity, homelessness, racism, and being uninsured are not listed as health indicators

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### **Conclusions**

- Data suggest that the overall health for minorities is poorer than for non-minorities.
- Pain-related disparities have been identified based on race, ethnicity, income, education, gender, age, and access to care
- Disparities in pain perception, assessment, and treatment have been found in all settings
- Although sources of pain-related disparity have been identified, research continues to be needed to determine methods of decreasing and eliminating such disparities

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### **Implications**

- Prospective studies are needed in vulnerable populations to ensure appropriate interventions, improve quality of pain care, provide safe and efficacious therapy, and enhance quality of life.
- Improved training for health care providers is also needed to respond to and reduce disparities in pain treatment.

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