Racial Disparities in Pain Management in Patients Referred to Hospice

Richard Stephenson MD
Hospice & Palliative Care Center
Dick.Stephenson@hospicecarecenter.org

Doug Easterling PhD
Wake Forest University School of Medicine
Objectives

- Quick Overview
  - Disparities
  - Healthcare services
  - Hospice

- Racial disparities in pain management

- What about Hospice

- “Snapshot”

- Current HPCC research
Disparities

- National Institutes of Health (NIH)
  “...differences in the incidence, prevalence, mortality, and burden of disease and other adverse health conditions existing among specific population groups in the US”

- Institute of Medicine (IOM)
  “racial and ethnic differences in the quality of care that are not due to access-related factors or clinical needs, preferences, and appropriateness of intervention”
Disparities exist because of...

1) Health care systems and the legal and regulatory climate in which they operate and

2) *Discrimination* (e.g., biases, stereotyping, and uncertainties in clinical communication and decision-making)
Death does not discriminate…

You’ll be happy to know that race played no part in this decision.
## Maybe...How we die - 2002

<table>
<thead>
<tr>
<th>African Americans</th>
<th>Whites</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. Heart disease</strong></td>
<td><strong>1. Heart disease</strong></td>
</tr>
<tr>
<td><strong>2. Cancer</strong></td>
<td><strong>2. Cancer</strong></td>
</tr>
<tr>
<td><strong>3. Cerebrovascular</strong></td>
<td><strong>3. Cerebrovascular</strong></td>
</tr>
<tr>
<td><strong>4. Diabetes</strong></td>
<td><strong>4. COPD</strong></td>
</tr>
<tr>
<td><strong>5. Accidents</strong></td>
<td><strong>5. Accidents</strong></td>
</tr>
<tr>
<td><strong>6. Homicide</strong></td>
<td><strong>6. Diabetes</strong></td>
</tr>
<tr>
<td><strong>7. HIV/AIDS</strong></td>
<td><strong>7. Influenza and Pneumonia</strong></td>
</tr>
<tr>
<td><strong>8. COPD</strong></td>
<td><strong>8. Alzheimer’s Disease</strong></td>
</tr>
<tr>
<td><strong>9. ESRD</strong></td>
<td><strong>9. ESRD</strong></td>
</tr>
<tr>
<td><strong>10. Septicemia</strong></td>
<td><strong>10. Suicide</strong></td>
</tr>
</tbody>
</table>
Death Rates for Chronic Diseases by Race 2003

Source: R Payne
Pub Med Search…3/12/09
“Racial disparities in HC Services”

- 216 hits
- OT
- Tobacco-cessation
- Rx dementia
- Cancer screening
- Cancer care
- Detoxification
- Mental health
- Cardiac revasc
- Asthma
- Diabetes
- Surgical care
- Pediatric hosp
- Hip replacement
- Childhood vacc
- New tech = ICD
- Perforated app
- Transplant
<table>
<thead>
<tr>
<th>Procedure</th>
<th>B</th>
<th>W</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Angioplasty (procedures per 1,000)</td>
<td>2.5</td>
<td>5.4</td>
<td>0.46</td>
</tr>
<tr>
<td>CABG Surgery (procedures per 1,000)</td>
<td>1.9</td>
<td>4.8</td>
<td>0.40</td>
</tr>
<tr>
<td>Mammography (procedures per 100 women/year)</td>
<td>17.1</td>
<td>26</td>
<td>0.66</td>
</tr>
<tr>
<td>Hip Fracture Repair (procedures per 100 women/year)</td>
<td>2.9</td>
<td>7.0</td>
<td>0.42</td>
</tr>
<tr>
<td>Amputation of All or Part of Limb (procedures per 1,000)</td>
<td>6.7</td>
<td>1.9</td>
<td>3.64</td>
</tr>
<tr>
<td>Bilateral Orchiectomy (procedures per 1,000)</td>
<td>2.0</td>
<td>0.8</td>
<td>2.45</td>
</tr>
</tbody>
</table>
Issues in Palliative and End of Life Care in Medically Underserved Communities

• Underutilization of hospice and other palliative care services
  (Facts and Figures on Hospice Care in America: The National Hospice and Palliative Care Organization, 2003)

• Underutilization of advance directives and other types of advanced care planning
  McKinley ED et al. J Gen Int Med 1996;11:651-6)

• Patient & physician preferences for resource intensive care: aggressive interventions over withdrawing or withholding treatments
## Hospice Utilization by Race

(NHPCO)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Caucasian</td>
<td>80.5</td>
<td>81.9</td>
<td>81.8</td>
<td>80.9</td>
<td>74</td>
</tr>
<tr>
<td>Multi or (H)</td>
<td>8.7</td>
<td>9.5</td>
<td>7.8</td>
<td>8.8</td>
<td>14.8</td>
</tr>
<tr>
<td>Afr Amer</td>
<td>8.7</td>
<td>7.2</td>
<td>9.0</td>
<td>8.2</td>
<td>13.4</td>
</tr>
<tr>
<td>Asian</td>
<td>1.9</td>
<td>1.1</td>
<td>1.6</td>
<td>1.8</td>
<td>4.4</td>
</tr>
</tbody>
</table>
Do we know what’s going on at HPCC?
KBR GIP Admissions by Race (#)

- Caucasian
- A-American
- Hispanic
- Other
Census 2006 (Est): By Race (%)

- NC: Caucasian 74%, A-American 22%, Hispanic 7%
- F-Co: Caucasian 71%, A-American 26%, Hispanic 10%
- W-S: Caucasian 56%, A-American 37%, Hispanic 8.6%

(2000 #s)
HPCC - Patients Served 2008
By Race and Location of Care (%)

KBR GIP Hospice CC SK CC nonSK

- Caucasian
- A-American
- Hispanic
- Other
HPCC - Patients Served 2008
By Race: Hospice, HH, or PC (%)

- Caucasian
- A-American
- Hispanic
- Other
KBR GIP Admissions 2008
By County

<table>
<thead>
<tr>
<th>County</th>
<th>Admissions</th>
</tr>
</thead>
<tbody>
<tr>
<td>F</td>
<td>73%</td>
</tr>
<tr>
<td>Sk</td>
<td>6</td>
</tr>
<tr>
<td>Da</td>
<td>6</td>
</tr>
<tr>
<td>Dn</td>
<td>6</td>
</tr>
<tr>
<td>Y</td>
<td>3</td>
</tr>
<tr>
<td>Sy</td>
<td>2</td>
</tr>
<tr>
<td>R</td>
<td>1</td>
</tr>
</tbody>
</table>
Disparities in Pain Management

- Not just access to pain services
- Or, access to pain clinics
- Or, pain procedures, pumps, etc
- But basic pain management
  - Opioids prescribed
  - Outcomes
    - Pain Management Index (PMI)
  - Drug availability
    - Pharmacies in minority neighborhoods
- In all kinds of settings
Numerous Studies Over 2 Decades Indicate Racial Disparities

- Long bone fractures in the ER
- Nontraumatic low-back pain in the ER
- All pain visits in the ER
- Chronic nonmalignant pain
- Cancer pain in cancer centers
- Cancer pain in nursing homes
- Acute postoperative pain
- Epidural analgesia
- Chest pain

- Pain-related visits to US ERs 1993-2005
- Opioids prescribed at discharge
- National Hospital Ambulatory Medical Care Survey (huge database)
- Opioid prescribing has increased over time
- Disparities have not diminished
- Differences larger as pain severity increased
- Particularly low in black and Hispanic children
ARRGGHHHH! More details – Opioid prescribing averaged over 13 years

<table>
<thead>
<tr>
<th>Race/Ethnicity</th>
<th>% Opioid Prescribed (for pain-related visit)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Whites</td>
<td>31%</td>
</tr>
<tr>
<td>Blacks</td>
<td>23%</td>
</tr>
<tr>
<td>Hispanics</td>
<td>24%</td>
</tr>
<tr>
<td>Asians/others</td>
<td>28%</td>
</tr>
</tbody>
</table>
## Pain of Increasing Severity

<table>
<thead>
<tr>
<th>Circumstance</th>
<th>Wh</th>
<th>NonWh</th>
</tr>
</thead>
<tbody>
<tr>
<td>Severe back pain (% opioid prescribed)</td>
<td>48%</td>
<td>38%</td>
</tr>
<tr>
<td>Severe headache</td>
<td>35</td>
<td>24</td>
</tr>
<tr>
<td>Severe abdominal pain</td>
<td>32</td>
<td>22</td>
</tr>
<tr>
<td>Long bone fracture</td>
<td>52</td>
<td>47</td>
</tr>
<tr>
<td>Nephrolithiasis</td>
<td>72</td>
<td>64</td>
</tr>
<tr>
<td>Nonopioid prescribed</td>
<td>26</td>
<td>32</td>
</tr>
</tbody>
</table>
Undiminished Over Time!

% opioid prescribed for pain-related ER visit

- Nonwhite
- White
Cancer Pain

- Cleeland – national study of over 1300 outpatients in 54 centers
  - 42% prescribed inadequate analgesics
  - Nonwhites 3 times more likely to be undermedicated

- Bernabei – cancer patients in LTCFs
  - African Americans more likely to have no pain assessment on chart
  - and more likely to be on no analgesic

- Analgesic consumption
- 250 patients
- Post-op internal fixation limb fracture
- Morphine equivalents mg/day
Bernardo Ng persisted...
- Patient-controlled analgesia offers an intriguing model
- Compare prescription and consumption
- 454 patients on PCA post-op
- Found significant differences in prescription
  - Whites > African Americans > Hispanics
- No difference in pain-intensity ratings or consumption
Pain Management is Complex
Numerous Barriers Identified in Numerous Studies

Patient in Pain
- Fears
- Addiction
- Tolerance
- Dope

Spouse

HHRN

Off.RN

self

MD attitude

Physician

MD education

Reg

Pharm

Rx issues

$\ldots$

Rx issues

$\ldots$

$\ldots$
Why Racial Disparities?

- **Provider-related**
  - Concerns about prescription abuse (AA actually less likely)
  - Inadequate assessment
  - Poor communication
    - Fluency (disparities persisted despite correction for language)

- **System-related**
  - Access to pain specialists
  - Pharmacy issues
  - Insurance
  - Reliance on ER vs. PCP
  - Barriers encountered

- **Patient-related**
  - Experience of pain (experimental pain)
  - Biological (pain threshold and/or tolerance)
  - Reluctance to c/o; stoicism; concerns about addiction

Culture? Stereotype? Bias? Racism?
What About Hospice?


- Great article

- Systematic review of the literature
  - All of what we just looked at and more

- Concludes:

  “No studies were found that evaluated the effect of patient race and ethnicity on pain assessment and management in the setting of hospice or palliative care.”
Implications…

- Such a study would be important
- If there are disparities, “in a setting where relief of pain is a fundamental goal”
- What a disturbing message!
- If there aren’t, what is hospice doing right? How could we model?
- Hey! We can do this study!
“Snapshot” of HPCC 1/12/2009

- **Census**
  - KBR 30
  - Home Hospice 211
  - Comfort Care 159
  - Total Hospice 400
  - Home Health 23
  - Palliative Care 53
  - **Grand Total** 476
Pain Medication by Race
Snapshot 1/12/2009 (Home, NH, ALF)

- C (305)
- AA (62)
WOW!

- “Snapshot” shows no significant racial disparities in pain management at HPCC!
- Only a snapshot
  - Nice little QAPI project
- But, don’t roll the Quad yet!
- We can do a bigger, better study!
Current Research

- A hospice/academic partnership with:
  - Department of Social Sciences and Health Policy
  - Division of Public Health Sciences
  - Wake Forest University School of Medicine
  - Translational Science Institute
- Doug Easterling, Mike O’Shea, and others
- Dick Stephenson, Med Staff, and Sean Burchette
- Current project...
An evaluation of the effect of race on pain management in a community hospice

- We reviewed all outpatients who died in our care 2001-2008

Hypothesis

- Blacks would be less likely to be prescribed opioids prior to hospice admission
- The process of Hospice care would make a difference
- Race would be a significant predictor of opioid prescription on the day of admission, but not on the day of death

- We also looked at whether emergency medicine kits (containing morphine) were less likely to be prescribed for Blacks during their hospice stay.
Study Sample & Methods

- **Data source**
  - Two files from Allscripts
    - Patient demographic data (Race, Age, Dx, MD, Adm, Death, etc.)
    - Prescription data
  - Files then merged

- **Patients included**
  - Admitted between 1/1/02 and 12/31/08
  - Died during first admission prior to 1/1/09
  - At least 21 years old
  - Residing at home, NH, ALF *(No KBR patients)*

- **5261 patients**
  - 4389 non-Hispanic whites, 818 blacks, 54 others (excluded)
  - Final sample of 5207
    - 84% whites and 16% blacks
Analgesia

- Master list of all medications prescribed to any patient in the sample
  - What a long list!!!!

- 2 MDs classified roughly based on WHO ladder into:
  - Non-analgesic (included adjuvants)
  - Non-opioid analgesic (NSAIDs, ASA, APAP)
  - Mild opioid (short-acting and APAP combos)
  - Strong opioid (long-acting, parenteral, and methadone)
## Demographics

<table>
<thead>
<tr>
<th></th>
<th>Total (5207)</th>
<th>Black (818)</th>
<th>White (4389)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>2121</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>3086</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>21-64</td>
<td>605 (11.6%)</td>
<td>143 (17.5%)</td>
<td>462 (10.5%)</td>
</tr>
<tr>
<td>65-84</td>
<td>2075 (39.9%)</td>
<td>347 (42.4%)</td>
<td>1728 (39.4%)</td>
</tr>
<tr>
<td>&gt; 85</td>
<td>2527 (48.5%)</td>
<td>328 (40.1%)</td>
<td>2199 (50.1%)</td>
</tr>
<tr>
<td><strong>Cancer</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>2496 (47.9%)</td>
<td>440 (53.8%)</td>
<td>2056 (46.8%)</td>
</tr>
<tr>
<td>No</td>
<td>2711 (52.1%)</td>
<td>378 (46.2%)</td>
<td>2333 (53.2%)</td>
</tr>
<tr>
<td>Demographics (cont)</td>
<td>Total (5207)</td>
<td>Black (818)</td>
<td>White (4389)</td>
</tr>
<tr>
<td>---------------------</td>
<td>--------------</td>
<td>-------------</td>
<td>--------------</td>
</tr>
<tr>
<td><strong>Dementia</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>737</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>3086</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Setting</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Home</td>
<td>3143 (60.4%)</td>
<td>537 (65.5%)</td>
<td>2606 (59.4%)</td>
</tr>
<tr>
<td>LTCF</td>
<td>1536 (29.5%)</td>
<td>242 (29.6%)</td>
<td>1294 (29.5%)</td>
</tr>
<tr>
<td>ALF</td>
<td>528 (10.1%)</td>
<td>39 (4.8%)</td>
<td>489 (11.1%)</td>
</tr>
<tr>
<td><strong>LOS</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0-6 days</td>
<td>1458 (28.0%)</td>
<td>198 (24.2%)</td>
<td>1260 (28.7%)</td>
</tr>
<tr>
<td>7-29 days</td>
<td>1644 (31.6%)</td>
<td>270 (33.0%)</td>
<td>1374 (31.3%)</td>
</tr>
<tr>
<td>&gt; 30 days</td>
<td>2105 (40.4%)</td>
<td>350 (42.8%)</td>
<td>1755 (40.0%)</td>
</tr>
</tbody>
</table>
### Opioids Prescription Increases During Hospice Stay (all patients)

<table>
<thead>
<tr>
<th>HIGHEST LEVEL OF ANALGESIC PRESCRIBED</th>
<th>Day of Adm</th>
<th>Day of Death</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Analgesic</td>
<td>10.3%</td>
<td>3.6%</td>
</tr>
<tr>
<td>Only Non-Opioid Analgesics</td>
<td>16.9%</td>
<td>5.7%</td>
</tr>
<tr>
<td>Mild Opioid Analgesic</td>
<td>11.1%</td>
<td>3.7%</td>
</tr>
<tr>
<td>Strong Opioid</td>
<td>61.7%</td>
<td>87.0%</td>
</tr>
</tbody>
</table>
Figure 1. Increase in Prescribing of Opioids Between Admission and Death for Cancer Patients

- 72.8% on Day of Admission
- 93.5% on Day of Death

- No Analgesic: 7.0%
- Only non-opioid analgesic: 7.8%
- Mild opioid: 12.3%
- Strong Opioid: 2.0%, 1.8%, 2.6%
Figure 2. Increase in Prescribing of Opioids Between Admission and Death for non-Cancer Patients

Day of Admission

- No Analgesic: 51.5%
- Only non-opioid analgesic: 25.2%
- Mild opioid: 13.4%
- Strong Opioid: 9.9%

Day of Death

- No Analgesic: 9.9%
- Only non-opioid analgesic: 4.9%
- Mild opioid: 25.2%
- Strong Opioid: 81.0%
**Initial Analysis Suggests No Significant Differences Based on Race**

<table>
<thead>
<tr>
<th>Rx</th>
<th>Day of Adm</th>
<th>Day of Death</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Black</td>
<td>White</td>
</tr>
<tr>
<td>None</td>
<td>11.4%</td>
<td>10.1%</td>
</tr>
<tr>
<td>NonOp</td>
<td>17.8</td>
<td>16.7</td>
</tr>
<tr>
<td>MildOp</td>
<td>11.0</td>
<td>11.1</td>
</tr>
<tr>
<td>StrgOp</td>
<td>59.8</td>
<td>62.1</td>
</tr>
</tbody>
</table>
Racial Disparity Underestimated

- Confounded by other factors
- Particularly cancer diagnosis
  - Disproportionate number of Blacks were younger, lived at home, and had CA
- Logistic regression analysis done to test the effect of race controlling for other covariates
Covariates

- Diagnosis – cancer and dementia
- Age – 21-64, 65-84, 85 and older
- Setting – home, NH, ALF
- LOS - < 7 days, 7-20 days, 21-63, and longer than 63 days

- Blacks are then significantly less likely to be prescribed an opioid on admission (OR=0.74, p=0.001)

- And, BY THE DAY OF DEATH, RACE IS NO LONGER A SIGNIFICANT predictor of opioid prescribing (OR=0.86, p=0.262)
## Multivariate Logistic Regression

<table>
<thead>
<tr>
<th>PREDICTOR</th>
<th>Day of Admission</th>
<th>Day of Death</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>OR(95CI)</td>
<td>P-value</td>
</tr>
<tr>
<td>Race:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Black</td>
<td>0.74</td>
<td>0.0011</td>
</tr>
<tr>
<td>White</td>
<td>REF</td>
<td></td>
</tr>
<tr>
<td>Cancer diagnosis</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>2.97</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>No</td>
<td>REF</td>
<td></td>
</tr>
<tr>
<td>LOS (days A to D)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0-6</td>
<td>2.85</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>7-20</td>
<td>1.77</td>
<td></td>
</tr>
<tr>
<td>21-63</td>
<td>1.38</td>
<td></td>
</tr>
<tr>
<td>64-1024</td>
<td>REF</td>
<td></td>
</tr>
<tr>
<td>PREDICTOR</td>
<td>Day of Admission</td>
<td>Day of Death</td>
</tr>
<tr>
<td>-----------------------------------</td>
<td>-----------------</td>
<td>--------------</td>
</tr>
<tr>
<td></td>
<td>OR(95CI)</td>
<td>P-value</td>
</tr>
<tr>
<td>Age group:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>21-64 years</td>
<td>REF</td>
<td></td>
</tr>
<tr>
<td>65-84</td>
<td>0.36</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>85+</td>
<td>0.56</td>
<td></td>
</tr>
<tr>
<td>Alzheimer’s diagnosis</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>0.66</td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>REF</td>
<td></td>
</tr>
<tr>
<td>Gender:</td>
<td></td>
<td>0.0001</td>
</tr>
<tr>
<td>Male</td>
<td>1.31</td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>REF</td>
<td></td>
</tr>
<tr>
<td>Setting of care:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Long-term</td>
<td>1.14</td>
<td></td>
</tr>
<tr>
<td>Asst Living</td>
<td>0.73</td>
<td></td>
</tr>
<tr>
<td>Home</td>
<td>REF</td>
<td></td>
</tr>
</tbody>
</table>
In other words...

- A Black patient admitted to hospice is only $\frac{3}{4}$ as likely to be prescribed an opioid for pain as a comparable white.

- This racial disparity decreased (essentially disappeared) during the time that patients were treated by hospice.
Figure 3. Change in Opioid Prescribing from Admission Date to Death by Race and Diagnosis

- Whites - with Cancer
- African Americans - with Cancer
- Whites - without Cancer
- African Americans - without Cancer

<table>
<thead>
<tr>
<th>Race and Diagnosis</th>
<th>Admission</th>
<th>Day of Death</th>
</tr>
</thead>
<tbody>
<tr>
<td>Whites - with Cancer</td>
<td>82.7%</td>
<td>86.0%</td>
</tr>
<tr>
<td>African Americans - with Cancer</td>
<td>85.7%</td>
<td>96.1%</td>
</tr>
<tr>
<td>Whites - without Cancer</td>
<td>56.9%</td>
<td>96.4%</td>
</tr>
<tr>
<td>African Americans - without Cancer</td>
<td>84.7%</td>
<td>96.1%</td>
</tr>
</tbody>
</table>
Now you can roll the Quad!
Victory for Hospice!
We also looked at E-Kits

- Looking across the entire time that patients were enrolled in hospice
- Physicians prescribed E-Kits to:
  - 5.6% of Black patients
  - 6.9% of White patients

Logistic regression analysis showed race to have a modest effect on E-Kits (OR=0.72, CI=[0.52-0.99], p=0.040)
This is the first study to explore whether racial disparities in pain management persist in a hospice or palliative care setting.

Our analysis demonstrates:

1. Racial disparities in pain management do exist at the time patients are referred to hospice.
   - Disparity is less than in other settings.

2. The observed disparity resolves by day of death under hospice care.

   and suggests a, “Hospice Effect”
Perhaps no, “Hospice Effect”

- Possible nonHospice patients analgesic Rx improves by death
  - Lack of comparison group
- Confounded by other factors
  - Socioeconomic status, alcohol or drugs
- Prescription drug or other information may have been miscoded
- This study can only detect differences in analgesic practice, not explain reasons
Causes of racial disparities in pain management:

Provider-related

- **Suspicion of abuse** – perhaps reflected by E-Kit disparity
- **Inadequate assessment** – whole hospice team does pain assessment – mandated
- **Provider education** – extensive hospice team education for RN, CNA, SW, Ch, Vol
- **Provider race** – HPCC clinical staff
  ~27% black (2004-2008)
Causes of racial disparities in pain management:

System-related

- **Access to pain specialists** – HPCC includes specialist MDs & NPs who regularly make housecalls

- **Access to analgesics** – HPCC operates its own open-formulary pharmacy with equal access to medications, pharmacists, and home delivery

- (Lack of) **oversight** – hospice subject to rules, regulations, certification, accreditation, and licensure that mandate pain assessment and management
Causes of racial disparities in pain management:

**Patient-related**

- **Financial constraints** – hospice financing eliminates cost of Rx concerns for pt/family
- **Reluctance to complain, stoicism, concerns about addiction** – hospice interdisciplinary team holistically addresses pt/family concerns
  - Black providers may be better able to address
Next Steps

- Publication, discussion, dissemination
- **Review other significant covariates**
- Grant support for a broader study
  - Allscripts users in other parts of the country
- Matched study (non-hospice users)
- Palliative Care based study (hospice-lite)
- Planned interventions
<table>
<thead>
<tr>
<th>PREDICTOR</th>
<th>Day of Admission</th>
<th>Day of Death</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>OR(95CI)</td>
<td>P-value</td>
</tr>
<tr>
<td>Age group:</td>
<td></td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>21-64 years</td>
<td>REF</td>
<td></td>
</tr>
<tr>
<td>65-84</td>
<td>0.36</td>
<td></td>
</tr>
<tr>
<td>85+</td>
<td>0.56</td>
<td></td>
</tr>
<tr>
<td>Alzheimer’s diagnosis</td>
<td></td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>Yes</td>
<td>0.66</td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>REF</td>
<td></td>
</tr>
<tr>
<td>Gender:</td>
<td></td>
<td>0.0001</td>
</tr>
<tr>
<td>Male</td>
<td>1.31</td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>REF</td>
<td></td>
</tr>
<tr>
<td>Setting of care:</td>
<td></td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>Long-term</td>
<td>1.14</td>
<td></td>
</tr>
<tr>
<td>Asst Living</td>
<td>0.73</td>
<td></td>
</tr>
<tr>
<td>Home</td>
<td>REF</td>
<td></td>
</tr>
</tbody>
</table>
Questions & Comments

Charles H Alston
References


