Exploring Social Determinants of Health by Race and Ethnicity in Medicare using ACS-CMS Linked Data

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“Working to Achieve Health Equity”
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Disclaimer

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Offices of Minority Health Within HHS

“Working to Achieve Health Equity”
Increasing understanding and awareness of disparities
Developing and disseminating solutions
Implementing sustainable actions

“Working to Achieve Health Equity”
Addressing Health Disparities at All Levels

Increasing Understanding and Awareness of Disparities
What are Social Determinants of Health?

• Conditions in the environments in which people:
  – live
  – learn
  – work
  – play

What is the Chronic Conditions Data Warehouse (CCW)?

- The CCW is CMS’ research data warehouse designed to support both external and internal CMS research and analytic functions.
BENEFits of the CCW

- One unique BENE_ID for each individual enrolled and eligible for Medicare and/or Medicaid
- Individual beneficiaries tracked and linked
  - Over time
  - Across claim types
  - Across programs (Medicare and Medicaid)
### What Kinds of Data are Available?

#### Patient Level variables

<table>
<thead>
<tr>
<th>Demographics</th>
<th>Geography, Birth and Death Dates, Age, Sex, and Race – both SSA and RTI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Part A &amp; B</td>
<td>Coverage Start, Reasons for Entitlement, ESRD indicator, Status Code,</td>
</tr>
<tr>
<td></td>
<td>Dual-Eligible</td>
</tr>
<tr>
<td>Part C</td>
<td>HMO indicator, Coverage months, Contract ID</td>
</tr>
<tr>
<td>Part D</td>
<td>Contract ID, Coverage months</td>
</tr>
</tbody>
</table>

#### Cost and Use variables

<table>
<thead>
<tr>
<th>Cost or Payments</th>
<th>Medicare, beneficiary and other primary payers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Utilization</td>
<td>Stays, Covered Days, Readmissions, Visits including Emergency Room,</td>
</tr>
<tr>
<td></td>
<td>and Events such as physician face-to-face visits</td>
</tr>
<tr>
<td>Part D</td>
<td>Summary cost and use</td>
</tr>
</tbody>
</table>
Geographical Variation Beneficiary File

Comparisons using Geographic Files

- Geographic identifiers
- Standardized payments
- Service categories
- Health status
- Quality measures

Specific Geographic Variables

- Zip code
- State
- County
- State/County FIPS code
- Core-Based Statistical Area
  - Metropolitan
  - Micropolitan
  - Non-CBSA
- Hospital Referral Region
- Hospital Service
Chronic Conditions Available in the CCW

27 Chronic Conditions
- Acute Myocardial Infarction
- Alzheimer’s Disease
- Cancer (multiple types)
- Cataracts
- Chronic Kidney Disease
- Depression
- Diabetes
- Heart Failure
- Stroke

35 Other Chronic or Potentially Disabling Condition Variables
- Alcohol Use Disorders
- HIV/AIDS
- Mobility Impairments
- Obesity
- Opioid Use Disorder
- PTSD
- Sensory Impairments
- TBI
- Viral Hepatitis (General)

Additional chronic conditions can be found at [www.ccwdata.org](http://www.ccwdata.org)
Opioid Use Disorder

• About 2.1 million Americans had opioid use disorder (OUD) in 2016.

• OUD is defined as a problematic pattern of opioid use leading to clinically significant impairment or distress.

• OUD has also been referred to as "opioid addiction."

• CCW OUD Flags include Medication Assisted Therapies

Available from: https://www.cdc.gov/drugoverdose/training/oud/
Data Sources

• 2016 CMS Medicare Geographical Variation Beneficiary File (GV_ BENE)
  – Beneficiary enrollment information (A/B/C/D)

• 2016 CMS Medicare Beneficiary Summary File – Other Chronic and Potentially Disabling Conditions Segment (OTCC)
  – OUD flags
  – Linked by BENE_ID (unique identifier)

• 2016 5-year ACS
  – Available from American FactFinder (AFF)

• Linked CMS data to ACS using ZCTA/Zip Code
Research Plan for Medicare-ACS Data Linkage

1. Downloaded 2016 5-yr ACS tables from AFF
2. Uploaded excel tables to CCW
3. Imported excel tables as SAS data sets
4. Recoded ACS variables, create percentages
5. Merged individual ACS data sets by ZCTA
6. Merged Medicare beneficiary data (GV BENE and OTCC) by BENE_ID
7. Linked ACS and Medicare by ZCTA/zip code
Developing and Disseminating Solutions
Racial and Ethnic Distribution of Medicare Beneficiaries by OUD Status

- **All beneficiaries**: N = 58 million
  - White: 75
  - Black: 10
  - A/NHOPI: 3
  - Hispanic: 9
  - AIAN: 1
  - Other/Unknown: 2

- **Beneficiaries with OUD**: N = 598,000
  - White: 81
  - Black: 12
  - A/NHOPI: 1
  - Hispanic: 5
  - AIAN: 1
  - Other/Unknown: 1
Percent of Medicare Beneficiaries in Zip Codes that Speak English only (mean)

<table>
<thead>
<tr>
<th></th>
<th>All Beneficiaries</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>81</td>
<td>86</td>
</tr>
<tr>
<td>White</td>
<td>82</td>
<td>62</td>
</tr>
<tr>
<td>Black</td>
<td>47</td>
<td>78</td>
</tr>
<tr>
<td>A/NHOPI</td>
<td>47</td>
<td>78</td>
</tr>
<tr>
<td>Hispanic</td>
<td>64</td>
<td>71</td>
</tr>
<tr>
<td>AIAN</td>
<td>86</td>
<td>83</td>
</tr>
<tr>
<td>Other/Unknown</td>
<td>78</td>
<td>83</td>
</tr>
</tbody>
</table>
Percent of Medicare Beneficiaries in Zip Codes that are Married (mean)

<table>
<thead>
<tr>
<th>Percent</th>
<th>Total</th>
<th>White</th>
<th>Black</th>
<th>A/NHOPI</th>
<th>Hispanic</th>
<th>AIAN</th>
<th>Other/Unknown</th>
</tr>
</thead>
<tbody>
<tr>
<td>54</td>
<td>54</td>
<td>55</td>
<td>45</td>
<td>50</td>
<td>50</td>
<td>50</td>
<td>54</td>
</tr>
</tbody>
</table>
Percent of Medicare Beneficiaries in Zip Codes with Less Than High School Education (mean)
Percent of Medicare Beneficiaries in Zip Codes with a Disability (mean)
Percent of Medicare Beneficiaries Living in Zip Codes Below 100% FPL (mean)

- Total: 23
- White: 22
- Black: 13
- A/NHOPI: 13
- Hispanic: 15
- AIAN: 13
- Other/Unknown: 22

All Beneficiaries

Percent
Summary

• Compared to all beneficiaries, more Whites, Blacks and AIAN resided in zip codes with a higher mean English-only speaking population.

• Compared to all beneficiaries a greater percentage of Blacks, Hispanics and AIAN beneficiaries w/ and w/o OUD lived in zip codes with higher mean rate of less than HS education.

• Compared to the total a higher percentage of AIAN beneficiaries w/ and w/o OUD lived in zip codes with higher mean disability rates.

• A lower percentage of White, NHOPI, and Other beneficiaries resided in zip codes below 100% FPL compared to Black, Hispanic, or AIAN beneficiaries.
Implementing Sustainable Action
This roadmap details our three-pronged approach to combating the opioid epidemic, focusing in on prevention, the treatment of patients and the utilization of data.

From Coverage to Care (C2C) Resources

- Roadmap to Better Care and a Healthier You
- 5 Ways to Make the Most of Your Coverage
- Managing Your Health Care Costs
- A Roadmap to Behavioral Health
- Videos
- Enrollment Toolkit
- Prevention Resources
- Partner Toolkit
- Community Presentation

http://go.cms.gov/c2c
Connected Care Resources

- **Information for Health Care Professionals**
  - Access resources and tools explaining the benefits of CCM and how to implement this service

- **Information for Patients**
  - Access easy-to-read information on the benefits of CCM for Medicare beneficiaries living with two or more chronic conditions

- **Campaign Partnership Resources**
  - Access information about partnering to bring awareness to CCM through the Connected Care campaign

[go.cms.gov/CCM]
Join Us on the Path to Equity
Get Involved!

www.cms.gov

• **NPRMs and RFIs** – Tell us what you think!
• **CMS Open Door Forums** – Find out about upcoming changes and get your questions answered.
• **Medicare Learning Network and MLN Connects® Provider eNews** – Get provider resources on CMS programs, policies and initiatives, such as Medicare Shared Savings Program, DMEPOS Billing Procedures.
• **Join Us!** – Participate in a model and sign up for the news you need.
Contact Information

CMS OMH website:
go.cms.gov/cms-omh

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