ResDAC
RESEARCH DATA ASSISTANCE CENTER

Using CMS Data for Research on Disparities in Health and Health Care

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Work performed under CMS Contract #HHSM-500-2013-00166C

Overview

- Review reminders and issues concerning CMS data
- Medicare
- Medicaid (MAX)
- MMLEADS
- Surveys
- Assessment data

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Reminders

- CMS is a payor, an "insurance 'company'"
  - Administrative data
- Some survey/registry linkages, assessment data
- Research-friendly/friendlier files (e.g, MAX, MMLEADS) shorten learning curve
  - Different files/data sources have various levels of user-friendliness, data restrictions versus granularity
  - Still caveats for administrative data, e.g.:
    - » Rely on FFS for complete claims
    - » Use services=proxy diagnosis; lack of services ≠ lack of condition…and measurement error/bias depends on the condition or treatment (e.g., obesity/bmi)
    - » No lab values, only certain uses for quality, etc.

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Documentation and understanding of context can be important: examples

- Changes in race/ethnicity
  - Medicare: Changed greatly between 1970s and 1990s, other updates since (upcoming slides)
  - Medicaid/MAX has also changed i.e., option of >1 race/ethnicity, reporting race separate from ethnicity
- Variables often come from other sources, may have only been carried over recently from those sources, those sources may have changed their own data procedures, etc.
- "Missing," "unknown," often mean something beyond random missing
- Other differences, e.g., by state
  - revenue center codes not used for some states– affects MAX
  - FFS as a proportion of total Medicare varies by state– potential bias related to Medicare advantage enrollment

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Note on Data File Privacy Levels

- Different privacy levels for CMS files:
  - RIF (research-identifiable files- most-protected and most restricted level)
  - LDS (limited datasets)
  - PUF (public use files)
- Use minimum privacy level, minimum specific files, and minimum analytic cohort to answer your questions—should reflect in your data request/application
- Upside: Since the variables we're discussing in looking at disparities are typically "status" variables, they generally are available in RIF, LDS, surveys, and assessment data (very limited in administrative-based PUFs)
- There are some differences from RIF vs LDS versions of files, so be sure to check

Medicare

- Race: conventionally taken from SSA
  - But can also see fill-ins/adjustments
    - » RTI based on first and last name algorithms; IHS
- In Master Beneficiary Summary – BASE (A/B/D) file:
  - RACE (Unkn, Wh, Bl, Other, Asian, Hispanic, NAmNative)
  - RTI_RACE_CD (Unk, N-H Wh, Bl (or Afr-Am), Oth, Asian/Pac Isl, Hisp., Amer Ind / AK native)
- Race available in other files, but see documentation re: RACE vs RTI_RACE and other variables, especially across RIF [privacy protected/most secure] versus LDS [less restricted but in some cases less granular] files

Medicare, cont'd

- Other status vars of interest for disparities in Medicare Beneficiary Summary File- Base A, B, D, as well as LDS Denominator file, e.g.:
- Sex
- Reason for entitlement (Medicare: 65+ age, Disability benefits (DIB), ESRD, DIB + ESRD)
  - Current reason: CREC
  - Also MS_CD: (ESRD by aged/disabled or alone)
  - OREC: ORIGINAL reason for entitlement
- State, County, Zip
  - For disparities by **Rurality**: can obtain State/County to CBSA crosswalk file at CMS.gov– those not linked to CBSA are rural
- Dual status (Medicare/Medicaid): 2006 forward in MBSF (available all years in MAX Personal summary file).
  - DUAL_MO (# months)
  - Monthly categorical, across multiple plans, with categories for various programs (e.g., QMB or SLMB plus Medicaid including Rx, QMB only, SLMB only, others…)

Reminder

- 5% random sample from Medicare
- May be useful, resource-efficient
- However, consider cell sizes and smaller racial grps (e.g., Native American/American Indian/Alaska Native…depending on the variable you use)
- CMS has limits on even aggregated tables if they have a cells of <11 people
  - May need to omit TWO smallest cells… deleting only one cell might still indicate where <11 people are

Medicaid
MAX (Medicaid Analytic eXtract)

Personal Summary (PS) file

- Race/ethnicity (from state files)
  - White, Black/Afr. American; American Indian/AK Native; Asian or Pacific Islander; "Hispanic/Latino- no race avail"; Native Hawaiian/Other Pacific Islander; Hispanic/Latino and one or more races; >1 race; Unknown
- Race/ethnicity from Medicare enrollment files (for dual eligibles only)
- Language code (from Medicare, also for duals only – based on the language that the SSA uses in mailings)
- MAX uniform eligibility code may be useful (e.g., EL_MAX_ELGBLTY_CD_LTST)
  - Monthly or annual (most recent/last) combination of status variable and maintenance assistance status/MAS, e.g.: "32=Blind/Disabled, poverty"; 25="Adult, medically needy"
- County/zip code of residence
- Eligibility measures: Medicaid eligibility by month; Dual status; 1915(c) waiver types (HCBS); Private insurance indicators monthly
- Pay attention to managed care enrollment– remember the caveat about FFS and complete claims

Side Note on Mini-MAX

- Mini-MAX
  - 5% cross-sectional sample (still RIF/privacy protected and restricted)
  - Available for 2008 only (no updates)
  - However, may be able to answer your questions without all the MAX data
  - Like 5% Medicare random sample, consider cell sizes

If you're interested in duals, MMLEADS is the place to be

- Medicare-Medicaid Linked Enrollee Analytic Data Source
- Focused on dual eligibles
  - Includes all non-dual Medicare
  - all duals [Medicare+Medicaid]
  - Only some non-dual Medicaid: mainly those eligible due to disability and blindness because most similar to duals (e.g., excl. children and families)
- Medicare Beneficiary-level file and Medicaid Beneficiary-level file
  - Medicare- and MAX-based socio-demographic variables
  - summary utilization measures
- Linked condition file
  - expanded diagnosis flags (chronic conditions, mental health, disability-related conditions)
  - Diagnosis indicators based on algorithms applied across Medicare only, Medicaid only, or both
- Medicare service-level file and Medicaid service-level file
  - Utilization and costs by service setting categories (not service events as are in claims)
- Good for some questions, not for others.
- RIF (like all RIF files, privacy protected and requires formal request process)
- SEE USER GUIDE AT CCWDATA.ORG– VERY HELPFUL

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CMS or Linkable Surveys

	HRS	MCBS	NHATS	HOS (Medicare Advantage)
Representative of:	Americans over 50	Medicare beneficiaries	Medicare beneficiaries 65+	Samples MAOs with 500+ enrollees
Cohorts/ Longitudinal panels?	Y	Y	Y	Repeated cross-sectional with single 2-yr follow-up
Hispanic/Latino ethnicity asked separately?	Y	Y	N (uses MBSF)	Y (and multiple Hispanic ethnicities in recent years)
Multiple races possible in response?	Y	Y	N	Y
Other status vars (e.g., SES, living situation)?	Y	Y	Y	Y
Collection	Core : every 2 years	Yearly	Yearly	See cohorts
Privacy level	Survey: Public	LDS	NHATS itself: RIF	PUF, LDS, RIF
Linkage to FFS ROIF administrative data?	Parallel approvals; requires federal research funds	Application package to ResDAC	ResDAC helps with DUA application	N/A

Not enough time to review them here, but…

- CMS has several **CAHPS** surveys available
  - Patient experience
    - » key part of the health care triple aim
    - » Not the same as "satisfaction"
    - » Most importantly: May be a prime indication of disparities
  - If you're not familiar, much literature and many references out there on CAHPS– can see cahps.ahrq.org; search CAHPS at cms.gov; etc.
  - Hospital (HCAHPS), Home Health, FFS, Advantage, In-center hemodialysis, Nationwide adult Medicaid, others (and more in development)

Assessment Data

(MDS, OASIS: Privacy Protected/RIF Files)

- MDS (Minimum Data Set)
  - All residents in MDCR or MDCD-certified LTC and SNF facilities
  - MDS 2 1999-2010; MDS 3 2010-2012 (redevelopment, resident reports)
  - Similar race/ethnicity
  - Also: Marital status; need for interpreter (A1100A_NEED_INTRPTR_CD); preferred language (A1100B_INTRPTR_LANG_TXT); and cognitive and functional assessments
  - See KnowledgeBase article on missing values in MDS at www.resdac.org
- OASIS (Outcome and Assessment Information Set)
  - Medicare Home Health services 1999-2012
  - Similar race/ethnicity categories
  - Also: Cognitive/decision making impairments (e.g., M0220B); obesity (M0290E); several environmental factors (e.g., M0310C-Stairs inside home must be used; M0320F-Inadequate Stair Railings); living situation and support system (M0340x-M0350x: e.g., IADL assistance, psychosocial support, paid help); zip code; health/functional status vars

Just a few examples for a sense of scope

- Tsai TC, Orav EJ, Joynt KE. Disparities in Surgical 30-Day Readmission Rates for Medicare Beneficiaries by Race and Site of Care. Annals of Surgery 2014;359(6):1086-90
  - National Medicare data 2007-2010
- Zhang S, Cardarelli K, Shim R, Ye J, Booker KL, Rust G. Racial Disparities in Economic and Clinical Outcomes of Pregnancy among Medicaid Recipients. Maternal and Child Health Journal 2013;17(8):1518-25.
  - MAX data for 14 states
- Rahman M, Foster AD. Racial segregation and quality of care disparity in US nursing homes. Journal of Health Economics 2015;39:1-16
  - FFS Medicare enrollees entering nursing homes for SNF stays
  - MDS, Medicare enrollment and part A claims, MAX, other sources
- Haas SA, Krueger PM, Rohlfsen L. Race/ethnic and nativity disparities in later life physical performance: the role of health and socioeconomic status over the life course. The Journals of Gerontology, Series B: Psychological Sciences and Social Sciences 2012;67(2):238–48.
  - Health and Retirement Study
- Akincigil A, Olfson M, Siegel M, Zurlo KA, Walkup JT, Crystal S. Racial and Ethnic Disparities in Depression Care in Community-Dwelling Elderly in the United States. American Journal of Public Health 2012;102(2):319-328
  - Medicare Current Beneficiary Survey

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Accessing Data (may include costs)

- For details, see ResDAC training materials and other material at resdac.org
- Non-identifiable process:
  - Download or very simple ordering process
- LDS Data request process:
  - Order form, Data Use Agreement, research protocol
  - With the exception of MCBS data requests, are not reviewed by ResDAC
- Research Identifiable File process
  - Details at ResDAC.org; data request packet
  - ResDAC will assist during preparation of any data request packet
  - ResDAC review required for ALL Identifiable Data Requests
- Request any materials from www.resdac.org: Data Request Center
- CMS Virtual Data research Center (VDRC)
  - Access to most RIF files, so requires application materials
  - Single annual charge for a user "seat"
  - See resdac.org for details

How to Contact the ResDAC Assistance Desk

- Phone
  - Toll free: 888-9ResDAC (888-973-7322)
- Email
  - resdac@umn.edu
- WEB
  - www.resdac.org (information)