



# OFFICE OF THE SECRETARY **PATIENT-CENTERED OUTCOMES RESEARCH TRUST FUND**

## **OS-PCORTF Medicare Claims Linkage Inventory**

This inventory includes federally funded survey and administrative data sources that contain information useful for patient-centered outcomes research (PCOR) on economic outcomes and that can be linked to Medicare fee-for-service (FFS) claims. This inventory accompanies an ASPE report entitled Medicare Data Linkages for Conducting Patient-Centered Outcomes Research on Economic Outcomes, which is available on: <https://aspe.hhs.gov/>. The first tab of the inventory lists each data source and provides information about its characteristics, access, size and scope, and linkage to Medicare FFS claims. The second tab provides explanatory notes regarding how certain fields were populated. Further details about the inventory are described in the report referenced above.

September 2022

Name	Fields Related to Characteristics							
	Acronym	Steward	URL	Periodicity of Data Collection	Source of Data	If Administrative Data, Administrative Data Type	Lowest Level of Aggregation	Length of Observation
Medicare FFS claims (Parts A and B, Research Identifiable Files)	RIF	CMS*	<a href="https://resdac.org/file-availability?field_data_file_category_target_id=4931&amp;title=">https://resdac.org/file-availability?field_data_file_category_target_id=4931&amp;title=</a>	Quarterly	Administrative	Claims and enrollment	Individual, Encounter/claim	Longitudinal (while continuously enrolled)
<b>Data Sources Linked or Linkable to Medicare FFS Claims</b>								
Medicare Part D claims	PDE	CMS*	<a href="https://resdac.org/cms-data/files/pde">https://resdac.org/cms-data/files/pde</a>	Annual	Administrative	Claims	Individual, Encounter/claim	Longitudinal
Medicare Current Beneficiary Survey	MCBS	CMS*	<a href="https://www.cms.gov/Research-Statistics-Data-and-Systems/Research/MCBS">https://www.cms.gov/Research-Statistics-Data-and-Systems/Research/MCBS</a>	Annual	Survey	NA	Individual	Longitudinal
Medicaid claims (Research Identifiable Files)	RIF	CMS*	MAX: <a href="https://www.cms.gov/Research-Statistics-Data-and-Systems/Computer-Data-and-Systems/MedicaidDataSourcesGenInfo/MAXGeneralInformation">https://www.cms.gov/Research-Statistics-Data-and-Systems/Computer-Data-and-Systems/MedicaidDataSourcesGenInfo/MAXGeneralInformation</a>  TAF: <a href="https://www.medicaid.gov/medicaid/data-systems/macbis/medicaid-chip-research-files/transformed-medicaid-statistical-information-system-t-msis-analytic-files- taf/index.html">https://www.medicaid.gov/medicaid/data-systems/macbis/medicaid-chip-research-files/transformed-medicaid-statistical-information-system-t-msis-analytic-files- taf/index.html</a>	Annual	Administrative	Claims and enrollment	Individual, Encounter/claim	Longitudinal (while continuously enrolled)
Medicare-Medicaid Linked Enrollee Analytic Data Source	MMLEADS	CMS*	<a href="https://resdac.org/cms-data/files/mMLEADS-1">https://resdac.org/cms-data/files/mMLEADS-1</a>	Annual	Administrative	Claims and enrollment	Individual	Longitudinal (while continuously enrolled)
National Health Interview Survey	NHIS	CDC/NCHS*	<a href="https://www.cdc.gov/nchs/nhis/about_nhis.htm#data">https://www.cdc.gov/nchs/nhis/about_nhis.htm#data</a>	Annual	Survey	NA	Individual	Cross-sectional
National Health and Nutrition Examination Survey	NHANES	CDC/NCHS*	<a href="https://www.cdc.gov/nchs/nhanes/index.htm">https://www.cdc.gov/nchs/nhanes/index.htm</a>	Annual	Survey	NA	Individual	Cross-sectional
The Second Longitudinal Study of Aging	LSOA II	CDC/NCHS*	<a href="https://www.cdc.gov/nchs/lsOA/lsOA2.htm#:~:text=The%20LSOA%20II%20is%20a,%2D98%20and%201999%2D2000.">https://www.cdc.gov/nchs/lsOA/lsOA2.htm#:~:text=The%20LSOA%20II%20is%20a,%2D98%20and%201999%2D2000.</a>	Biennial	Survey	NA	Individual	Longitudinal
National Hospital Care Survey	NHCS	CDC/NCHS*	<a href="https://www.cdc.gov/nchs/nhcs/index.htm">https://www.cdc.gov/nchs/nhcs/index.htm</a>	Annual	Survey	NA	Individual	Cross-sectional
The National Nursing Home Survey	NNHS	CDC/NCHS*	<a href="https://www.cdc.gov/nchs/nhcs/about_nnhs.htm">https://www.cdc.gov/nchs/nhcs/about_nnhs.htm</a>	1973-74, 1977, 1985, 1995, 1997, 1999, and 2004	Survey	NA	Individual	Cross-sectional

Name	Fields Related to Characteristics							
	Acronym	Steward	URL	Periodicity of Data Collection	Source of Data	If Administrative Data, Administrative Data Type	Lowest Level of Aggregation	Length of Observation
<b>United States Renal Data System</b>	USRDS	NIH*	<a href="https://usrds.org/">https://usrds.org/</a>	Annual	Administrative	Hospital and Administrative Records	Individual	Cross-sectional
<b>National Health and Aging Trends Study</b>	NHATS	NIH*	<a href="https://nhats.org/">https://nhats.org/</a>	Annual	Survey	NA	Individual	Longitudinal
<b>National Study of Caregiving</b>	NSOC	NIH*	<a href="https://nhats.org/researcher/nsoc">https://nhats.org/researcher/nsoc</a>	Annual	Survey	NA	Individual	Historically cross-sectional; longitudinal data collection began in 2017
<b>National Long Term Care Survey</b>	NLTCS	NIH*	<a href="https://www.nia.nih.gov/research/resource/national-long-term-care-survey-nltcs">https://www.nia.nih.gov/research/resource/national-long-term-care-survey-nltcs</a>	Every five years	Survey	NA	Individual	Longitudinal
<b>SEER-Medicare</b>	None	NIH*	<a href="https://healthcaredelivery.cancer.gov/seermedicare/overview/">https://healthcaredelivery.cancer.gov/seermedicare/overview/</a>	Annual	Administrative	Claims and utilization	Individual	Longitudinal
<b>Health and Retirement Study</b>	HRS	NIH*	<a href="https://resdac.org/cms-data/files/hrs-medicare">https://resdac.org/cms-data/files/hrs-medicare</a>	Biennial	Survey	NA	Individual	Longitudinal
<b>Panel Study of Income Dynamics</b>	PSID	University of Michigan	<a href="https://psidonline.isr.umich.edu/">https://psidonline.isr.umich.edu/</a>	Annual from 1968-1997, biennially after 1997	Survey	NA	Individual	Longitudinal
<b>Health Economics Resource Center Average Cost Datasets</b>	HERC	U.S. Department of Veterans Affairs	<a href="https://www.herc.research.va.gov/include/page.asp?id=guidebooks">https://www.herc.research.va.gov/include/page.asp?id=guidebooks</a>	Annual	Administrative	Hospital encounter records	Encounter/claim	Cross-sectional
<b>Medical Expenditure Panel Survey*</b>	MEPS	AHRQ*	<a href="https://www.meps.ahrq.gov/mepsweb/">https://www.meps.ahrq.gov/mepsweb/</a>	Annual	Survey	NA	Individual	Longitudinal (2 year overlapping cohorts)

\* Although publicly available information about the MEPS-Medicare data linkage is not available, a technical expert panel (TEP) panel member at AHRQ confirmed with the research team that external researchers can request for MEPS-Medicare linked data through the NCHS RDC.

Name	Fields Related to Access		
	Publicly Available Data?	If Publicly Available Data, Additional Restricted-Use Version Available?	Cost of Data
Medicare FFS claims (Parts A and B, Research Identifiable Files)	No	NA	Cost varies by project scope/amount of data requested
<b>Data Sources Linked or Linkable to Medicare FFS Claims</b>			
Medicare Part D claims	No	NA	Cost varies by project scope/amount of data requested
Medicare Current Beneficiary Survey	Yes	Yes	Free for public-use data; Cost varies by project scope/amount of data requested for restricted-use data
Medicaid claims (Research Identifiable Files)	No	NA	Cost varies by project scope/amount of data requested
Medicare-Medicaid Linked Enrollee Analytic Data Source	No	NA	Cost varies by project scope/amount of data requested
National Health Interview Survey	Yes	Yes	Free for public-use data; Cost varies by project scope/amount of data requested for restricted-use data
National Health and Nutrition Examination Survey	Yes	Yes	Free for public-use data; Cost varies by project scope/amount of data requested for restricted-use data
The Second Longitudinal Study of Aging	Yes	No	Free for public-use data
National Hospital Care Survey	No	NA	Cost varies by project scope/amount of data requested
The National Nursing Home Survey	Yes	Yes	Free for public-use data; Cost varies by project scope/amount of data requested for restricted-use data
United States Renal Data System	No	NA	<\$100
National Health and Aging Trends Study	Yes	Yes	Free for public-use data; <\$100 for restricted-use data
National Study of Caregiving	No	NA	Cost varies by project scope/amount of data requested
National Long Term Care Survey	Yes	Yes	Free for public-use data; Cost varies by project scope/amount of data requested for restricted-use data
SEER-Medicare	No	NA	Cost varies by project scope/amount of data requested
Health and Retirement Study	Yes	Yes	Free for public-use data; Cost varies by project scope/amount of data requested for restricted-use data
Panel Study of Income Dynamics	Yes	Yes	Free for public-use data; >=\$100 for restricted-use data
Health Economics Resource Center Average Cost Datasets	No	NA	<\$100 for restricted-use data
Medical Expenditure Panel Survey*	Yes	Yes	Free for public-use data; >=\$100 for restricted-use data
* Although publicly available information about the MEPS-Medicare data linkage is not available, a technical expert panel (TEP) panel member at AHRQ confirmed with the research team that external researchers can request for MEPS-Medicare linked data through the NCHS RDC.			

Name	Fields Related to Size and Scope						
	Years of Data Available	Latest Available Sample Size	If Survey Data, Latest Available Survey Response Rate	Population Scope of Data	Data Nationally Representative/ National Coverage?	Lowest Level of Geography Available	If Publicly Available Data, Lowest Level of Geography Available in Restricted-Use Version
Medicare FFS claims (Parts A and B, Research Identifiable Files)	1999-2020	Varies by file type; 61+ million	NA	U.S. Medicare Beneficiaries	Yes	Zip code	NA
<b>Data Sources Linked or Linkable to Medicare FFS Claims</b>							
Medicare Part D claims	2006-2020	48 million	NA	U.S. Medicare Beneficiaries	Yes	NA	NA
Medicare Current Beneficiary Survey	1991-2020	11,548	55%	U.S. Medicare Beneficiaries	Yes	None	Zip code
Medicaid claims (Research Identifiable Files)	Medicaid Analytic eExtract (MAX): 1999-2015  Transformed Medicaid Statistical Information System (T-MSIS) Analytic Files (TAF): 2014-2019	Varies by file type; 73+ million Medicaid; 6.7 million CHIP	NA	U.S. Medicaid and CHIP Beneficiaries	Yes	Zip code	NA
Medicare-Medicaid Linked Enrollee Analytic Data Source	2006-2012	58+ million	NA	Medicare and/or Medicaid beneficiaries	Yes	Zip code	NA
National Health Interview Survey	1963-2020	30,000	57%	U.S. Civilian Noninstitutionalized Population	Yes	Census region	County
National Health and Nutrition Examination Survey	1959-2018	9,254	49%	U.S. Civilian Noninstitutionalized Population	Yes	None	Census block
The Second Longitudinal Study of Aging	1997-1998 and 1999-2000	9,447	89.80%	U.S. Civilian Noninstitutionalized Population aged 70+	Yes	Census region	NA
National Hospital Care Survey	2013-2016	500 hospitals	15%	Patients in US hospital settings	Yes	Zip code	NA
The National Nursing Home Survey	1973-2004	1 million+	Unknown	U.S. Nursing Homes and Nursing Assistants	Yes	Census region	Census region
United States Renal Data System	2010-2021	1 million+	NA	U.S. Population with Kidney Disease	Yes	Zip code	NA
National Health and Aging Trends Study	2011-present	16,283	2011 Cohort: 70.9%; 2015 Cohort: 72.1%	U.S. Medicare beneficiaries	Yes	Census division	Census tract

Name	Fields Related to Size and Scope						
	Years of Data Available	Latest Available Sample Size	If Survey Data, Latest Available Survey Response Rate	Population Scope of Data	Data Nationally Representative/ National Coverage?	Lowest Level of Geography Available	If Publicly Available Data, Lowest Level of Geography Available in Restricted-Use Version
<b>National Study of Caregiving</b>	2011, 2015, 2017, starting in 2021 NSOC will be conducted annually	2,361	61.90%	U.S. Caregivers	Yes	Census division	Census tract
<b>National Long Term Care Survey</b>	1982, 1984, 1989, 1994, 1999 and 2004	35,789	95%	U.S. Population aged 65+	Yes	Census region	Zip code
<b>SEER-Medicare</b>	1999-2017	6 million+	NA	U.S. Population with Cancer	Yes	Census tract	NA
<b>Health and Retirement Study</b>	1992-present	27,895	Baseline average response rate 73.0%, re-interview response rates range from 68.8% to 92.3%.	U.S. Population aged 50+	Yes	Census division	Zip code
<b>Panel Study of Income Dynamics</b>	1968-2019	26,000	90%	U.S. Civilian Noninstitutionalized Population	Yes	State	Zip code
<b>Health Economics Resource Center Average Cost Datasets</b>	1998-present	Unknown	NA	U.S. veteran population	Yes	VA Station Number	NA
<b>Medical Expenditure Panel Survey*</b>	1996-2019	30,716 individuals, 12,756 families	HC: 44.2% IC: 82% - Government; 59% Private	U.S. civilian noninstitutionalized population	Yes	Census region	County

\* Although publicly available information about the MEPS-Medicare data linkage is not available, a technical expert panel (TEP) panel member at AHRQ confirmed with the research team that external researchers can request for MEPS-Medicare linked data through the NCHS RDC.

Name	Fields Related to Economic Outcomes						
	Available Economic Outcome Categories	Available Economic Outcome Measures, by Category	Economic Perspectives Represented	Identifiable SDOH Categories***	Demographics Available for Conducting Disparities/Equity Analyses**	Facility Identifier(s) Available	Facility Information Available
<b>Medicare FFS claims (Parts A and B, Research Identifiable Files)</b>	Direct Medical Costs	<u>Direct Medical Costs:</u> Paid/reimbursed amount	Payer	Social context, Economic context, Healthcare context	<u>Age and sex available?</u> Yes  <u>Other available characteristics based on the EO:</u> Race/ethnicity, Disability status, Urban-rural status, Income or income status	Provider Number; Claim Facility Type Code, National Provider Identifier	Location - Zip Code, Location - State, type of provider
<b>Data Sources Linked or Linkable to Medicare FFS Claims</b>							
<b>Medicare Part D claims</b>	Direct Medical Costs	<u>Direct Medical Costs:</u> Insurance premium*; OOP health care costs, Paid/reimbursed amount  *Premium information is available in the Plan Characteristics file	Patient, Payer	Social context, Healthcare context	<u>Age and sex available?</u> Yes  <u>Other available characteristics based on the EO:</u> NA	National Council for Prescription Drug Programs (NCPDP) number, Prescriber Identification Number	type of pharmacy used, relationship to chain or franchise*  *This information can be ascertained via linkage to the Pharmacy Characteristics file
<b>Medicare Current Beneficiary Survey</b>	Direct Medical Costs, Direct Non-Medical Costs	<u>Direct Medical Costs:</u> Insurance Premium, OOP health care costs, Paid/reimbursed amount  <u>Direct Non-Medical Costs:</u> Transportation, Time costs: health care seeking	Patient, Payer	Social context, Economic context, Education, Physical Infrastructure, Healthcare context	<u>Age and sex available?</u> Yes  <u>Other available characteristics based on the EO:</u> Race/ethnicity, Disability Status, Urban-rural status, Income or income status	Medicare provider number	type of facility at which beneficiary is staying, whether facility is part of larger facility/campus, type of larger facility/campus of which facility is part, ownership of facility (e.g., non-profit), number of beds, number of beds of specific types (e.g., Medicare certified), facility and specialty of usual source of care

Name	Fields Related to Economic Outcomes						
	Available Economic Outcome Categories	Available Economic Outcome Measures, by Category	Economic Perspectives Represented	Identifiable SDOH Categories***	Demographics Available for Conducting Disparities/Equity Analyses**	Facility Identifier(s) Available	Facility Information Available
<b>Medicaid claims (Research Identifiable Files)</b>	Direct Medical Costs	<u>Direct Medical Costs:</u> Paid/reimbursed amount, OOP health care costs	Patient, Payer	Social context, Economic context, Healthcare context	<u>Age and sex available?</u> Yes  <u>Other available characteristics based on the EO:</u> Race/ethnicity, Disability status, Income or income status, Urban-rural status	Type of Hospital; Billing Provider Number, Billing Provider Type, Billing Provider National Provider Identifier, Provider Location ID	None - requires linkage
<b>Medicare-Medicaid Linked Enrollee Analytic Data Source</b>	Direct Medical Costs	<u>Direct Medical Costs:</u> Paid/reimbursed amount	Payer	Social context, Economic context, Healthcare context	<u>Age and sex available?</u> Yes  <u>Other available characteristics based on the EO:</u> Race/ethnicity, Disability status, Urban-rural status	None	None
<b>National Health Interview Survey</b>	Direct Medical Costs, Indirect Costs	<u>Direct Medical Costs:</u> Insurance Premium, OOP health care costs  <u>Indirect Costs:</u> Absenteeism, Time costs: home production and leisure, Inability to work, Productivity	Patient	Social context, Economic context, Education, Physical Infrastructure, Healthcare context	<u>Age and sex available?</u> Yes  <u>Other available characteristics based on the EO:</u> Race/ethnicity, LGBTQ+, Disability status, Urban-rural status, Income or income status	None	None
<b>National Health and Nutrition Examination Survey</b>	Direct Non-Medical Costs, Indirect Costs	<u>Direct Non-Medical Costs:</u> Special food  <u>Indirect Costs:</u> Time costs: home production and leisure	Patient	Social context, Economic context, Education, Physical Infrastructure, Healthcare context	<u>Age and sex available?</u> Yes  <u>Other available characteristics based on the EO:</u> Race/ethnicity, Disability status, Urban-rural status, Income or income status	None	type of facility respondent goes to most often (e.g., doctor's office, urgent care)



Name	Fields Related to Economic Outcomes						
	Available Economic Outcome Categories	Available Economic Outcome Measures, by Category	Economic Perspectives Represented	Identifiable SDOH Categories***	Demographics Available for Conducting Disparities/Equity Analyses**	Facility Identifier(s) Available	Facility Information Available
<b>The Second Longitudinal Study of Aging</b>	Indirect Costs	<u>Indirect Costs:</u>  Absenteeism, Time costs: home production and leisure, Inability to work, Productivity	Patient	Social context, Economic context, Education, Physical Infrastructure, Healthcare context	<u>Age and sex available?</u> Yes  <u>Other available characteristics based on the EO:</u> Race/ethnicity, LGBTQ+, Disability status, Urban-rural status, Income or income status	None	None
<b>National Hospital Care Survey</b>	Direct Medical Costs	<u>Direct Medical Costs:</u> Paid/reimbursed amount	Payer	Social context, Healthcare context	<u>Age and sex available?</u> Yes  <u>Other available characteristics based on the EO:</u> Urban-rural status	Hospital Identifier	service type of hospital, hospital ownership
<b>The National Nursing Home Survey</b>	Direct Medical Costs	<u>Direct Medical Costs:</u>  OOP health care costs	Patient	Social context, Economic context, Education, Healthcare context	<u>Age and sex available?</u> Yes  <u>Other available characteristics based on the EO:</u> Race/ethnicity, Income status, Urban-rural status, Disability status	None	chain status, ownership, number of beds
<b>United States Renal Data System</b>	Direct Medical Costs	<u>Direct Medical Costs:</u> Paid/reimbursed amount, OOP health care costs	Patient, Payer	Social context, Healthcare context	<u>Age and sex available?</u> Yes  <u>Other available characteristics based on the EO:</u> Race/ethnicity, Urban-rural status, Disability status	USRDS Assigned Facility ID, Chain ID	Location - Zip Code, whether hospital-based or freestanding, for-profit or non-profit
<b>National Health and Aging Trends Study</b>	Direct Medical Costs, Indirect Costs	<u>Direct Medical Costs:</u> Insurance Premium  <u>Indirect Costs:</u> Inability to work	Patient	Social context, Economic context, Education, Physical Infrastructure, Healthcare context	<u>Age and sex available?</u> Yes  <u>Other available characteristics based on the EO:</u> Race/ethnicity, Disability status, Urban-rural status, Income or income status	None	type of facility at which respondent is temporarily staying, type of facility at which respondent received rehab services

Name	Fields Related to Economic Outcomes						
	Available Economic Outcome Categories	Available Economic Outcome Measures, by Category	Economic Perspectives Represented	Identifiable SDOH Categories***	Demographics Available for Conducting Disparities/Equity Analyses**	Facility Identifier(s) Available	Facility Information Available
<b>National Study of Caregiving</b>	Direct Non-Medical Costs, Indirect Costs	<u>Direct Non-Medical Costs:</u> Time costs: Informal caregiving, Transportation, Special food, Time costs: healthcare seeking, home modifications, housekeeping  <u>Indirect costs:</u> Absenteeism, Inability to work	Caregiver	Social context, Economic context, Education, Healthcare context	<u>Age and sex available?</u> Yes  <u>Other available characteristics based on the EO:</u> Income or income status, Urban-rural status	None	type of facility spouse/partner went after a hospital stay
<b>National Long Term Care Survey</b>	Direct Medical Costs	<u>Direct Medical Costs:</u> Paid/reimbursed amount, OOP health care costs, Insurance Premium	Patient, Payer	Social context, Economic context, Education, Healthcare context	<u>Age and sex available?</u> Yes  <u>Other available characteristics based on the EO:</u> Race/ethnicity, Disability Status, Income or income status, Urban-rural status	None	None
<b>SEER-Medicare</b>	Direct Medical Costs	<u>Direct Medical Costs:</u>  Paid/reimbursed amount	Payer	Social context, Economic context, Healthcare context	<u>Age and sex available?</u> Yes  <u>Other available characteristics based on the EO:</u> Race/ethnicity, Urban-rural status, Disability status, Income or Income Status	Provider Number; Claim Facility Type Code, National Provider Identifier	Location - State, type of provider
<b>Health and Retirement Study</b>	Direct Medical Costs	<u>Direct Medical Costs:</u>  Insurance Premium, Paid/reimbursed amount, OOP health care costs	Patient, Payer	Social context, Economic context, Healthcare context	<u>Age and sex available?</u> Yes  <u>Other available characteristics based on the EO:</u> Race/ethnicity, Disability status, Income status, LGBTQ+, religious affiliation, Urban-rural status	None	None

Name	Fields Related to Economic Outcomes						
	Available Economic Outcome Categories	Available Economic Outcome Measures, by Category	Economic Perspectives Represented	Identifiable SDOH Categories***	Demographics Available for Conducting Disparities/Equity Analyses**	Facility Identifier(s) Available	Facility Information Available
<b>Panel Study of Income Dynamics</b>	Direct Medical Costs, Direct Non-Medical Costs, Indirect Costs	<u>Direct Medical Costs:</u> Insurance Premium, OOP health care costs  <u>Direct Non-Medical Costs:</u> Informal Caregiving  <u>Indirect Costs:</u> Absenteeism, Time costs: home production & leisure	Patient, Caregiver	Social context, Economic context, Education, Physical Infrastructure, Healthcare context	<u>Age and sex available?</u> Yes  <u>Other available characteristics based on the EO:</u> Race/ethnicity, Religious affiliation, Disability Status, Urban-rural status, Income or income status	None	None
<b>Health Economics Resource Center Average Cost Datasets</b>	Direct Medical Costs	<u>Direct Medical Costs:</u> (Approximation of) Paid/reimbursed amount, OOP health care costs*  <i>*Estimates are average costs</i>	Patient, Payer	Social context	<u>Age and sex available?</u> Yes  <u>Other available characteristics based on the EO:</u> Unknown	Unknown	Unknown
<b>Medical Expenditure Panel Survey*</b>  * Although publicly available information about the MEPS-Medicare data linkage is not available, a technical expert panel (TEP) panel member at AHRQ confirmed with the research team that external researchers can request for MEPS-Medicare linked data through the NCHS RDC.	Direct Medical Costs, Direct Non-Medical Costs, Indirect Costs	<u>Direct Medical Costs:</u> Insurance premium, OOP health care costs  <u>Direct Non-Medical Costs:</u> Informal Caregiving  <u>Indirect Costs:</u> Absenteeism	Patient, Caregiver, Employer, Payer	Social context, Economic context, Education, Physical Infrastructure, Healthcare context	<u>Age and sex available?</u> Yes  <u>Other available characteristics based on the EO:</u> Race/ethnicity, Urban-rural status, Income or income status	NA	type and location of provider for usual source of care

Name	Fields Related to Linkage with Medicare Claims			
	Available Timeframe for Linked Data	Outside Researchers' Access to Linked Data	Rating of Linked Data for PCOR Economic Evaluations	Rationale for Rating
<b>Medicare FFS claims (Parts A and B, Research Identifiable Files)</b>	NA	NA	NA	NA
<b>Data Sources Linked or Linkable to Medicare FFS Claims</b>				
<b>Medicare Part D claims</b>	2006-2020	Via research application to ResDac	Medium	Multiple perspectives represented with the linkage
<b>Medicare Current Beneficiary Survey</b>	1991-2020	Via research application to ResDAC.	High	Multiple economic outcome domains and perspectives represented with the linkage
<b>Medicaid claims (Research Identifiable Files)</b>	1999-2019	Via research application to ResDAC	Medium	Multiple economic measures and perspectives represented with the linkage
<b>Medicare-Medicaid Linked Enrollee Analytic Data Source</b>	2006-2012	Via research application to ResDAC	Low	Only one economic domain and one perspective represented with the linkage
<b>National Health Interview Survey</b>	1994-2018 NHIS data has been linked to 2014-2018 Medicare enrollment data and 2016-2018 FFS claims  1994-2013 NHIS has been linked to 1999-2013 Medicare enrollment and FFS claims	Via research application to NCHS Research Data Center (RDC)	High	Multiple economic outcome domains and perspectives represented with the linkage
<b>National Health and Nutrition Examination Survey</b>	1999-2018 Continuous NHANES and Third NHANES (NHANES III) data has been linked to 2014-2018 Medicare enrollment data and 2016-2018 FFS claims  1999-2012 Continuous NHANES and NHANES III has been linked to 1999-2013 Medicare enrollment and FFS claims	Via research application to NCHS RDC	High	Multiple economic outcome domains and perspectives represented with the linkage
<b>The Second Longitudinal Study of Aging</b>	The 1994 LSOA II survey data are linked to 1991 – 2013 Medicare FFS claims.	Via request of the CD-ROM or diskettes; e-mail nchsquery@cdc.gov or telephone (301) 458-INFO.	High	Multiple economic outcome domains and perspectives represented with the linkage

Name	Fields Related to Linkage with Medicare Claims			
	Available Timeframe for Linked Data	Outside Researchers' Access to Linked Data	Rating of Linked Data for PCOR Economic Evaluations	Rationale for Rating
<b>National Hospital Care Survey</b>	2014, 2016	Via research application to NCHS RDC	Low	Only one economic domain and one perspective represented with the linkage
<b>The National Nursing Home Survey</b>	2004 NNHS has been linked to 2014-2018 Medicare enrollment data and 2016-2018 FFS claims, and 1999-2013 Medicare enrollment and FFS claims	Via research application to NCHS RDC	Medium	Multiple economic measures and perspectives represented with the linkage
<b>United States Renal Data System</b>	2011-2019	Via a Research Proposal and a USRDS Merged Dataset Agreement for Release of Data	Medium	Multiple economic measures and perspectives represented with the linkage
<b>National Health and Aging Trends Study</b>	Longitudinal linked data available for participants in the 2011 cohort and new participants in the 2015 cohort.	NHATS-CMS linked data files are available through the Health and Aging Data (HaAD) Enclave. Access to linked data requires a DUA with NHATS and data protection plan.	High	Multiple economic outcome domains and perspectives represented with the linkage
<b>National Study of Caregiving</b>	Longitudinal linked data available for participants in the 2011 NHATS cohort and new participants in the 2015 NHATS cohort.	NHATS-CMS linked data files are available through the Health and Aging Data (HaAD) Enclave. Access to linked data requires a DUA with NHATS and data protection plan. The NSOC is considered NHATS Restricted Data and can be requested along with the CMS-linked data.	High	Multiple economic outcome domains and perspectives represented with the linkage
<b>National Long Term Care Survey</b>	1984-2004	Via research application to the National Archive of Computerized Data on Aging. Access to linked data requires a DUA.	Medium	Multiple economic measures and perspectives represented with the linkage
<b>SEER-Medicare</b>	1999-2019	Via research proposal to IMS (NCI's information technology contractor).	Low	Only one economic domain and one perspective represented with the linkage

Name	Fields Related to Linkage with Medicare Claims			
	Available Timeframe for Linked Data	Outside Researchers' Access to Linked Data	Rating of Linked Data for PCOR Economic Evaluations	Rationale for Rating
<b>Health and Retirement Study</b>	HRS data is linked to Parts A & B Research Files from 1991 - 2021	First step is a research application to HRS. Additional steps:- If research project is funded by NIA, researcher should apply to MedRIC to access the data through the MedRIC Enclave.- If research project is not funded by the NIA, researcher will apply for a CMS DUA through ResDAC before requesting the data from MedRIC.	Medium	Multiple perspectives represented with the linkage
<b>Panel Study of Income Dynamics</b>	1991-2010	Via a Data Use Agreement (DUA) from CMS and approval from PSID	High	Multiple economic outcome domains and perspectives represented with the linkage
<b>Health Economics Resource Center Average Cost Datasets</b>	NA	Outside researchers must collaborate with a VA researcher	Medium	Multiple perspectives represented with the linkage
<b>Medical Expenditure Panel Survey*</b>  * Although publicly available information about the MEPS-Medicare data linkage is not available, a technical expert panel (TEP) panel member at AHRQ confirmed with the research team that external researchers can request for MEPS-Medicare linked data through the NCHS RDC.	1996-2019 MEPS linked with 2014-2018 Medicare claims 1996-2014 MEPS linked with 1999-2013 Medicare claims	Via research application to the National Center for Health Statistics Research Data Center	High	Multiple economic outcome domains and perspectives represented with the linkage

Data Inventory Field	Notes
Available Economic Outcome Categories and Available Economic Outcome Measures, by Category	With the exception of the SEER-Medicare data which is already in linked form, the economic outcome measures field for all other data sources represents the specific outcomes that are available independently in the data source versus via the linkage.
Steward	The asterisk (*) against select values represents agencies at HHS
Demographics Available for Conducting Disparities/Equity Analyses	The asterisk (**) against the field title notes that some of the identified characteristics are based on the Executive Order (EO) On Advancing Racial Equity and Support for Underserved Communities Through the Federal Government
Identifiable SDOH Categories	The asterisk (***) against the field title notes that these domains are based on AHRQ's framework ( <a href="https://www.ahrq.gov/sdoh/about.html">https://www.ahrq.gov/sdoh/about.html</a> ).
Periodicity of Data Collection	Values in "Other" include: (1) every 60 days until discharge (Home Health Outcome and Assessment Information Set), (2) every three years (Kids' Inpatient Database), (3) continuously as each admission and discharge record is mined for data (Treatment Episode Data Set), and (4) every four months for two and a half to four years (Survey of Income and Program Participation).
Economic Perspectives Represented	"Patient" is listed when a source contains information on out-of-pocket health care costs, other out-of-pocket medical expenses, insurance premiums, any of the direct non-medical costs except the time costs of informal caregiving, and any of the indirect costs if they can be attributed to the individual for a health condition and/or service. "Caregiver" is listed when a source contains information on any of the direct non-medical costs or indirect costs if they can be attributed to an individual caring for a person with a health condition. "Payer" is listed when a source contains information on paid/reimbursed amounts if they can be attributed to a third-party organization that covers health care costs for patients. "Employer" is listed when a source contains information on paid/reimbursed amounts, insurance premiums, absenteeism, and presenteeism if they can be attributed to an organization that offers employment for patients.