

Centers for Medicare & Medicaid Services

AcademyHealth National Health Policy
Conference - Adjunct Meeting

Medicare Part D Data
February 4, 2009

CMS Chronic Condition Data Warehouse

Background

- Medicare Modernization Act of 2003, Section 723, mandated a plan to “*improve the quality of care and reduce the cost of care for chronically ill Medicare beneficiaries*”
- Essential component of plan was to establish a research database that contains fee-for-service Medicare claims data and assessments, linked by beneficiary, across the continuum of care
- Claims, assessment, and prescription drug event (PDE) data, are linked to Medicare eligibility/enrollment data

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Data Available

- Medicare Part A, B, C and D Enrollment/eligibility data – 100% Medicare beneficiaries
- Administrative claims
 - Fee-for-service institutional claims for inpatient, outpatient, skilled nursing facility, hospice, and home health agency settings
 - Fee-for-service non-institutional claims for physician/supplier and durable medical equipment
- Prescription Drug Events (PDE)
 - Point of service - transactional information at the time the prescription is filled

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Data Available (cont.)

- CCW is *not* limited to those with chronic conditions
- Chronic condition indicators are variables which indicate whether a chronic condition is present for a specified reference period

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5% Sample Cohorts Available (fee-for-service claims 1999 – forward)

- Random 5% sample of Medicare beneficiaries (e.g., *beneficiary-based* sampling methodology)
- Eligible for and enrolled in Medicare on or after January 1, 1999 through the most current period
- Health Insurance Claim (HIC) number where the eighth and ninth digits are in the set {05, 20, 45, 70, 95}
- Qualified for 5% sample, therefore, remained part of the ongoing CCW sample (includes *ever-qualifying* beneficiaries from January 1, 1999 forward, i.e., an *enhanced* or *person-based* 5% sample)

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100% Sample Cohorts Available (fee-for-service claims 2000 – forward)

- 100% Medicare beneficiaries
- Linked with historical data
- Random 5% sample flags or can submit finder file for cohort selection
- Current data

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Other Available (and Linkable) Data Files

- Assessment data
 - Minimum Data Set (MDS) - nursing facilities
 - Outcome and Assessment Information Set (OASIS) - home health agencies
 - Inpatient Rehabilitation Facility Patient Assessment Instrument (IRF-PAI)
 - Swing bed data
- CCW (CMS) Denominator File (100% or 5% sample)
- CCW (CMS) Part D Denominator File
- Beneficiary Summary File
- Chronic Condition Summary File
- Medicare Current Beneficiary Survey (MCBS)

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Part D Denominator File

- New variables added to CMS Denominator File:
 - On/Off Creditable Coverage Switch
 - Part D Plan Type Indicators
 - Cost Share Group
 - Retiree Drug Subsidy Indicators
 - State Reported Dual Eligible Status Code
 - Part D Plan Coverage Months
 - Retiree Drug Subsidy Months
 - Medicaid Dual Eligible Months
 - Research Triangle Institute Race Code

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Part D Denominator File

On/Off Creditable Coverage Switch: Indicator of creditable coverage in January of the Denominator File year, e.g., FEHB, Tricare, VA, SPAP, or active workers (i.e., ESRD, disabled, aged)

Part D Plan Type Indicators: Type of plan, e.g., Managed Care Organizations, other than Regional PPO, Regional PPO, PDP, Not Part D Enrolled, Employer Plan (beginning in 2007)

Cost Share Group: Monthly indicator of beneficiary liability of cost-sharing

Retiree Drug Subsidy Indicators: Monthly indicator of whether employer should be subsidized for beneficiary

State Reported Dual Eligible Status Code: Monthly indicator of dual eligibility status

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Part D Denominator File

Part D Plan Coverage Months: Total number of months of Part D plan coverage

Retiree Drug Subsidy Months: Total number of months employer is entitled to Retiree Drug Subsidy for beneficiary

Medicaid Dual Eligible Months: Total number of months of dual eligibility status

Research Triangle Institute Race Code: Enhanced race/ethnicity designation based on first and last name algorithms

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Part D Event (PDE) Data Files

- Drug “events” or fills for 100% of Medicare beneficiaries enrolled in Part D plans
- Approximately 1 billion drug claims annually, for 2006 and 2007
- Includes beneficiary, prescriber, and pharmacy identifiers (will be encrypted or suppressed, depending on DUA), drug utilization, cost, and coverage information

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PDE Variables

CCW Beneficiary ID Number	Fill Number
RX Claim Control Number	Dispensing Status Code
RX Cardholder Identifier	Drug Coverage Status Code
Patient Date of Birth (DOB)	Adjustment Deletion Code
Patient Gender	Non-Standard Format Code
RX Service Date (DOS)	Pricing Exception Code
Paid Date	Catastrophic Coverage Code
Service Provider ID Qualifier Code	Gross Drug Cost Below Out-of-Pocket Threshold (GDCB)
Service Provider ID	Gross Drug Cost Above Out-of-Pocket Threshold (GDCA)
Prescriber ID Qualifier Code	Patient Pay Amount
Prescriber ID	Other TrOOP Amount
RX Service Reference Number	Low Income Cost Sharing Subsidy Amount (LICS)
Product Service ID (NDC)	Patient Liability Reduction Due to Other Payer Amount (PLRO)
Compound Code	Covered D Plan Paid Amount (CPP)
Dispense as Written (DAW) Product Selection Code	Non-Covered Plan Paid Amount (NPP)
Quantity Dispensed	Gross Drug Cost
Days Supply	

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PDE Data Files

- *Part D Utilization File* (for researchers interested in linking PDE data to Part A/B data):

Unique Beneficiary ID	RX Service Date	Product Service ID (NDC)
Quantity Dispensed	Days Supply	Patient Pay Amount
Gross Drug Cost	Brand Name*	Generic Name*
Drug Strength Description*	Dosage Form Code*	Dosage Form Code Description*
Route of Administration Code*	Route Description*	

*Source: First DataBank

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PDE Data Files (cont.)

- *Part D Event File* (for researchers interested in limiting research to only PDE data)
 - Variable justification required
 - Random 5%, 10%, or 20% samples available
 - Researchers may define custom cohorts or submit finder files for cohort identification

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PDE Data File Enhancements

- CMS to develop characteristics files (or added fields to the PDE record) to supplement Part D event data
- Supplemental characteristics files:
 - Drug: First DataBank NDC drug information (e.g., drug name)
 - Pharmacy: NCPDP pharmacy information (e.g., type of pharmacy)
 - Prescriber: DEA/HCIdea Prescriber information (e.g., type of prescribing provider)
 - Plan: CMS Plan Finder (e.g., type of benefit/coverage for beneficiary)

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Key Features - Linkage Across the Continuum of Care

- All CCW data files linked by assignment of a unique, unidentifiable beneficiary link key for ease of analysis across data files (unique link keys replace HIC numbers)
- Allows for cross-sectional and longitudinal research from 1999 forward
- Allows linkage across the continuum of care to construct patient-centric views of enrollment and service utilization
- Link keys encrypted prior to delivery to the researcher, for privacy protection

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Key Features - Chronic Condition Categories

Researchers may request data for 21 predefined chronic condition categories, allowing for timely data extraction:

Acute Myocardial Infarction

Alzheimer's, Related Disorders,
or Senile Dementia

Alzheimer's Disease only

Atrial Fibrillation

Cancer, Female Breast

Cancer, Colorectal

Cancer, Prostate

Cancer, Lung

Cancer, Endometrial

Cataract

Chronic Kidney Disease

Chronic Obstructive Pulmonary Disease

Depression

Diabetes

Glaucoma

Heart Failure

Hip/Pelvic Fracture

Ischemic Heart Disease

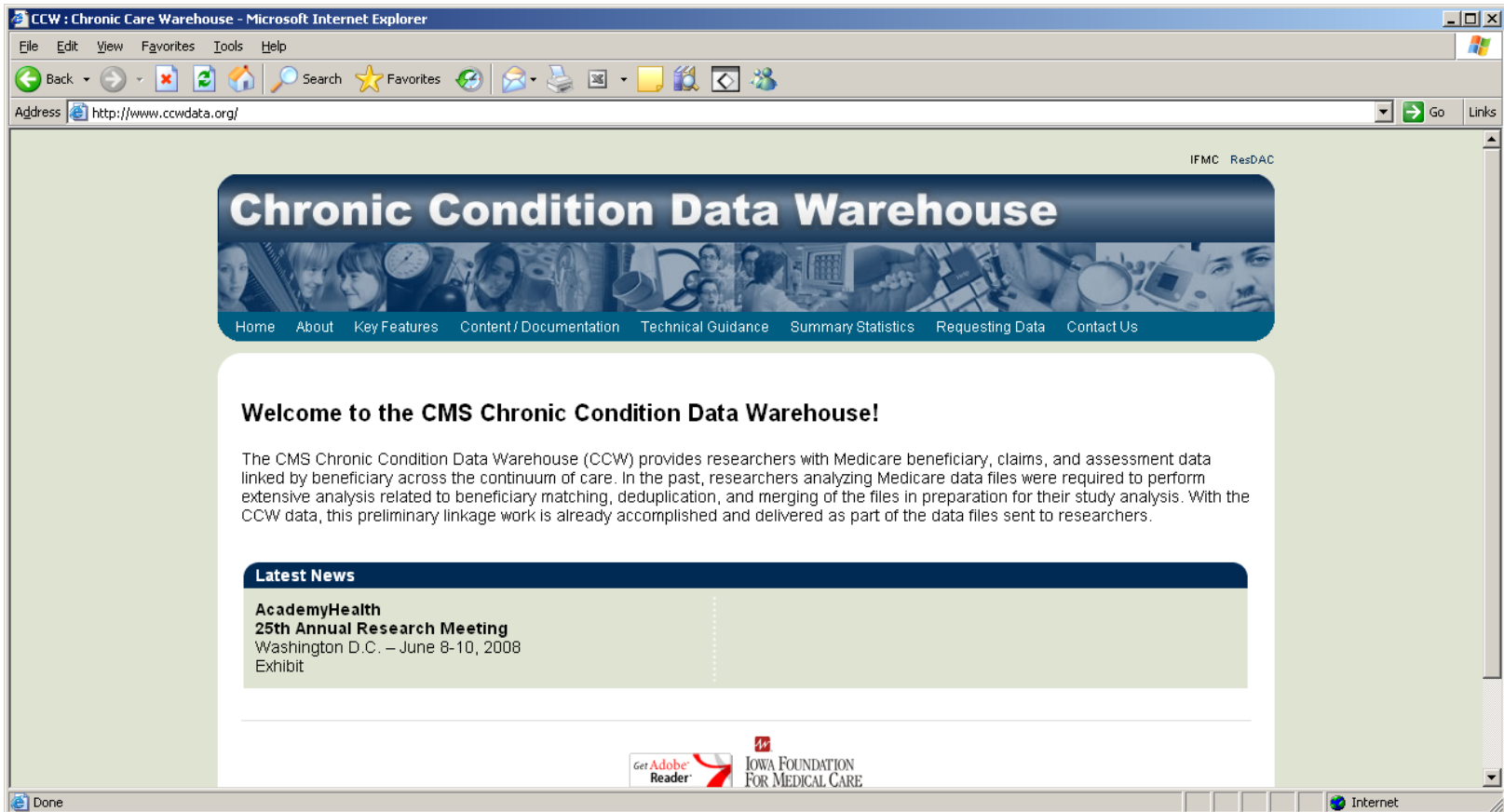
Osteoporosis

Rheumatoid Arthritis/Osteoarthritis

Stroke/Transient Ischemic Attack

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Key Features - www.ccwdata.org



The screenshot shows a Microsoft Internet Explorer browser window displaying the CMS Chronic Condition Data Warehouse website. The browser's address bar shows the URL <http://www.ccwdata.org/>. The website's main header features the title "Chronic Condition Data Warehouse" in a large, bold font, with a navigation menu below it including links for Home, About, Key Features, Content/Documentation, Technical Guidance, Summary Statistics, Requesting Data, and Contact Us. A central text block welcomes visitors and explains that the CCW provides Medicare beneficiary, claims, and assessment data linked by beneficiary across the continuum of care. Below this, a "Latest News" section highlights the "AcademyHealth 25th Annual Research Meeting" held in Washington D.C. from June 8-10, 2008. The footer of the page includes logos for Adobe Reader and the Iowa Foundation for Medical Care.

CCW : Chronic Care Warehouse - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Refresh Home Search Favorites Recycle Mail Print Mail Stop

Address <http://www.ccwdata.org/> Go Links

IFMC ResDAC

Chronic Condition Data Warehouse

Home About Key Features Content/Documentation Technical Guidance Summary Statistics Requesting Data Contact Us

Welcome to the CMS Chronic Condition Data Warehouse!

The CMS Chronic Condition Data Warehouse (CCW) provides researchers with Medicare beneficiary, claims, and assessment data linked by beneficiary across the continuum of care. In the past, researchers analyzing Medicare data files were required to perform extensive analysis related to beneficiary matching, deduplication, and merging of the files in preparation for their study analysis. With the CCW data, this preliminary linkage work is already accomplished and delivered as part of the data files sent to researchers.

Latest News

**AcademyHealth
25th Annual Research Meeting**
Washington D.C. – June 8-10, 2008
Exhibit

Get Adobe Reader IOWA FOUNDATION FOR MEDICAL CARE

Done Internet

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Key Features - Web Site Statistical Summaries

- Available to general public (pdf format)
- Resource for high level, summary statistics by segmentation variables (e.g., predefined CCW chronic conditions, utilization summary information, demographic, and/or enrollment factors)
- Helpful for finding quick facts
- Useful with exploring sample size options

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Summary Files - Beneficiary Summary File

- Annual beneficiary summary file containing demographic and enrollment data
- Includes data for beneficiaries in the requested cohort or other specified population who were:
 - *Ever* part of the CCW 5% sample
 - Documented as being alive for some part of the reference year
 - Enrolled in Medicare Part A or B at some point during the reference year (may also have been enrolled in managed care)

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Summary Files - Chronic Condition Summary File

- Summary of a beneficiary's chronic conditions (if any) by year
- Indicator variables for presence of a CCW condition during that year
 - End of year
 - Mid-year
 - Ever occurred (1999 to current)
- Includes beneficiaries in requested cohort (or other specified population)

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Chronic Condition Algorithms

- Claims Requirements for Condition
 - Diagnosis and/or procedure codes
 - Claims types
 - Look-back period
- Coverage Level Descriptions
- CC indicator variables for each of 21 conditions, with four possible values:
 - 0 = Neither claims nor coverage met
 - 1 = Claims met, coverage not met
 - 2 = Claims not met, full coverage met
 - 3 = Claims and full coverage met

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Sample Chronic Condition Algorithm Criteria

Algorithms	Reference Time Period	Valid ICD-9/CPT4/HCPCS Codes	Number/Type of Claims to Qualify
Acute Myocardial Infarction	1 year	DX 410.01, 410.11, 410.21, 410.31, 410.41, 410.51, 410.61, 410.71, 410.81, 410.91 (ONLY first or second DX on the claim)	At least 1 inpatient claim with DX codes during the 1-yr period
Atrial Fibrillation	1 year	DX 427.31 (ONLY first or second DX on the claim)	At least 1 inpatient claim or 2 HOP or Carrier* claims with DX code during the 1-yr period

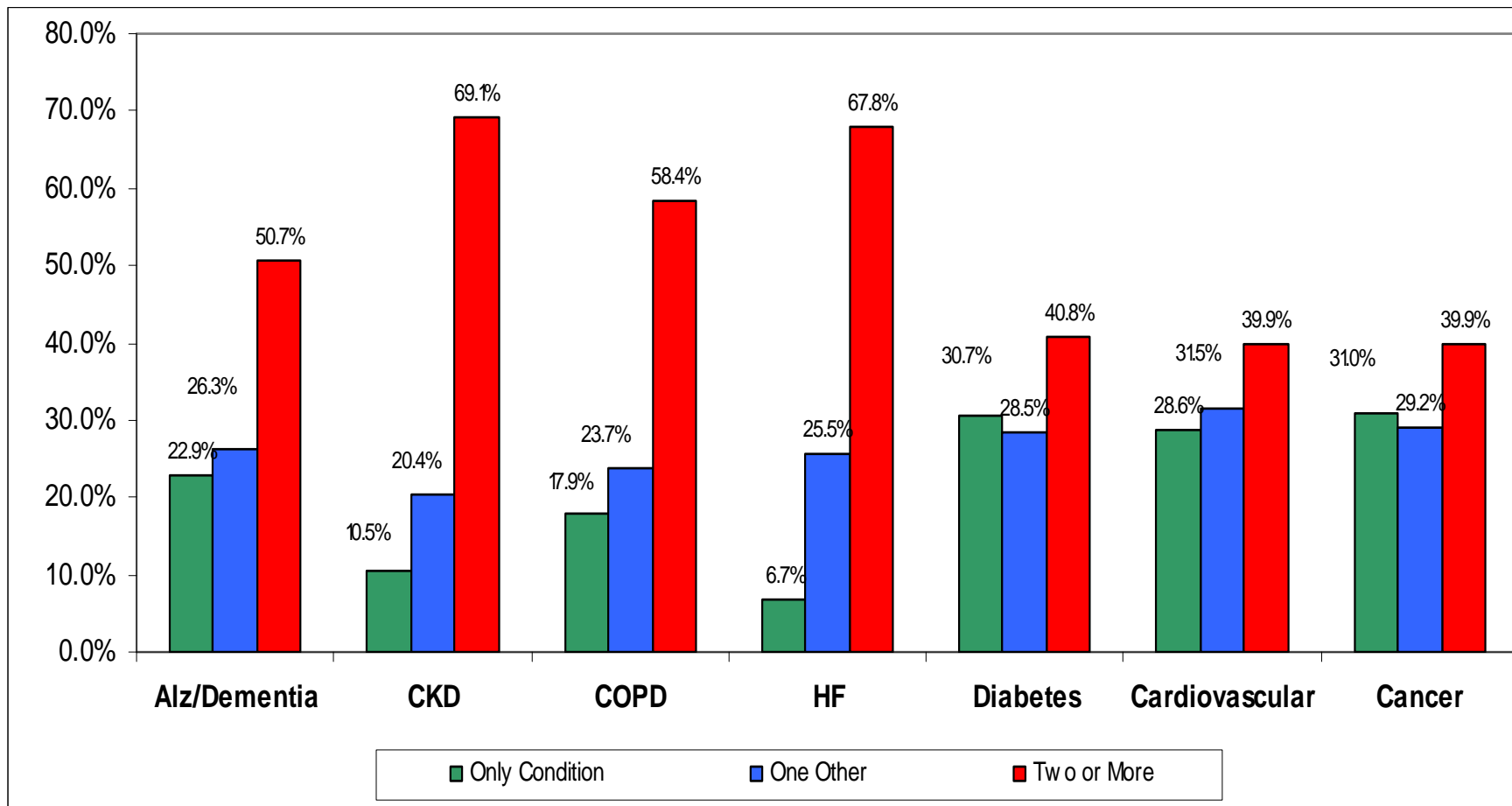
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Prevalence of Chronic Condition in Medicare FFS Population

	Beneficiaries	Prevalence
Total FFS Sample	1,603,392	100.0%
Condition		
Alzheimer's/Dementia	172,313	10.7%
Chronic Kidney Disease	169,061	10.5%
Chronic Obstructive Pulmonary Disease	174,551	10.9%
Heart Failure	283,018	17.7%
Diabetes	405,297	25.3%
Cardiovascular (AMI, IHD, Afib, stroke)	586,638	36.6%
Cancer (lung, prostate, female breast, colorectal)	102,347	6.4%
# Conditions		
None	649,856	40.5%
One	431,091	26.9%
Two	261,870	16.3%
Three or More	260,575	16.3%

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Percentage of Beneficiaries with Multiple Chronic Conditions



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Data Requests - Considerations

- Broad criteria for CCW conditions
- Medicare coverage restrictions (see *CCW Technical Guidance Paper* on web site)
- Inclusion of control or comparison group (chronic condition indicator variables can make this simple)
- Claims maturity

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Research Potential Using CCW Data

- Supports increased need for chronic disease research as aging population increases
- Allows longitudinal analyses of Medicare utilization, expenditures, quality of care, and health outcomes across continuum of care
- Only source of Part D prescription drug enrollment and event data
- Provides researchers with low cost, easy-to-use data files
- Flexible data extract system allows researchers to request only minimum data needed for studies

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Questions?

Visit these web sites for additional information!

Research Data Assistance Center

www.resdac.umn.edu

E-Mail: resdac@umn.edu

Phone: 1-888-9-ResDAC or 1-888-973-7322

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