

ENHANCING OUR UNDERSTANDING OF LONG-TERM CARE

U.S. Census Bureau / Enhancing Health Data (EHealth) Program

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Keywords:

administrative records, health data, long-term care, nursing, Medicaid, Python, large datasets

Summary:

Long-term care has become increasingly important to study as America's population ages, and as initiatives to improve this care emerged in the aftermath of the COVID-19 pandemic. To improve our understanding of this crucial population, I developed a data infrastructure using innovative linkages. Primarily, I linked Medicaid and Census data to provide comparative state-level estimates for nursing home residents in the context of state Medicaid policy. I also developed a preliminary infrastructure to link business and demographic data that paves the way to understanding other types of long-term care populations beyond nursing home residents.

Enhancing Our Understanding of Nursing Home Residents: An Innovative Medicaid-Census Data LinkAge

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Any opinions and conclusions expressed herein are those of the authors and do not reflect the views of the U.S. Census Bureau.
This presentation does not include any confidential data.

Background on the Enhancing Health Data (EHealth) Program

Research program focused on enhancing health data through the strategic re-use of administrative records and survey data



Improve
understanding of
patients, providers,
and population
health



Produce
innovative statistical
estimates and data
products

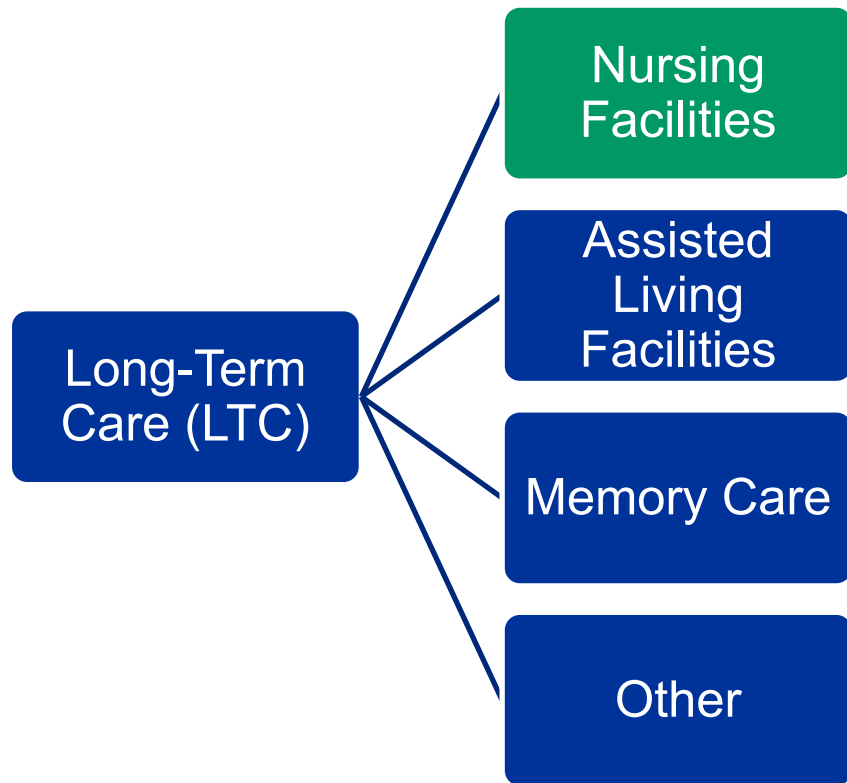


Conduct original
research and
collaborate with
external partners

More information: census.gov/ehealth

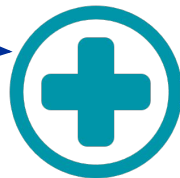
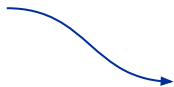
Why Research Long-Term Care?

- What is long-term care (LTC)?
- Population aging; increasing need for LTC
- Impacts of COVID; federal initiatives to improve LTC
- Disparate and non-standardized data
- Medicaid funding for nursing facilities



Census Bureau Enumeration of Nursing Facilities

Our focus



Housing Unit: primary sampling unit for collecting demographic information

Group Quarters (GQs): A group setting that is owned/managed by an organization where people receive housing and/or other services

Informational interviews

- Identify and understand internal modernization efforts

Policy landscape

- Understand state and federal policy governing long-term care

Dataset evaluation

- Document all possible internal and external data that could be used for LTC research

Data infrastructure

- Medicaid Linkage
- Business Register Linkage

Data Infrastructure: Medicaid Beneficiaries in GQ Nursing Facilities

Approach: Link national Medicaid enrollment data with decennial census data for those living in nursing facilities.

Medicaid Enrollment Data (MSIS)

Universe: All Medicaid
beneficiaries in 2010

Analytic focus:
Medicaid
beneficiaries in
nursing facilities

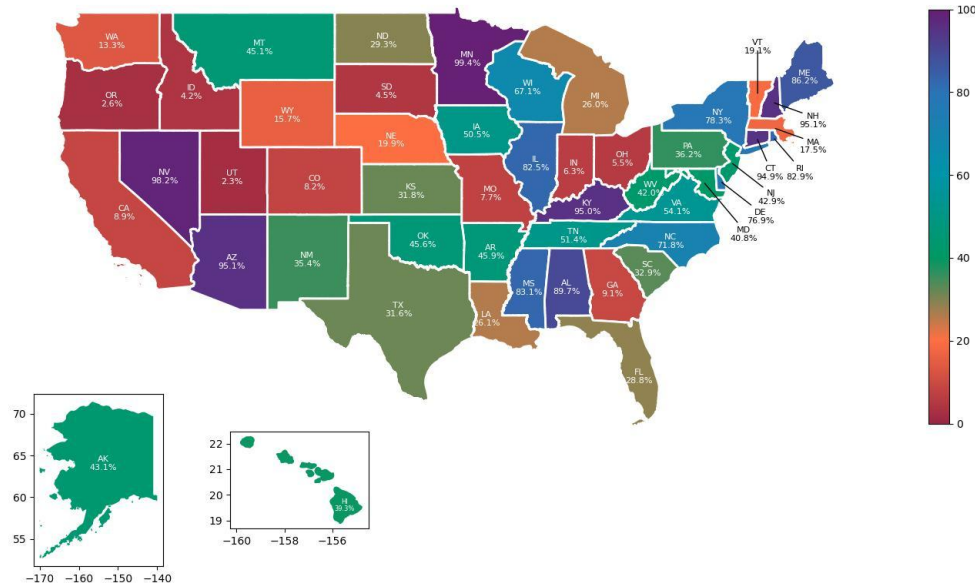
Linkage: Protected
Identification Key (PIK)

2010 Census

Universe: Individuals living
in GQ nursing facilities

Data Infrastructure: Medicaid-Decennial State-Level Analysis

- Map #1 – share of Medicaid beneficiaries in NFs
- Map #2 – share of NF residents on Medicaid
- Map #3 – share of whole state population in both



Note: All statistical estimates presented are fictitious

Data Infrastructure: Medicaid-Decennial State-Level Analysis

	% missing race	% Race 1	% Race 2	% Race 3	% Race 4	% Delta – race 1	% Delta – race 2	% Delta – race 3	% Delta - race 4
AK									
AL									
AR									
AZ									
CA									
CO									
...									

Data Infrastructure (Next Steps): Business Linkage for Long-Term Care

Approach: Link business data with decennial data to find all LTC residents, including those living in non-nursing LTC facilities (“missed” by previous GQ counts).

Business Register (BR)

Universe: All businesses in the U.S. in 2010

Focus: NAICS codes

2010 Census

Universe: All U.S. residents in 2010

Analytic focus:
Individuals living in long-term care facilities

Linkage: MAFID and addresses from MAFX



Data linkage
and repurposing
data



Utility of
administrative
data



Improving
understanding of
long-term care

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coding it forward >



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