Use of Administrative Data for Research and Evaluation

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Presented at

HHS ACF SAMI-CCPRC Conference
August 1, 2007

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How to Use Administrative Data for Research

- Identify research questions to be answered

- Assess research method needed

- Assess availability and quality of administrative data

- Collect other data (e.g., survey, policy) not contained in administrative records

- Determine best way to organize data (e.g., relational database or flat files) and to link across files

- Determine sampling strategy

- Create data set(s) needed to answer research questions

Types of Research
That Can Be Conducted

- Experimental and quasi-experimental program evaluation

- Demographic characteristics of program participants and families

- Tracking program participation and outcomes over time

- Determination of factors associated with positive program outcomes

Advantages of Administrative Data

- Detail and accuracy of program information

- Large sample size

- Ability to conduct analysis on small states or sub-state areas in large states

- Data on the same individuals over a long period of time

- Ability to expand information by linking across programs

Limitations of Administrative Data

- The number and types of variables available for research may be limited

- Quality and completeness of 'non-required' variables may be suspect

- Not well suited for population-based research questions unless combined with survey data

- Computation of statistics across states must be done with caution

Ways to Improve
Power of Administrative Data

- Link across programs (e.g., TANF, Medicaid, Food Stamps, child care, education, child support, in-state UI earnings, out-of-state earnings from FPLS)

- Link files over time

- Add survey variables to add detail on topics of interest

- Add economic/geographic variables that are available from published sources

Today's Examples

- Additional uses of Administrative Data
  - Survey variables added to linked administrative data files (example 1)
  - Analysis of small geographic areas (example 2)

- Interpreting Analysis of Administrative Data Across Jurisdictions (example 2)
  - Differences in populations
  - Differences in policies
  - Changes over time

Example 1: Texas TANF Leavers Study

- Conducted by Ray Marshall Center and Center for Social Work Research, University of Texas

- Funded by HHS (ASPE) and Texas Department of Human Services

- Report: *Texas Families in Transition/ Surviving without TANF: An Analysis of Families Diverted from or Leaving TANF* **(January 2002)** www.utexas.edu/research/cshr/pubs/TexasFamilies2002pub.htm

- Forthcoming book: *Life After Welfare - Reform and the Persistence of Poverty (***December 2007***)*

Research Questions

- To what extent are TANF leavers employed and/or receiving other economic supports? (e.g., child support, subsidized child care)

- What types of employment barriers do these families face and how do they manage?

- Which factors are associated with:
  - Employment
  - Returning to TANF?

Research Methods and Data

Population	Time Period of Cohort	Research Approaches and Data Sources Used	Geographic Coverage
TANF Leavers N- 143,491 families	April 1998-June 1999 (Cohort 1)	Administrative data (18 months follow-up) Econometric analysis (administrative data only)	Statewide universe Statewide universe
TANF Leavers N=23,113 families	July – Sept. 2000 (Cohort 2)	Administrative data (6 months follow-up) Telephone/mail survey within 6 months after exit Econometric analysis a. administrative data only b. administrative and survey data	Statewide universe Statewide sample Statewide universe Statewide sample

Administrative Data
Used as Framework

- Administrative Data
  - Statewide universe of program data over 5 years
  - Linked data from 9 programs
    TANF, Food Stamps, Medicaid, Choices, quarterly earnings, child support, subsidized child care, child abuse and neglect, foster case

- Survey Data
  - Used to explore a topic in depth:
    details of employment patterns
    child care arrangements not measured by subsidy system
  - Combined with administrative data in regressions

Child Care Strategies

- Less than 25 percent of employed families received child care subsidies

- Survey data used to describe unsubsidized care:
    - Care by TANF leaver
    - Care by relatives
    - Informal arrangements in other homes
    - Self-care by child

Influence of Child Care on Probability of Employment

For families leaving TANF July-September 2000

	Model 1: Admin. Data State	Model 2: Admin. Data Sample	Model 3 Admin + Survey Sample
Any subsidy after leaving TANF	.136	.229	.240
Care for youngest child myself	N/A	N/A	-.123
Youngest child in non-relative's home	N/A	N/A	.117

Influence of Child Care on Probability of TANF Re-Entry

For families leaving TANF July-September 2000

	Model 1: Admin. Data State	Model 2: Admin. Data Sample	Model 3: Admin + Survey Sample
Any subsidy after leaving TANF	-.027	n.s.	n.s.
Any subsidy during prior TANF spell	.036	.078	.083
Youngest child in non-relative's home	N/A	N/A	.138

Benefit of Linking Administrative and Survey Data

This study conclusion could not have been determined from either administrative or survey data alone:

"Non-relative care in family homes was associated with both increased employment and increased TANF recidivism, suggesting that such care (or the jobs that may cause families to select this type of care) is not stable over time"

Example 2:
TX Child Care Devolution Study

- Conducted by Ray Marshall Center and Center
  for Social Work Research,
  University of Texas

- Funded by HHS Child Care Bureau and OPRE

- Publications can be found at:

  http://www.utexas.edu/research/cshr/current/devchildcare.htm

Research Questions

- Which combinations of child care subsidy policies did local areas adopt after devolution from the state to the local level?

- Which local policy choices were associated with longer child care subsidy duration?

- Which local policy choices were associated with longer employment duration for families receiving subsidies?

TX Local Workforce Development Areas
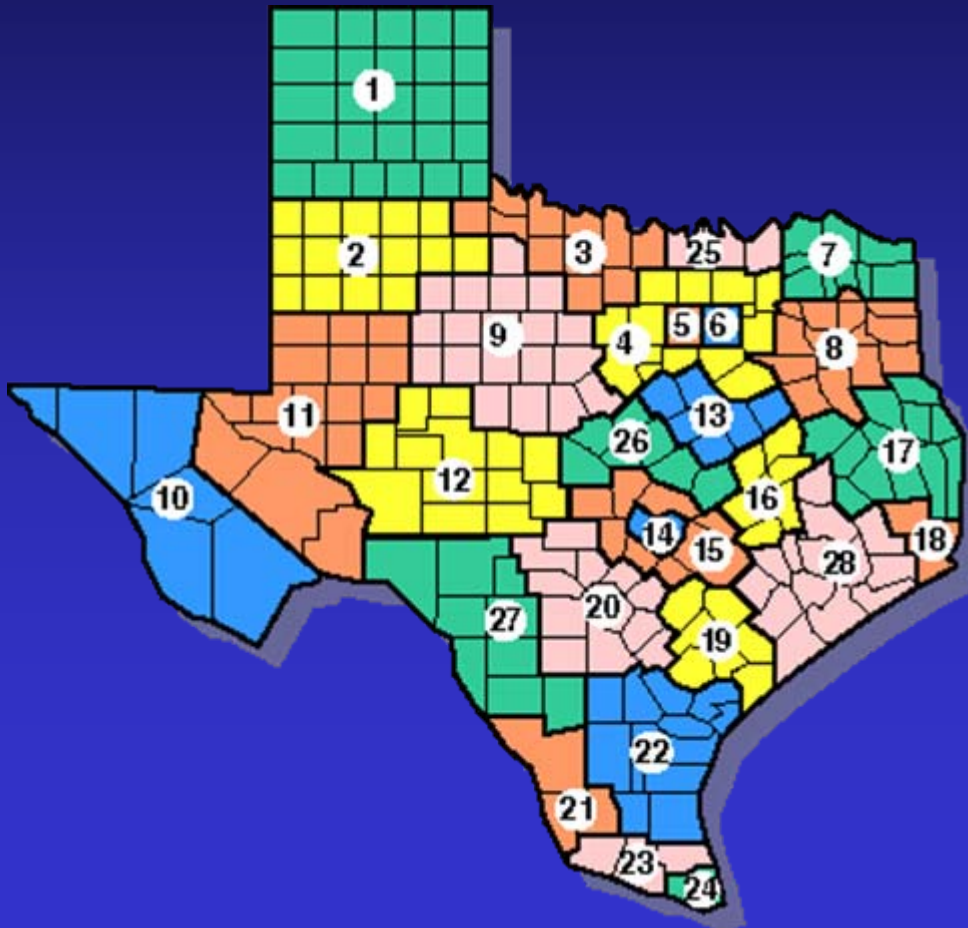
1. Panhandle
2. South Plains
3. North Texas
4. North Central
5. Tarrant County
6. Dallas
7. North East
8. East Texas
9. West Central
10. Upper Rio Grande
11. Permian Basin
12. Concho Valley
13. Heart of Texas
14. Capital Area
15. Rural Capital
16. Brazos Valley
17. Deep East Texas
18. South East Texas
19. Golden Crescent
20. Alamo
21. South Texas
22. Coastal Bend
23. Lower Rio Grande Valley
24. Cameron County
25. Texoma
26. Central Texas
27. Middle Rio Grande
28. Gulf Coast

Diversity of Texas Workforce Areas Comparable to Diversity Across States
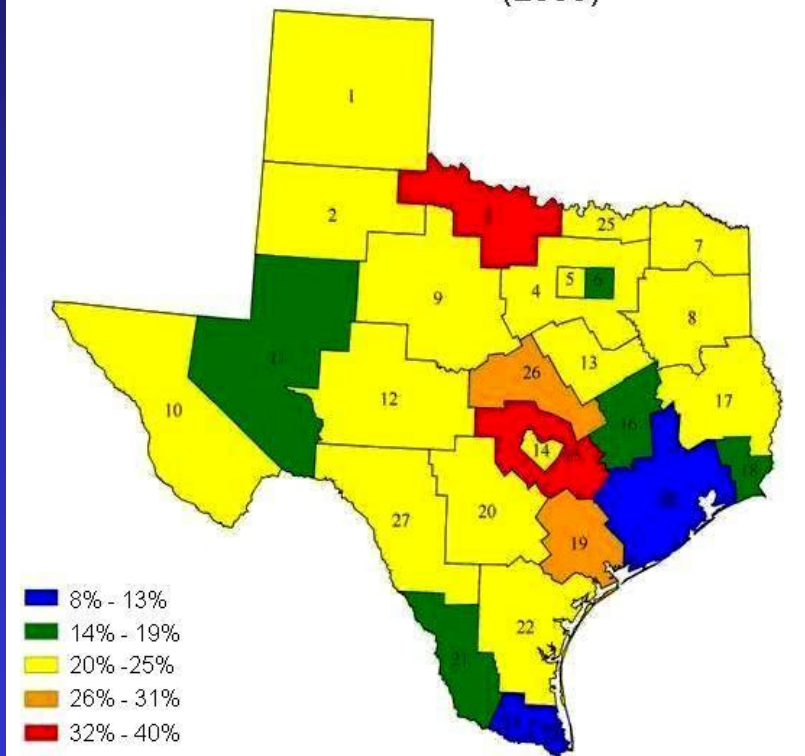
N=28	Largest (Gulf Coast)	Smallest (Concho Valley)
Child Population	1,401,948	38,549
Funding for Subsidies (FYs 2002 & 2003)	$184 million	$6.1 million
Total children receiving subsidies (FYs 2002 & 2003)	49,676	2,649

Share of Poor Children Served

Share of poor children served (1999)

8% - 13%
14% - 19%
20% -25%
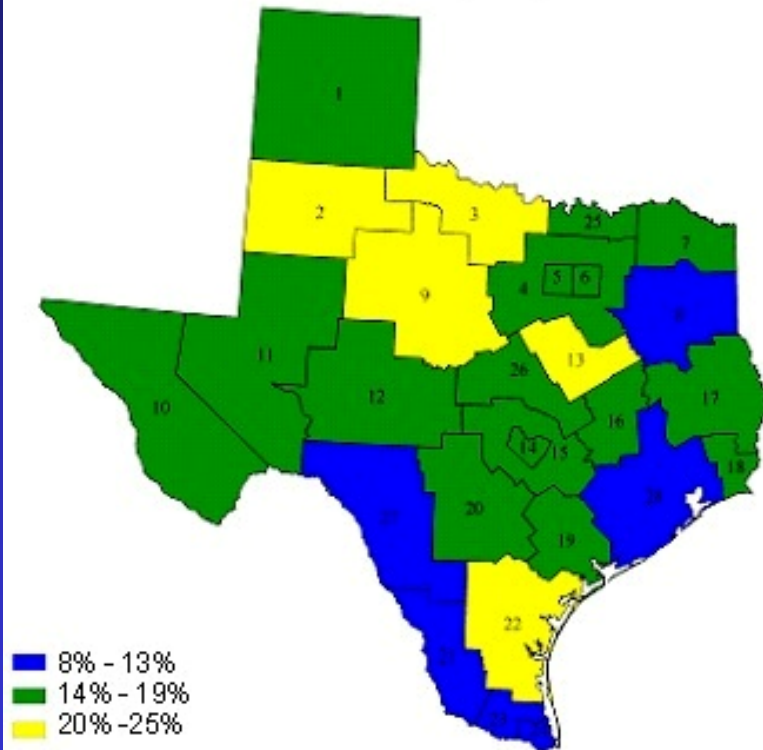
Share of poor children served (2003)

8% - 13%
14% - 19%
20% -25%
26% - 31%
32% - 40%

Policy Context Across States
(2003)

	IL	MD	OR	TX
Income eligibility ceiling (% of SMI)	39%	40%	60%	Varies by local area; 50 - 85%
Monthly co-pay (family of 3; 2 children)				Varies by local area
Minimum	$8	$4	$43	9% of income
Maximum	$320	$116	$399	15% of income

Texas Child Care Policy Context

Statewide throughout study period:

- TANF Choices recipients have priority for subsidies and are exempt from co-payments
- Child care subsidies are not guaranteed for non-TANF recipients, with waiting lists in some areas

Statewide before devolution in September 1999:

- Income eligibility limits - 150% of FPL or 85% SMI
- Co-payment - 9% of income for 1 child and 11% for 2 or more children
- Reimbursement rates were set at state level but varied based on local market rates

Policy Choices After Devolution

Local Workforce Board Policies: Sept 1999- Aug 2003

N > 28 because some boards changed policies more than once during period

- 5 boards kept baseline policies
- 12 increased payments
- 7 increased payments and eligibility limits
- 8 increased co-pays
- 5 increased eligibility limits
- 4 increased eligibility limit and co-pays
- 3 increased eligibility limits and reduced co-pays
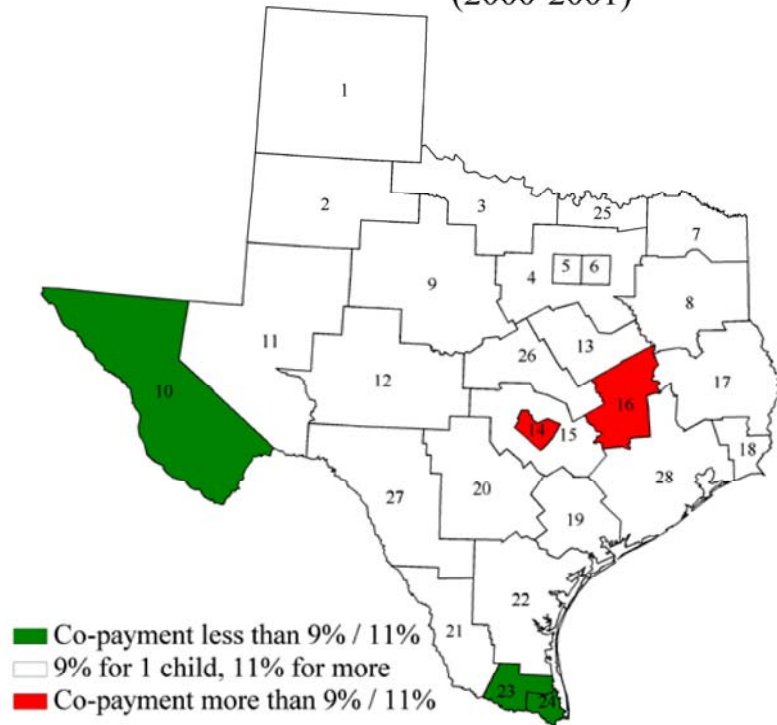
Income Eligibility Ceilings

The income eligibility guidelines varied significantly among the 28 local board areas.
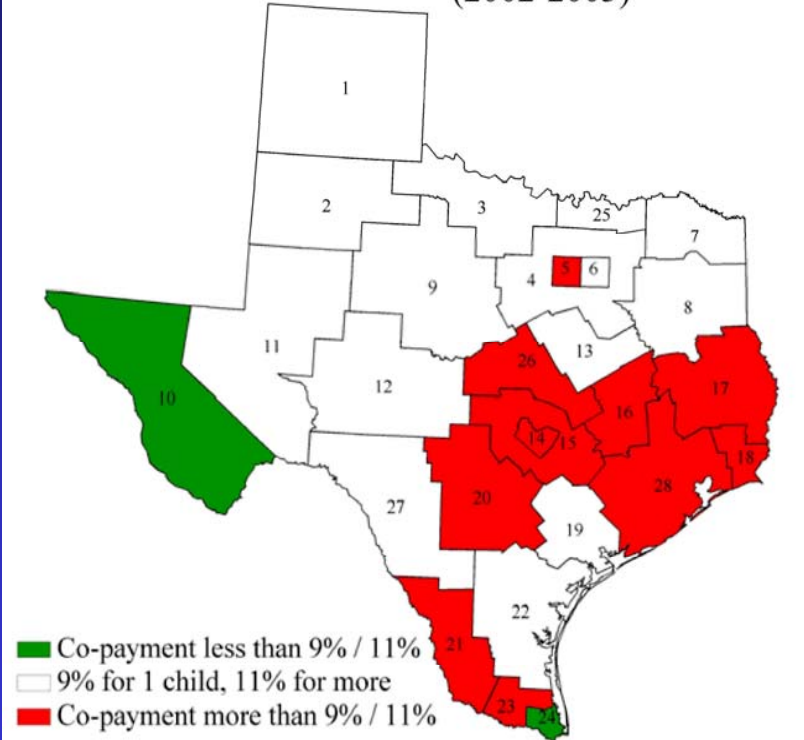
Income Eligibility Ceilings Across the State
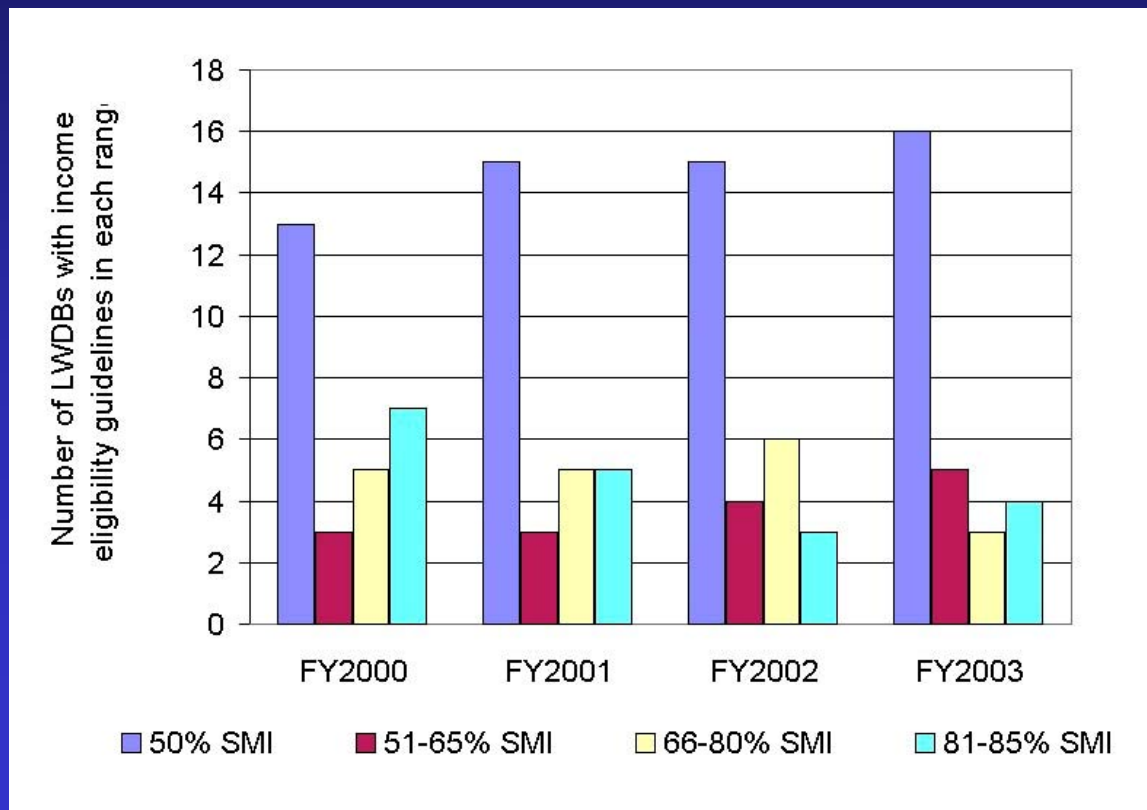
Required Parental Co-Payments

Co-payment policy variation (2000-2001)

Co-payment policy variation (2002-2003)

Co-payment less than 9% / 11%
9% for 1 child, 11% for more
Co-payment more than 9% / 11%

Available Data

- Statewide longitudinal data for 6-year period (1997-2003)
  - Child care subsidy participation, demographics and payment
  - Local funding allocations
  - Employment records

- Local subsidy policies, 1999-2003

- Contextual economic and community variables

Research Methods

- Descriptive statistics
  - Families receiving subsidies
  - Patterns of subsidy use
  - Characteristics of local workforce areas

- Cluster analysis to determine variation in local policy choices following devolution

- Cox proportional hazards regression models with time-varying covariates
  - Probability of exit from subsidy
  - Probability of exit from employment

Structuring and Interpreting Regressions

- Need to account for:
    - differences in local workforce board areas
    - differences in population receiving subsidies
    - changes in policies over time and area

- Requires use of complex statistical models

- Requires careful and thoughtful interpretation of results

Suggestions for New Users

1. Start small
   Limit number of files, complexity of questions and geographic scope

2. Use first efforts to learn the nuances of variable meanings, context and limitations

3. Gradually move to more complex topics and files

4. If interested in sophisticated techniques presented today, partner with organization that has experience using administrative data for research

For More Information

All project descriptions and cited publications can be found at: http://www.utexas.edu/research/cshr/

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