

The Legacy of Sidney Katz: Setting the Stage for Systematic Research in Long Term Care

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A Half Century of Ideas

- Most Scientists don't have a single field changing idea
- Sidney Katz had 3 and influenced many more
 - Measuring Activities of Daily Living
 - Estimating Active Life Expectancy
 - Uniform Resident Assessment for Care Planning
- Many careers predicated on these ideas

Studies of Illness in the Aged

The Index of ADL: A Standardized Measure of Biological and Psychosocial Function

*Sidney Katz, MD, Amasa B. Ford, MD, Roland W. Moskowitz, MD,
Beverly A. Jackson, BS, and Marjorie W. Jaffe, MA, Cleveland*

JAMA, Sept 21, 1963

Progress in Development of the Index of ADL

Sidney Katz, MD², Thomas D. Downs, MD³, Helen R. Cash, MD⁴,
and Robert C. Grotz, MD⁵

The Index of Independence in Activities of Daily Living (ADL), now in frequent use in rehabilitation settings, has application for prevention of disability and maintenance of rehabilitation gains in the aging person in all settings. Since the Index is sensitive to changes in meaningful self-care functions, uses well-defined criteria, and can be broadly taught to non-professionals, it has considerable practical value as a longitudinal measure of change and predictor of adaptive capacity in terms of community residences and congregate living facilities.

Active life expectancy

S Katz, LG Branch, MH Branson, JA Papsidero, JC Beck, and DS Greer

Abstract

TOOLS & SERVICES

- ▶ Add to Personal Archive
- ▶ Add to Citation Manager
- ▶ Notify a Friend
- ▶ E-mail When Cited

MORE INFORMATION

- ▶ PubMed Citation

This study was designed to demonstrate the feasibility of forecasting functional health for the elderly. Using life-table techniques, we analyzed the expected remaining years of functional well-being, in terms of the activities of daily living, for noninstitutionalized elderly people living in Massachusetts in 1974. The expected years, or active life expectancy, showed a decrease, from 10 years for those aged 65 to 70 years to 2.9 for those 85 or older. Active life expectancy was shorter for the poor than for others, and women had a longer average duration of expected dependence than men. The measure of active life expectancy provides important information about health at a given population level, in terms other than death. This information can be used for actuarial purposes in planning and policy making. It is also useful in identifying high-risk populations for which preventive health care and medical care can compress morbidity during the last years of life.

National Institute on Aging

Strategic Goals: 2006

Subgoal 1: Increase Active Life Expectancy and Improve Health Status for Older Minority Individuals

In the next half century, the proportion of racial minorities and Hispanics among the elderly population is expected to increase rapidly and become more diverse. Life expectancy at older ages has increased significantly in the last quarter century for all major racial groups, although there are disparities. More marked differences among these racial and ethnic groups exist in "active life expectancy," the average number of years lived without a limiting disease or disability. Improved diagnosis and treatment of major medical conditions have led to growth in the number of persons living with one or more chronic conditions, which impact not necessarily on the length of life, but on the quality of life. Genetic, lifestyle, and socioeconomic factors also play an important role in the severity or time of onset of disease and disability. It is important to understand the special needs of minority elderly persons to design appropriate interventions to improve health status and quality of life for all older persons.

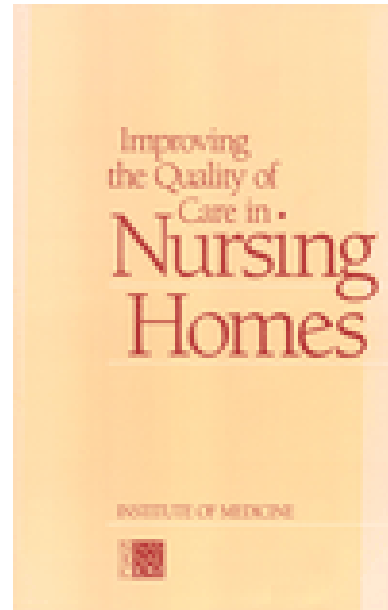
RISK OF FUNCTIONAL DECLINE AMONG WELL ELDER^S*

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Institute of Medicine Committee on the Quality of Nursing Homes



**Recommendations translated DIRECTLY into Federal
Legislation: Virtually Unique**

Designing the National Resident Assessment Instrument for Nursing Homes¹

John N. Morris, PhD,² Catherine Hawes, PhD,³ Brant E. Fries, PhD,⁴
Charles D. Phillips, PhD, MPH,³ Vincent Mor, PhD,⁵
Sidney Katz, MD,⁶ Katharine Murphy, RN C, MS,²
Margaret L. Drugovich, MA,⁷ and Alan S. Friedlob, MSSA⁸

The Fourth Big Idea: A Data Archive to Test Policy Effects

- At Brown Katz initiated a data archive when the internet and data downloads were not even a dream
- Uniform Hospital Discharge data in Michigan which he stimulated are now downloaded for the whole country
- Data on all Nursing Home Residents in the country are now available for download

Building on Katz Ideas to Examine Efforts to “Rebalance” Long Term Care

- In 1986 when the Institute of Medicine Committee was meeting 5% of elderly Americans were in Nursing Homes
- Now only 4% of Elderly are in a Nursing Home on any given day;
 - Many Nursing Homes do post-acute Rehab
 - Long Term Residential Care is provided in Assisted Living and care at home is preferred
- BUT, huge interstate variation

State Medicaid Programs

- Medicaid coverage for nursing home residents among the first covered services in all states;
- Nursing home MA recipients consume a large share of state MA funds but represent a small share of eligible patients
- Most states want to reduce reliance on nursing home care, but NH costs keep rising so limit funds available to “re-balance” system
- Periodic scandals haven’t led to restructuring because in many state there are few reasonable options for “de-institutionalizing” nursing homes

State Medicaid Policies Governing Nursing Homes that Affect Long Term Care

- **NH Payment Rate**
- **Case-Mix Adjusted NH Reimbursement**
- **Investment in Community Based Long Term Care Services**
- **Expanded Community Based Waiver Programs**
- **Possible to see the effect of these policies by looking at who stays in NHs**

Data and Cohorts

- Facility data from Centers for Medicare and Medicaid Services' annual Online Survey Certification and Reporting (OSCAR) system. 1993-2008
- Minimum Data Set (MDS) assessments -- admission and quarterly, to capture admission & resident cohort acuity (1999-2007)

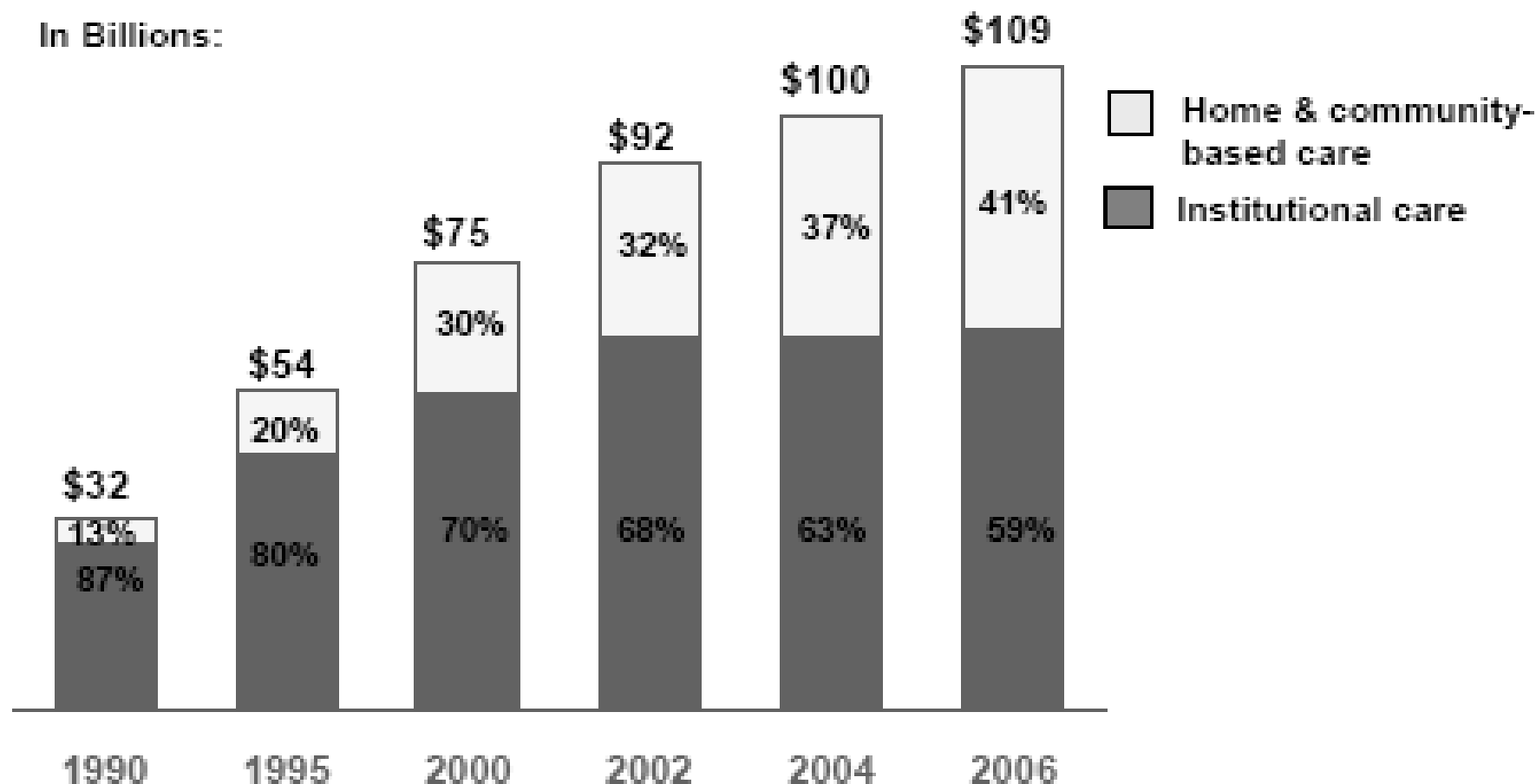
Survey of State Medicaid Policies*

- Began with Harrington, State Policy Book
- Surveyed Medicaid officials in 48 contiguous states
- Information on:
 - Average per-diem payment rate and ancillary payments
 - Method of calculation
 - Case-mix method and updating schedule
- Updated through 2004
- More recent data from AARP supplement

Background

Growth in Medicaid Long-Term Care Services Expenditures, 1990-2006

In Billions:



Note: Home and community-based care includes home health, personal care services and home and community-based service waivers.

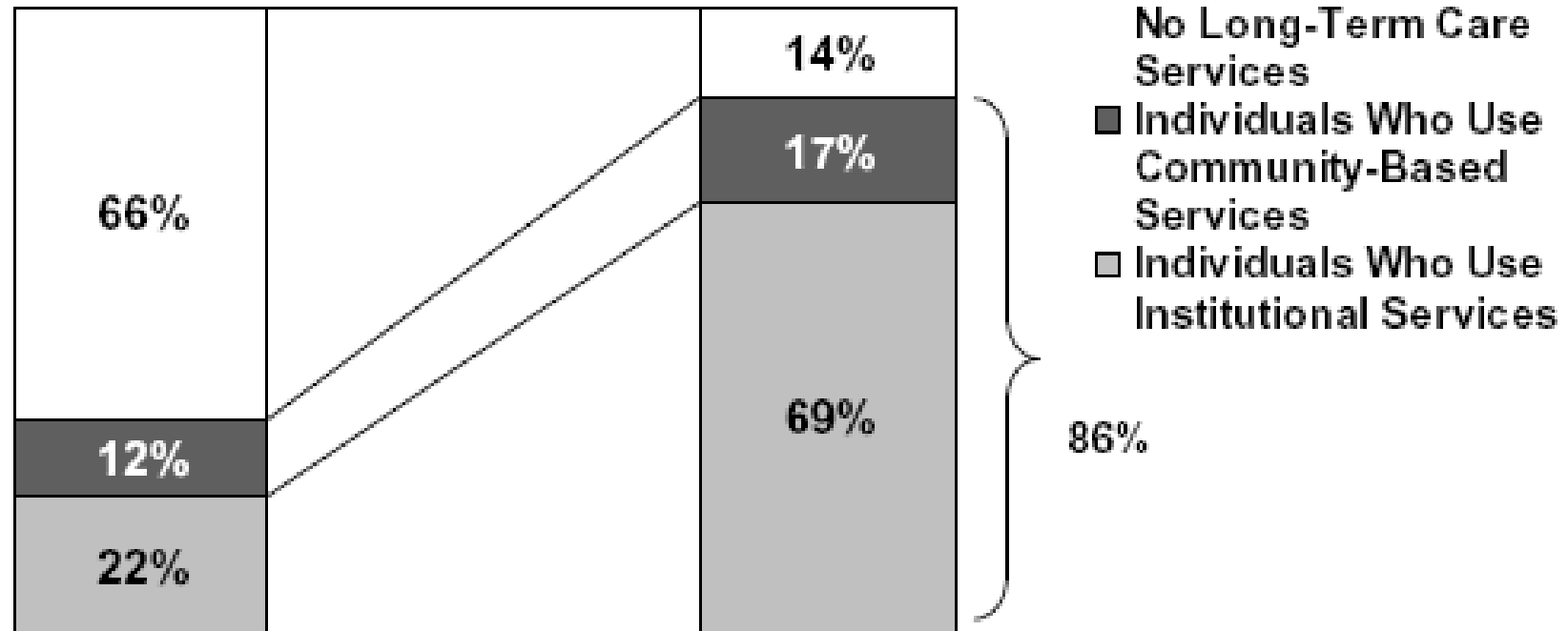
SOURCE: KCMU and Urban Institute analysis of HCFA/CMS-64 data.

Figure 5

Distribution of Medicaid Elderly, by Long-Term Care Use

Enrollees

Expenditures



Total = 5.4 million

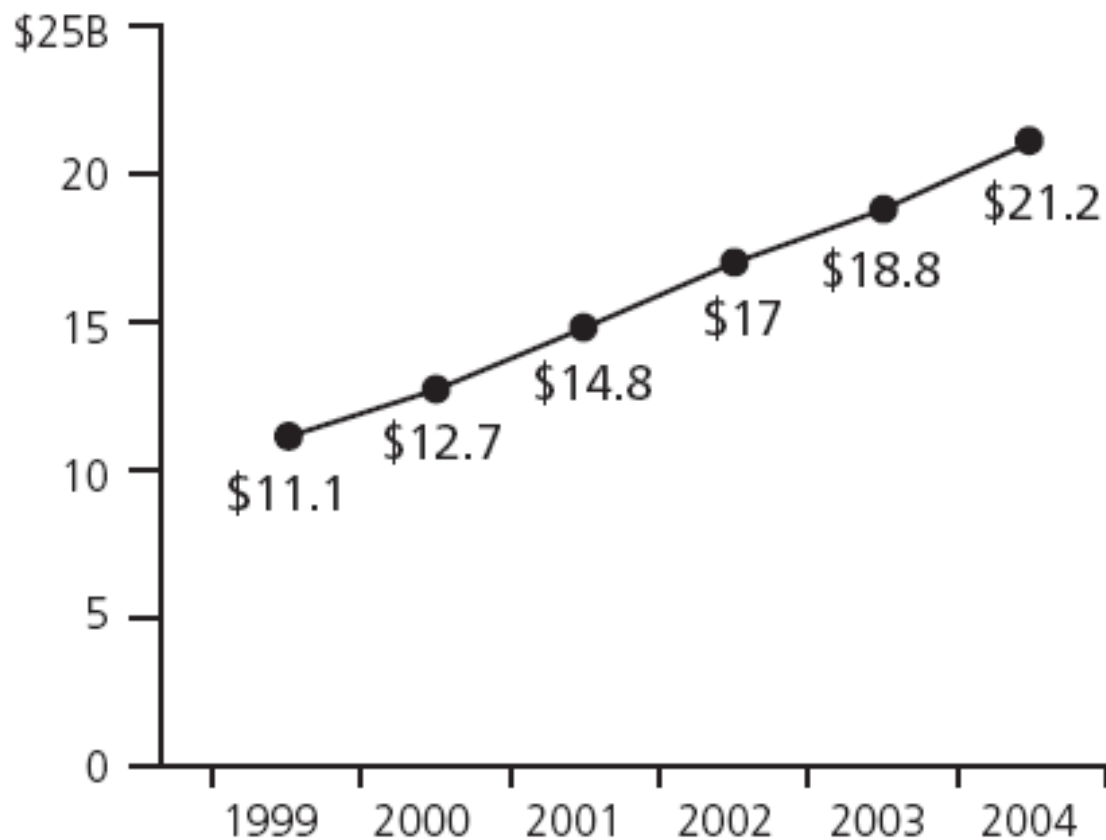
Total = \$68.2 billion

Note: Data include spending on acute and long-term care services by users.
Source: KCMU and Urban Institute estimates based on MSIS 2002.

Enhancing Community Based Services with Waivers

- For Medicaid eligible older and disabled people, waivers make it possible to provide enhanced community based services for those who might otherwise get nursing home care
- States expanding those benefits increased options available for impaired elderly outside of the nursing home
- BUT, most such spending for the younger disabled population

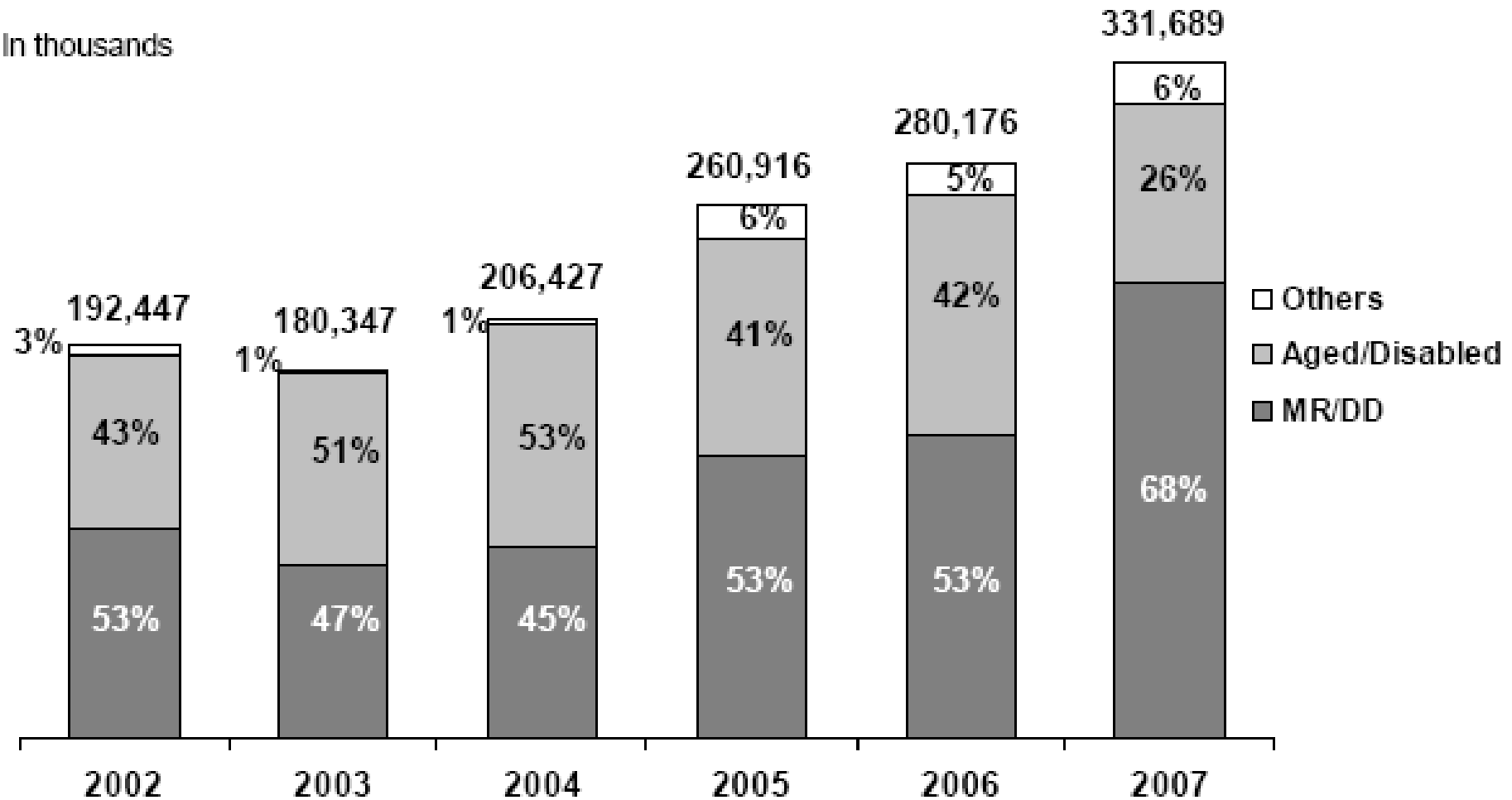
Growth in HCBS Waiver Expenditures (in billions)



Source: Steve Eiken, Brian Burwell, and Eileen Walker, "Medicaid HCBS Waiver Expenditures, FY1999 through FY2004," memorandum, Medstat, May 9, 2005; available at www.hcbs.org/files/71/3514/HCBSWaivers2004.Doc.

Medicaid 1915(c) HCBS Waiver Waiting Lists, by Enrollment Group, 2002-2007

In thousands



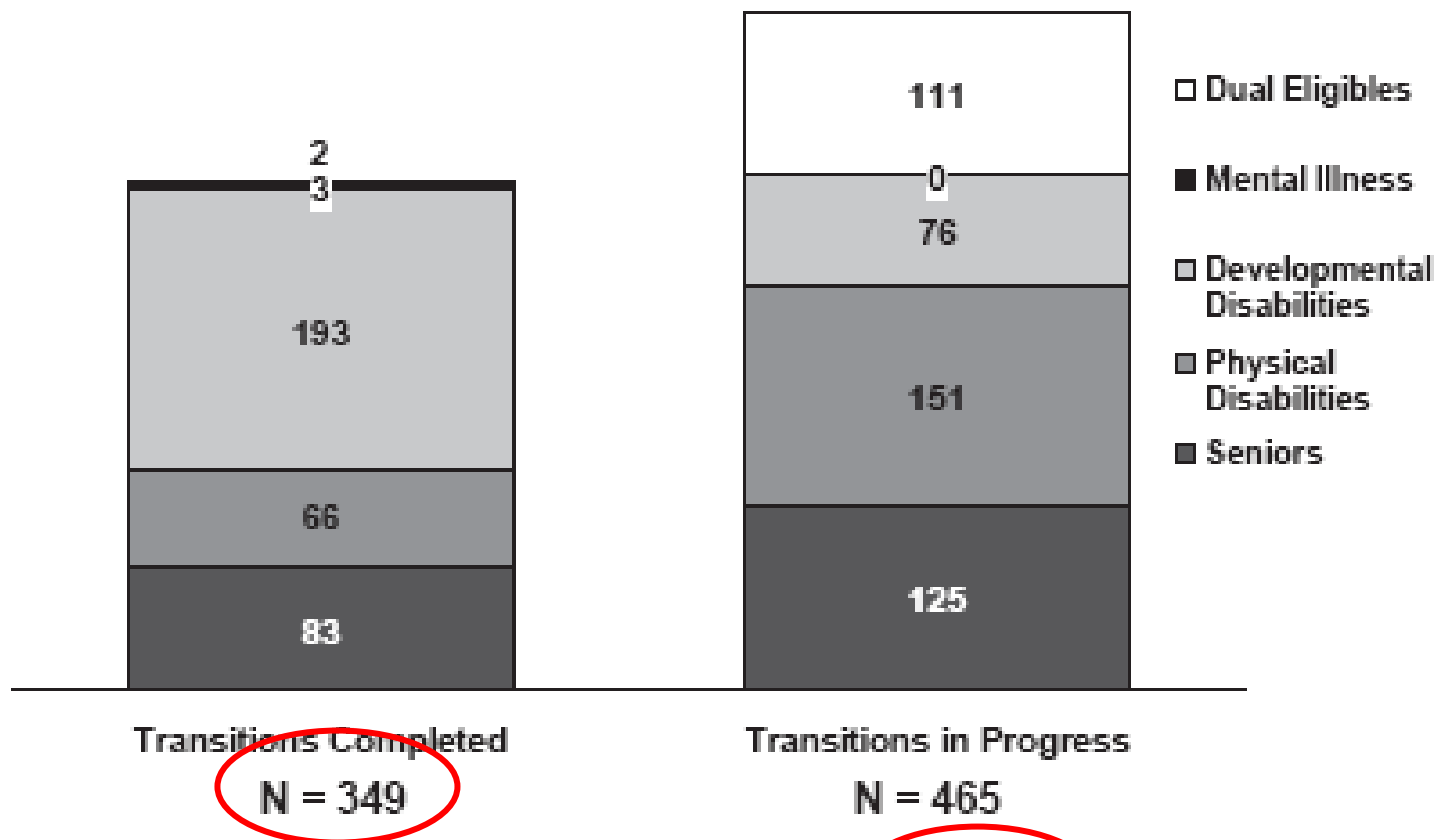
- Others
- Aged/Disabled
- MR/DD

Note: Others includes waivers that serve children, persons with HIV/AIDS, mental health needs, and with traumatic brain and spinal cord injuries. Sources: Kaiser Commission on Medicaid and the Uninsured and UCSF analysis of CMS Form 372 data and program surveys.

Money Follows the Person

- Congress recently established new Policies designed to actually allow nursing home residents to leave the facility for a community setting
- Such “De-institutionalization” efforts have been attempted in multiple states, BUT, very hard to “deflect” nursing home admissions much less get people out

Distribution of Community Transitions To-Date, by Target Population



Notes: Figure provides an estimate as of late summer/early fall 2008 based on 14 states that had been enrolling participants. Totals also include 1 child and 1 person with a traumatic brain injury in both the "Completed" and "In Progress" categories which were not specified in a population category. Source: KCMU MFP survey, 2008.

How NH Bed Supply & Home Care Investment affect NH Case-Mix

- Roemers' law applied to Nursing Home engendered much debate about need for Certificate of Need (CoN).
- A bed built was considered a bed occupied; BUT now occupancy rates lower
- Little focus on how resident acuity varies by bed supply or states' investment in long term care alternatives.

Correlates of the Percent of states' NH residents who are "low care"

- Low care residents defined based upon ADL, RUGs and clinical features in MDS
- Rate of "low care" per state estimated for all prevalent residents in 2004 AND all admits to NHs in 2004 still in home 90 days AFTER admission
- Correlated state estimates to state rates of bed supply and home care investment

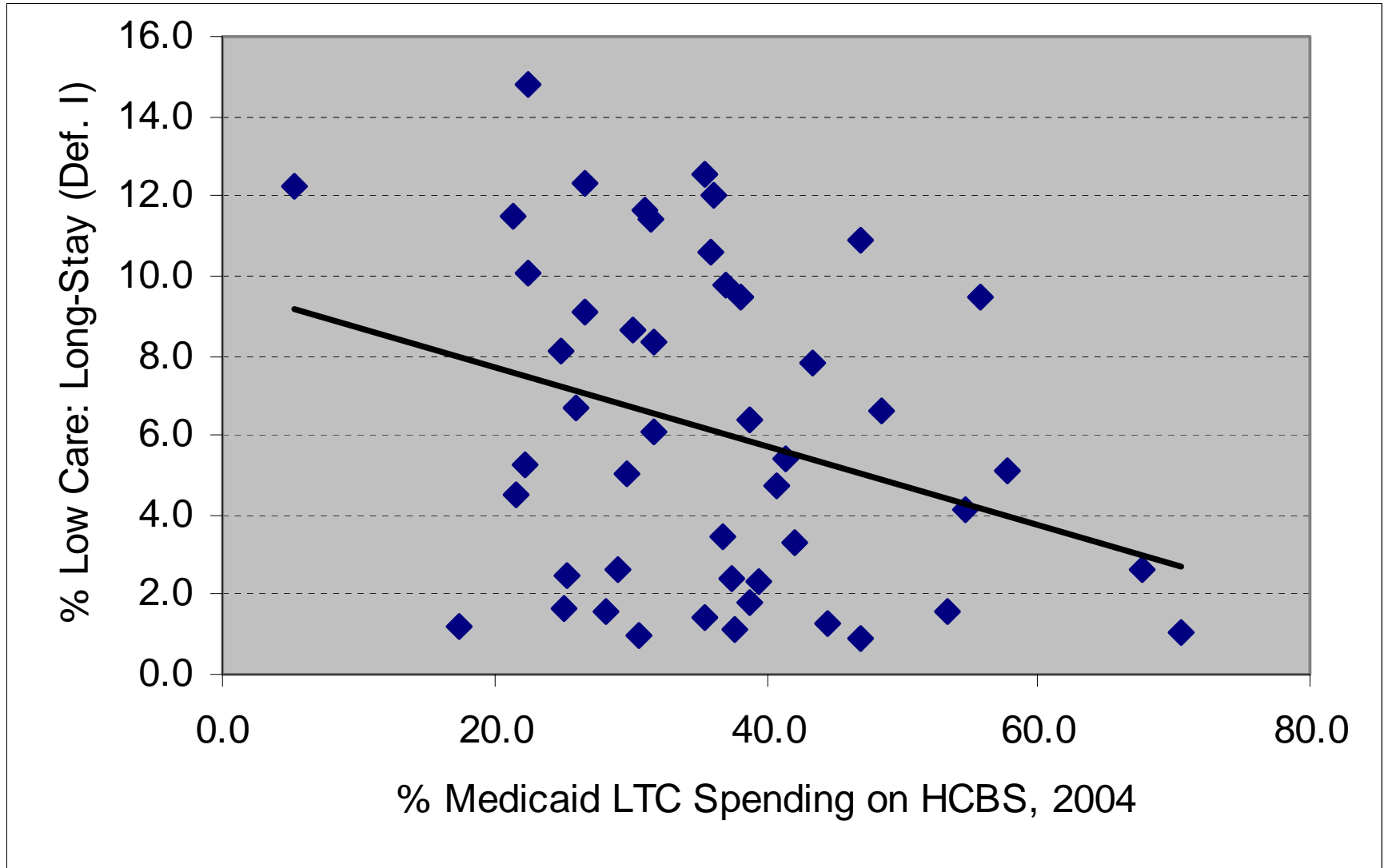
Prevalence of Low-Care Nursing Home Residents by State

State	Long Stay Nursing Home Population (2004)		New Nursing Home Admissions (July 2003–June 2004)			
	N	Percent Long Stay with Low Care	All Admissions N	Long Stay Admissions ^a N	Percent Admissions that became Long Stay	Percent Long Stay Admissions with Low Care ^b
AL	21,183	2.5	7,855	3,407	43.4	1.1
AR	16,092	11.5	4,801	2,628	54.7	14.3
AZ	10,063	1.6	10,389	2,478	23.9	0.7
CA	85,667	1.3	51,630	15,405	29.8	0.7
CO	14,373	6.6	8,100	2,781	34.3	6.1
CT	24,270	2.4	12,857	4,538	35.3	0.7
DE	3,394	2.6	2,122	776	36.6	0.5
FL	60,716	6.7	40,318	12,505	31.0	4.7
GA	32,038	8.1	9,736	4,857	49.9	9.2
IA	26,300	11.7	7,337	4,070	55.5	16.6
ID	4,147	4.7	2,290	862	37.6	4.4
IL	62,228	12.3	24,824	9,883	39.8	11.8
IN	35,610	9.1	13,113	5,857	44.7	9.3
KS	19,365	10.9	7,170	3,472	48.4	14.1
KY	20,157	5.9	7,544	3,698	49.0	4.9
LA	24,225	14.8	7,840	4,553	58.1	15.9

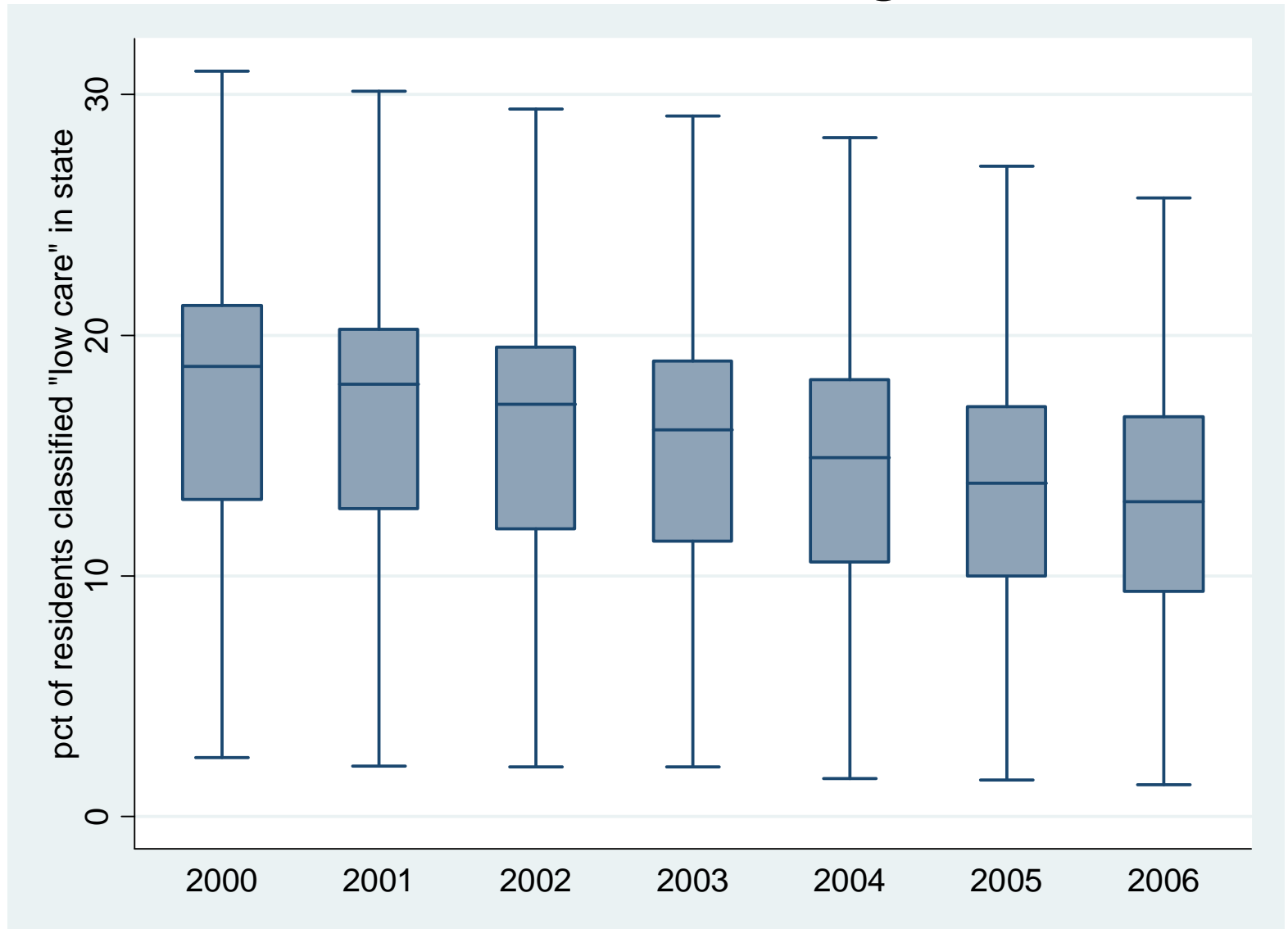
Relationship between % low care and NH supply: 2004



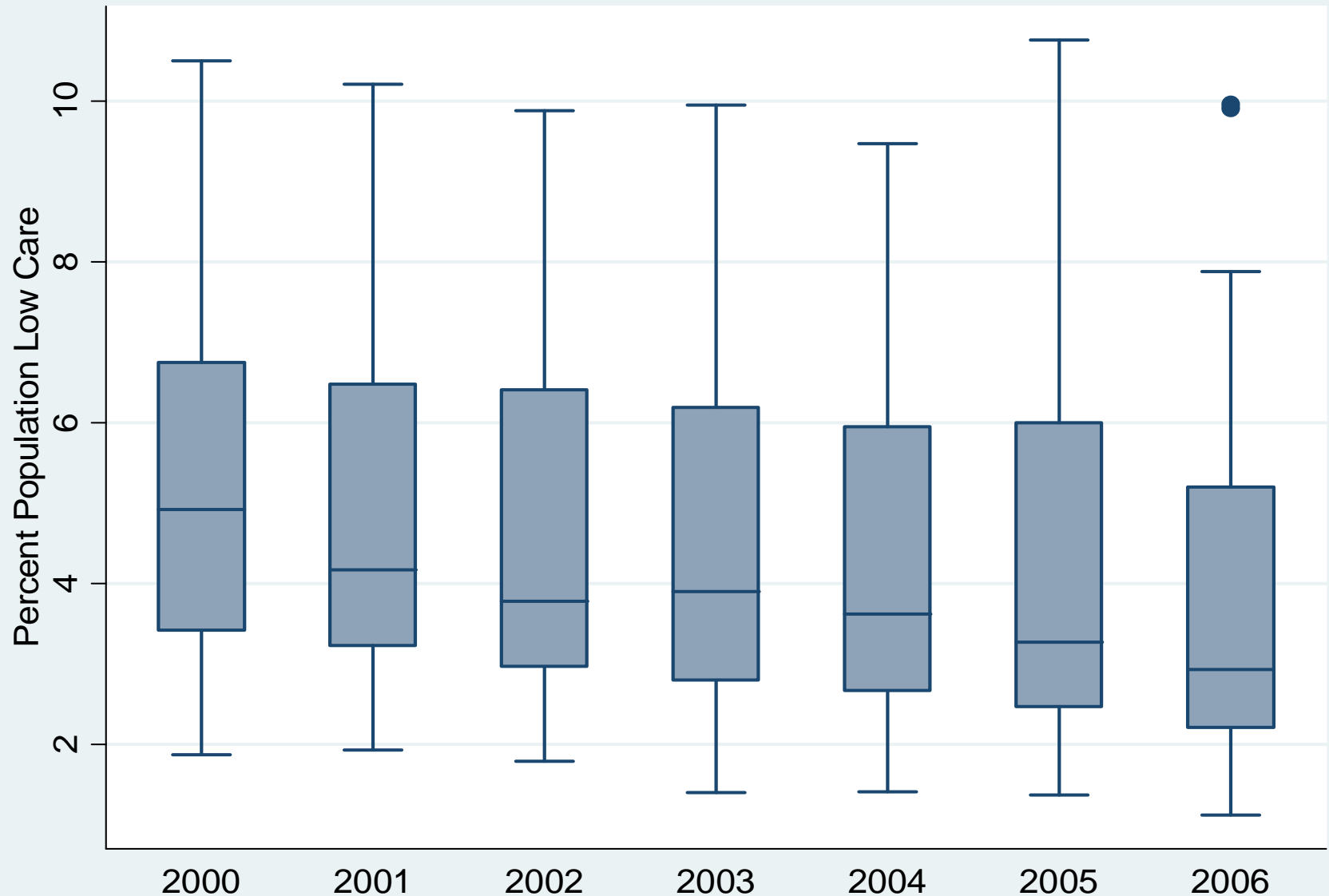
Relationship between % low care and state investment in HCBS: 2004



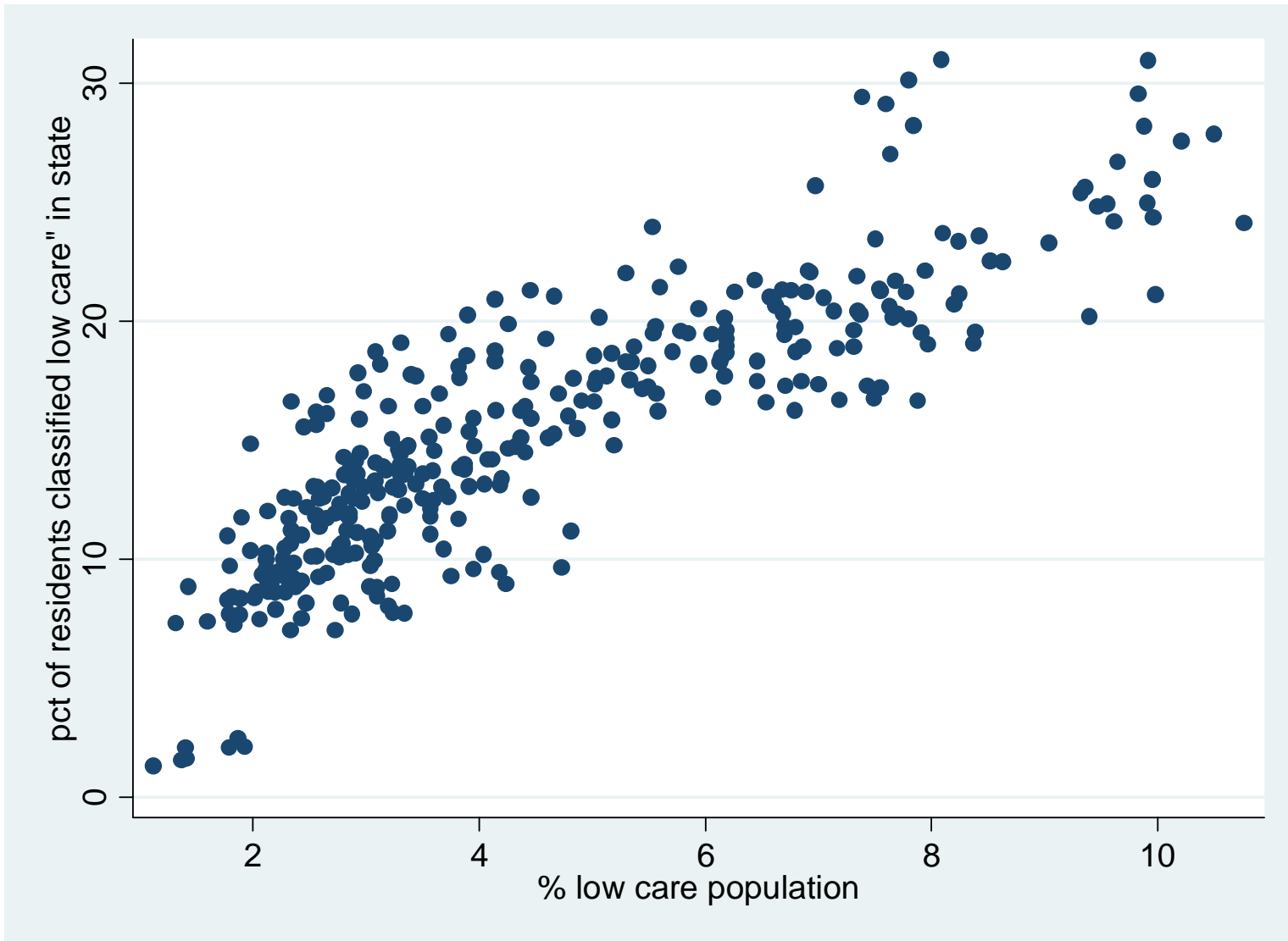
Declining Prevalence of “Low Care” Residents in US Nursing Homes



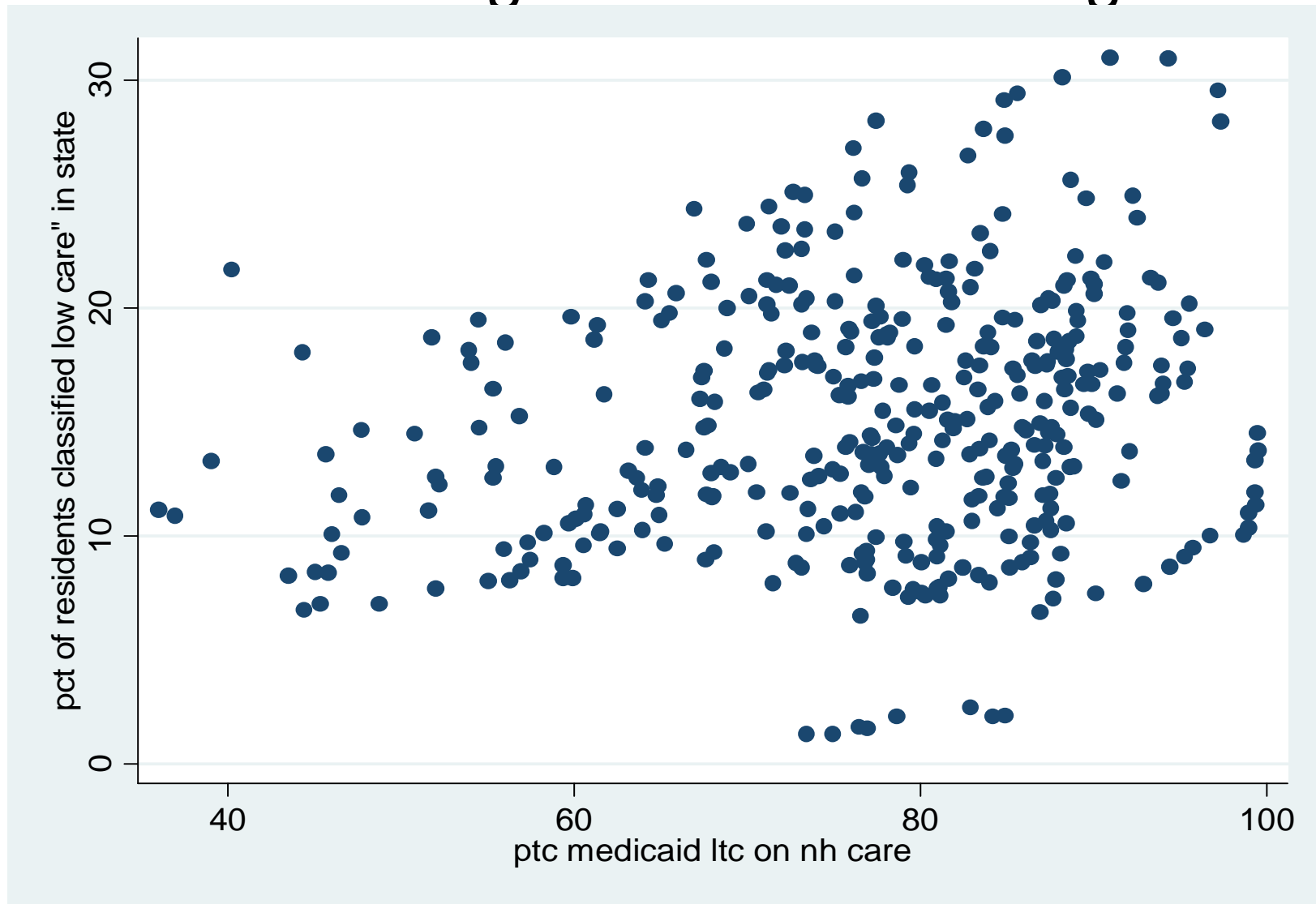
Declining Rate of Admission of “Low Care” Patients in US Nursing Homes



Prevalence vs. Incidence of Low Care Admissions & Residents



State Prevalence of “Low Care” Residents by % of LTC funding devoted to Nursing homes



Correlation .20

Policy Interpretation

- Efforts to rebalance long term care investment are underway, but with considerable inter-state variation
- States with more NH beds and fewer alternatives have nursing home residents more likely to have low care requirements
- Prevalence of low care residents is a good proxy for the incidence of new low care admissions
- AND, elders are still entering NHs and remaining there when they should be able to be cared for in the community

Implications for “Re-Balancing”

- Some states are still admitting many people into nursing home who could leave but don't leave.
- Given limited number of “de-institutionalized” residents in spite of major policy, more focus on deflecting is necessary
- Since nursing homes increasingly used for rehabilitation and recuperation, essential to intervene early in the stay

Implications for Research & Policy Analysis

- Availability of Longitudinal, hierarchical, nested data on state policies, market characteristics, provider strategies and resident characteristics and outcomes (including returning home or re-hospitalization) permits unique policy evaluations
- But, long term care arena provides an example of what is possible with integrated policy, administrative and clinical data.
- This paradigm is the hidden contribution that Sid Katz has made to the entire field