

# **Impacts of Waiting Periods for Home and Community Based Services on Consumers and Medicaid Costs in Iowa**

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**MATHEMATICA**  
Policy Research

# Introduction

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- **Most states use Medicaid 1915(c) waivers to provide home and community-based services (HCBS)**
- **Waiting periods are common**
- **Research questions: Do long wait times**
  - **Increase the risk of entering a nursing home or being hospitalized?**
  - **Raise total spending on long-term care?**

# Study Design (1)

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- **Population: adults age 18–64 who applied in 2002-2009 for three waivers (n=11,128)**
  - **Health and Disability**
  - **Physical Disability**
  - **Brain Injury**
- **Data sources**
  - **IA Medicaid: who applied, when**
  - **Medicare/Medicaid claims 2002-2010**

# Study Design (2)

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- **Quasi-experimental**
  - **Natural variation in wait times**
  - **Applicants grouped by median wait time**
  - **Compare outcomes up to 3 years after application, by group**

# Study Variables

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## ■ Outcomes

- Long-term (>90 day) institutional stays
- Hospitalization (any, preventable)
- Long-term care costs (institution, community)

## ■ Control variables

- Demographics
- Medical conditions
- Application year

# Waiver Eligibility Criteria

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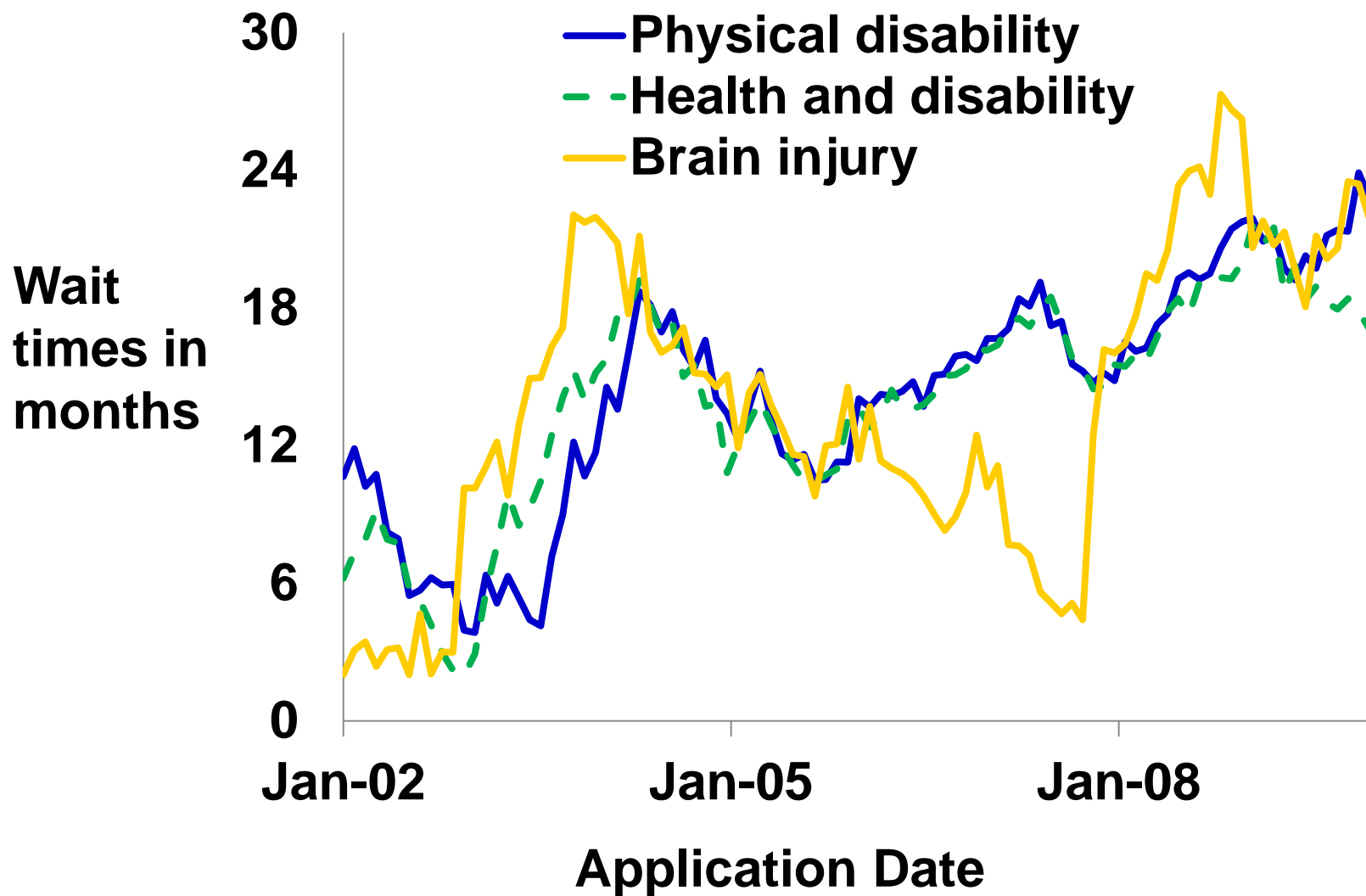
- **All three waivers: institutional level of care, Medicaid eligible, older than 65**
- **Physical Disability: physical impairment, ineligible for ID waiver, older than 18**
- **Health and Disability: income under 300% SSI and over 100% SSI (if older than 25)**
- **Brain Injury: qualifying brain injury**

# Wait Lists and Alternative Services

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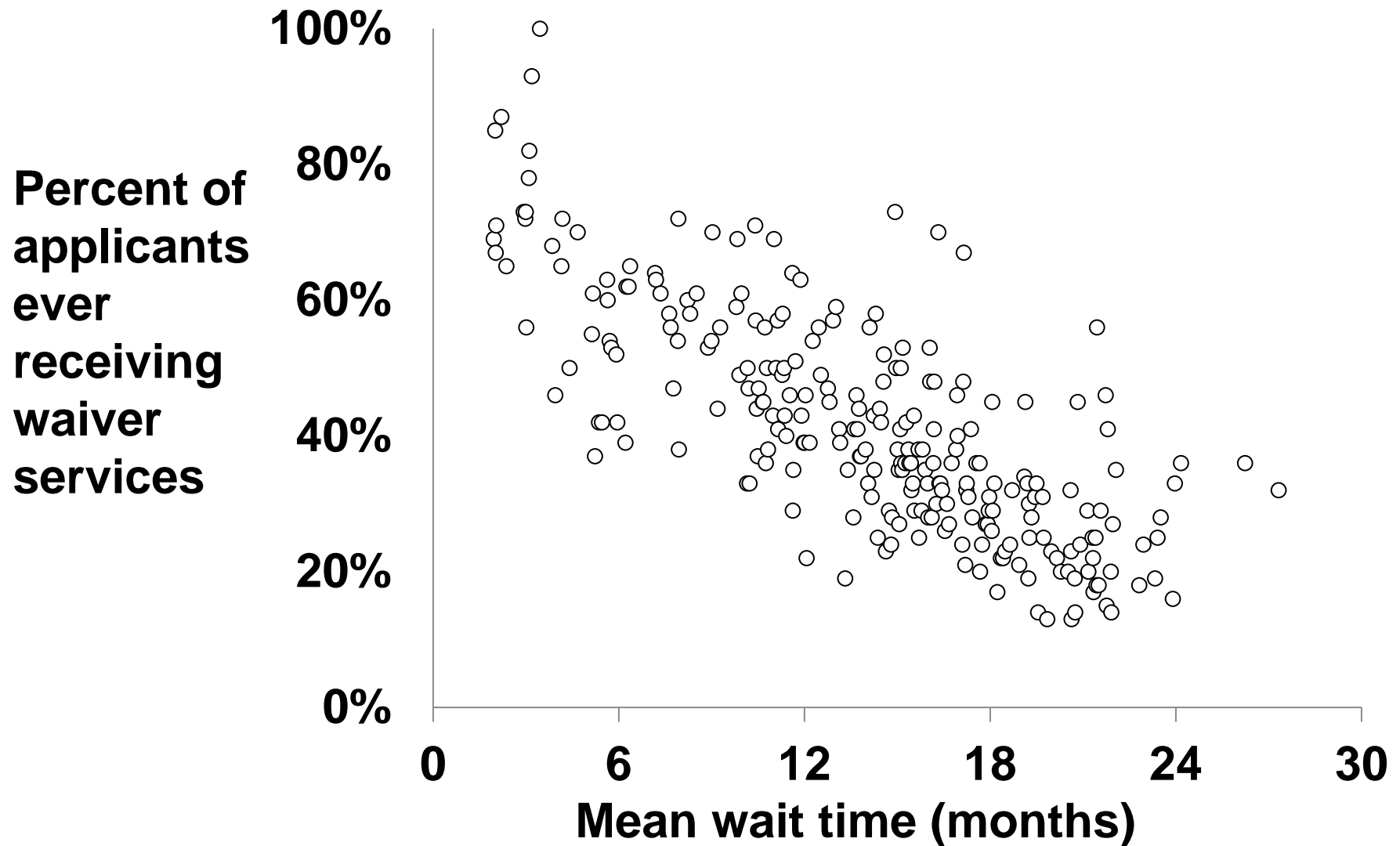
- **Wait lists**
  - Administered centrally
  - First come, first served
  - No formal screening to get on wait list
- **Some support available while on wait list**
  - Home health aide through state plan
  - In-home health-related care services

# Median Wait Times

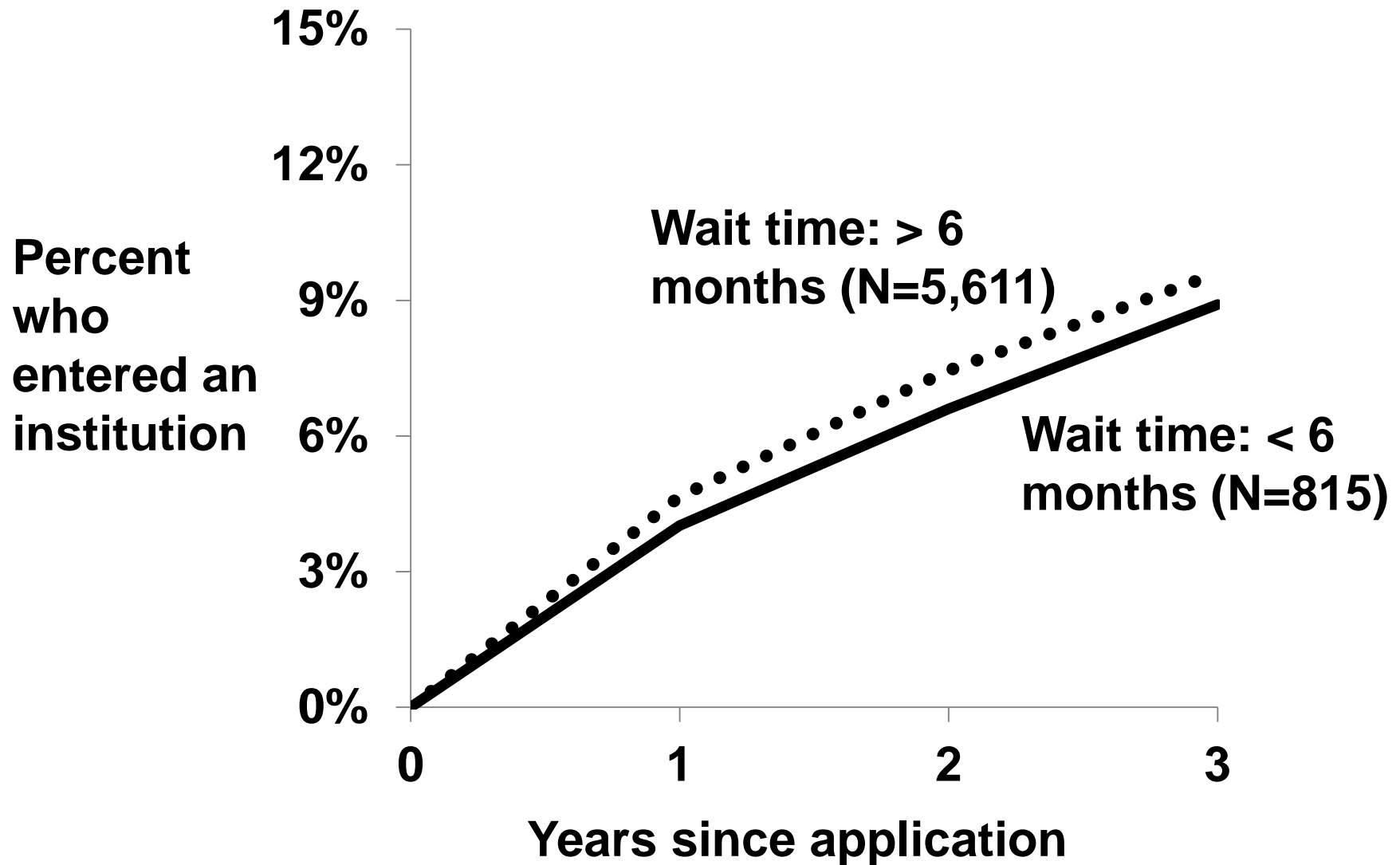




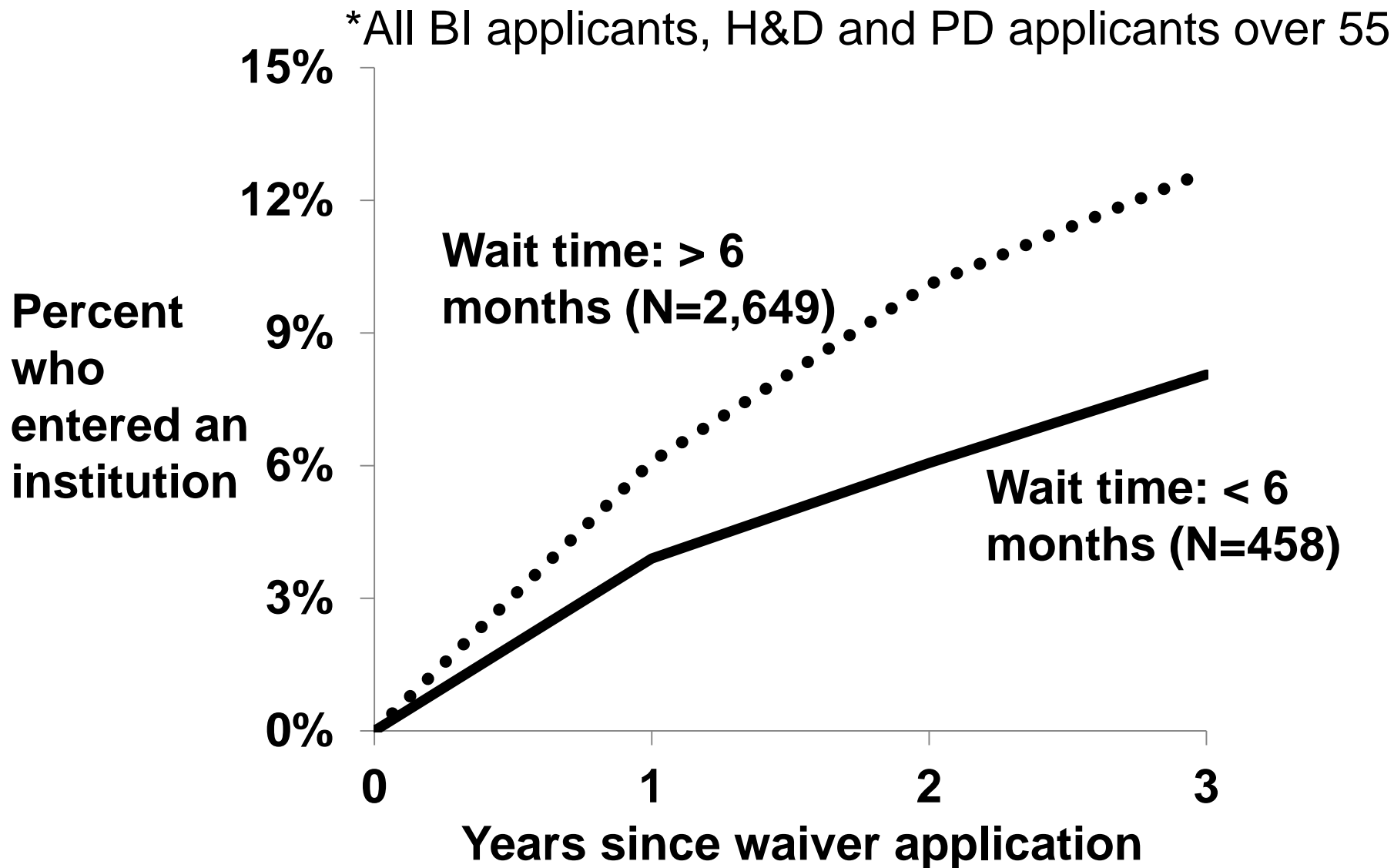
# Applicants Receiving Waivers, by Wait Time



# Risk of Institutionalization



# Institutionalization: Higher-Risk\* Applicants



# Institutionalization: Regression Adjusted

## Percent Entering an Institution Within 3 Years of Application

Applicants	> 6-Month Wait	< 6-Month Wait	Difference
All	10.2 (n=5,611)	7.3 (n=815)	-2.9* (-28%)
Higher risk	13.6 (n=2,649)	6.1 (n=458)	-7.5*** (-55%)

\* =  $p < .10$ , \*\* =  $p < .05$ , \*\*\* =  $p < .01$

# Hospitalizations

Applicants	Mean Hospitalization Rate During the 3 Years After Application (#/person/year)		
	> 6-Month Wait	< 6-Month Wait	Difference*
Any Stay			
All	0.880	0.879	-0.001
Higher-risk	0.844	0.902	0.058
Potentially Preventable Stays			
All	0.261	0.239	-0.022
Higher-risk	0.253	0.259	0.006

\*None of the differences is statistically significant.

# Medicaid Long-Term Care Costs<sup>a</sup>

## Mean Expenditures for All Applicants (\$ / person / month)

Cost Category	> 6-Month Wait	< 6-Month Wait	Difference
All Applicants			
Community	502	631	129***
Institutional	224	138	-86**
Total	726	769	43
Higher-Risk Applicants			
Community	662	770	108***
Institutional	307	118	-189***
Total	969	888	-81

\*\*p < .05, \*\*\*p < .01

<sup>a</sup>Over 3 years after waiver application.

# Limitations

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- **Variables constrained to what can be measured in claims → omit important:**
  - **Outcomes: unmet needs, caregiver burden**
  - **Control variables: ADLs/IADLs, caregiver presence**
- **Results may not be similar for:**
  - **Other populations (children, elderly)**
  - **Other states (e.g., with needs-based wait lists)**

# Summary and Policy Implications

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- **Short wait times (< 6 months)**
  - **Decreased risk of institutionalization**
  - **Did not affect hospitalizations**
- **Effects concentrated in higher-risk applicants**
  - **Lower institutional costs fully offset higher HCBS costs over 3 years**
- **Results support value of needs-based vs. first-come, first-served wait list**



# For More Information

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# Supplemental Slides

# Frequently Used Waiver Services

Services	Percent of Waiver Recipients Who Got Specific Services		
	BI (N=560)	H&D (N=1,373)	PD (N=1,298)
Consumer-directed attendant care	46%	62%	87%
Supported community living	74%	—	—
Case management	98%	—	—
Meals & nutrition counseling	—	61%	—
Personal emergency response	24%	56%	54%
Home & vehicle modifications	24%	39%	34%

BI = Brain Injury Waiver; H&D = Health and Disability Waiver;  
PD = Physical Disability Waiver

# LTC Costs<sup>a</sup> with Confidence Intervals

Cost Category	Mean Expenditures for All Applicants (\$/person/month)		
	> 6- month wait	< 6-month wait	Difference (90% confidence)
All Applicants			
Community	502	631	129*** (88 to 170)
Institutional	224	138	-86** (-141 to -31)
Total	726	769	43 (-22 to 108)
Higher Risk Applicants			
Community	662	770	108*** (43 to 173)
Institutional	307	118	-189*** (-265 to -113)
Total	969	888	-81 (-175 to 13)

<sup>a</sup> Over 3 years after waiver application

# Effects for Lower Risk Applicants

Outcome Within 3 Years of Waiver Application	> 6-Month Wait (N=2,962)	< 6-Month Wait (N=357)	Difference (Adjusted)
Ever went into an institution (%)	7.1	9.5	+2.4 <sup>a</sup>
Medicaid Long-Term Care Costs (\$/person/month)			
Community	329	450	121***
Institutional	130	164	34 <sup>a</sup>
Total	457	613	156***

<sup>a</sup>Not statistically significant

\*\*\* =  $p < 0.01$

# Sensitivity Tests

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**Results similar if:**

- **Use different approach to adjust for time trends**
  - **State-wide average nursing home use**
  - **Restrict to 2002-2003 applicants**
- **Expand sample definition**
  - **Include all applicants, not just those enrolled in Medicaid within 3 months of application**