

Trends in Disability and the use of Disability Insurance

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Background & Motivation for Study

- SSDI is the most important public support for working age Americans with disabilities
- Several studies have found evidence of worsening health in older working ages (especially among those with less education) and falling (men) or flat (women) labor force participation rates
- Recent decline in population receiving SSDI benefits makes clear that health isn't all that drives program spending, but if these health trends continue, will we see renewed pressure on SSDI trust fund?

Research questions

- Do self-reported health trends correspond with or diverge from trends in SSDI application and receipt?
- What are trends in health measures that are of most importance to SSDI program?
- If trends point to poorer health, what do they portend for the future of SSDI claiming?

Data

- HRS, 1996-2016
 - Self-reported (ever, recent) application for SSDI and SSI
 - Self-reported (ever, recent) receipt of SSDI and SSI benefits
 - Self-reported functional limitations, and difficulty with 5 ADLs and 3 IADLs, and CES-Depression scale
- NHIS, 1997-2017
 - Self-reported (ever) applications for SSDI and SSI
 - Self-reported functional limitations, help with 6 ADLs and any IADLs, and Kessler 6 distress scale
 - Primarily to validate observed trends and predictive models in HRS, where possible

Methods

- Estimate models of SSDI/SSI application and receipt
 - $DI_{it} = f(\text{Health}_{it}, \text{Demographics}_{it}, \text{Year}_t)$
- Simulate SSDI/SSI outcome allowing health to change, but holding other variables constant
 - $DI_{it}^* = f(\text{Health}_{it}, \text{Demographics}_0, \text{Year}_0)$
 - This prediction is essentially an index of health weighted by relevance to SSDI outcome
- Compare trends in predicted outcome to actual outcome

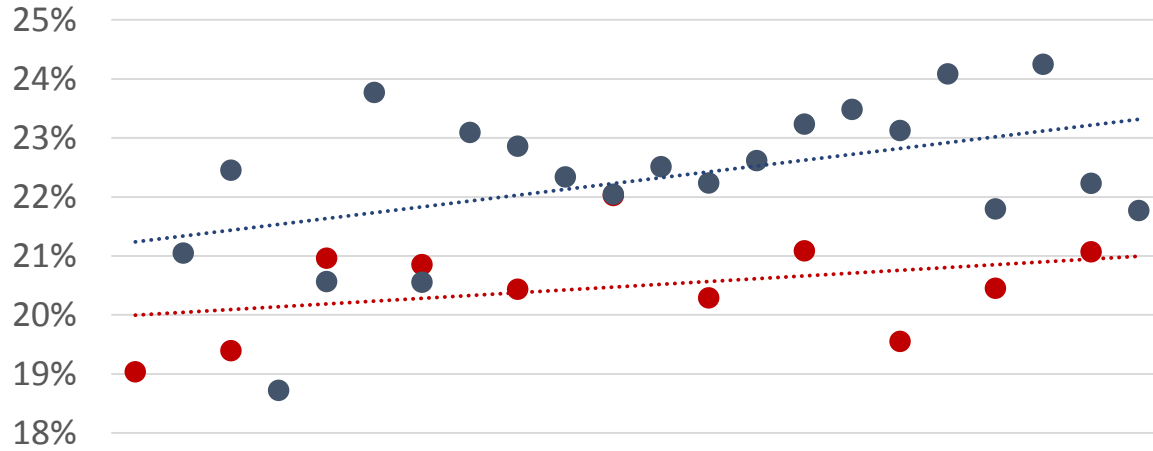
Simple models of disability application/award

Odds-ratios (n.s.)	Ever Apply		Ever Award		New App	New Awd
	HRS	NHIS	HRS	NHIS	HRS	HRS
Any difficulty						
reaching/extending arms up	1.4	1.2	1.1	1.2	1.0	1.1
lifting/carrying	2.2	1.7	2.1	1.5	1.7	2.2
picking a dime from a table (grasp small object)	1.5	1.2	1.2	1.2	0.9	1.2
walking several blocks (1/4 mile)	2.4	2.0	2.5	2.2	2.5	2.6
walking one block	1.2		1.2		1.1	1.1
sitting for 2 hours	1.4	1.3	1.3	1.1	1.0	1.3
getting up from chair	1.0		1.0		1.0	1.0
standing for 2 hours		2.1		2.5		
climbing several flights of stairs	2.0		2.1		2.3	2.1
climbing one flight without resting	1.2	1.3	1.3	1.5	1.1	1.3
stooping/kneeling/crouching	1.3	1.3	1.2	1.1	1.6	1.2
pushing or pulling large objects	1.8	2.1	1.8	2.1	1.6	1.7
Some difficulty (Needs Help) with						
Routine Needs		3.9		3.4		
using a telephone	1.2		1.3		1.1	1.4
handling money	1.9		1.5		0.9	1.5
taking medication	1.3		1.2		1.3	1.1
shopping	2.0		2.0		1.6	2.0
preparing meals	1.7		1.3		1.0	1.3
Some difficulty (Needs Help) with						
walking across room (getting around in home)	0.9	0.9	1.0	1.1	0.8	0.9
dressing	1.0	1.1	0.9	0.9	1.1	1.0
bathing	1.1	0.9	0.9	0.9	1.2	1.0
eating	1.3	0.5	1.3	1.2	0.9	1.1
getting in/out bed	0.8	1.3	0.6	1.0	0.8	0.6
using toilet	0.9	1.2	0.8	1.0	1.0	0.8
CESD8>=3	1.5		1.3		1.1	1.3
Kessler6 > 12 (of 24)		2.1		1.6		

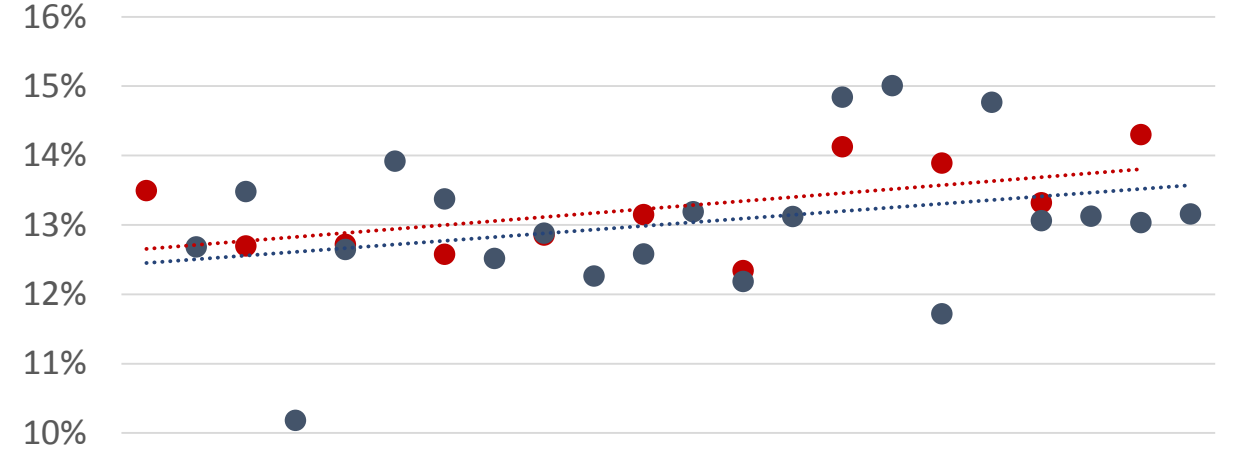
Physical Limitation Trends (any difficulty)

● HRS ● NHIS Linear (HRS) Linear (NHIS)

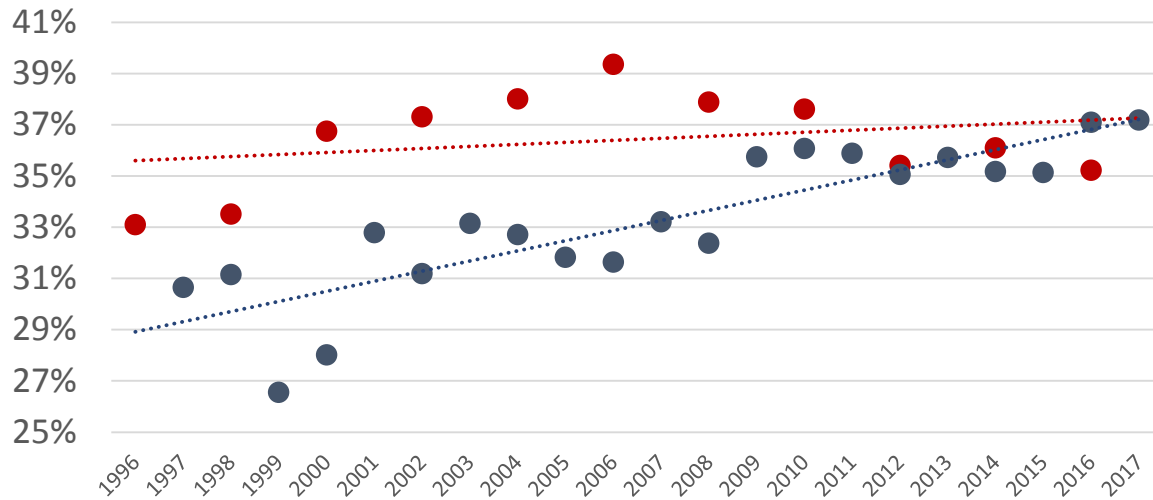
Walking (several blocks for HRS; 3 city blocks for NHIS)



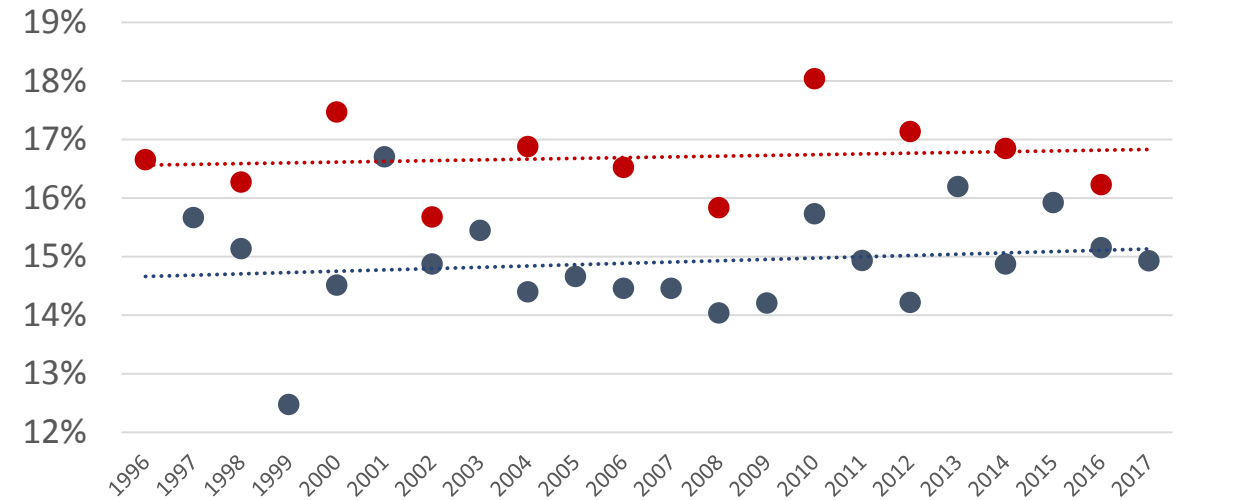
Reach/Extend Arms Up



Stooping/Kneeling/Crouching

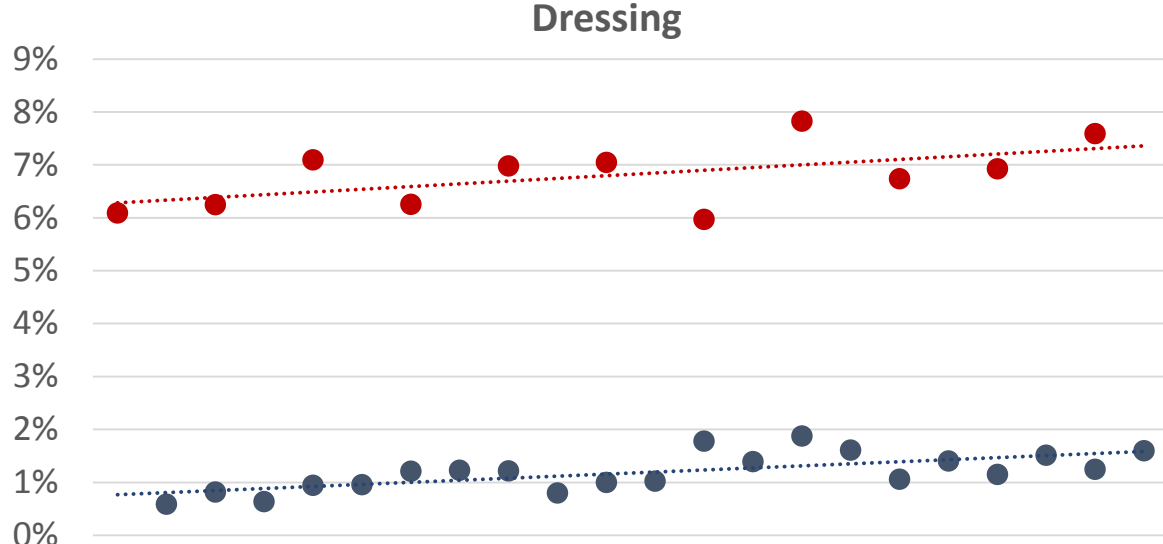
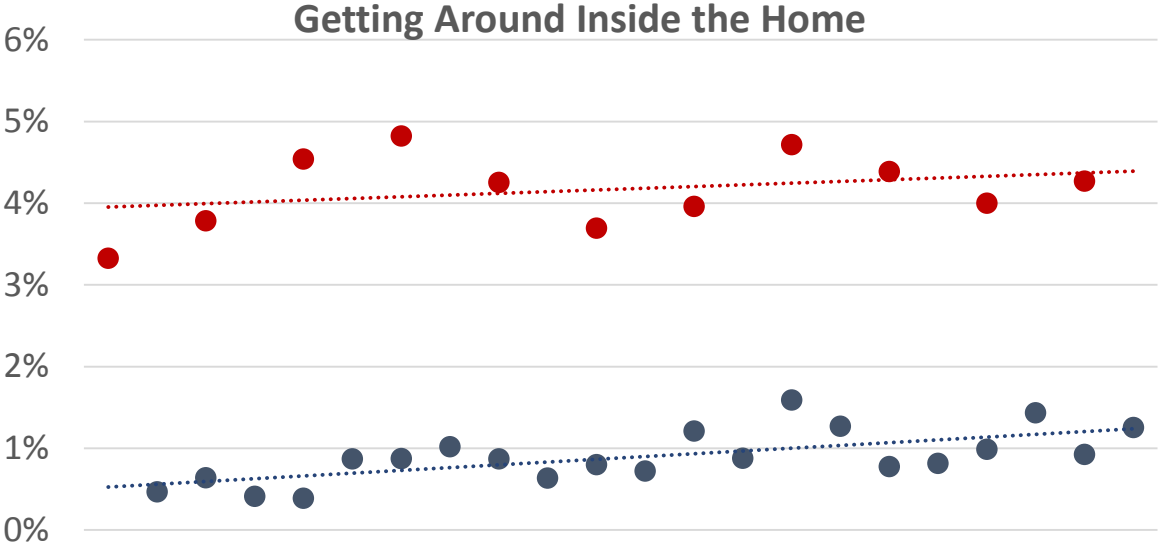


Lifting/Carrying

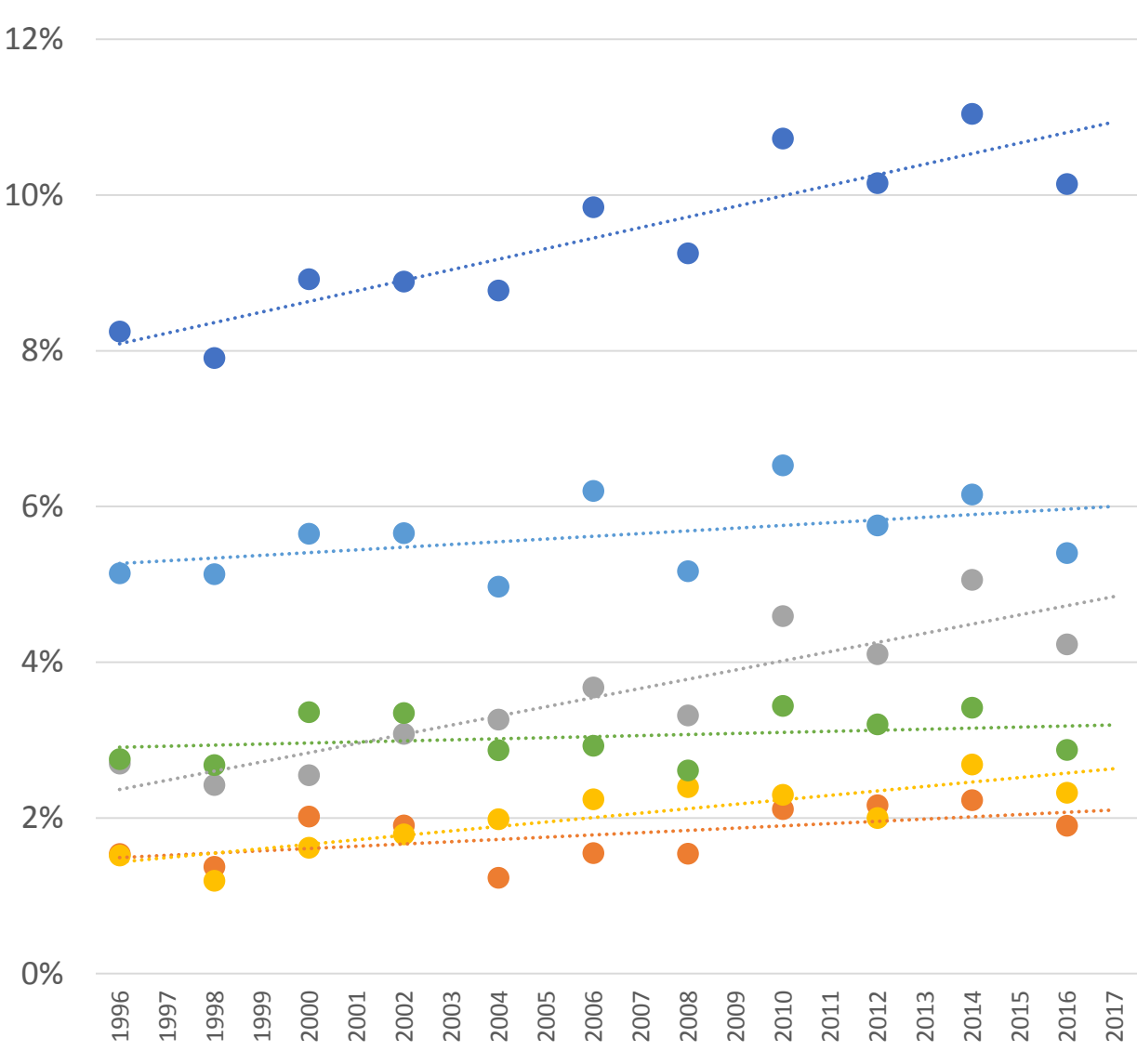


ADL/IADL Trends (HRS: any difficulty, NHIS: needs help)

● HRS ● NHIS ● Linear (HRS) ● Linear (NHIS)

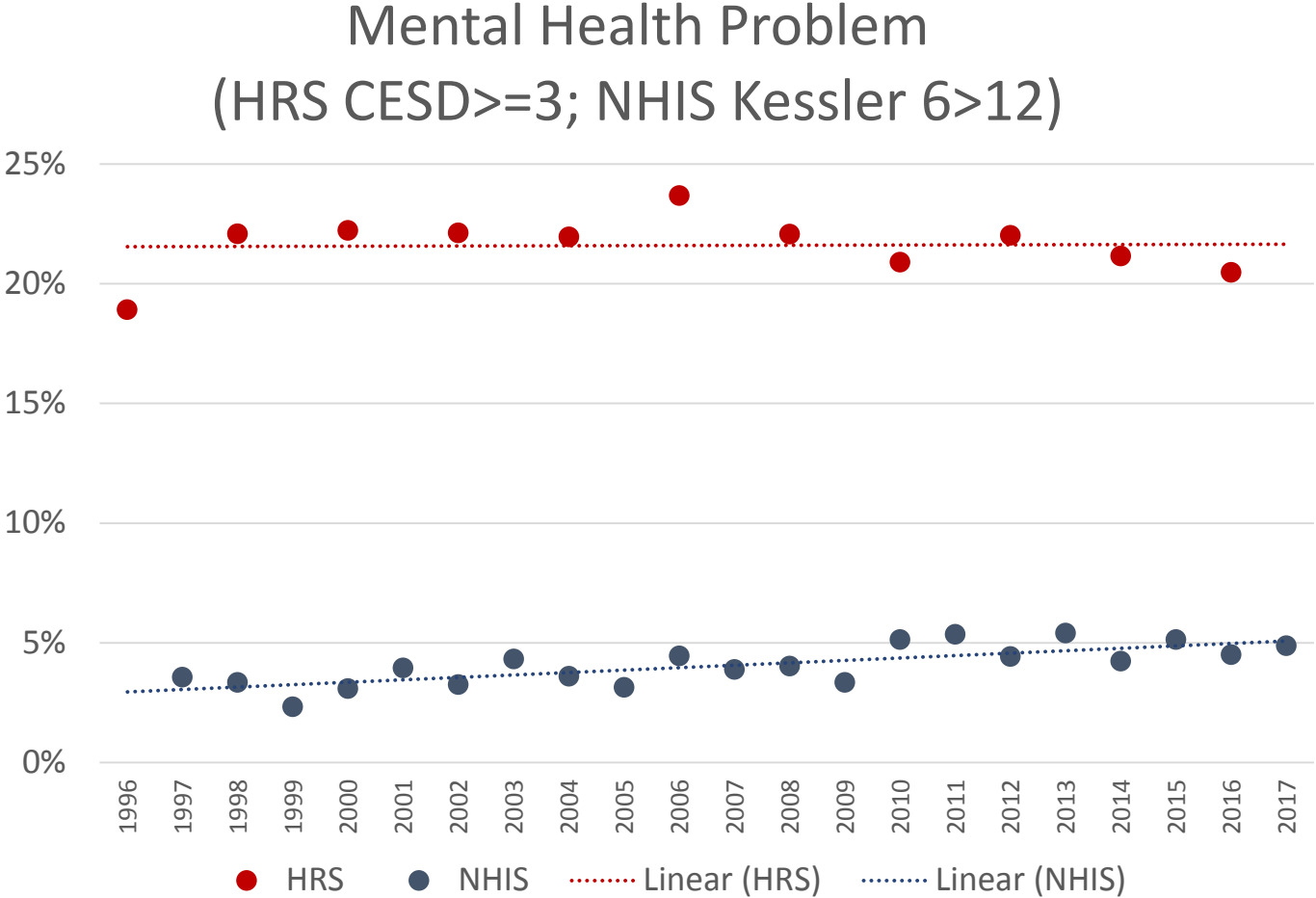


IADLs



● Any (NHIS) ● Medication ● Phone ● Shopping ● Money ● Meal Prep

Mental Health (HRS: Depression, NHIS: Distress)

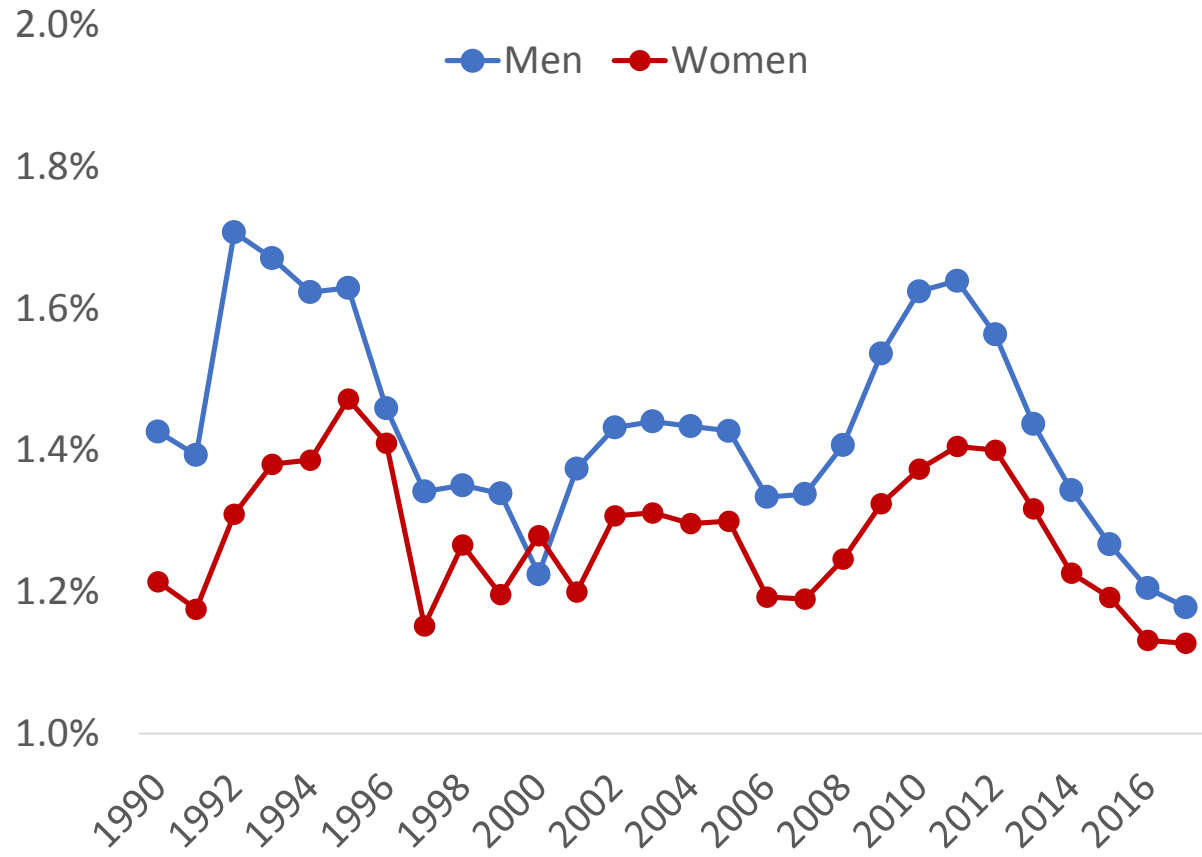


Trends in Health and Functional Status Age 55-61, controlling for demographic shifts

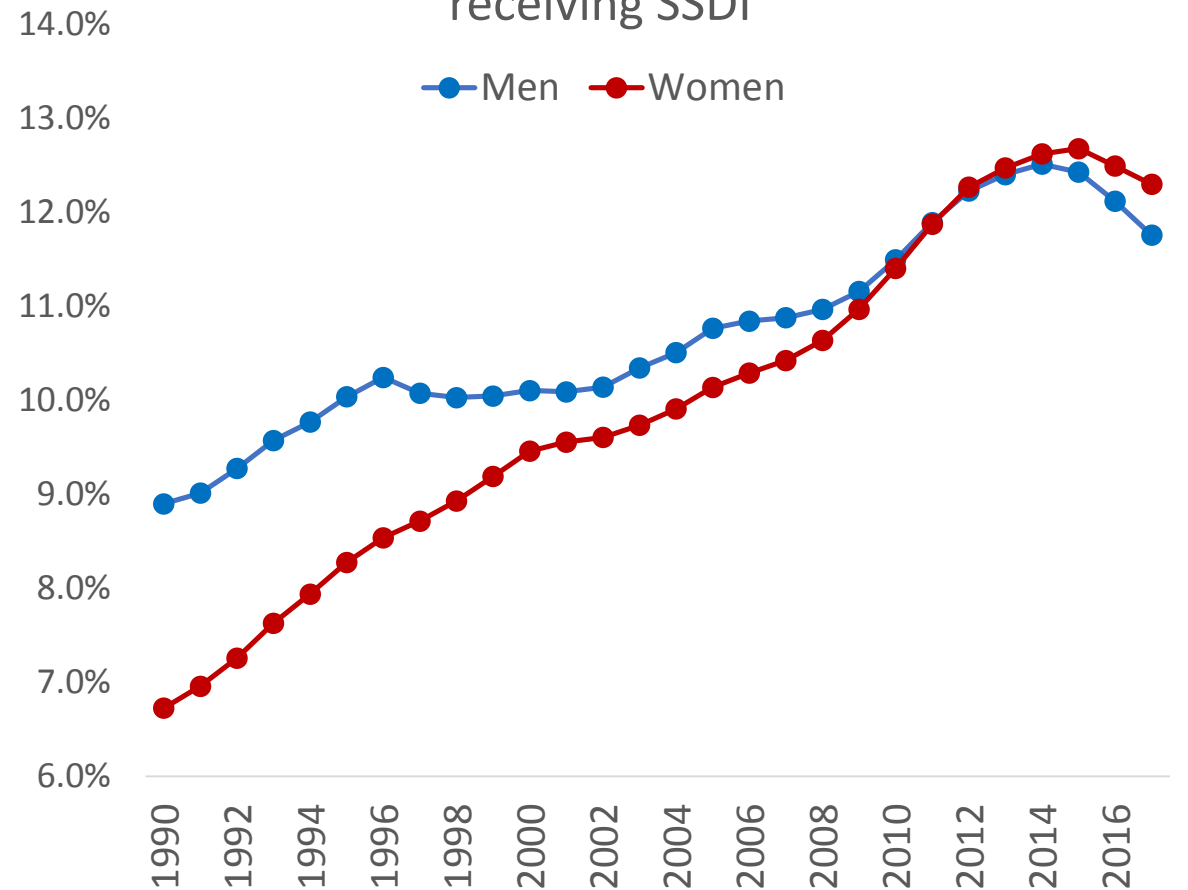
- HRS, 1996-2016
 - Increase in most functional limitations (1-2%/year)
 - Increase in difficulty with IADLs (1-4%/year) and ADLs (1-3%/year)
 - Increase in CESD-based depression indicator (0.5%/year)
- NHIS, 1997-2017
 - Increase in functional limitations (1-2%/year)
 - Increase in receiving help with ADLs (2-4%/year) and IADLs (2%/year)
 - Increase in Kessler6-based psychological distress indicator (3.7%/year)

SSA Administrative Data

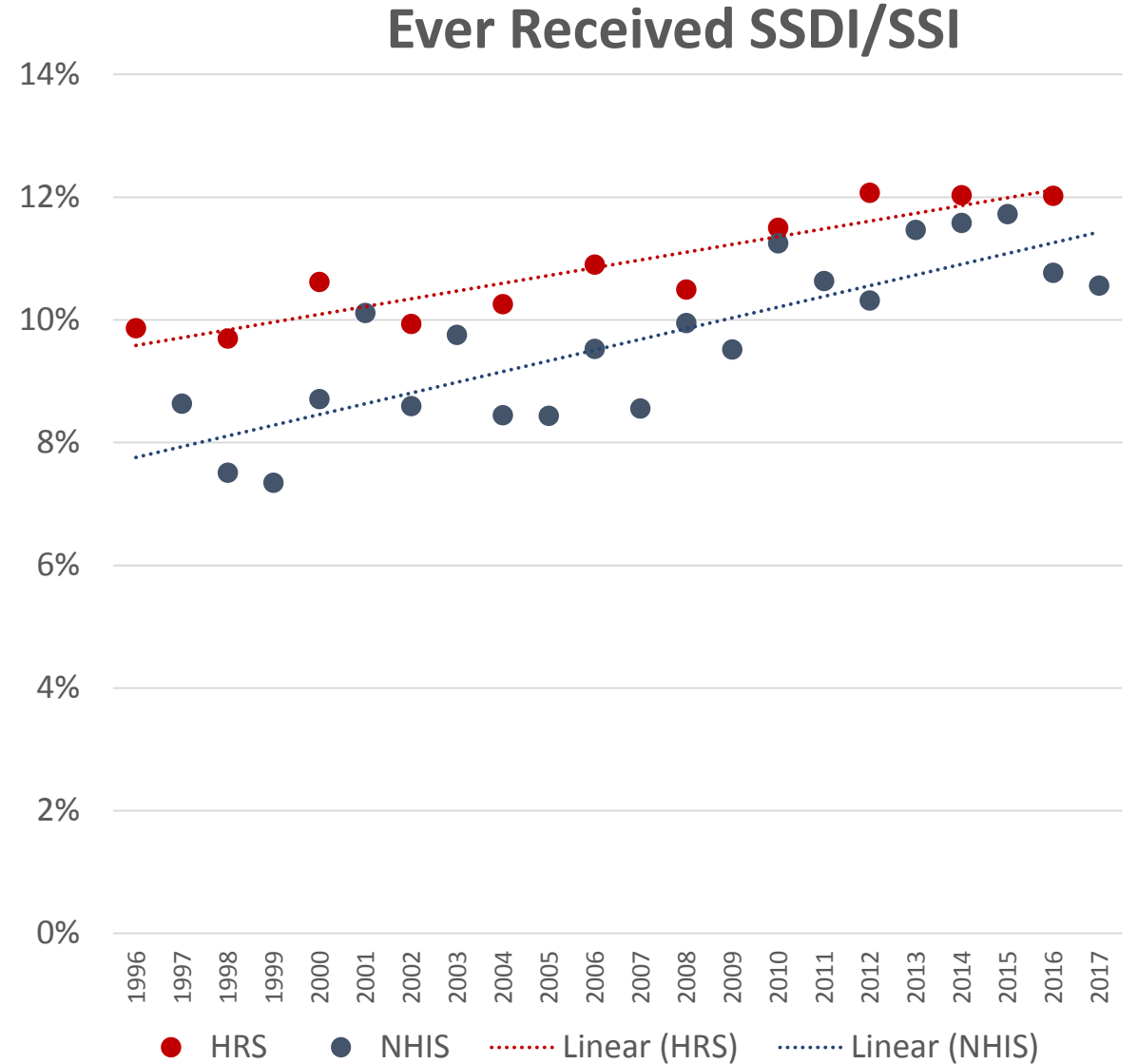
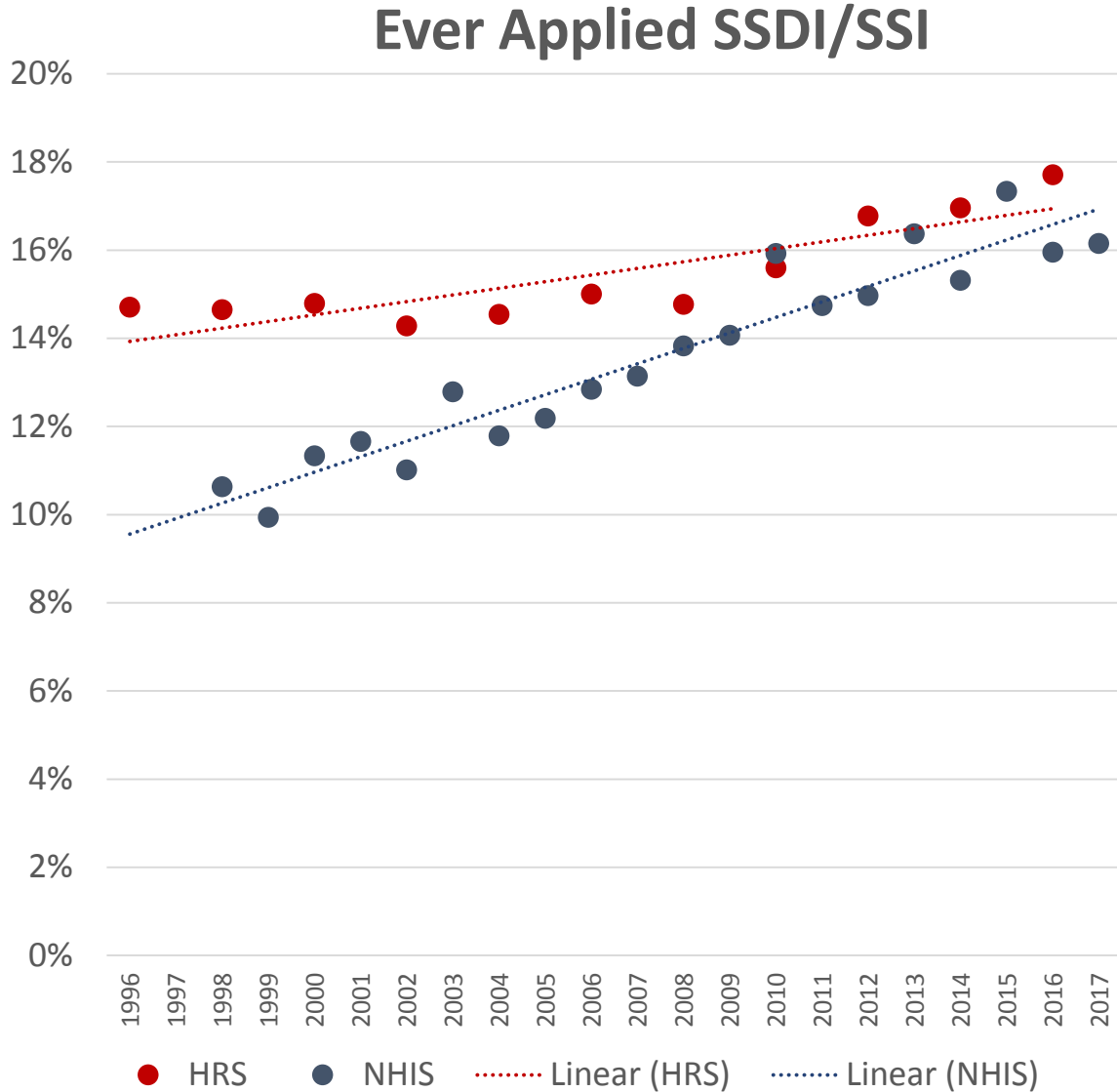
Share of Population 55-59 with new SSDI awards



Share of Population 55-59 currently receiving SSDI



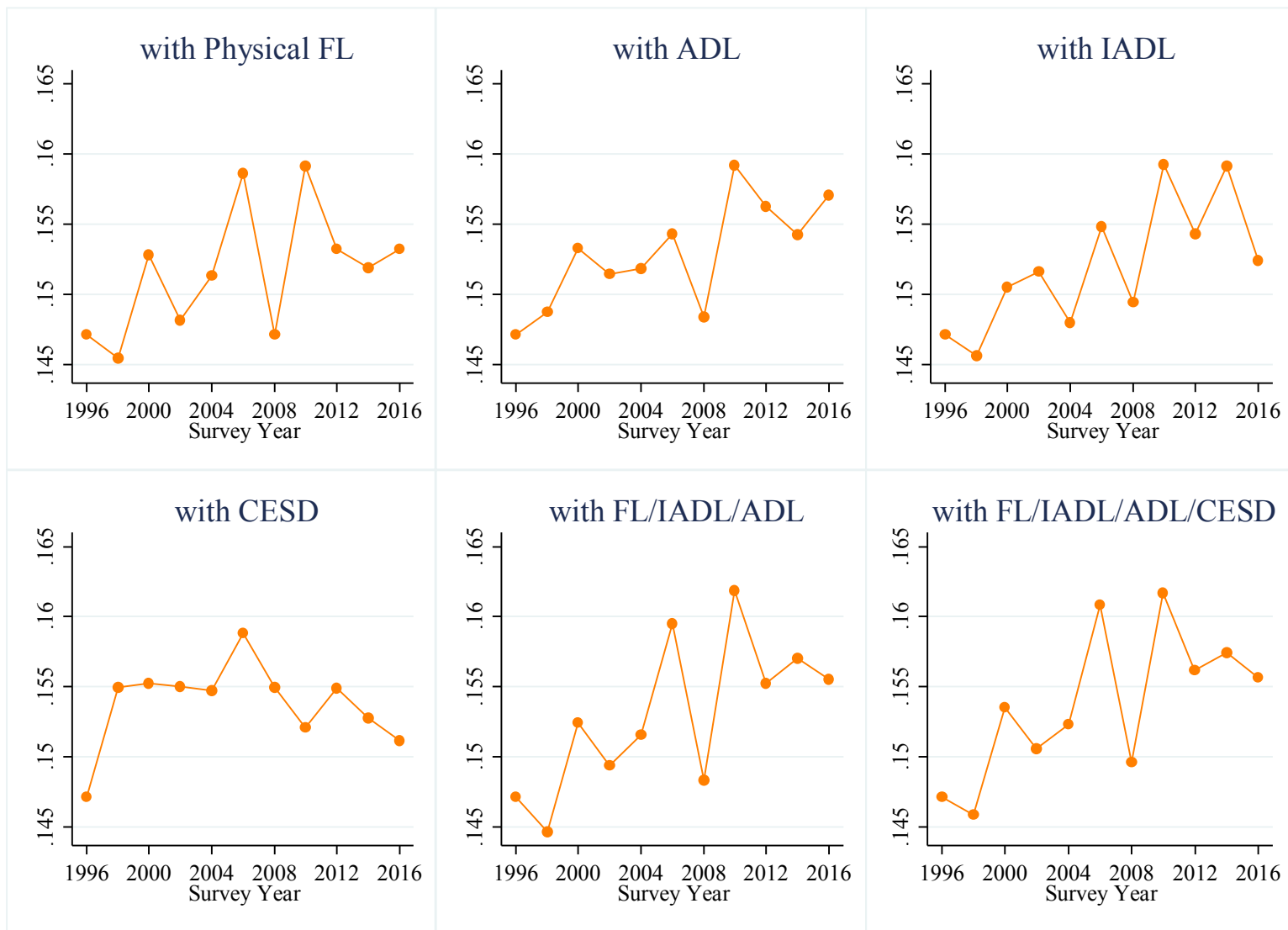
Survey Trends in Disability Program Measures



Simulations

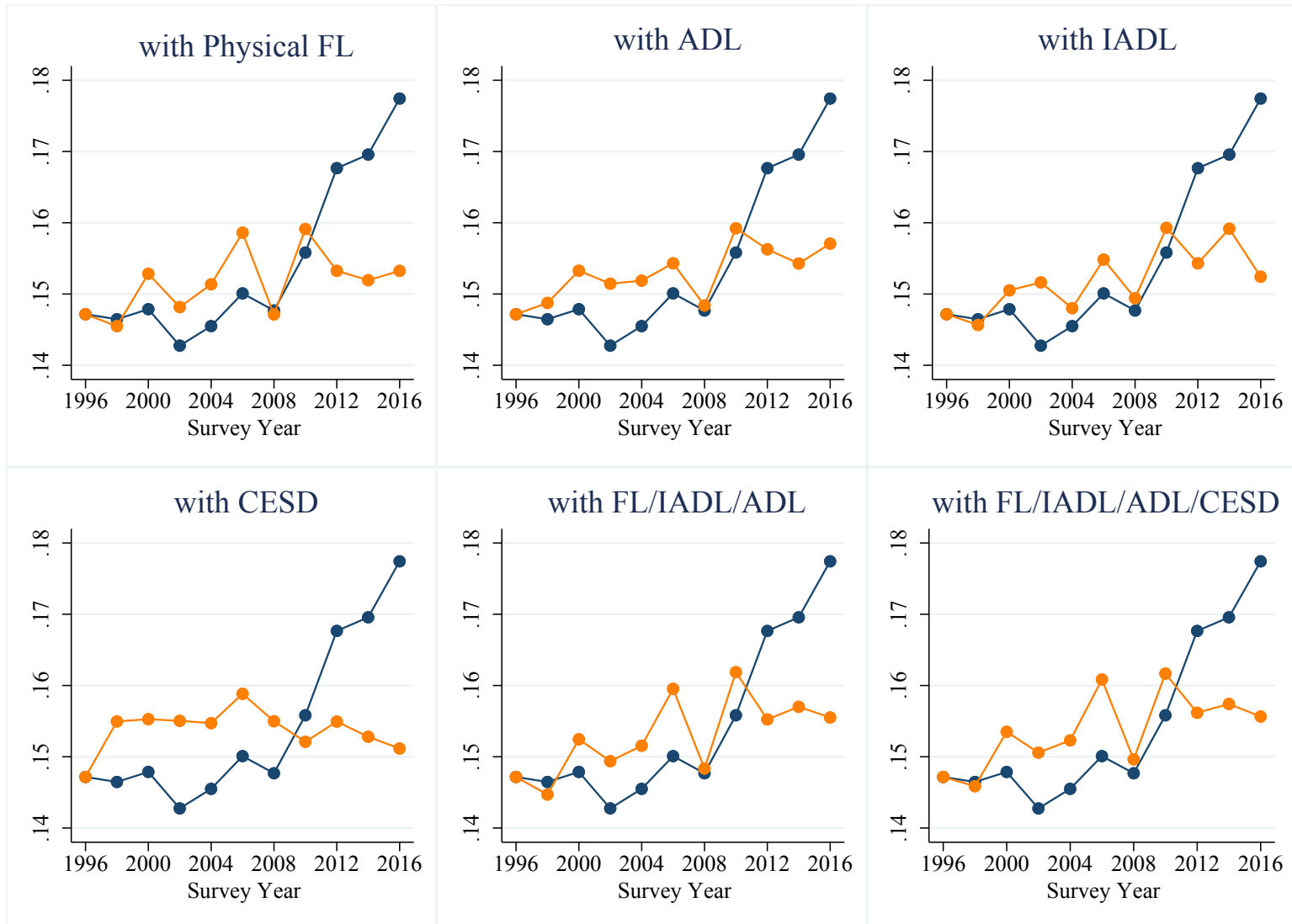
- Holding all non-health factors constant, what would we expect DI trends to have been, based solely on trends in health variables?

Ever applied to SSDI/SSI , Predicted from changes only in health



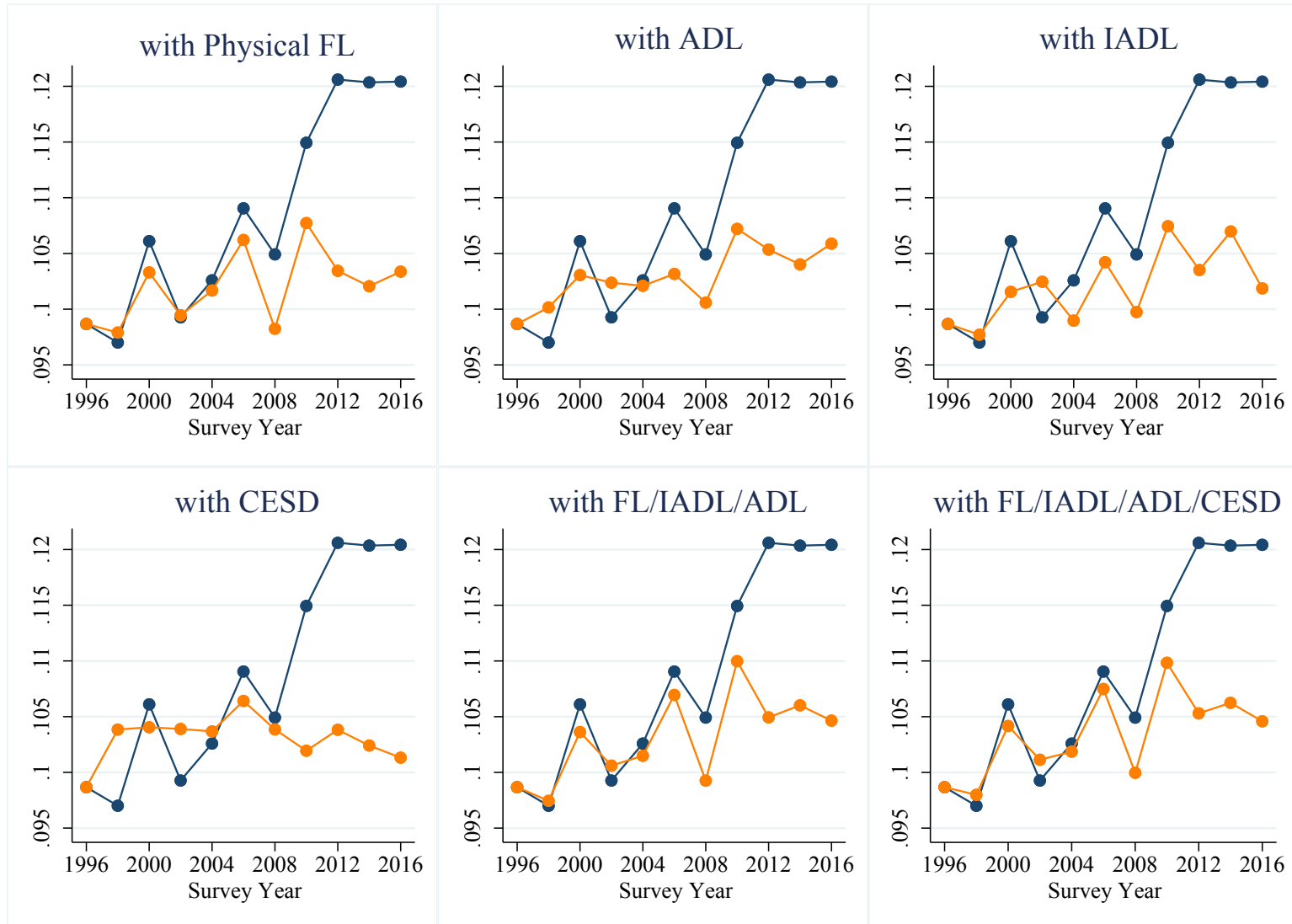
Ever applied to SSDI/SSI

—●— Actual —●— Predicted



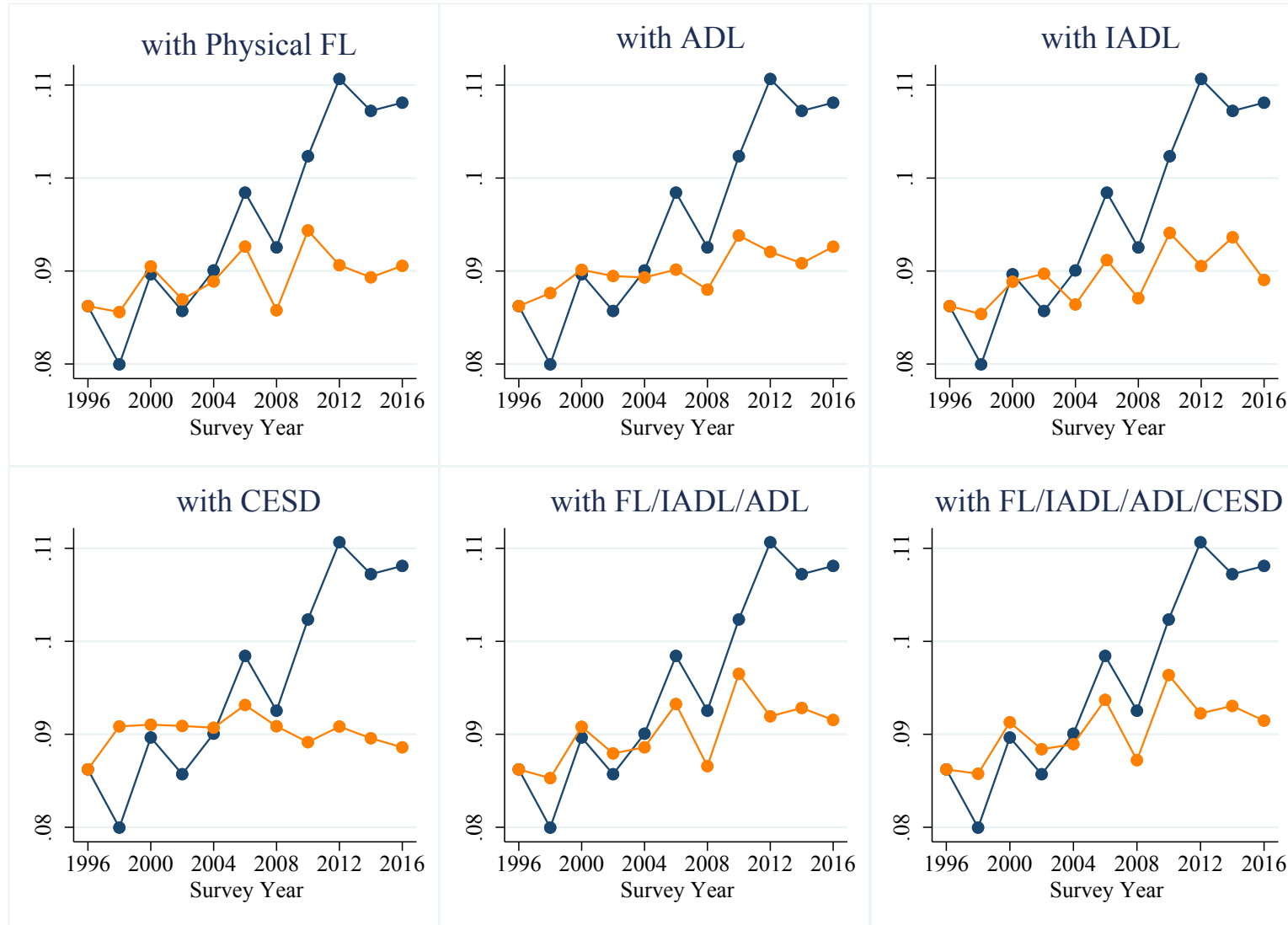
Ever received SSDI/SSI

—●— Actual —●— Predicted



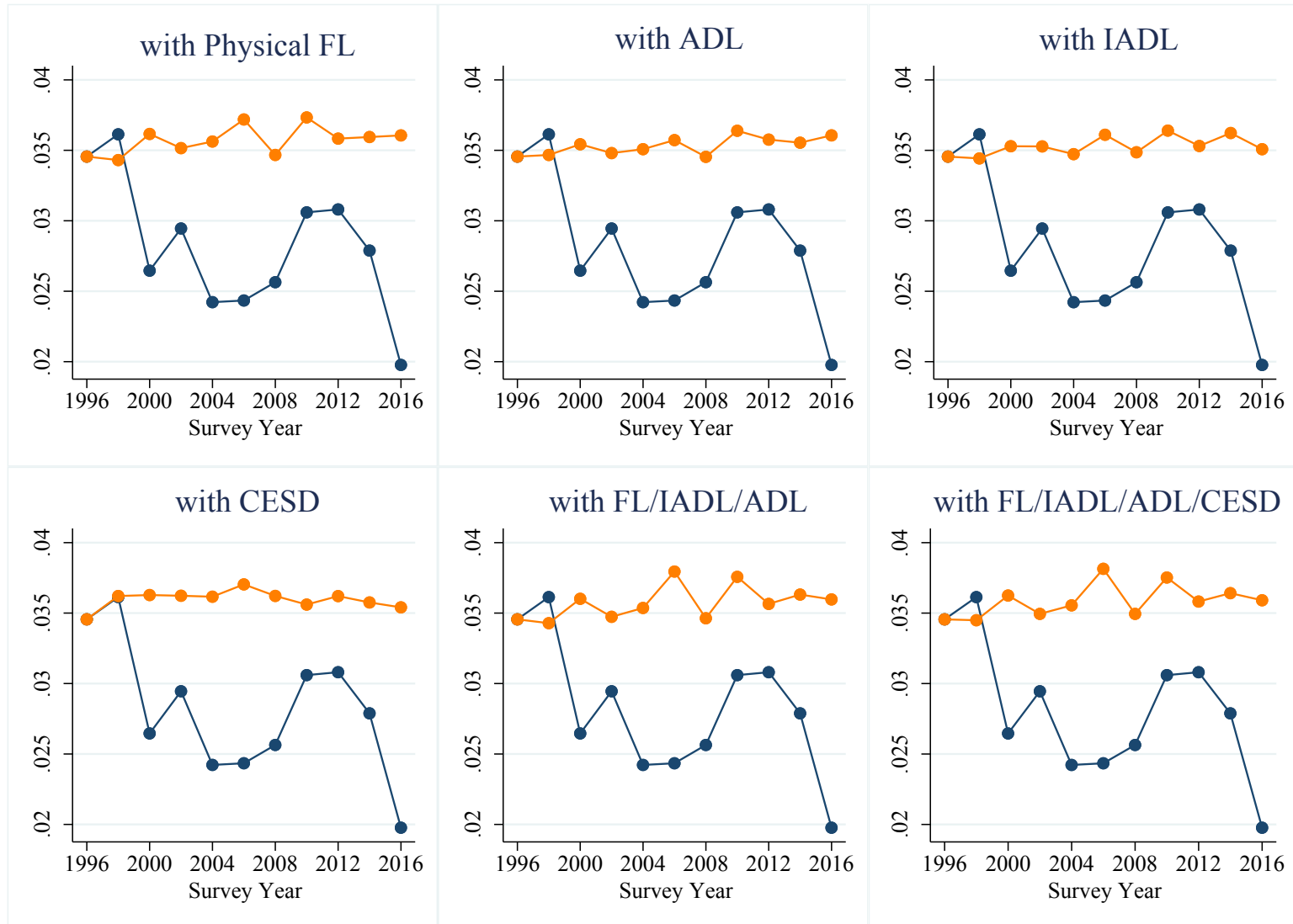
Currently receiving SSDI/SSI

—●— Actual —●— Predicted



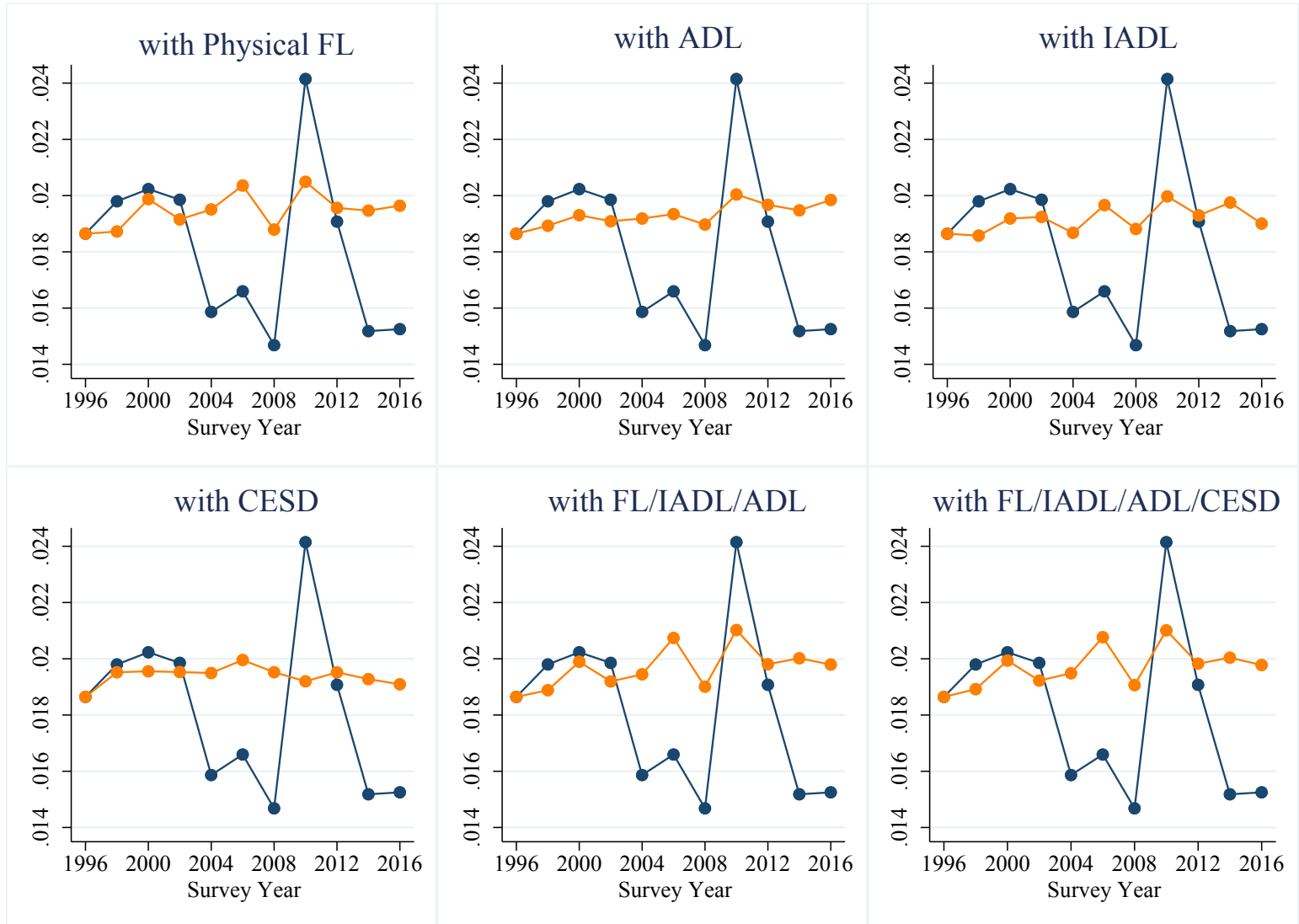
Recently applied to SSDI/SSI

—●— Actual —●— Predicted

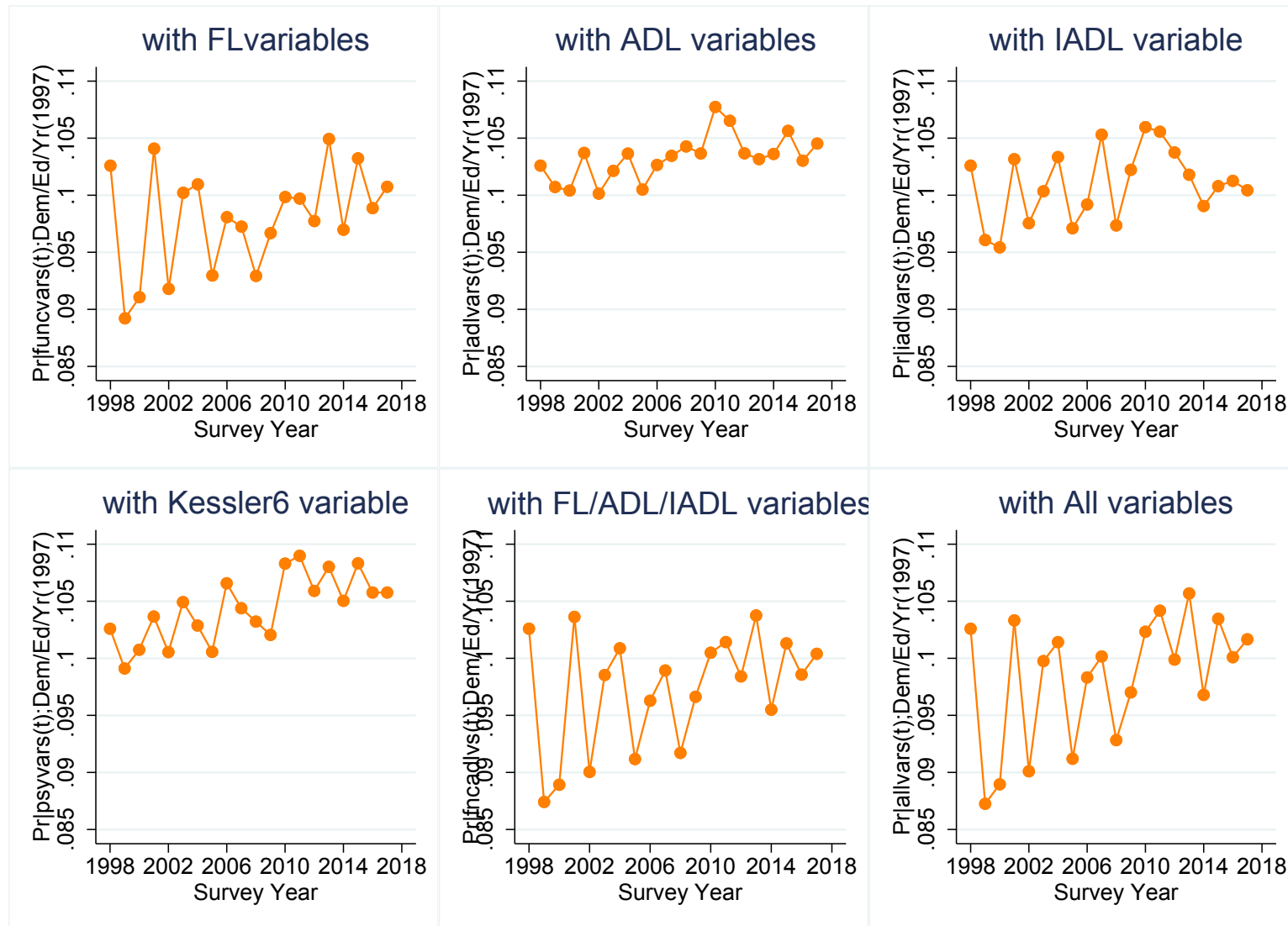


Recently received SSDI/SSI

—●— Actual —●— Predicted

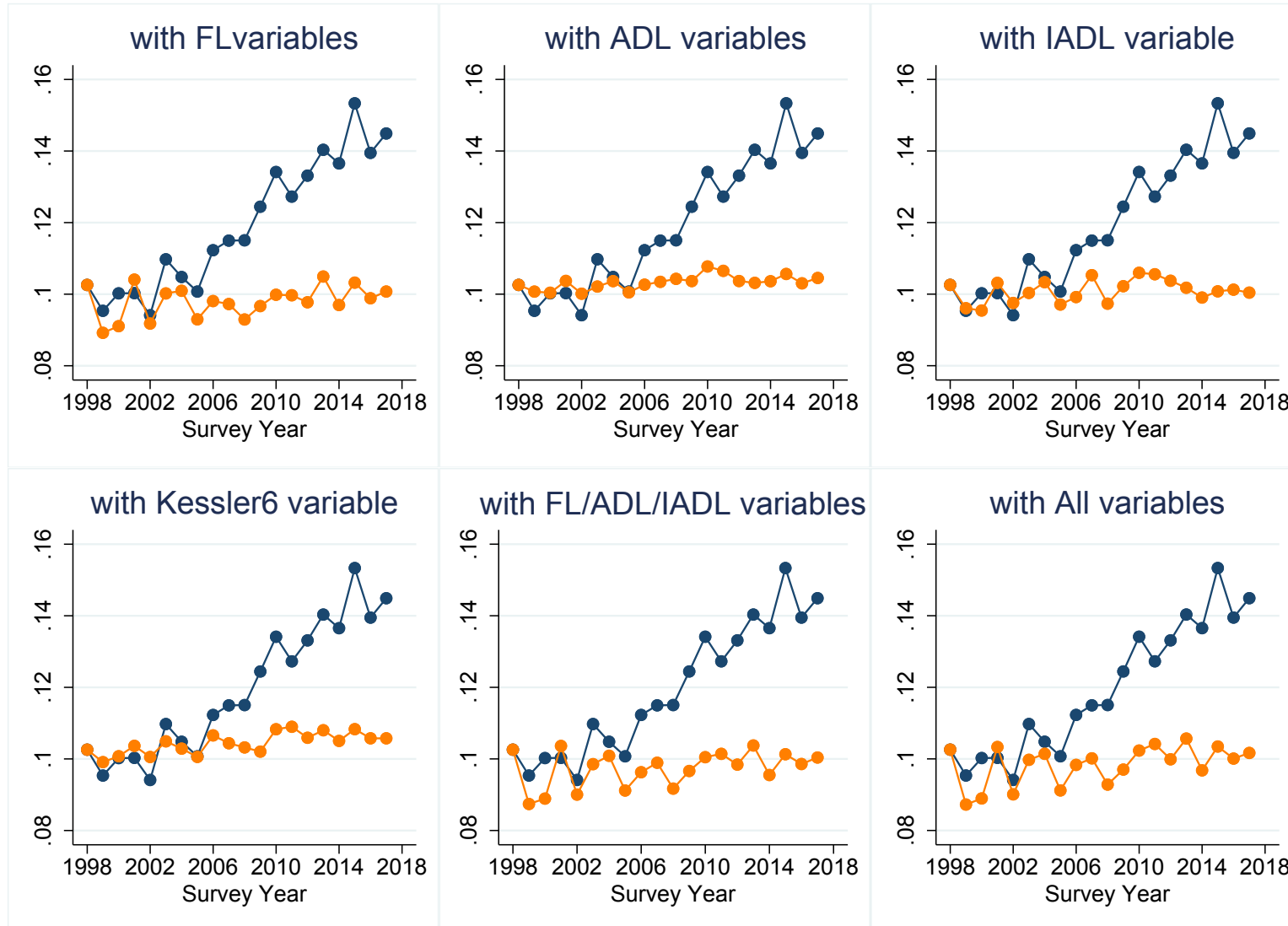


NHIS: Ever applied to SSDI/SSI, Predicted



NHIS: Ever applied to SSDI/SSI

—●— Actual —●— Predicted



Summary of Results

- Predictions are robust to other controls (demographics and year fixed effects)
- Functional limitations increased over the period and are strongly associated with DI/SSI activity
- They predict increased rates of disability activity,
 - But, the magnitude of the predicted increase is substantially less than actual increase
- Similar story for ADLs, IADLs, and measures of psychological distress

Preliminary Conclusions

- Survey measures point toward worsening health and increased DI & SSI application, awards from mid 1990s-mid 2010s, but *not* decreases observed recently
- Health variables do better job predicting trends in cumulative than recent activity
- Magnitudes of currently observed trends in health are worrisome, *ceteris paribus*, for DI trust fund balances, but in context of other changes, not so much.

Non-health explanations for DI/SSI trends

- Macroeconomic conditions
- Population aging
- ACA Health Insurance expansion
- SSA administrative and policy changes