

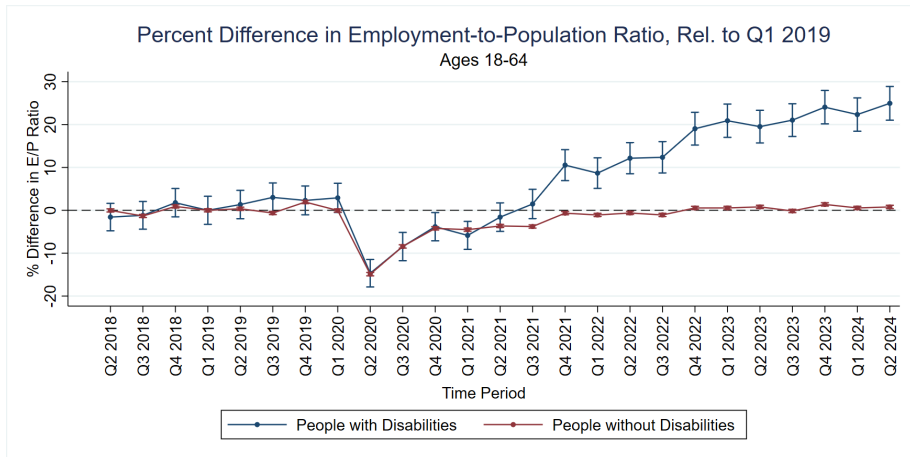
# Disability Employment Trends During COVID-19

Ari Ne'eman

Harvard T.H. Chan School of Public Health & Harvard Medical School

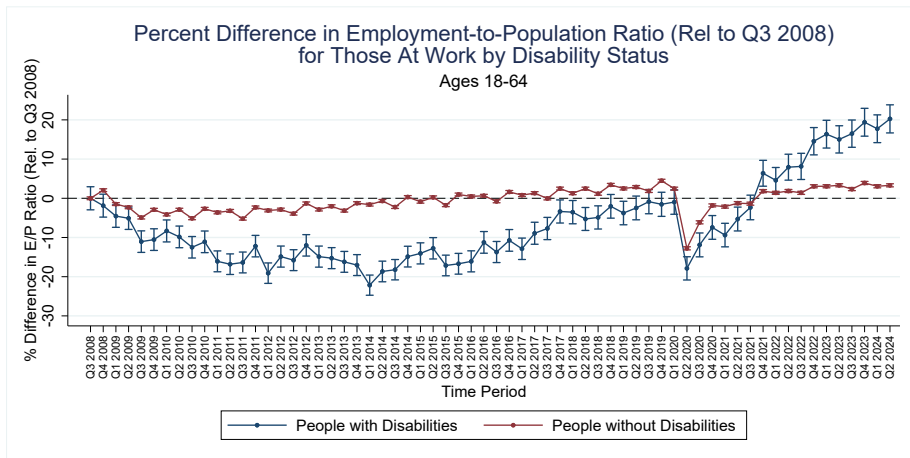
October 16, 2024

# Disability Employment During COVID-19



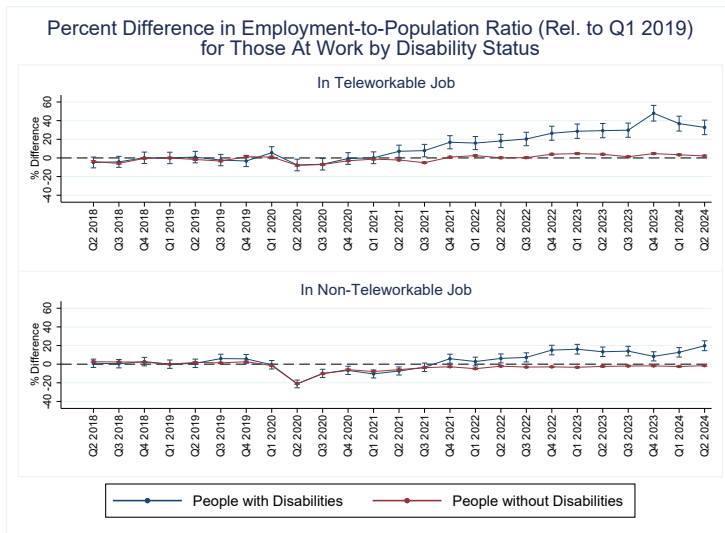
Adapted from Ne'eman & Maestas (2023a)

# Disability Employment from Q3 2008-Q2 2024



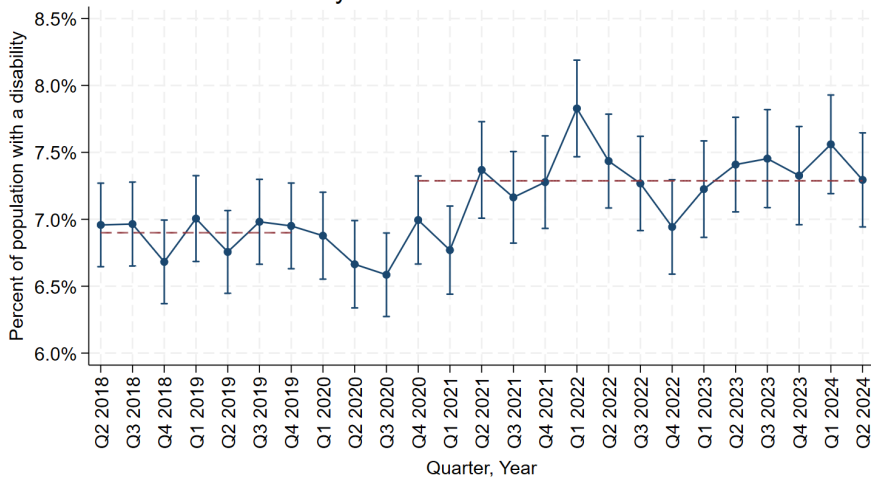
Adapted from Ne'eman & Maestas (2023a)

# COVID-era Disability Employment Gains Strongest in Teleworkable Occupations



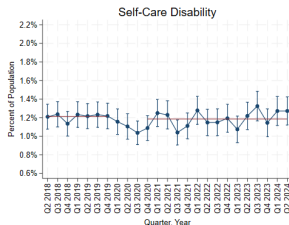
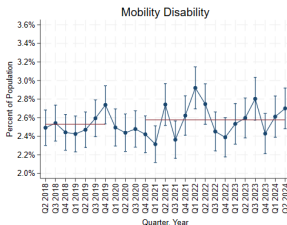
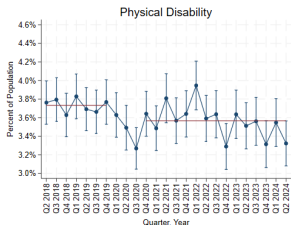
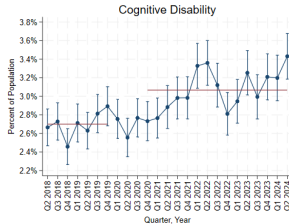
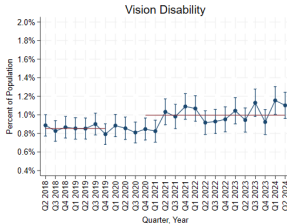
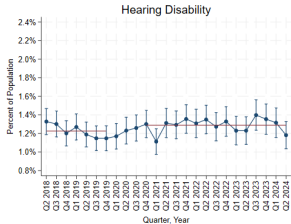
# Disability Rates - Overall

Disability Rate from Q2 2018 to Q2 2024



# Disability Rates - By Type

Rate of Disability Type within the Population  
from Q2 2018 to Q2 2024



Note: y-axis scales remain consistent at 1.6%, but vary across ranges

# Prior Work on the COVID Disability Employment Surge

- Ne'eman & Maestas (2022) use the CPS to show the surge in disabled employment and Labor Force Participation (LFP) in 2022, but note a corresponding increase in disability rates.
- Sheiner & Salwati (2022) use the CPS to argue that disability employment improvements are primarily the result of compositional change as employment growth largest among cognitively disabled (who also see largest disability increase).
- Guo & Krolkowski (2024) use the longitudinal component of the CPS to show that 55% of the increase in disabled LFP 2021-22 is from switching into disability rather than switching into employment.

# Prior Work on Telework's Role

- Ne'eman & Maestas (2022) use the CPS to show that the increase in disabled employment is strongest in teleworkable occupations.
- Liu & Quinby (2024) use the HRS to show that increased employment among older workers with disabilities is **entirely** in teleworkable occupations.
- Bloom, Dahl & Rooth (2024) use the CPS and ACS to show that a 1 percentage point increase in telework increases full-time employment by 1.1% for people with non-cognitive disabilities, explaining 80% of the disability employment surge for this group.
  - ▶ To deal with compositional change, they exclude cognitive disability from their analysis.



# Decomposition Analysis

- Regression relies on  $\beta$ s and Xs: the coefficients indicating the returns of a variable and the "endowments" indicating the level of that variable
- Decomposition analysis calculates how much of the difference between two groups can be explained by differences in endowments
- We use a Fairlie regression - a variant on the popular Kitagawa-Oaxaca-Blinder designed for logit regression
- Data comes from Current Population Survey respondents who indicate a disability in Wave 5 in 2019 or 2023 (n=13,605, 46% in 2019 and 54% in 2023)

# Decomposition Analysis

- We use coefficients from a pooled regression of all time periods, showing how subtracting the endowment levels of time  $t$  from time  $t+1$  impacts the difference in outcomes assuming common coefficients.
- We test for compositional change in new disability, each of the 6 disability types, age, educational attainment, race/ethnicity, children, veteran status, citizenship, nativity, marriage, sex, state of residence, and calendar month.
- Test both a combined approach and one dis-aggregated by cognitive disability status.

# Disability Recency: Exploiting the Longitudinal Nature of the CPS

Table: Ongoing Disabled

Month	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Month in Sample	1	2	3	4									5	6	7	8
6 Disability Questions	Y												Y			

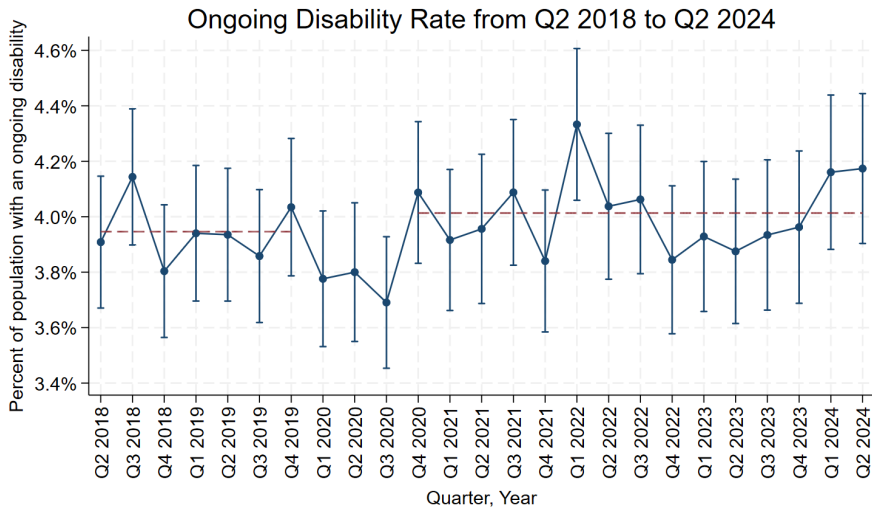
Respondent indicates having a disability in the first and second administrations of the disability questions.

Table: Newly Disabled

Month	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Month in Sample	1	2	3	4									5	6	7	8
6 Disability Questions	N												Y			

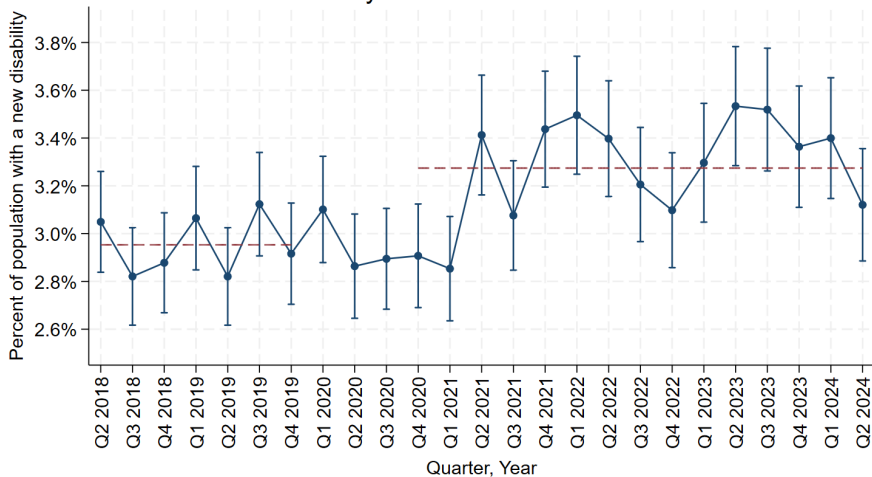
Respondent did not indicate having a disability in the first administration of the disability questions but did indicate having a disability in the second administration.

# Disability Rates - Ongoing Disabled



# Disability Rates - Newly Disabled

New Disability Rate from Q2 2018 to Q2 2024



# Descriptive Statistics

	All Disabled	Ongoing Disabled	Newly Disabled
Proportion of sample (%)	100.0%	59.9%	40.1%
<b>Employment/Benefit Participation</b>			
Avg. employment rate (%)	26.7%	19.0%	38.1%
Avg. SSI rate (%)	18.2 %	23.2%	10.6%
Avg. SSDI rate (%)	27.0%	35.2%	14.8%

From Ne'eman & Maestas (2023b)

# Descriptive Statistics

	All Disabled	Ongoing Disabled	Newly Disabled
Proportion of sample (%)	100.0%	59.9%	40.1%
<b>Employment/Benefit Participation</b>			
Avg. employment rate (%)	26.7%	19.0%	38.1%
Avg. SSI rate (%)	18.2 %	23.2%	10.6%
Avg. SSDI rate (%)	27.0%	35.2%	14.8%

From Ne'eman & Maestas (2023b)

# Descriptive Statistics

	All Disabled	Ongoing Disabled	Newly Disabled
Proportion of sample (%)	100.0%	59.9%	40.1%
<b>Employment/Benefit Participation</b>			
Avg. employment rate (%)	26.7%	19.0%	38.1%
Avg. SSI rate (%)	18.2 %	23.2%	10.6%
Avg. SSDI rate (%)	27.0%	35.2%	14.8%

From Ne'eman & Maestas (2023b)



# Decomposition Results

Comparing 2019 to 2023	
2023 Disability Employment	0.3560
2019 Disability Employment	0.2776
Difference	0.0784
<i>Total Explained</i>	0.0330
<i>Total Difference Explained (%)</i>	42.12%
<b>Independent Variables</b>	<i>% Explained by Each</i>
Physical Disability	11.34%
BA+	8.79%
Age 18-34	6.36%
New Disability	5.57%
Mobility Disability	4.37%
State	4.10%
Some College	1.91%
Age 35-49	1.21%
Personal Care Disability	1.02%
Hearing Disability	0.49%
Black	0.47%
Vision Disability	0.34%
Calendar Months	0.26%
Children	0.15%
Hispanic	0.13%
Veteran	0.01%
Citizen	-0.01%
Native Born	-0.04%
White	-0.24%
Married	-0.26%
Male	-0.30%
Cognitive Disability	-3.63%

# Decomposition Results

Comparing 2019 to 2023	
2023 Disability Employment	0.35595475
2019 Disability Employment	0.277584
Difference	0.07837075
<i>Total Explained</i>	0.03300895
<b><i>Total Difference Explained (%)</i></b>	<b>42.12%</b>
<b>Independent Variables</b>	<b>% Explained by Each</b>
Physical Disability	11.34%
BA+	8.79%
Age 18-34	6.36%
New Disability	5.57%
Mobility Disability	4.37%
State	4.10%
Some College	1.91%
Age 35-49	1.21%
Personal Care Disability	1.02%
Hearing Disability	0.49%
Black	0.47%
Vision Disability	0.34%
Calendar Months	0.26%
Children	0.15%
Hispanic	0.13%
Veteran	0.01%
Citizen	-0.01%
Native Born	-0.04%
White	-0.24%
Married	-0.26%
Male	-0.30%
Cognitive Disability	-3.63%

# Decomposition Results - By Cognitive Disability Status

Cognitive Disability		No Cognitive Disability	
2023 Disability Employment	0.3187	2023 Disability Employment	0.3831
2019 Disability Employment	0.2118	2019 Disability Employment	0.3212
Difference	0.1069	Difference	0.0619
<i>Total Explained</i>	0.0451	<i>Total Explained</i>	0.0309
<i>Total Difference Explained (%)</i>	42.19%	<i>Total Difference Explained (%)</i>	49.99%
<b>Ind. Variables</b>	<i>% Explained by Each</i>	<b>Ind. Variables</b>	<i>% Explained by Each</i>
Physical Disability	4.05%	Physical Disability	16.72%
BA+	6.98%	BA+	10.65%
Age 18-34	9.10%	Age 18-34	3.40%
New Disability	3.08%	New Disability	8.36%

# Decomposition Results - By Cognitive Disability Status

Cognitive Disability		No Cognitive Disability	
2023 Disability Employment	0.3187	2023 Disability Employment	0.3831
2019 Disability Employment	0.2118	2019 Disability Employment	0.3212
Difference	0.1069	Difference	0.0619
<i>Total Explained</i>	0.0451	<i>Total Explained</i>	0.0309
<i>Total Difference Explained (%)</i>	42.19%	<i>Total Difference Explained (%)</i>	49.99%
<b>Ind. Variables</b>	<i>% Explained by Each</i>	<b>Ind. Variables</b>	<i>% Explained by Each</i>
Physical Disability	4.05%	Physical Disability	16.72%
BA+	6.98%	BA+	10.65%
Age 18-34	9.10%	Age 18-34	3.40%
New Disability	3.08%	New Disability	8.36%

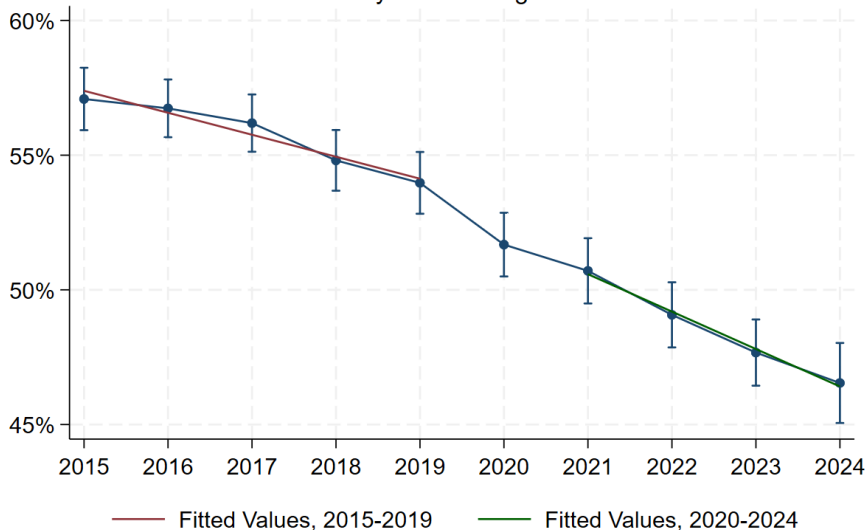
# Decomposition Results - By Cognitive Disability Status

Cognitive Disability		No Cognitive Disability	
2023 Disability Employment	0.3187	2023 Disability Employment	0.3831
2019 Disability Employment	0.2118	2019 Disability Employment	0.3212
Difference	0.1069	Difference	0.0619
<i>Total Explained</i>	0.0451	<i>Total Explained</i>	0.0309
<b><i>Total Difference Explained (%)</i></b>	<b>42.19%</b>	<b><i>Total Difference Explained (%)</i></b>	<b>49.99%</b>
<b>Ind. Variables</b>	<b>% Explained by Each</b>	<b>Ind. Variables</b>	<b>% Explained by Each</b>
Physical Disability	4.05%	Physical Disability	16.72%
BA+	6.98%	BA+	10.65%
Age 18-34	9.10%	Age 18-34	3.40%
New Disability	3.08%	New Disability	8.36%

# Physical Disability Trends, 2015-24

## Percent of Disabled Population with a Physical Disability

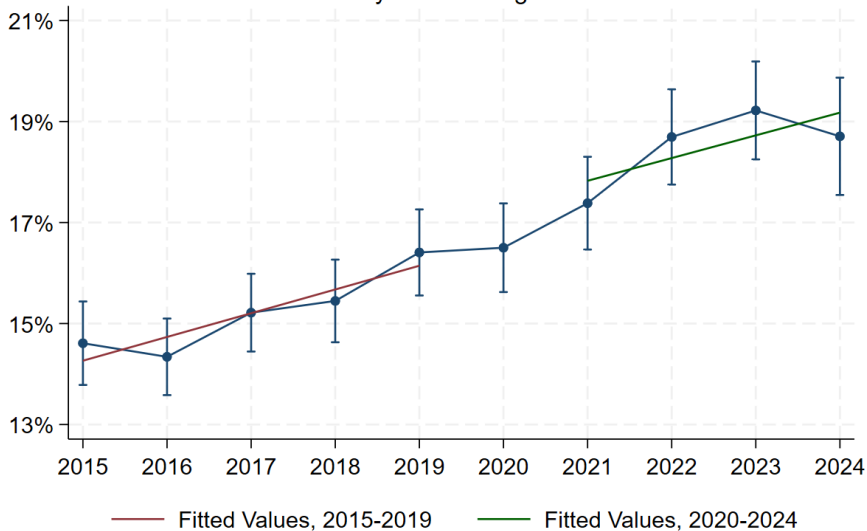
January 2015 to August 2024



## BA+ Trends, 2015-24

### Percent of Disabled Population with a Bachelor's Degree

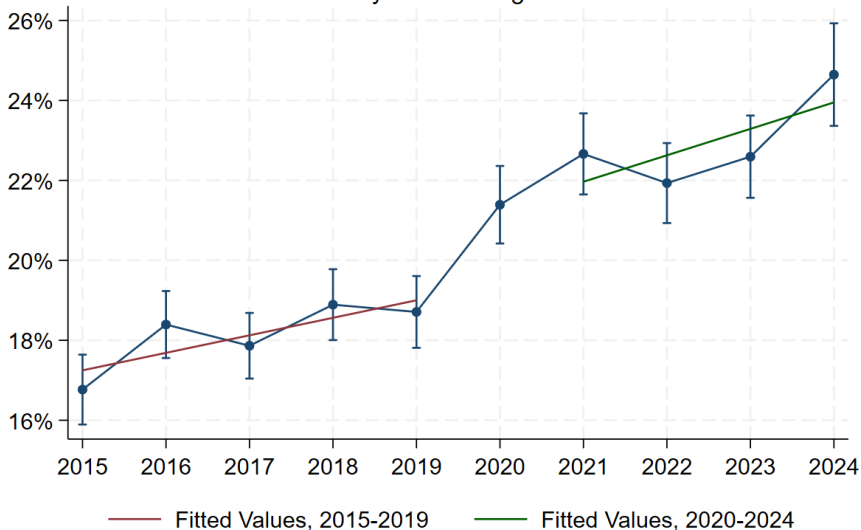
January 2015 to August 2024



## Age 18-34 Trends, 2015-24

### Percent of Disabled Population Age 18-34

January 2015 to August 2024

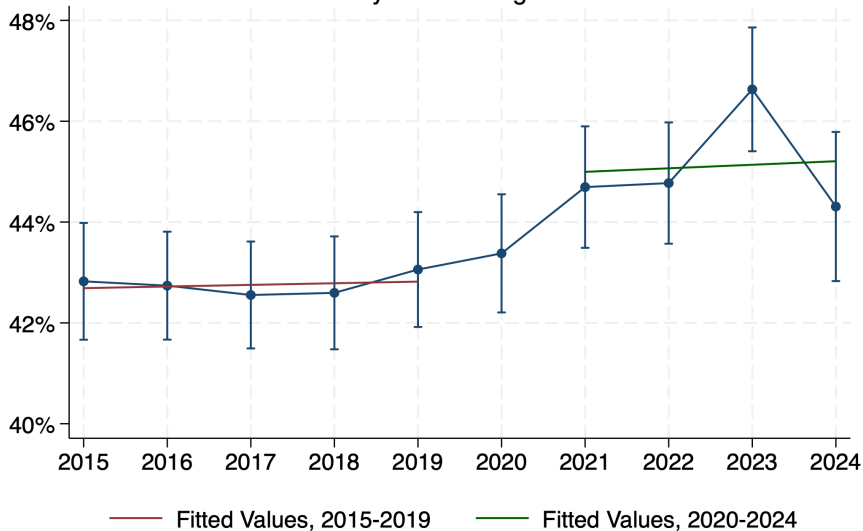




# New Disability Trends, 2015-24

## Percent of Disabled Population with a New Disability

January 2015 to August 2024



# 2019-23 Compared to Pre-COVID Decompositions

Comparing 2019 to 2023		Comparing 2015 to 2019		Comparing 2014 to 2018	
Difference	0.0784	Difference	0.0435	Difference	0.0347
<i>Total Explained</i>	0.0330	<i>Total Explained</i>	0.0088	<i>Total Explained</i>	0.0136
<b><i>Difference Explained</i></b>	<b>42.12%</b>	<b><i>Difference Explained</i></b>	<b>20.24%</b>	<b><i>Difference Explained</i></b>	<b>39.24%</b>
<b>Ind. Variables</b>	<b>% Explained</b>	<b>Ind. Variables</b>	<b>% Explained</b>	<b>Ind. Variables</b>	<b>% Explained</b>
Physical Disability	11.34%	Physical Disability	9.63%	Physical Disability	20.65%
BA+	8.79%	BA+	7.51%	BA+	7.25%
Age 18-34	6.36%	Age 18-34	3.63%	Age 18-34	2.60%
New Disability	5.57%	New Disability	0.73%	New Disability	3.77%

# Key Takeaways

- The disabled population is changing over time - and not just because of COVID.
- Compositional change is associated with approximately half of the disability employment increase during COVID - but much of it comes from pre-COVID trends.
- Not all of the increase in disability employment is associated with COVID-specific compositional change or compositional change in general.

# Questions?