Reducing Young Invincibles' Total Health Care Spending through The ACA Expansion of Dependent Coverage

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Presenter Disclosures

No relationships to disclose

Young Invincibles

* Before the implementation of the ACA, approximately 30 percent of young adults were uninsured.

Background

* The Affordable Care Act (ACA) extended eligibility for dependent coverage under private family health insurance up to age 26.
* Recent estimates show that this provision has reduced the number of uninsured young adults by at least 3 million individuals.

Health care expenditures among young adults

* Young adults' health spending patterns will impact the aggregate U.S. health spending in the long term.
* Lack of health care access and health insurance may result in delaying or forgoing necessary treatment, potentially leading to health problems and higher health expenditures in mid-adulthood.

Distributions of health care expenditures

* The ACA provision is positively associated with the lower end of the health expenditures distribution, and negatively associated with the higher end of this distribution.

Study Objective

- To estimate health care expenditure trends among young adults ages 19-25 before and after the 2010 implementation of the ACA extended eligibility for dependent private health insurance coverage.

Study Design

- Difference-in-differences model
  - young adults ages 19-25 (the treatment group) and ages 27-29 (the control group).
  - pre- (2008-2009) to post- (2011-2012) implementation periods
  - Quantile regression was used to capture different associations between the ACA expansion and health care expenditures.

Data

- 2008 to 2012 Medical Expenditure Panel Survey
  - 7,623 young adults ages 19-25 years old
  - 3,516 young adults ages 27-29 years old

Annual health care expenditures per person

- Total health care spending (2012 Consumer Price Index Medical Component)
- Spending on specific types of health care ***services***: physician visits, prescription drugs, inpatient visits, and ED visits.
- Expenditures by ***payors***: out-of-pocket (OOP) payments, private health insurance, Medicaid, and other sources.

Model Specifications

$$\text{Health care expenditures} = \beta_0 + \beta_1(\text{Age 19-25}) + \beta_2(\text{Years 2011-2012}) + \beta_3(\text{Age 19-25} * \text{Years 2011-2012}) + \beta_4(\text{covariates}) + \varepsilon$$

- Andersen social behavioral model
  - the predisposing factors (race/ethnicity, gender, marital status, US-born vs. foreign-born, and interview language)
  - enabling factors (education, family income, urban/rural, and U.S. Census Region
  - clinical needs factors (self-reported physical and mental health, SF12- physical component summary, and mental component summary.

Method

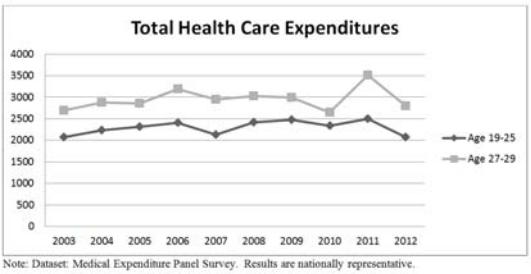
- A generalized linear model with log link and gamma distribution (GLM)
- Propensity score matching to adjust for sample selection bias due to observable differences between the treatment and control groups.
- Sensitivity analyses

Method

- Difference-in-differences
- Quantile regression model
  - The coefficient at the lower percentiles of the expenditures (e.g. the 10th, 25th and 50th percentiles): *the association between the ACA expansion and health expenditures on primary or routine health care.*
  - The coefficient at the higher percentiles of health expenditures (e.g. the 75th, 90th, and 95th percentiles): *the association between the ACA expansion and the use of more intense and costly health care services.*

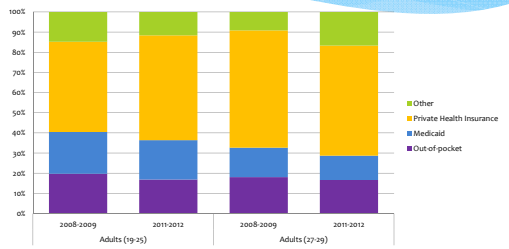
Parallel trends

Figure 1: Trends of total health care expenditures for young adults ages 19-25 and ages 27-29 years old from 2003-2012

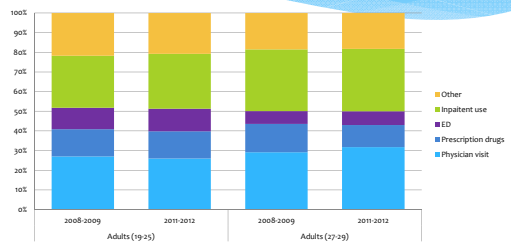


Note: Dataset: Medical Expenditure Panel Survey. Results are nationally representative.

Health Care Expenditures by Payors



Health Care Expenditures by Services



Total Health Care Expenditures by Payors

propensity score-weighted GLM	Total Health Care Expenditures		Out-of-Pocket Payment		Private Health Insurance		Medicaid	
	Coef	p	Coef	p	Coef	p	Coef	p
The interaction term								
Age 19-25* Year 2011-2012	**-0.21**	**0.01**	**-0.21**	**0.05**	0.00	0.97	-0.16	0.33
Quantile Regression				*10th Percentile*				
Age 19-25* Year 2011-2012	-0.02	0.91	0.25	0.07	-0.06	0.72	0.41	0.21
				25th Percentile				
Age 19-25* Year 2011-2012	**0.27**	**0.00**	**0.28**	**0.01**	-0.05	0.67	0.13	0.61
				50th Percentile				
Age 19-25* Year 2010-2012	0.05	0.54	0.02	0.84	0.08	0.50	0.23	0.29
				75th Percentile				
Age 19-25* Year 2010-2012	-0.07	0.47	-0.07	0.49	0.03	0.82	0.33	0.14
				90th Percentile				
Age 19-25* Year 2010-2012	-0.13	0.22	**-0.33**	**0.01**	0.00	0.99	-0.24	0.21
				95th Percentile				
Age 19-25* Year 2010-2012	**-0.20**	**0.07**	**-0.44**	**0.01**	0.16	0.38	-0.38	0.10

Health Care Expenditures by Services

propensity score-weighted GLM	Physician Visit		Prescription Drug		Inpatient Visit		ED Visit	
	Coef	p	Coef	p	Coef	p	Coef	p
The interaction term								
Age 19-25* Year 2011-2012	**-0.22**	**0.03**	**0.05**	**0.02**	-0.03	0.10	0.03	0.19
Quantile Regression				*10th Percentile*				
Age 19-25* Year 2011-2012	-0.13	0.15	**0.31**	**0.03**	0.31	0.38	**0.70**	**0.00**
				25th Percentile				
Age 19-25* Year 2011-2012	-0.13	0.12	0.19	0.08	-0.12	0.50	0.35	0.11
				50th Percentile				
Age 19-25* Year 2010-2012	**-0.21**	**0.01**	**0.18**	**0.10**	**-0.24**	**0.05**	0.12	0.42
				75th Percentile				
Age 19-25* Year 2010-2012	-0.09	0.31	0.14	0.25	-0.09	0.51	-0.08	0.64
				90th Percentile				
Age 19-25* Year 2010-2012	-0.21	0.06	0.27	0.07	**-0.34**	**0.01**	-0.02	0.93
				95th Percentile				
Age 19-25* Year 2010-2012	-0.16	0.35	0.10	0.61	-0.14	0.64	-0.35	0.10

Findings and Implications

- The treatment group had 10% lower overall health care expenditures and 21% lower out-of-pocket payment compared to the control group in 2011-2012.
- The overall reduction was more significant at the higher end of the health care expenditure distribution.
  - Results also show the increased spending on physician visits and prescription drugs and the reduction on inpatient visit costs of the treatment group in 2011-2012.

Findings and Implications

- Results suggest that the ACA expansion of dependents' coverage might have contributed to the controlled growth of health care expenditures among adults ages 19-25.
- Fewer OOP health expenditures and increased financial protection of newly insured populations.
  - the decline in catastrophic expenditures

Findings and Implications

- Our analyses from a payor perspective did not show significant differences of private health insurers' cost.
  - mainly associated with a shift in reported OOP cost
- Results show that the Medicaid expenditures reduced more among the young adults age 19-25 years old, though this reduction did not reach statistical significance.
- More years of observations may be needed to reflect the time lag.

Limitations

- Our results cannot infer the precise causality given the data availability.
- Our study does not examine long-term health outcomes.
- Our measures of payors are too broad to capture possible "cost-shifting" effect and make specific inferences given the heterogeneity in Medicaid and private insurance plan benefits.

Conclusions

- Extended coverage eligibility has increased financial protection for young adults.
- Our results suggested that enrollment into dependent's private health insurance might have successfully reduced spending by reducing catastrophic expenditures.

Thank you!

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