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Design Issues for a Longitudinal Employer Health Insurance Survey to Facilitate Analysis of Policy Changes

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Disclaimer

- The views expressed in this presentation are those of the authors and no official endorsement by the Department of Health and Human Services, the Agency for Healthcare Research and Quality is intended or should be inferred.



Presentation Outline

- MEPS Insurance Component (MEPS-IC) Overview
- Impetus for Longitudinal IC
 - ▶ Affordable Care Act (ACA)
 - ▶ Measure changes due to the ACA
- Overview of Design/Results from 3 Iterations
 - ▶ 2013-14
 - ▶ 2014-15
 - ▶ 2015-16
- Summary



Medical Expenditure Panel Survey Insurance Component (MEPS-IC)

- Annual survey since 1996
- Sample of ~ 45,000 entities
 - ▶ ~ 42,000 private sector business establishments
 - ▶ ~ 3,000 state & local governments
- Provides national & state estimates



Examples of MEPS-IC National Estimates, Private Sector 2013 & 2014

	2013	2014	2015
Percentage of Establishments Offering Health Insurance	49.9% (0.46)	47.5% (0.35)	45.7% (0.35)
Percent of Employees Enrolled at Establishments Offering	58.2% (0.27)	57.8% (0.38)	57.0% (0.39)
Average Total Single Premium Per Enrolled Employee	\$5,571 (22.7)	\$5,832 (25.4)	\$5,963 (26.4)

() = standard error

[Add 2016 estimates & std errors]



Affordable Care Act (ACA)

- Passed in 2010 (phased in over several years)
 - ▶ Provisions alter employers' incentives to offer insurance and employees' incentives to obtain insurance
 - ▶ **Changed:** Insurance mandates for sizes of small businesses
- New motivation for developing Longitudinal IC
 - ▶ Pre/post ACA measures on same sample of establishments to measure changes in:
 - Offers of insurance
 - Enrollment in offered plans
 - Premiums, deductibles, copay/coinsurance levels



2014 Affordable Care Act (ACA)

- Employers with > 50 FTE employees must offer qualified insurance to their employees or pay a penalty
- Employers with 50 or fewer FTE employees (small businesses) may purchase insurance coverage through a State or Federal exchange
 - ▶ Exchange is a health insurance marketplace
 - For employers called the Small Business Health Options Program (SHOP)
 - ▶ May qualify for a tax credit based on:
 - % of employer contribution towards total employee premiums
 - Number of employees
 - Average annual wage of employees
 - ▶ **Changed in some states in 2015:** 100 or fewer employees



2014 Affordable Care Act (ACA)

- Exchange Type (for eligibility and enrollment)
 - ▶ State-Based (SBE): 18 States
 - ▶ Federally Facilitated (FFE): 32 states and DC
- Some designations changed over time
 - ▶ Example: Late in 2013.....
 - Texas: SBE → FFE
 - Utah: FFE → SBE
 - Mississippi: FFE → SBE
 - Idaho: SBE → FFE



MEPS-IC Longitudinal Surveys

- Series of 3 independent 2-year studies
 - ▶ Survey scope, size and design characteristics differ
- Sponsors
 - ▶ Office of the Assistant Secretary for Planning and Evaluation (ASPE)
 - ▶ Agency for Healthcare Research and Quality (AHRQ)



MEPS-IC Longitudinal Surveys: Private Sector Establishments

- 2013 – 2014
 - ▶ Establishments in firms with ≤ 50 employees
 - ▶ $n = 3,000$ establishments
- 2014 – 2015
 - ▶ Establishments in firms with ≤ 100 employees
 - ▶ $n = 5,000$ establishments
- 2015 – 2016
 - ▶ All firm sizes
 - ▶ $n = 7,000$ establishments

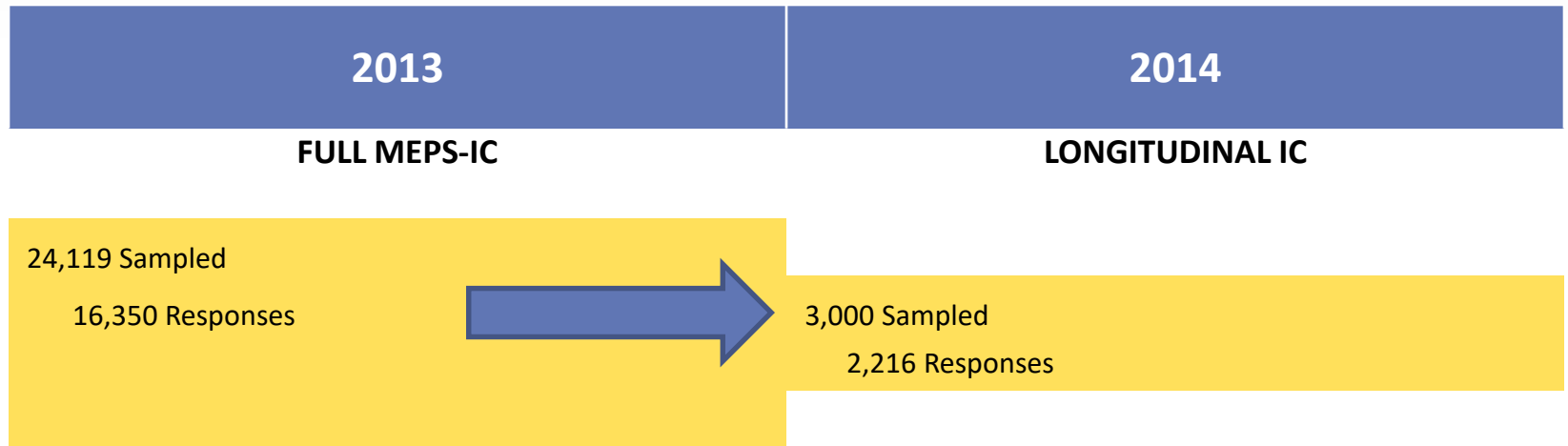


MEPS-IC Longitudinal Surveys Response Rates

Survey Year	Response Rate
2013-2014	75.6 %
2014-2015	76.8 %
2015-2016	73.5 %



2013-14 Longitudinal IC: Private Sector Establishments in firms with ≤ 50 Employees





2013-14 Sampling Strata

- Firm Size (# of employees)
 - ▶ 1-11
 - ▶ 12-50
- Type of Marketplace in Employer State
 - ▶ State Based Marketplace (SBM)
 - ▶ Federally Facilitated Marketplace (FFM)



2013-14 Longitudinal Survey Frame: Number of Establishments by Strata

- Unweighted (16,350 respondents to 2013 IC)

Exchange Type	1 – 11 Employees	12 – 50 Employees
State Based (SBM)	4,195	1,793
Federally Facilitated (FFM)	7,193	3,119

- ▶ Weighted total of 5.3 million establishments



Allocation of Sample Across Strata

- Neyman Allocation
- Considered variances for 2 key variables:
 - ▶ Offer insurance (yes/no)
 - ▶ Enrolled employees (number)

Stratum	Offer Insurance (1)	# Enrolled (2)	Final: .44 (1) + .56 (2)
FFM (1 - 11)	1,480	821	1,111
SBM (1 - 11)	982	856	911
FFM (12 - 50)	346	835	620
SBM (12 - 50)	192	488	358
TOTAL	3,000	3,000	3,000

- Establishments within strata sorted by
 - ▶ State
 - ▶ Industry (2-digit NAICS sector)
 - ▶ Exact firm size
 - ▶ Unique firm ID
- Sequential PPS sampling within strata
 - ▶ PPS Measure of Size
 - year 1 full IC non-response adjusted weight (nrwgt)
 - ▶ Probability of selection, p_i , for an establishment

$$p_i = \left(\frac{\text{nrwgt}_i}{\sum_i \text{nrwgt}_i} \right) \times (\textit{stratum sample size})$$



2013-14 Longitudinal IC Establishment Analytic Weight Components

- Base weight: year 1 non-response adjusted wt.
- Adjusted for P(selection) in longitudinal sample
- Nonresponse Raking Adjustment
 - ▶ Firm size x region
 - ▶ Marketplace type
 - ▶ Industry
- Post-stratification
 - ▶ Region*Firm Size*Marketplace Type*Industry



Example of Results Based on 2013-14 Longitudinal IC (Establishments in Firms with ≤ 50 employees)

Any Family Coverage Offered in 2013	Any Family Coverage Offered in 2014		Total
	No	Yes	
No	85.5 % (SE=1.93)	14.5 % (SE=1.93)	100.0 %
Yes	28.3 % (SE=2.90)	71.7 % (SE=2.90)	100.0 %

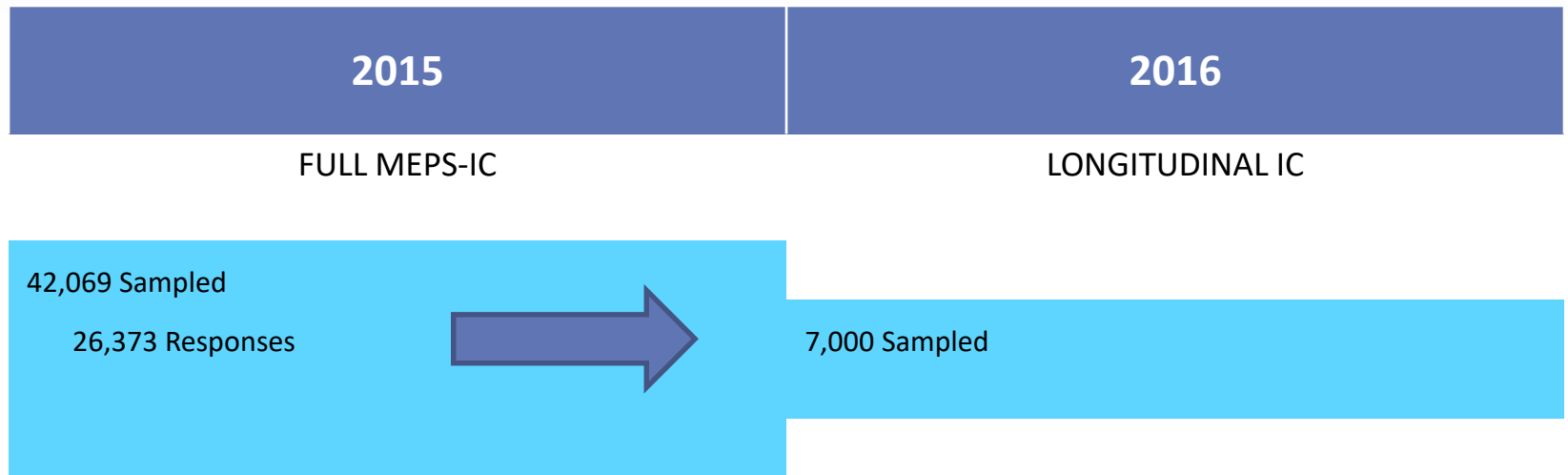


Summary of Design Changes for the Three Longitudinal IC Surveys

Survey	Firm Size (Employees)	Sample Size (Establishments)	Strata
2013-14	≤ 50	3,000	Firm Size State Marketplace Type
2014-15	≤ 100	5,000	Firm Size State Marketplace Type
2015-16	All Firm Sizes	7,000	Firm size Medicaid Expansion State Offer Insurance



2015-16 Longitudinal IC: All Private Sector Establishments





2015-2016 Sampling Strata

- Firm size
 - ▶ 1 – 50 employees
 - ▶ 51 – 100 employees
 - ▶ 101 + employees
- Establishment in Medicaid Expansion State
 - ▶ Yes
 - ▶ No
- Establishment Offered Insurance in 2015
 - ▶ Yes (most allocated sample)
 - ▶ No (minimum allocated sample)



2015 – 2016 IC Longitudinal Survey Establishment Sample Allocation

- Strategy
 - ▶ Targeted mainly toward Offer group
 - ▶ Sample 100% of 51-100 stratum due to smaller stratum size
 - ▶ Sample sizes similar for Expansion/Non-Expansion groups

	Non-Medicaid Expansion State		Medicaid Expansion State		
Firm Size	Firm Offers Insurance		Firm Offers Insurance		Total
	Yes	No	Yes	No	
1 – 50	1322	312	1322	312	3268
51 – 100	399	93	646	127	1265
101 +	1189	31	1206	41	2467
Total	2910	436	3174	480	7000



Results (Weighted %)

Offered Health Insurance, Year 1 vs Year 2

- Establishments in firms with ≤ 50 employees
- (standard error)

2013-2014	Offered in 2014	Did Not Offer in 2014
Offered in 2013	33.8 (1.03)	3.1 (0.41)
Did Not Offer in 2013	6.0 (0.54)	57.2 (1.09)

2014-2015	Offered in 2015	Did Not Offer in 2015
Offered in 2014	31.3 (0.95)	3.2 (0.39)
Did Not Offer in 2014	4.2 (0.42)	61.3 (1.01)

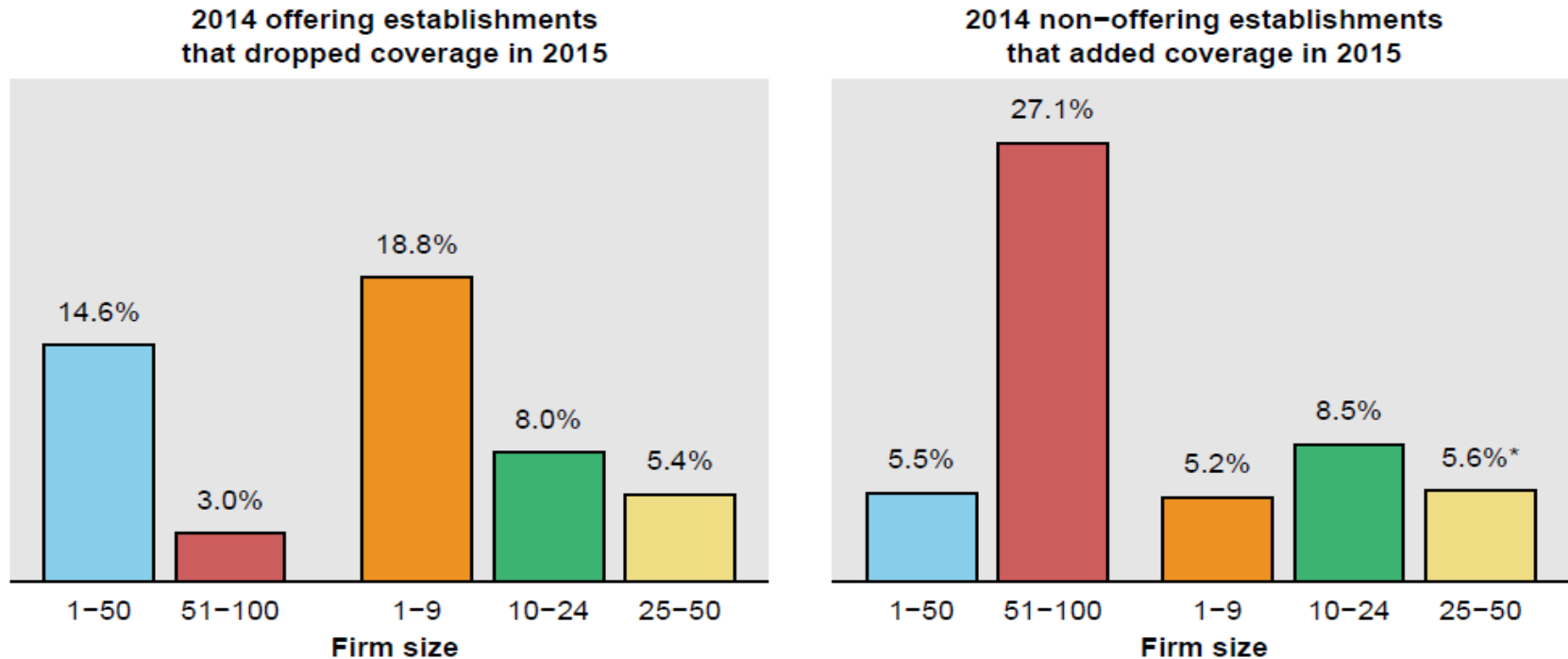
2015-2016	Offered in 2016	Did Not Offer in 2016
Offered in 2015	29.7 (0.39)	6.4 (1.08)
Did Not Offer in 2015	5.0 (0.37)	68.6 (0.91)



Longitudinal Estimates “Churn” in Health Insurance Offerings

- Vistnes, Rohde, Miller and Cooper (2017)

Exhibit 1: Percentage of private-sector establishments dropping or adding coverage in 2015, by firm size



Source: AHRQ's 2014-2015 Medical Expenditure Panel Survey – Longitudinal Insurance Component.

Note: Offers refer to at least one plan offered that includes hospital and medical coverage. Firm size refers to the number of employees in the establishment's firm.

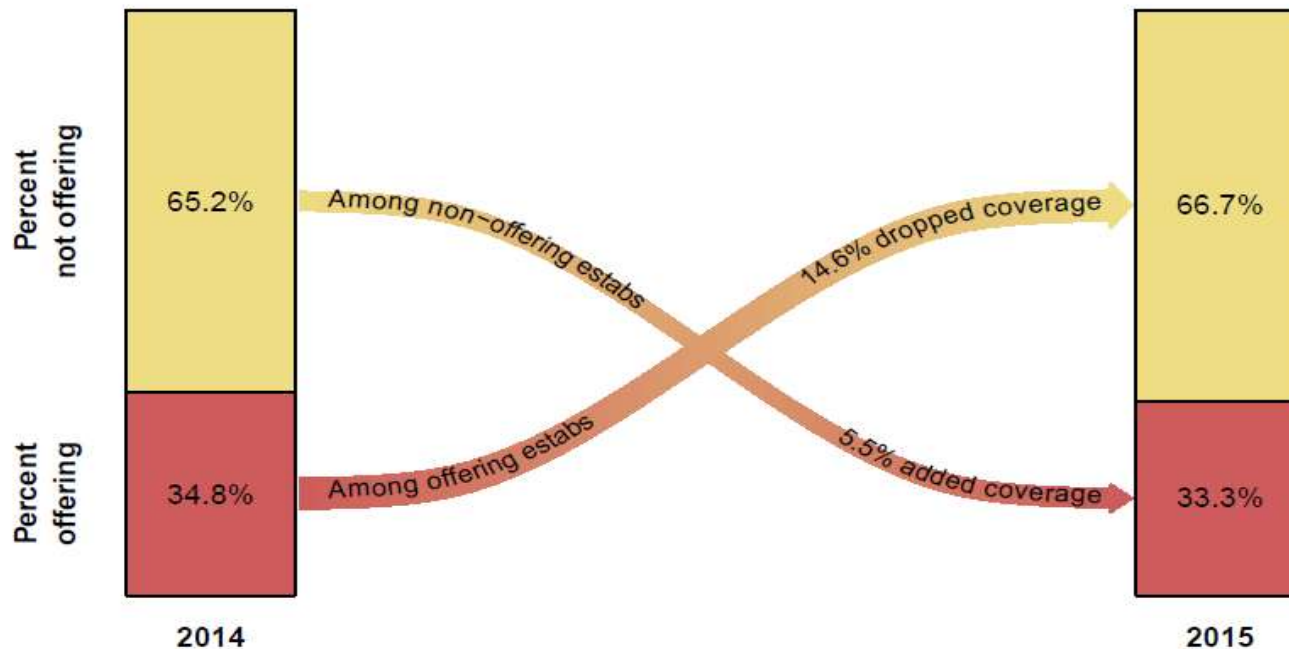
* Relative standard error of estimate is greater than 30%.



Longitudinal Estimates “Churn” in Health Insurance Offerings

- Vistnes, Rohde, Miller and Cooper (2017)

Exhibit 2: Percentage of private-sector establishments that offered insurance, establishments in firms with 50 or fewer employees, 2014 and 2015



Source: AHRQ's 2014–2015 Medical Expenditure Panel Survey – Longitudinal Insurance Component.
Note: Offers refer to at least one plan offered that includes hospital and medical coverage.

Summary

- MEPS Longitudinal IC useful for analyses of ***year-year changes*** & potential impact of ACA on:
 - ▶ insurance offers by employers
 - ▶ # of enrollees in health insurance
 - ▶ premiums, deductibles, copay/coinsurance levels
- 3 Longitudinal MEPS-IC surveys have been fielded
 - ▶ covers pre/post ACA implementation
 - ▶ challenges due to evolution of content/scope
 - ▶ no current plans or funding for future surveys

- Survey design challenges:
 - ▶ Changing rules of ACA as law is phased in
 - ▶ Changing state-level health insurance
 - ▶ Changing survey scope & budget
 - ▶ Changing priorities for strata development



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