Declines in Employer-Sponsored Insurance between 2000 and 2008: Examining the Components of Coverage by Firm Size

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Objective. To examine trends in employer-sponsored health insurance coverage rates and its associated components between 2000 and 2008, to provide a baseline for later evaluations of the Affordable Care Act, and to provide information to policy makers as they design the implementation details of the law.

Data Sources. Private sector employer data from the 2000, 2001, and 2008 Medical Expenditure Panel Survey-Insurance Component (MEPS-IC).

Study Design. We examine time trends in employer offer, eligibility, and take-up rates. We add a new dimension to the literature by examining dependent coverage and decomposing its trends. We investigate heterogeneity in trends by firm size.

Data Collection. The MEPS-IC is an annual survey, sponsored by the Agency for Healthcare Research and Quality and conducted by the U.S. Census Bureau. The MEPS-IC obtains information on establishment characteristics, whether an establishment offers health insurance, and details on up to four plans.

Principal Findings. We find that coverage rates for workers declined in both small and large firms. In small firms, coverage declined due to a drop in both offer and take-up rates. In the largest firms, offer rates were stable and the decline was due to falling take-up rates. In addition, enrollment shifted toward single coverage and away from dependent coverage in both small and large firms. For small firms, this shift was due to declining offer and take-up rates for dependent coverage. In large firms, offers of dependent coverage were stable but take-up rates dropped. Within the category of dependent coverage, the availability of employee-plus-one plans increased in all firm size categories, but take-up rates for these plans declined in small firms.

Key Words. Employer-sponsored health insurance, offer rates, take-up rates, dependent coverage

After rising from 1997 to 2000, nonelderly Americans' employer-sponsored health insurance (ESI) coverage rates declined from 2000 to 2008, falling six percentage points overall (from 68.1 to 61.8 percent), and three

percentage points for both policyholders (from 34.6 to 31.5 percent) and dependents (from 33.5 to 30.3 percent).¹ In this article, we analyze the decline from 2000 to 2008, paying special attention to decomposing trends in overall coverage rates into offer and take-up rates for any coverage as well as for single and dependent coverage. While data on workplace health insurance trends are easily accessible on websites and in reports from employer surveys, such as the Medical Expenditure Panel Survey-Insurance Component (MEPS-IC) and the Kaiser Family Foundation/Health Research and Educational Trust (KFF/HRET) Employer Survey, these statistics have not included detailed information on all the factors necessary to understand changes in dependent coverage.² Such information is important for understanding overall coverage trends since one out of every two Americans with ESI is covered as a dependent on an employer policy. We are also not aware of any analyses that have focused on changes over this period in the components of coverage—that is, offers, eligibility, and take-up rates.

Trends in the components of ESI coverage, and their differences by firm size, are important factors for policy makers to consider when designing the implementation rules for the Affordable Care Act (ACA). They are also important as baselines for evaluating the eventual impact of the legislation.³ The ACA, passed in 2010, makes changes to many aspects of the U.S. health insurance landscape, introducing an array of incentives for employers and individuals that may affect decisions regarding ESI.⁴ Starting in 2010, temporary tax credits were made available to small employers in order to stimulate offers of coverage. From 2014 onward, health insurance exchanges will provide an alternative to the current individual and small business markets for health insurance, and tax credits, subsidies, and penalties will be in place to encourage employers to provide and for individuals to obtain health insurance. Public coverage will also be extended to all nonelderly individuals with incomes up to 133 percent of the Federal

[Corrections added after online publication 1/17/2012: In the first paragraph of the article (pp. 1-2, discussing nonelderly Americans' employer-sponsored health insurance (ESI) coverage rates), there were inaccuracies in the three sets of percentage rates. These have been corrected.]

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Poverty Line (FPL). High-risk pools and tightened regulation of pricing and issuing of health insurance will improve options for those with pre-existing health conditions.

Affordable Care Act provisions, as well as other labor market trends, may influence employees' decisions to enroll in ESI, Medicaid, or exchange coverage and employers' decisions regarding the generosity of offered health insurance plans and whether to offer coverage. These changes may also influence employer and employee decisions with respect to single and dependent coverage. In order to evaluate the impact of future health insurance market changes on ESI coverage rates, it is useful to place them in the context of changes in ESI prior to both ACA passage and to the start of the most recent recession. In this article, we examine trends in the ESI components of coverage using private-sector employer data from the MEPS-IC. As the effect of the recent economic downturn may confound the longer term trends in ESI, we examine trends from 2000 to 2008. We chose this particular timeframe because it represents the most recent period of decline in ESI prior to the economic downturn.

A number of studies that examined previous periods of decline in ESI coverage rates decomposed the overall change into component factors.^{5,6} Cooper and Schone (1997) analyzed the last documented period of ESI decline, from 1987 to 1996, using household survey data. They focused on worker-level offer rates (which reflect both employer offer and eligibility rates) and take-up rates, and they demonstrated that the drop in ESI was the result of a reduction in enrollment or "take-up" of offered coverage and not a decline in worker-level offer rates. However, Cooper and Schone (1997) were not able to examine whether the offers were for single coverage only or if they included an offer of dependent coverage, as such information is usually not collected in household surveys. Cutler (2003) performed a similar analysis for changes in coverage from 1987 through 2001, using both household- and employer-level data, and concluded that increased employee premium contributions were responsible for the decline in take-up rates.⁷ In addition, the KFF/HRET employer survey reports data on the components of long-term trends in coverage in its annual reports and shows a decline in coverage of workers over the period of our analysis. However, published analyses of these data and statistical comparisons reflect year-to-year changes rather than trends over the entire period.⁸ In addition, these analyses and online reports only show enrollment shares for single and dependent coverage; they do not examine the availability of dependent coverage nor enrollment rates among those offered such coverage.

We find that the decline in ESI coverage rates from 2000 to 2008 resulted from different components than in earlier declines. Although coverage rates declined in both small and large firms, unlike Cooper and Schone (1997) we find no evidence that worker-level offer rates rose for employers of any size in this more recent time period. Furthermore, in our data ESI eligibility rates remained stable across employers of all sizes. In small firms, declining coverage rates were due to falling offer and take-up rates. In the largest firms, offer rates were stable and declining coverage rates were due to decreasing take-up rates.⁹

In both large and small firms, the type of coverage held by workers shifted toward single coverage and away from dependent coverage.¹⁰ When we decompose this shift toward single coverage, we find that in small firms it resulted from decreases in both offer and take-up rates for any dependent coverage. In large firms, the shift resulted only from decreased take-up rates as offers of any dependent coverage were stable. Within the category of dependent coverage, however, there was an increase in the availability of employee-plus-one plans. Despite this increased availability, enrollment in employee-plus-one plans decreased at small firms as a result of declining take-up rates for such coverage. By contrast, the increased availability of employee-plus-one plans and their steady take-up rates at the largest employers translated into increased enrollment in employee-plus-one coverage. In the discussion and conclusion section below, we discuss the relevance of these findings to the ACA.

DATA

The data used in this study are from the private-sector establishments in the 2000, 2001, and 2008 MEPS-IC, a large nationally representative annual survey of private-sector establishments and state and local governments in the United States. The MEPS-IC is sponsored by the Agency for Healthcare Research and Quality (AHRQ) and conducted by the U.S. Census Bureau. Each year, the MEPS-IC obtains information on whether an establishment offers health insurance, the number and types of plans offered, and the characteristics of each plan. Information collected on the plan includes the total annual premiums for single, employee-plus-one, and family coverage, the required annual employee contributions toward premiums, as well as the specific benefit provisions under the plan. These detailed data are collected on up to four offered plans per establishment. In addition, the MEPS-IC data provide information on employer and workforce characteristics.

METHOD

Our descriptive tables present trends in the components of employee coverage rates for establishments in five firm size categories.¹¹ Because we use our estimates to help explain the decline in ESI observed in household data, we weight our estimates by the number of employees relevant for each statistic.^{12,13} We begin our analysis by examining employer-level coverage rates (the percent of all employees at an establishment that are enrolled in health insurance) and its following components: offer rates (the percent of employees at employers that offer coverage), eligibility rates (the percent of employees that are eligible for coverage if offered), and take-up/enrollment rates (the percent of eligible employees that enroll in offered coverage). We then examine the availability of coverage options that include dependents, such as employee-plus-one and family plans. Finally, we present descriptive statistics on employee contributions to aid our understanding of changes in enrollment rates (overall, and for single and dependent coverage).

When employers offer multiple plans, we select the plan with the lowest employee contribution at each establishment for single, employee-plus-one, and family coverage to represent the premiums for the establishment. We present means of the lowest priced single plans when we analyze data on take-up rates of *any* coverage and we present means of the lowest priced single, employee-plus-one, and family plans when examining enrollment shares among these coverage types (all premiums are in 2008 dollars).¹⁴ As not all establishments offer all three types of coverage, we examine enrollment shares and contribution levels for employers that only offer single and family coverage separately from those employers that offer all three types of coverage.¹⁵ In addition, while we focus on trends between 2000 and 2008, the MEPS-IC started collecting information on premiums and contributions for employee-plus-one coverage in 2001. Therefore, for tables and analyses that include information on employee-plus-one enrollment and premium contributions, we present additional data for 2001.

RESULTS

Any Coverage Decomposition and Employee Premium Contributions

Table 1 presents estimates of employee coverage rates and its components—offer rates for coverage, eligibility rates, and take-up rates—by firm size. An

Table 1: Changes in Coverage: Offers, Eligibility, and Take-Up by Firm Size: 2000–2008

<i>Year</i>	<i>Firm Size</i>	<i>Total Number of Employees (Thousands)</i>	<i>Coverage Rate (%)</i>	<i>Offer Rate (%)</i>	<i>Eligibility Rate (%)</i>	<i>Take-Up Rate (%)</i>
2000	All	112,189	57.11	88.97	78.98	81.27
	<10	12,434	31.91	46.58	83.77	81.77
	10–24	9,990	44.43	71.51	78.57	79.06
	25–99	16,168	51.68	88.40	75.11	77.83
	100–999	21,882	60.33	96.84	77.93	79.94
	1,000+	51,715	65.95	99.38	80.00	82.95
2008	All	116,282	53.63***	87.10***	78.22	78.73***
	<10	12,840	29.04***	43.66***	83.25	79.89***
	10–24	11,320	40.42***	68.79*	78.56	74.80***
	25–99	17,055	47.05***	83.68***	74.91	75.07***
	100–999	21,326	57.63**	95.84	76.38	78.73
	1,000+	53,741	62.79***	98.94	79.23	80.10***

Notes. Coverage, offers, and eligibility estimates are weighted by the number of employees at establishments, and take-up is weighted by the number of eligible employees at establishments offering health insurance. “Coverage” is defined as the percent of all workers at the establishment who are enrolled in health insurance. “Offered” is the percent of employees in establishments that offer health insurance. “Eligible” is the percent of all workers that are eligible for coverage. The sample for this column is subset to establishments that offer coverage. “Take-up” is the percent of eligible workers who enroll in coverage (family, single, or other). This column is subset to establishments that offer insurance and have at least one eligible worker. Asterisks on statistics for 2008 indicate significant differences from 2000. Bold font indicates the direction of the change is a decline over time.

*Significant at the .10 level;

**Significant at the .05 level;

***Significant at the .01 level.

Source: Agency for Healthcare Research and Quality, 2000 and 2008 Medical Expenditure Panel Survey-Insurance Component (MEPS-IC).

asterisk placed in a 2008 cell indicates that the difference between the 2000 and 2008 estimate is statistically significant. To make decreases more visible in the tables, among the estimates that are statistically significant, those that represent a decline over time are presented in bold.

Comparing estimates in the “All” size category over time, we find that employee coverage rates declined from 57.1 to 53.6 percent between 2000 and 2008. While this decline was consistent across all firm size categories, underlying components in this trend were different for smaller and larger firms. Falling offer and take-up rates contributed to the decline in coverage for smaller employers, but only declining take-up rates contributed to the decrease for the largest employers. Offer rates declined in the smallest firms from 46.6 percent in 2000 to 43.7 percent in 2008 and from 88.4 to 83.7 percent for those with

25–99 employees, but they were steady in firms with 100 or more employees. By contrast, eligibility rates were stable throughout this period for employers in all firm size categories. Take-up rates declined across all firm sizes, except those with 100–999 employees, and the magnitude of the decline was somewhat greater for large firms than small firms (less than two percentage points for the smallest firms and 2.9 percentage points for the largest firms).

In Table 2, we show the rising cost of coverage to aid our understanding of the declining take-up rates from Table 1. To do so, we show the mean of the lowest single employee premium contribution at an establishment. This represents the lowest priced option available to employees when they are considering whether to take *any* coverage from their employers.

Table 2 shows that the real dollar value of required employee contributions increased across all employer size categories over this period, rising from \$507 in 2000 to \$701 in 2008. These statistics, however, mask the substantial difference between small and large firms in whether any contribution is required by employees and the magnitude of contributions when required. As column 2 of Table 2 clearly demonstrates, employers increasingly required employees to contribute toward the cost of single coverage over this period.¹⁶ In 2000, only 68.4 percent of eligible workers were required to pay an employee premium contribution for the lowest priced single plan. By 2008, however, 76.7 percent of eligible workers were required to make positive contributions. This shift away from zero contribution single plans occurred in all firm size categories and is substantial—at least a seven percentage point decrease for all firm sizes. In both years, eligible workers at small employers remained more likely than those at large employers to be offered zero contribution plans, most likely to ensure that enrollment rates reached minimum participation requirements.¹⁷ When contributions were required, estimates in column 3 indicate that they were substantially higher in small firms than large firms (e.g., \$1,793 for firms with <10 workers and \$724 for those with 1,000+ workers in 2008), and that they increased over time for all firm size categories ($p < .10$ for firms with <10 workers).

Dependent Coverage Decomposition

Next, we turn our attention to trends in single and dependent coverage, which are important components for understanding changes in household ESI rates. If more workers shift away from covering their whole family and increasingly enroll in single coverage, estimates of ESI coverage from household surveys could decline even if employer data indicated that overall coverage rates were

Table 2: Employee Single Premium Contributions by Firm Size: 2000–2008

<i>Year</i>	<i>Firm Size</i>	<i>Mean of All Single Contributions (2008\$) (1)</i>	<i>Percent with Positive Single Contribution (2)</i>	<i>Mean of Single Contributions If Positive (2008\$) (3)</i>
2000	All	507	68.44	740
	<10	490	29.49	1,662
	10–24	543	42.99	1,262
	25–99	591	57.35	1,030
	100–999	562	70.29	800
	1,000+	459	78.68	584
2008	All	701***	76.68***	914***
	<10	668***	37.24***	1,793*
	10–24	794***	53.55***	1,482***
	25–99	877***	67.93***	1,291***
	100–999	765***	78.43***	975***
	1,000+	623***	85.99***	724***

Notes. Estimates are weighted by the number of eligible employees at establishments offering health insurance. All \$ values are in real 2008 dollars here and elsewhere in later tables. Asterisks on statistics for 2008 indicate significant differences from 2000.

*Significant at the .10 level.

***Significant at the .01 level.

Source: Agency for Healthcare Research and Quality, 2000 and 2008 Medical Expenditure Panel Survey-Insurance Component (MEPS-IC).

stable. Existing KFF/HRET and MEPS-IC data available on websites and in reports contain information on enrollment shares in single, employee-plus-one, and family coverage and we start our analysis by reporting similar enrollment shares in Table 3. However, as these shares are calculated for all enrollees, rather than for enrollees with different offers of dependent coverage (e.g., single and either employee-plus-one, family or both), they do not show offer and take-up rates for dependent coverage.¹⁸ We therefore decompose these trends into detailed dependent offer and take-up rates in Tables 4 and 5.

Table 3 indicates that enrollment shifted toward single coverage over this time period, with the percent of covered workers selecting single coverage increasing from 46.2 percent in 2001 to 50.1 percent in 2008. This shift occurred in all firm size categories, and it was accompanied by a decrease in the proportion of enrollees in family coverage. Enrollment rates in employee-plus-one coverage show a more complicated pattern, declining in firms with <100 employees, remaining stable for those with 100–999 employees and increasing for the largest employers. Taken together, the data in Tables 1 and 3 therefore suggest that declining household ESI rates reflect two forces: the

Table 3: Distribution of Enrollment by Single, Employee-Plus-One and Family Coverage by Firm Size: 2001–2008

Year	Firm Size	Percent of Enrollees in:			
		Single Coverage	Any Dependent Coverage	Employee-Plus-One Coverage	Family Coverage
2001	All	46.2	53.80	17.3	36.5
	<10	55.9	44.10	14.2	29.9
	10–24	56.5	43.50	15.1	28.4
	25–99	54.9	45.10	16.4	28.7
	100–999	49.9	50.10	15.9	34.2
	1,000+	40.5	59.50	18.6	40.9
2008	All	50.1***	49.90***	18.0**	31.9***
	<10	61.5***	38.50***	12.6**	25.9***
	10–24	60.9***	39.10***	13.4**	25.7**
	25–99	58.7***	41.30***	15.3*	26.0***
	100–999	52.1**	47.90**	16.7	31.2***
	1,000+	44.6***	55.40***	20.4***	35.0***

Notes. These data show the percent of employees who are enrolled in health insurance who have chosen single coverage, employee-plus-one coverage, and family coverage. Asterisks on statistics for 2008 indicate significant differences from 2001. Bold font indicates the direction of the change is a decline over time.

*Significant at the .10 level.

**Significant at the .05 level.

***Significant at the .01 level.

Source: Agency for Healthcare Research and Quality, 2001 and 2008 Medical Expenditure Panel Survey–Insurance Component (MEPS-IC).

reduction in overall take-up and an increase in single coverage among enrollees.

To investigate the trends in coverage types, we use our strategy of decomposing coverage rates into offer and take-up rates. However, mechanically decomposing single and dependent coverage in this way is more complicated than decomposing general coverage trends. First, we must investigate trends in whether employers offer any dependent coverage and whether they offer different combinations of employee-plus-one and family coverage. Then, we must calculate take-up rates separately for employers with different dependent options.

To briefly summarize our findings from this type of decomposition for the 2001 to 2008 period (see the detailed discussion on Tables 4 and 5 below), offer rates for dependent coverage declined at smaller employers and enrollment shifted from dependent to single coverage. This trend parallels the earlier change we observed for small employers where both offer and take-up rates declined. For large employers, however, offers of any dependent

Table 4: Percent of Establishments That Offer Family Coverage and Employee-Plus-One Coverage among Establishments That Offer Coverage: 2000/2001–2008

Year	Firm Size	Percent of Eligible Employees That Are Offered				
		Any Dependent Coverage [†] (1)	Family Coverage (2)	Employee-Plus-One Coverage (3)	Both Family and Employee-Plus-One Coverage (4)	Family Coverage Only (5)
2000	All	98.95***	98.82***	70.78***	70.65***	28.17***
	<10	89.43***	88.05***	45.70***	44.32***	43.73***
	10–24	97.11***	96.82***	56.98***	56.69***	40.13***
	25–99	98.80*	98.62***	65.89***	65.70***	32.91***
	100–999	99.94***	99.93***	65.65***	65.64***	34.29***
	1,000+	99.97	99.97	78.97***	78.97***	21.00***
2001	All	98.71***	98.03***	77.98***	77.31***	20.73***
	<10	87.61***	81.34***	55.98	49.71	31.63***
	10–24	95.38**	93.05***	70.13**	67.80	25.25***
	25–99	98.41	97.54	75.60***	74.73***	22.81***
	100–999	99.95***	99.86***	72.28***	72.19***	27.67***
	1,000+	99.97	99.97	84.18***	84.18***	15.79***
2008	All	98.09	97.21	87.43	86.55	10.66
	<10	82.57	76.55	54.68	48.66	27.89
	10–24	93.25	89.38	73.76	69.89	19.49
	25–99	97.95	96.75	83.37	82.16	14.58
	100–999	99.60	99.38	84.27	84.05	15.33
	1,000+	99.99	99.94	95.25	95.20	4.74

Notes. Estimates are weighted by the number of eligible employees at establishments offering health insurance. Asterisks placed next to the 2001 and 2000 cells show whether each is statistically different from the corresponding estimate for 2008. Bold font indicates the direction of the change is a decline from 2000/2001 to 2008.

*Significant at the .10 level.

**Significant at the .05 level.

***Significant at the .01 level.

[†] Offered either family or employee-plus-one coverage.

Source: Agency for Healthcare Research and Quality, 2000, 2001, and 2008 Medical Expenditure Panel Survey-Insurance Component (MEPS-IC).

coverage remained steady and coverage shifted toward single plans, again mirroring our earlier findings.¹⁹ It is possible that the declines in dependent coverage at small employers could be due to declining demand for such coverage if fewer small firm workers had dependents in 2008 compared to in 2000. We examined this issue by estimating the percent of small firm workers in the 2000 and 2008 Current Population Survey who had a spouse or any children and found that the percent with dependents was stable over this period.

Table 5: Enrollment Rates and Premium Contributions among Establishments That Offer Single, Employee-Plus-One and Family: 2000/2001–2008

Year	Firm Size	Enrollment Shares Percent of Enrollees in:			Costs in 2008\$ Mean Employee Contributions for:		
		Single Coverage (1)	Employee-Plus-One Coverage (2)	Family Coverage (3)	Single Coverage (4)	Employee-Plus-One Coverage (5)	Family Coverage (6)
2000	All	44.88***	21.16**	33.96***	459***		2,002***
	<10	50.19***	25.25***	24.56	402***		1,939***
	10–24	53.71*	21.39***	24.90	514***	No data	2,849***
	25–99	54.16***	18.50	27.34***	500***		2,966***
	100–999	49.42***	19.71	30.87***	511***		2,671***
2001	1,000+	40.38***	21.87	37.75***	433***		1,519***
	All	44.96***	22.05***	32.99***	459***	981***	2,211***
	<10	49.10***	23.40***	27.50*	417***	683***	2,092***
	10–24	53.63**	21.19***	25.18	450***	1,374***	3,057***
	25–99	54.61***	21.39***	24.00	506***	1,628***	3,443***
2008	100–999	50.41*	22.37***	27.22	528***	1,383***	2,942***
	1,000+	40.10***	22.08	37.83***	432***	701***	1,647***
	All	48.91	20.42	30.67	640	1,858	3,069
	<10	54.45	20.08	25.46	614	1,843	3,225
	10–24	56.36	17.61	26.04	685	2,371	4,146
	25–99	58.22	18.09	23.69	764	2,813	4,720
	100–999	52.48	19.83	27.70	669	2,328	3,845
	1,000+	44.76	21.40	33.84	603	1,458	2,359

Notes. Estimates are weighted by the total number of enrollees at the establishment. Asterisks placed next to the 2001 and 2000 cells show whether each is statistically different from the corresponding estimate for 2008. Bold font indicates the direction of the change is a decline from 2000/2001 to 2008.

*Significant at the .10 level.

**Significant at the .05 level.

***Significant at the .01 level.

Source. Agency for Healthcare Research and Quality, 2000, 2001, and 2008 Medical Expenditure Panel Survey-Insurance Component (MEPS-IC).

Increased availability of employee-plus-one coverage for employers of all sizes and declining take-up of such plans at all but the largest employers helps to explain the enrollment patterns we observed in Table 3. Decreasing shares for small employers were due to declining take-up rates for employee-plus-one coverage. Steady take-up rates combined with increased availability led to increasing enrollment shares for employee-plus-one coverage at the largest firms.

Dependent Coverage: Offers, Take-Up, and Employee Premium Contributions

Table 4 contains detailed information on the availability of dependent coverage.²⁰ The first column shows the percent of eligible workers with access to any dependent coverage, which indicates that the employer offered either employee-plus-one or family coverage. We find that coverage for at least some dependents (in either an employee-plus-one or family plan) is almost always available to eligible workers—98.1 percent had such access in 2008. However, there are important differences by firm size. In particular, access to dependent coverage was not universal at small employers, even at the beginning of our analysis period. Only 89.4 percent of workers at the smallest employers were offered some type of dependent coverage in 2000 and by 2008 that figure had fallen to 82.6 percent. Dependent coverage in the next largest firm size category (10–24 employees) also declined, from 97.1 percent in 2000 to 93.3 percent in 2008. By contrast, dependent coverage was almost universally available to workers at the largest firms throughout this time period.

Next, we decompose changes in the availability of dependent coverage into offers of employee-plus-one and family coverage. As seen in Table 4, the observed declines in offers of dependent coverage reflect decreases in the availability of *family coverage* for eligible workers at all but the largest employers between 2000 and 2008. *Employee-plus-one plans* became more widely available between 2000 and 2008, with offers rising from 70.8 to 87.4 percent. In addition, while smaller employers became more likely to offer this type of coverage over time, it remained much more likely to be offered at larger firms in 2008. Only half (54.7 percent) of the eligible workers at the smallest employers were offered employee-plus-one coverage in 2008 compared to 95.3 percent at the largest employers.

Employers usually offered employee-plus-one coverage in combination with an offer of family coverage, not in lieu of such coverage. However, a small fraction of workers in small employers were offered employee-plus-one coverage as the only dependent option: 6 percent of eligible employees at the

smallest firms and 3.9 percent at firms with 10–24 workers in 2008.²¹ Note that while the MEPS-IC does not collect information on other types of dependent coverage that employers may offer, such as employee-plus-two or employee-plus-three coverage, it is possible that when employers offer employee-plus-one coverage they also offer a range of dependent options that are tailored to the family size distribution of their workforce. Therefore, an offer of employee-plus-one coverage but not family coverage does not necessarily imply that workers cannot cover all of their dependents.

To investigate take-up of dependent coverage, we first constrain our data to employees who face the simplest choice: those offered only single and family coverage (10.7 percent of eligible workers, from Table 4, column 5). For these workers, single coverage enrollment shares increased from 46.9 percent in 2000 to 50.8 percent in 2008 (data not shown). Perhaps due to small sample size, the firm size category of 10–24 workers was the only category to exhibit a statistically significant change in single enrollment shares.

In Table 5, we analyze trends in enrollment shares by firm size for the most common choice (faced by 86.6 percent of eligible workers in 2008, from Table 4, column 4): single, employee-plus-one, or family coverage. We find an increase in single plan shares across firms of all sizes ($p < .10$ for firm size 100–999) between 2001 and 2008. For smaller employers (<1000 workers), the shift was away from employee-plus-one coverage toward single coverage since family shares were stable except in the smallest firms ($p < .10$). The reverse was true for the largest firms, where the shift toward single coverage came at the expense of family coverage. Note that we observe more movement in family enrollment rates for the smaller firms when we take into account changes between 2000 and 2001. At the smallest firms, family enrollment shares actually increased between 2000 and 2001 (from 24.6 to 27.5 percent) before declining back to 2000 levels by 2008. Family enrollment shares in firms with 25–99 and 100–999 employees declined between 2000 and 2001 and then remained at the lower levels in 2008.

By looking at columns 1–3 in Table 5 together with columns 4–6, we are able to examine the correlation in trends between enrollment rates and employee premium contributions. As shown in column 4–6, mean contributions (in 2008 dollars) increased across the board for single, employee-plus-one and family plans for enrollees in all firm size categories. However, the absolute dollar increase was substantially greater for options that included dependents, particularly for employee-plus-one coverage. Contributions for single coverage increased from \$459 to \$640 between 2001 and 2008 and family coverage contributions increased from \$2,211 to \$3,069. However,

contributions for employee-plus-one coverage almost doubled, increasing from \$981 to \$1,858. By 2008, employee-plus-one contributions had approached the levels (in 2008 dollars) of family contributions in 2000.

DISCUSSION AND CONCLUSION

Household data indicate that ESI coverage rates for nonelderly Americans declined six percentage points from 2000 to 2008. Studies examining earlier periods of ESI decline found that although more employers offered coverage, employees were less likely to enroll and increasing employee contributions accompanied the declining take-up rates (Cooper and Schone 1997; Cutler 2003). In this article, we examine the decline in ESI from 2000 to 2008 using data from the MEPS-IC. Our paper makes two contributions to the literature. First, we examine changes in offer, take-up, and eligibility rates between 2000 and 2008 to decompose the decline in coverage. Second, we examine new components of the decline in ESI over this period—changes in offer and take-up rates for dependent coverage.

Unlike the previous period of ESI decline, we find that declining coverage rates for employees in small firms were due to declining offer *and* take-up rates. By contrast, declining rates for the largest firms were due only to declining take-up rates as almost all employees at the largest employers were offered coverage throughout this time period. We also observe a shift in enrollment toward single coverage across all firm size categories.²² However, the components of this shift differed by firm size. Offers of dependent coverage declined at smaller employers so that by 2008 only 82.6 percent of eligible workers at the smallest employers had access to some form of employment-related dependent coverage. By contrast, almost all of the largest employers continued to offer dependent coverage to eligible workers. In addition, despite the fact that the availability of employee-plus-one coverage increased across employers of all sizes, take-up of such plans declined at all but the largest employers between 2001 and 2008.

Our analysis of ESI trends over the past decade provides a baseline from which to examine the impact of the ACA on employers' and workers' ESI decisions. The fact that offer rates at smaller employers declined over our analysis period is particularly relevant for evaluating the effects of the ACA. For example, it remains to be seen whether new incentives created for small employers by the temporary tax credits that started in 2010 are enough to reverse the decline in offers rates at small employers observed

from 2000 to 2008. Other features of the ACA provide subsidies for coverage available outside of the employer arrangement; starting in 2014, subsidized coverage becomes available through health insurance exchanges for individuals between 133 and 400 percent of the FPL who lack affordable insurance options, or for free through Medicaid if individuals' incomes are below 133 percent of the FPL.²³ Small employers whose workers are sufficiently low income may factor this alternative form of coverage into their ESI decisions. As a result of these dueling incentives and their timing, the trend in offer rates for small employers may follow an unsteady path in the coming years.

More immediately, our results on the availability of dependent coverage are of particular relevance to the proposed implementation rule regarding the definition of affordable ESI coverage in the ACA.²⁴ The ACA charges large employers a fine if employees obtain subsidized coverage through the exchange in cases where employers do not offer coverage at all or if they offer "unaffordable" coverage. Coverage is considered unaffordable if the employee contribution toward premiums is >9.5 percent of family income. However, it remained unclear whether this definition of affordable coverage referred to single or family coverage. In August 2011, the DHHS issued a draft regulation clarifying this definition and specifying that employers would only face penalties if single coverage was not affordable. Hearings on proposed implementation rules are set for November 17, 2011. The final decision regarding the definition of affordable coverage could have substantial consequences for the ways that families obtain full insurance coverage and for employers' decisions regarding dependent coverage. Our analysis regarding recent downward trends in dependent coverage, particularly at smaller employers, should be useful information to policy makers when considering access to subsidized exchange coverage for dependents. In addition, the information we present on the rapid rise in employee-plus-one coverage over our analysis period is useful when considering how to structure exchange premiums for families of different sizes and how the income-related premium caps will apply to these plans.

The ACA rules that are being designed with respect to dependent coverage may change the pathways by which families obtain health insurance and have implications for the distribution of burdens for families' out-of-pocket premium and medical care costs. In addition, to the extent that families achieve full coverage for all members through multiple sources, having to satisfy plans with separate deductibles and dealing with different provider networks may have adverse effects on the family's use of services compared to

families with a single source of coverage. Monitoring the ways in which families mix ESI and other forms of coverage after the ACA is fully implemented will therefore be an important area for future research due to its implications for the horizontal equity of cost burdens and the use of medical services.

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NOTES

1. These estimates are calculated using data from the Current Population Survey.
2. The MEPS-IC and KFF/HRET estimates on the Internet contain information on the percent of all enrollees in single, employee-plus-one, and family coverage. However, they do not report statistics on the percent of workers who are offered dependent coverage nor the take-up rates for workers faced with different choices of single and dependent coverage. Data from both surveys show a decline in ESI coverage over this time period and a shift toward single enrollment.
3. For further discussion of federal health care reform, see Harrington (2010) and Simon (2010).
4. See Simon (2010) for a discussion of these incentives.
5. See Bundorf (2002), Hadley and Reschovsky (2002), Marquis and Long (2001), and Moran, Chernew, and Hirth (2001) for examples of analyses of ESI decisions.
6. For examples of the large literature on household demand for ESI and the demand for dependent coverage, see Abraham and Feldman (2010), Okeke, Hirth, and

- Grazier (2010), Monheit and Vistnes (2005), Polsky et al. (2005), Cooper and Vistnes (2003), and Blumberg, Nichols, and Banthin (2001).
7. Other papers that have examined changes in insurance coverage over time include Chernew, Cutler, and Seliger Keenan (2005), Farber and Levy (2000), Glied and Stabile (2000), Kronick and Gilmer (1999), and Fronstin and Snider (1996/1997).
 8. See Claxton et al. (2007, 2009), Claxton et al. (2010), and Rowland, Hoffman, and McGinn-Shapiro (2009) for analyses of the KFF/HRET survey.
 9. These findings differ from those in the KFF/HRET data which show declines in offer and take-up rates at small firms with 3–199 workers between 2000 and 2008 but steady rates for large employers with 200 or more workers.
 10. The KFF/HRET annual report showed a decrease in family coverage and an increase in single coverage between 2001 and 2008 for both small (3–199 employees) and large firms (200+ employees). However, the KFF/HRET data indicate a consistent rise in employee-plus-one coverage, which contrasts with findings from the MEPS-IC, perhaps due to differences in the firm size categories.
 11. An establishment refers to the physical location where business activity takes place. Our discussion of employers by firm size refers to establishments that belong to firms of specific sizes.
 12. Coverage, offer, and eligibility rate estimates in Table 1 are weighted by the number of employees at establishments, and take-up is weighted by the number of eligible employees at establishments offering health insurance. Estimates in Tables 2 and 4 are also weighted by the number of eligible employees at the establishment. The figures in Tables 3 and 5 are weighted by the total number of enrollees at the establishment. All standard errors are adjusted for the survey design of the MEPS-IC.
 13. We do not show the standard errors, but we have computed the statistical tests of differences in means between 2000/2001 and 2008, and indicate statistical significance with asterisks. All differences noted in the text are statistically significant at the .05 level or better unless noted.
 14. To calculate enrollment in family coverage, we subtract enrollment in single and employee-plus-one coverage from overall enrollment figures for active employees. We identify the remainder as family coverage but recognize that other forms of coverage may be included in these estimates.
 15. Note that while employers may offer employees more choices than single, employee-plus-one, and family coverage (e.g., they may offer employee-plus-two coverage), the MEPS-IC questionnaire only collects information on these three options.
 16. The KFF/HRET data also show an increase in the percent of covered workers required to contribute to coverage between 2002 and 2010 (Exhibit 6.16, KFF/HRET Annual Report, 2010).
 17. See Zawacki and Taylor 2005 for a discussion of employer offers of zero premium contribution plans.
 18. These estimates are for enrollees who are active employees. As noted earlier, we chose 2001 as the “base” year for this table because of limitations in data availability with respect to employee-plus-one plans.
 19. While the decline for employers with 100–999 workers was statistically significant, it was not economically meaningful.

20. In Tables 4 and 5, the asterisks are placed next to the 2000 or 2001 cells to indicate differences between 2000 and 2008, and 2001 and 2008, respectively.
21. These figures were calculated by subtracting the percent offering both types of coverage (column 4) from the percent offering employee-plus-one coverage (column 3). Since the sample size for this choice set is so small, we do not investigate enrollment rates at these establishments.
22. During this time period, public health insurance (Medicaid/CHIP) enrollment for children grew from 20 percent in 2000 to 30 percent in 2008 (author calculations from the CPS).
23. States can ask for a waiver to start the Medicaid expansions prior to 2014.
24. 45 Code of Federal Regulations (CFR) Parts 155 and 157, Department of Health and Human Services (DHHS), available at [http://www.ofr.gov/\(X\(1\)S\(cjrllex1mz20ayk4j1n3szdny\)\)/OFRUpload/OFRData/2011-20776_PI.pdf](http://www.ofr.gov/(X(1)S(cjrllex1mz20ayk4j1n3szdny))/OFRUpload/OFRData/2011-20776_PI.pdf), accessed August 2011.

REFERENCES

- Abraham, J. M., and R. Feldman. 2010. "Taking Up or Turning Down: New Estimates of Household Demand for Employer-Sponsored Health Insurance." *Inquiry* 47 (1): 17–32.
- Blumberg, L., L. Nichols, and J. Banthin. 2001. "Worker Decisions to Purchase Health Insurance." *International Journal of Health Care Finance and Economics* 1: 305–25.
- Bundorf, M. K. 2002. "Employee Demand for Health Insurance and Employer Health Plan Choices." *Journal of Health Economics* 21 (1): 65–88.
- Chernew, M., D. M. Cutler, and P. Seliger Keenan. 2005. "Increasing Health Insurance Costs and the Decline in Insurance Coverage." *Health Services Research* 40 (4): 1021–39.
- Claxton, G., J. Gabel, B. DiJulio, J. Pickreign, H. Whitmore, B. Finder, P. Jacobs, and S. Hawkins. 2007. "Health Benefits in 2007: Premium Increases Fall to an Eight-Year Low, While Offer Rates and Enrollment Remain Stable." *Health Affairs* 26 (5): 1407–16.
- Claxton, G., B. DiJulio, H. Whitmore, J. Pickreign, M. McHugh, B. Finder, and A. Osei-Anto. 2009. "Job-Based Health Insurance: Costs Climb at a Moderate Pace." *Health Affairs* 28 (6): 1002–12.
- Claxton, G., B. DiJulio, H. Whitmore, J. D. Pickreign, M. McHugh, A. Osei-Anto, and B. Finder. 2010. "Health Benefits in 2010: Premiums Rise Modestly, Workers Pay More Toward Coverage." *Health Affairs* 29 (10): 1942–50.
- Cooper, P., and B. Schone. 1997. "More Offers, Fewer Takers for Employment-Based Health Insurance: 1987 and 1996." *Health Affairs* 16 (6): 142–9.
- Cooper, P., and J. Vistnes. 2003. "Workers' Decisions to Take-Up Offered Health Insurance Coverage: Assessing the Importance of Out-of-Pocket Premium Costs." *Medical Care* 41 (7 suppl): III-35–43.
- Cutler, D. M. 2003. "Employee Costs and the Decline in Health Insurance Coverage." In *Frontiers in Health Policy Research*, Vol. 6, edited by D. M. Cutler and A. M.

- Garber, pp. 27–53. Cambridge MA: The MIT Press (for the National Bureau of Economic Research).
- Farber, H. S., and H. Levy. 2000. “Recent Trends in Employer-Sponsored Health Insurance: Are Bad Jobs Getting Worse?” *Journal of Health Economics* 19 (1): 93–120.
- Fronstin, P., and S. C. Snider. 1996/1997. “An Examination of the Decline in Employment-Based Health Insurance between 1988 and 1993.” *Inquiry* 33 (Winter): 317–25.
- Glied, S., and M. Stabile. 2000. “Explaining the Decline in Health Insurance Coverage among Young Men.” *Inquiry* 37 (Fall): 295–303.
- Hadley, J., and J. D. Reschovsky. 2002. “Small Firms’ Demand for Health Insurance: The Decision to Offer Insurance.” *Inquiry* 39 (2): 118–37.
- Harrington, S. 2010. “The Health Insurance Reform Debate.” *Journal of Risk and Insurance* 77 (1): 5–38. Available at <http://www3.interscience.wiley.com/journal/123237316/abstract?CRETRY=1&SRETRY=0>
- Kaiser Family Foundation/HRET. 2010. *Employer Health Benefits: 2010 Annual Survey*. Menlo Park, CA/Chicago, IL: Kaiser Family Foundation/HRET.
- Kronick, R., and T. Gilmer. 1999. “Explaining the Decline in Health Insurance Coverage, 1979–1995.” *Health Affairs* 18 (2) (March/April): 30–47.
- Marquis, M. S., and S. H. Long. 2001. “To Offer or Not to Offer: The Role of Price in Employers’ Health Insurance Decisions.” *Health Services Research* 36(5): 935–58.
- Monheit, A., and J. Vistnes. 2005. “The Demand for Dependent Health Insurance: How Important Is the Marginal Cost of Family Coverage?” *Journal of Health Economics* 24: 1108–31.
- Moran, J. R., M. E. Chernew, and R. A. Hirth. 2001. “Preference Diversity and the Breadth of Employee Health Insurance Options.” *Health Services Research* 36 (5): 911–34.
- Okeke, E. N., R. A. Hirth, and K. Grazier. 2010. “Workers on the Margin: Who Drops Health Coverage When Prices Rise?” *Inquiry* 47 (1): 33–47.
- Polsky, D., R. Stein, S. Nicholson, and M. K. Bundorf. 2005. “Employer Health Insurance Offerings and Employee Enrollment Decisions.” *Health Services Research* 40 (5 Pt 1): 1259–78.
- Rowland, D., C. Hoffman, and M. McGinn-Shapiro. 2009. *Health Care and the Middle Class: More Costs and Less Coverage*. Menlo Park, CA: Kaiser Family Foundation.
- Simon, K. 2010. “Implications of Health Reform for Employers: An Analysis of the Patient Protection and Affordable Care Act.” Center for American Progress. Available at http://www.americanprogress.org/issues/2010/05/pdf/health_employers.pdf
- Zawacki, A., and A. Taylor. 2005. “Contributions to Health Insurance Premiums: When Does the Employer Pay 100 Percent?” Center for Economic Studies, U.S. Census Bureau Working Paper Series CES-WP-05-27. Available at http://www.ces.census.gov/index.php/ces/cespapers?detail_key=101737

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Appendix SA1: Author Matrix.

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