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Data Used to Model Health Reform: The Health Benefits Simulation Model (HBSM)

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Proposals Simulated with The Lewin Group Health Benefits Simulation Model (HBSM)

- Medicaid/SCHIP expansions
- Premium subsidies
  - Individuals
  - Employers
- Pay-or-play employer contribution
  - Cost minimization
  - Alternative program designs
- Insurance market regulations
  - Underwriting practices
  - Rate compression
- Changes in consumer price incentives
  - Limit/eliminate employer tax exclusion
  - "Managed Competition" models
  - Health Savings Accounts (HSAs)

Micro Simulation Baseline Data

- Data used in HBSM
  - MEPS as basic household file
  - CPS updates on coverage and population
  - SIPP data on Medicaid enrollment
- Program data and projections
  - OAct CMS health spending
  - Public program detail
  - CBO projections
- Employer micro data, used for "Synthetic Firms"
  - 2006 KFF/HRET data
  - 1997 RWJF Data
  - MEPS employer data on per worker costs

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Why MEPS is Used as Underlying Data

- MEPS provides nearly all the data points needed
    - Health coverage by month
    - Actual health services utilization and spending
    - Health conditions
    - Income and employment information
    - Demographics
- MEPS is conducive to month-by-month simulation
- Health spending data by payer permits stakeholder impact analyses
- Health condition and spending data permit modeling of insurer underwriting rules and risk pool enrollment
- Pool MEPS for 2002 through 2005 for sample size

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Figure 1: 2006 Estimates of the Number of People Without Health Insurance from Alternative Sources

Measure if Uninsured	MEPS 2005-2006 [a/]	CPS 2006 [b/]	CPS 2006 Adjusted [c/]	SIPP Reweighted 2004-2006
Point in Time	49.9	n/a	47.1	45.1
All Year	36.7	46.5	34.3	30.5 [d/]
Anytime in Year	68.0	n/a	62.5	58.4 [d/]
Anytime in 24 months	83.3	n/a	n/a	73.6 [e/]

a/ AHRQ, "The Long-Term Uninsured in America, 2003-2006: Estimates for the U.S. Population Under Age 65."

b/ Bureau of the Census estimates for 2006 using the 2007 CPS at http://www.census.gov/hhes/www/hlthins.

c/ The Lewin Group adjusted the 2007 CPS to account for underreporting of Medicaid and SCHIP coverage and assigned months of coverage for each type of insurance status. Medicaid coverage months are reported in the data. For people with employer coverage, we assigned coverage during months employed.

d/ Includes individuals reporting data for all 12 months and adjusted to account for the demographic and health insurance status of those not reporting for the full period. See Figure 2.

e/ Includes individuals reporting data for all 24 months and adjusted to account for the demographic and health insurance status of those not reporting for the full period. See Figure 2

Source: Lewin Group Analysis of Selected data files.

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Figure 2: Uninsured Estimates from the Survey of Income and Program Participation

	2001 Panel		2004 Panel	
	Number of People (millions)	Monthly Weights	Number of People (millions)	Monthly Weights
Average monthly Uninsured	43.3	Monthly weights (waves 7-9)	45.1	Monthly weights (waves 6-8)
Uninsured all year [a/]	24.5	Longitudinal CY Weight # 3 (waves 7-9)	30.5	Longitudinal CY Weight # 2 (waves 6-8)
Uninsured sometime in year [a/]	67.5	Longitudinal CY Weight # 3 (waves 7-9)	58.4	Longitudinal CY Weight # 2 (waves 6-8)
Uninsured sometime in 24 months [b/]	79.0	Longitudinal CY Weight # 3 (waves 4-9)	73.6	Longitudinal CY Weight # 2 (waves 3-8)
Range of Average Monthly Uninsured by Month				
Range of average monthly uninsured	39.8 – 43.8	Monthly weights (waves 1-9)	40.5 – 46.3	Monthly weights (waves 1-8)

a/ Includes people who report for all 12 months and reweighted to match total population by age, sex, poverty and uninsured in last month.

b/ Includes people who report for all 24 months and reweighted to match total population by age, sex, poverty and uninsured last month.

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Figure 3: Number Uninsured One or More Month Over a 24-Month Period

	Uninsured once or more over 24 Months - MEPS
2003 – 2004	79.8
2004 – 2005	82.0
2005 – 2006	83.3

Source: AHRQ, "The Long-Term Uninsured in America, 2003-2006: Estimates for the U.S. Population Under Age 65."

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Formation of Employer Micro-database

- 2006 KFF/HRET data
  - Multiple offerings
  - Enrollment by plan type
  - Co-pay and deductibles
  - Self-funded/full insured
  - Premiums
- RWJF provides workforce profile
  - Part time/full-time
  - Age/Gender
  - Eligible not enrolled
  - Ineligible workers
  - Family coverage option
- Statistically match KFF/HRET data to RWJF on:
  - Employer characteristics and
  - Decile ranking of health plans by actuarial value

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Synthetic Firms

- Each worker is matched to a KFF/HRET/RWJF employer with similar characteristics
- Each firm is populated with MEPS workers
- Replicates reported work force mix
  - Part time/full-time
  - Age/Gender
  - Eligible not enrolled
  - Ineligible workers
  - Family coverage option
- Work force data permits modeling of
  - Insurance rating practices
  - Risk selection for insurance pools
  - Employer crowd-out behavior

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Data Wish List

- Add state identifier to MEPS

- Stabilize SIPP longitudinal coverage data

- Program cost data by eligibility group to match proposed expansions

- MEPS employer micro-data

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