CECBP Program Update

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California Biomonitoring Program

Scientific Guidance Panel Meeting
June 10, 2008
Oakland, California

Good news

- Public participation activities regarding chemical selection and priorities – 3 public meetings, 3 statewide conference calls, online survey, telephone survey of state agencies
- Laboratory – purchasing equipment, hiring staff, preparing for facilities renovations
- Completed complex Feasibility Study Report (FSR) for California Biomonitoring Information Technology System (CalBITS)
  - FSR prerequisite to requesting resources for IT projects in state govt.

Collaboration with CDC

- Two-year inter-agency agreement (with CDC/National Center for Health Statistics-NCHS) in place for technical assistance with study design, sampling approach, field operations procedures
- Weekly conference calls for many months
- 2 ½-day May meeting in Richmond with NCHS staff

CDC/NCHS Technical Assistance

- Concept of operations for field operations
- Cost modeling
  - Tasks and level of effort
  - Staffing and job duties
- Data collection methodology
  - Protocol development
  - Data integrity/quality control
  - Input into IT considerations
- Sample Design (more later!)

Not-so-good news

- Resources: Governor's proposed budget includes no new funds for 2008-09, as well as 10% reduction of existing resources to address state's fiscal crisis
  - No predictions regarding budget for the next couple of years

Sample design preview of issues: "representativeness" for statewide survey

- How to implement SB 1379 with respect to:
  - "representative sample" in bill preamble
  - H&SC section 105443(b): "Individuals selected to participate in the biomonitoring program shall reflect the age, economic, racial and ethnic composition of the state."

Sampling design: Self-weighting vs. over-sampling

- Do we want a self-weighting sample with race, ethnicity and other variables proportional to their estimated population proportions?

OR

- Do we want to over-sample for certain subpopulations and age groups, allowing for more robust prevalence estimates and comparisons?
  - Requires larger total sample size, generally
  - Requires additional screening and costs

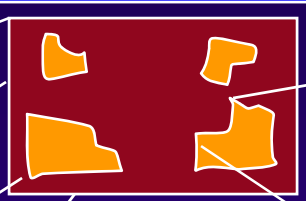
Cluster Sampling Strategy

- Statistical ideal is simple random sample of the population, but cost is prohibitive
- Cluster sampling decreases cost, but also decreases power (design effect issues)
- National Health and Nutrition Examination Survey (NHANES) and other large population surveys use cluster sampling

Overview of a Potential Cluster Sampling Approach

Stage 1 - counties

Stage 2 - segments



Stage 3 - homes

Stage 4 - study participants

Decisions Regarding Sample Size

- Precision of estimates – relative standard errors of, e.g., 10% vs 20% vs 30%
- Power to be able to detect:
  - differences of ??% between different groups
  - chemical trends over time (either total population, within-group changes, or both)

Other Study Design Issues

- Numbers of Primary Sampling Units (PSUs)/year
- Which data will be collected and analyzed besides designated chemicals?
- Which languages will be used?

	CA %	US %
Foreign-born	26.2	11.1
First language not English	39.4	17.9

Source: National Center for Health Statistics, 2008

Sampling design decisions involve trade-offs

- Sample size (statistical power and precision) versus budget
- Number of PSUs and geographic coverage vs. complexity of logistics
- Racial/ethnic/age/economic groups
- Many others

TO BE CONTINUED…..