

The Survey Research Center



50 Years of High Quality Survey Research



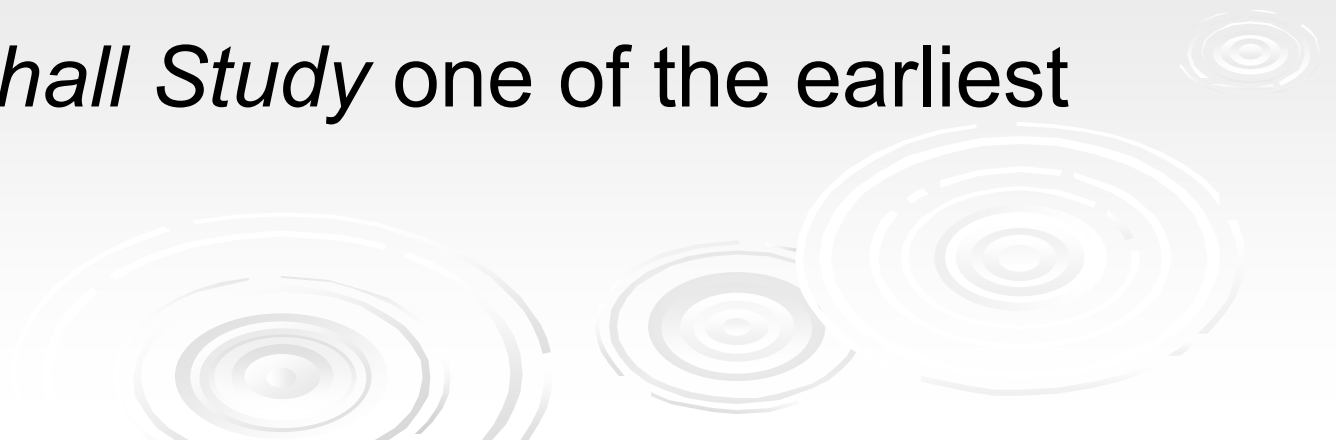
Drawing Blood:
**The Challenge of Bio-marker
Survey Research**

Presented by Robert H. Lee
Survey Research Center
The University of California at Berkeley
Presented at:
International Field Director's & Technology Conference
May 21, 2008
New Orleans, LA



General Historical Perspective

- Collection of survey data and medical data at least 50 years old
- Social and economic studies with biological measures have shorter history
- Interest in the effect of SES on health outcomes
- The *Whitehall Study* one of the earliest



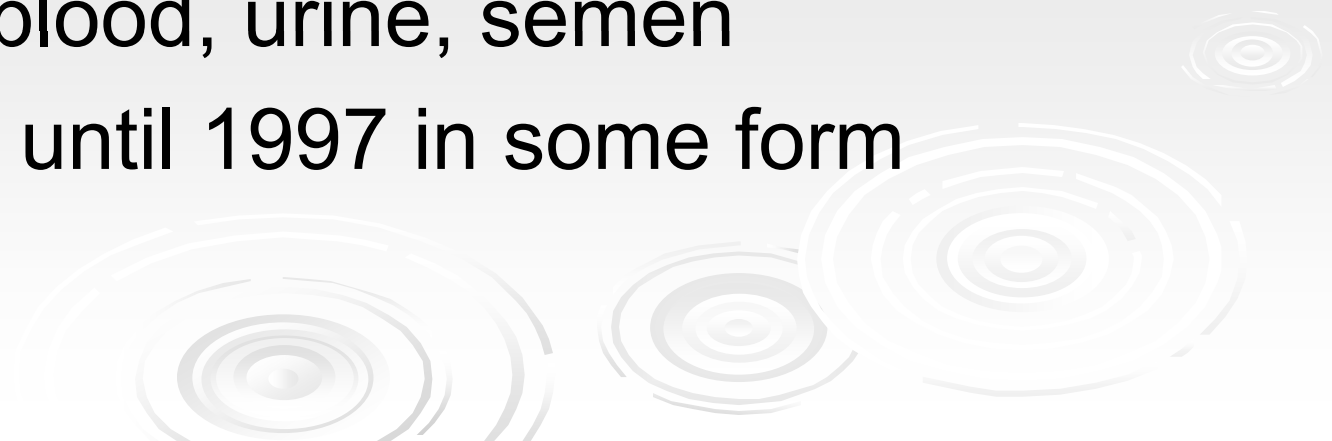
General Historical Perspective (con't)

- The original **Whitehall Study** investigated social determinants of health, specifically the cardio-respiratory disease prevalence and mortality rates among British male civil servants between the ages of 20 and 64. The initial study, the Whitehall I Study, was conducted over a period of ten years, beginning in 1967. A second phase, the Whitehall II Study, examined the health of 10,308 civil servants aged 35 to 55, of whom two thirds were men and one third women. A long-term follow-up of study subjects from the first two phases is ongoing.
- The Whitehall studies found a strong association between grade levels of civil servant employment and mortality rates from a range of causes. Men in the lowest grade (messengers, doorkeepers, etc.) had a mortality rate three times higher than that of men in the highest grade (administrators).



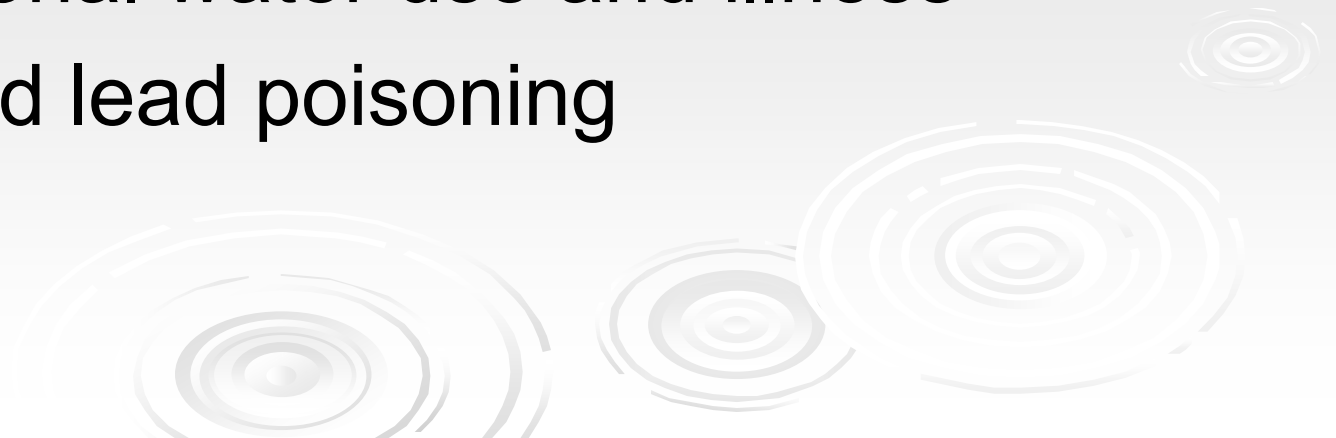
History of SRC Bio-marker Studies

- First study was 1978 Hypertension Study
- Key project - 1985 Men's Health Study
- Study of men in SF with immune disease
- Term AIDS not yet coined
- Extensive list of Q's about activities
- Collected blood, urine, semen
- Continued until 1997 in some form



Recent Study Topics:

- HIV Transmission
- In-home drinking water and gastrointestinal illness
- Adolescent sexual networks and STD transmission
- Recreational water use and illness
- Childhood lead poisoning



Current SRC Bio-marker Studies

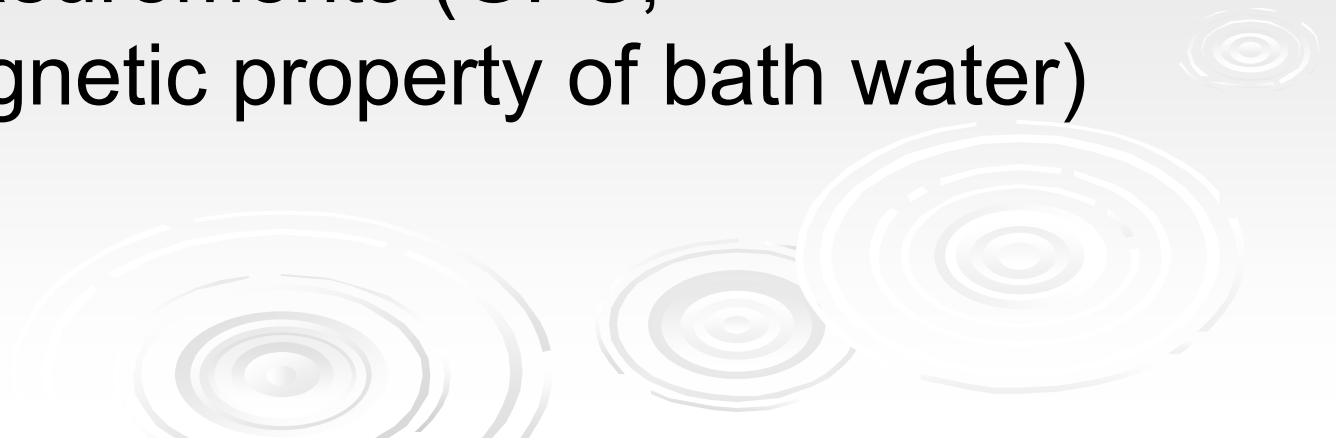
- Parents of children with Leukemia
- Adult patients with COPD
- Adult patients with asthma



Current SRC Bio-marker Studies

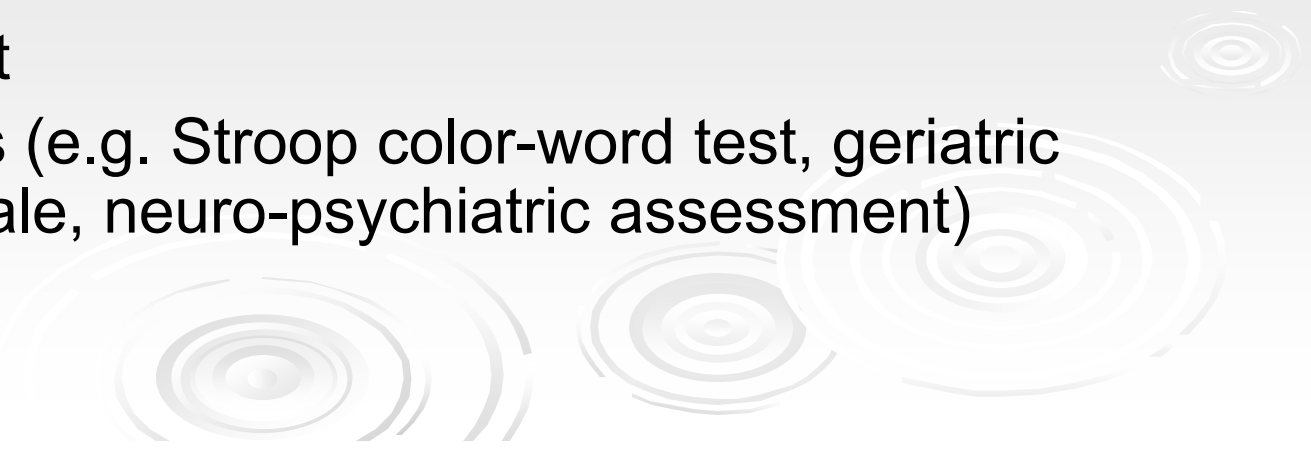
Childhood Leukemia Study

- Recruited patient family sample and control family sample
- Mixed mode (in-person, phone)
- Collect various specimen (blood, dust, saliva, buccal [cheek] cells)
- Other measurements (GPS; electromagnetic property of bath water)



Current SRC Bio-marker Studies

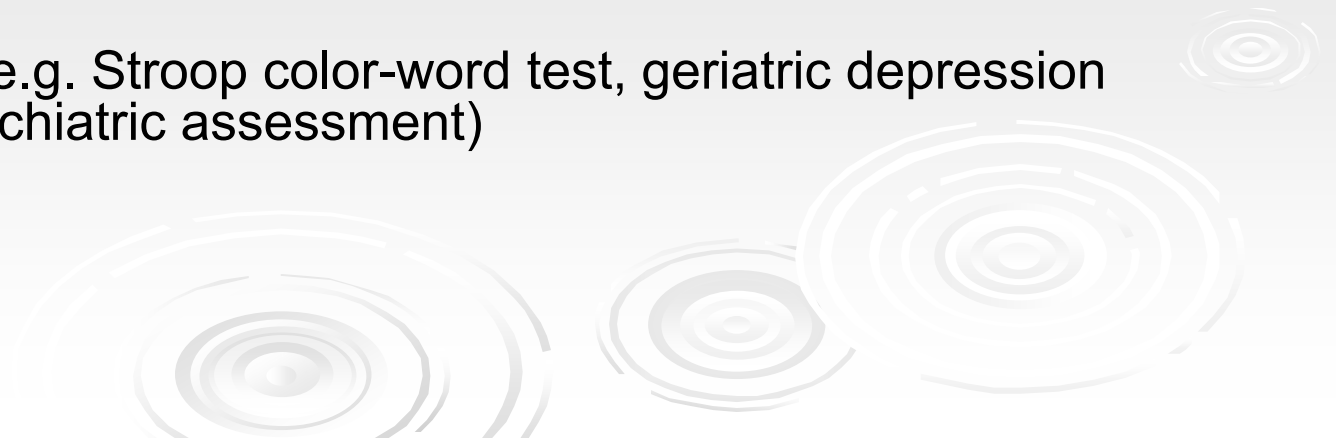
COPD Project

- *Recruited patients with COPD:*
 - Lung function tests (spirometry)
 - Pulse oximetry
 - Gait and balance tests
 - Body fat measurement
 - Blood pressure
 - Muscle strength tests
 - Height / weight
 - Cognitive tests (e.g. Stroop color-word test, geriatric depression scale, neuro-psychiatric assessment)
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Current SRC Bio-marker Studies

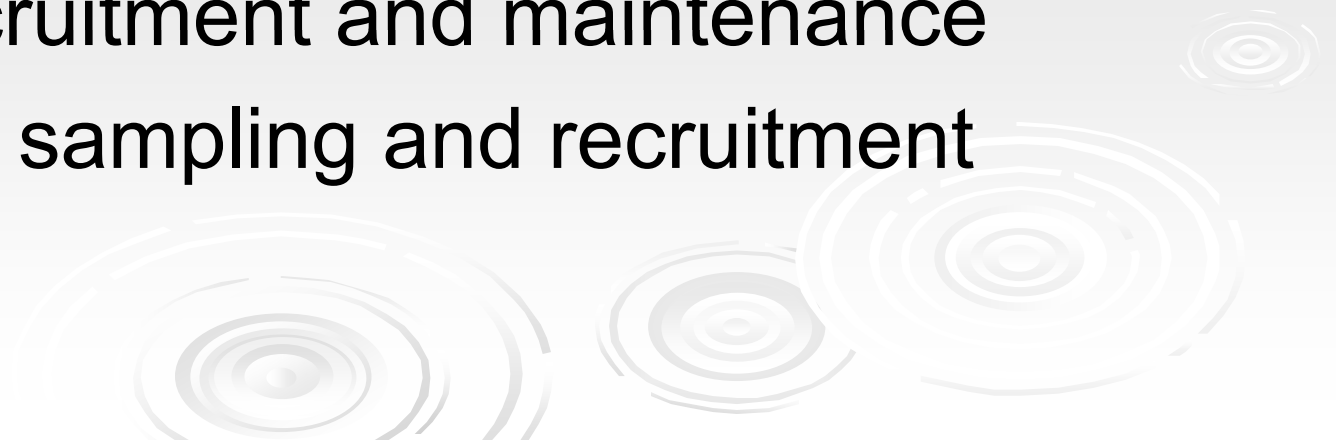
Asthma Study

- *Recruited patients with Asthma:*
- Saliva and hair specimen
- Passive air monitors
- Lung function tests (spirometry)
- Pulse oximetry
- Gait and balance tests
- Body fat measurement
- Blood pressure
- Muscle strength tests
- Height / weight
- Cognitive tests (e.g. Stroop color-word test, geriatric depression scale, neuro-psychiatric assessment)



Unique Needs of Bio-marker (epidemiologic) Studies

- Local, statewide and national frames
- Biological and environmental specimens
- Rigid regulations
- Medical and cognitive measurements
- Multiple data collection methods, usually
- Cohort recruitment and maintenance
- Innovative sampling and recruitment



Management Challenges

- Strong management model needed
- Need centralized material preparation
- Intensive training and in-home monitoring
- Cross training between studies
- Clear, explicit instructions
- Anticipating future expansion / contraction



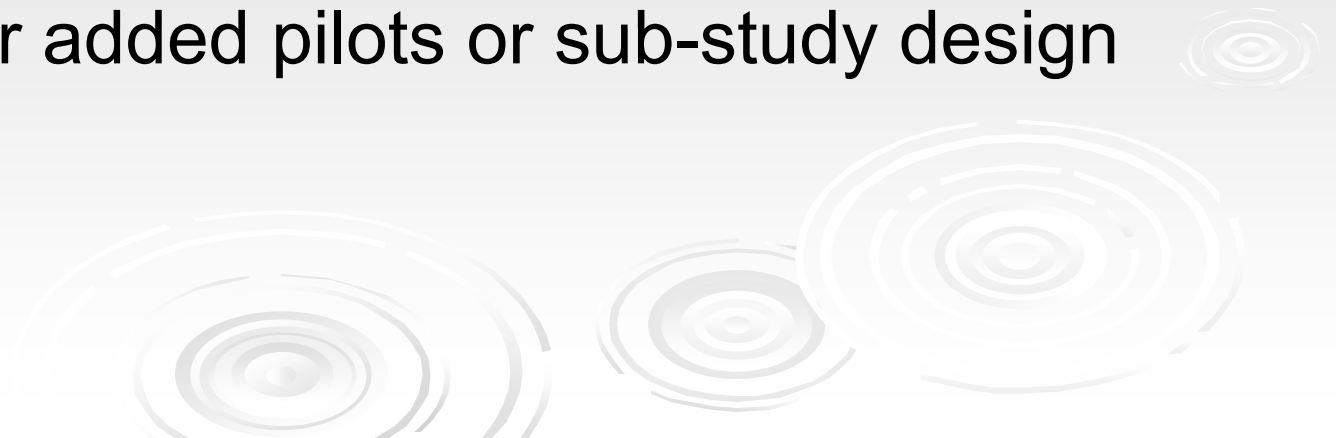
Quality Control

- Create standardized protocols
- On-going monitoring / tracking
- On-going problem-solving with client
- In-home monitoring
- Validation calls
- Monthly reviews



Services to Support Project

- Tracing (tracking) services
- Newsletters and study reports to participants
- Personal clinical and test results
- HIV disclosures
- Medical Referrals
- Medical record review/abstraction
- Flexibility for added pilots or sub-study design



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