

APPENDIX C
SAMPLE SELECTION USING TELEPHONE RANDOM DIGIT DIALING

Random digit dialing is a telephone sampling method that produces a random sample of households with telephones, regardless of whether or not the number is listed in the telephone directory. It appears to be an efficient and inexpensive means of obtaining an unbiased random sample, and a preferable alternative to time-consuming and costly door-to-door screening and to random selection of numbers from telephone directories or specially compiled lists. The latter approach misses unpublished and new listings and requires the difficult task of removing duplicates when large geographic areas and multiple overlapping directories and lists are involved. Further, since 90.2% of all U.S. households had telephones in 1976 (thought to be around 95% in 1983), biases attributable to underrepresentation of those households that do not have telephones are not likely to affect results appreciably (Klecka and Tuchfarber, 1976). One factor to be aware of, however, is that availability of telephones is related to income. According to the 1970 Census of Population and Housing, 76% of households with incomes \$5,000 had telephones, compared with 95% of households with incomes |\$25,000; 89% of white households had telephones, compared with 70% for black households (Waksberg, 1978).

Random digit dialing methods range from dialing a 7- or 10-digit random number to compiling a listing of area codes plus 3-digit exchanges used within the geographic bounds from which a study sample is to be drawn and randomly appending the last 4 digits. The 7- and 10-digit random numbers are estimated to produce households for only 1 in 30 and 1 in 200 numbers dialed, respectively (Cooper, 1964; Glasser and Metzger, 1972). Sampling within the listing of area code plus 3-digit exchanges involves one of several approaches to randomly append the last 4 digits and to deal with non-residential and not-in-service numbers. Klecka and Tuchfarber (1974a) report that the proportion of not-in-service numbers ranged from 37.3% in an urban setting to 70.6% in a rural region for 3 random digit dialing samples; and the proportion of business numbers were 11.3% and 3.2%, respectively. Cooper (1964), who uses blocks of 3-digit exchanges plus 1 digit and randomly selects the remaining 3, reports 32% of the numbers were ineligible. Waksberg (1978) contends that simple random sampling within existing exchanges is inefficient, since about 80% are businesses, institutions, government, or not in service. Waksberg's method seems to eliminate making large numbers of nonproductive calls to non-residential and not-in-service numbers by making multiple calls within a block of numbers (block=area code + exchange + 2 random numbers) only if the first number dialed within that block is residential.

To support the hypothesis that random digit dialing yields an unbiased sample, such a sample must be scientifically compared with samples drawn by conventional means in the field. In 1974, Klecka and Tuchfarber (1976) compared their random digit dialing sample on crime victimization of 800 households and 1,685 respondents in Cincinnati, Ohio, with the Census Bureau's survey of 9,708 households and 19,903 respondents. Race, age, sex, education, income, household density of persons over 12 years of age, and ownership status of the residence were among the demographic variables examined. Excepting education, there were no statistically significant differences between the two populations when tested by chi-square. Thus, the authors concluded that random digit dialing and Census Bureau's complex approach had produced samples from the same population. References cited above and others documenting the efficacy of random digit dialing are found in section 12.

In summary, many health studies have been conducted on veteran populations, but because of the lack of control groups, the selection of control groups from among veterans who were not classified as to their combat experience, and the selection of study subjects from specific military occupational specialties, the studies are not useful for evaluating the overall effect of war service. CDC's review of this literature revealed little which could be used to generate specific hypotheses about health effects of military service in the Vietnam war.

ENVIRONMENTAL AND OCCUPATIONAL EXPOSURES

Smoking

Alcohol

Abbreviated Occupational History Focusing on Exposures to Herbicides

Illicit Drug Use

MILITARY HISTORY

Drafted/Enlisted

Countries of Assignment

Occupational Duties

Combat Intensity

Injuries, Wounds in Service

Herbicide Exposure

APPENDIX D

TOPICAL LIST OF QUESTIONNAIRE ITEMS* FOR
AGENT ORANGE AND VIETNAM EXPERIENCE STUDIESADMINISTRATIVE

Name
Identification Numbers
 Military Service Number
 Social Security Number
Telephone Number
Interviewer Name
Date of Interview
Quality of Interview
Names and addresses of friends who will know future whereabouts

SOCIODEMOGRAPHIC

Date of Birth
Place of Birth
Current Residence
Race/Ethnicity
Marital History
Education
Religion
Occupation and Income
Problems in Obtaining Employment

MEDICAL

Height and Weight
General Health Status
All Hospitalizations and Operations
Physician Treatment, Physician Diagnosis, or Self-Diagnosis of:
 Neurologic Disorders
 Psychologic Disorders
 Impaired Fertility
 Endocrine Diseases
 Cardiovascular Diseases
 Cancer
 Gastrointestinal Disorders
 Genitourinary Disorders
 Respiratory Diseases
 Musculoskeletal Condition
 Dermatologic Conditions
 Other Complaints
Trauma
Reproductive History
Blood Transfusions

*Some data items listed may be derived from military records.

LABORATORY TESTING

BLOOD:

Complete Blood Count: hematocrit, red cell count, white cell count
and differential, platelet count
Fasting Blood Glucose
Cholesterol and Triglycerides
Creatinine
Bilirubin and GGPT
Thyroxine
Hepatitis B Core Antibody
Serum Stored for Future Serologic Testing

URINE:

Protein
Glucose
Hemoglobin
Porphyrins

STOOL:

Qualitative Test for Occult Blood

MISCELLANEOUS:

Delayed Cutaneous Hypersensitivity Battery:

Mumps
Candida
Tuberculin
Streptococcus
Proteus
Diphtheria
Tetanus
Control

APPENDIX E
TOPICAL LIST FOR EXAMINATION AND LABORATORY TESTING*
AGENT ORANGE AND VIETNAM EXPERIENCE STUDIES

PHYSICAL EXAMINATION

The physical examination will be modified from those of the National Center for Health Statistics' Health and Nutrition Examination Survey and the Ranch Hand Study, with special attention given to the dermatologic and neurologic systems.

General: habitus, weight, height, blood pressure, pulse, respiratory rate
 Skin: rash, scars, ulcers, acne, masses, spider angiomas, pigmentation
 Head: movements, hair pattern
 Eyes: movements, fundi, Snellen testing of acuity, conjunctiva, icterus
 Ears: audiometry, otoscopic exam
 Nose: polyps, sinusitis
 Mouth: teeth, tonsils, tongue, cheeks, throat, gingiva
 Neck: thyroid and parotid palpation, cervical lymphadenopathy
 Chest: movements, bony abnormalities, axillary lymphadenopathy
 Lungs: rales, rhonchi, wheezes, dullness, hyperresonance
 Heart: extra sounds, murmurs, rubs, size
 Abdomen: liver and spleen size, tenderness, masses, hernias, testicular size and masses, inguinal lymphadenopathy, rectal exam
 Back: scoliosis, kyphosis, tenderness
 Limbs: movements, edema, arthritis, varicosities, nail clubbing, peripheral pulses, lymph nodes
 Neurologic: mental status, cranial nerves, motor system, reflexes, sensory deficits, nerve conduction studies (conduction evaluation only for Agent Orange study)

PSYCHOLOGIC AND NEUROPSYCHOLOGIC TESTING

Minnesota Multiphasic Personality Inventory
 Diagnostic Inventory Schedule
 Psychiatric Epidemiology Research Interview
 Battery from Halstead-Reitan Neuropsychological Tests
 Armed Forces Qualification Test--this is the intelligence test given to the veterans on their induction into service
 Wechsler Memory Scale

* May be modified as a result of consultations to take place in late 1983 and early 1984 with experts in several specialties, e.g., neurology, immunology, psychology.

MEDICAL

Height and Weight
Possibly Predisposing Conditions
 Immune Deficiency Diseases
 Rheumatoid Arthritis
 Other Cancers
 Celiac Disease/Gluten Enteropathy
 Hemophilia
 Infectious Mononucleosis
 Neurofibromatosis
 Trauma
Medical Exposures
 Immunosuppressive Therapy
 X-irradiation
 Dilantin
 Iron Dextran
 Blood Transfusions
Surgery, Hospitalizations, Long-term Medications
Medical Care Utilization

ENVIRONMENTAL AND OCCUPATIONAL EXPOSURES

Smoking
Alcohol
Lifetime Occupational History, Including Probes to Exposures Such As:
 Asbestos
 Herbicides
 Pesticides
 Irradiation
 Organic Solvents
 Vinyl Chloride
 Benzene
 Arsenicals
 Wood dust
Illicit Drug Use

MILITARY HISTORY

Drafted/Enlisted
Training
Countries of Assignment
Military Occupational Specialty
Occupational Duties
Combat Intensity
Herbicide Exposure

Use of trade names is for identification only and does not imply endorsement of the Public Health Service or the Department of Health and Human Services.

APPENDIX F

TOPICAL LIST OF QUESTIONNAIRE ITEMS FOR
SELECTED CANCERS CASE-CONTROL STUDYADMINISTRATIVE

Name
Identification Numbers
 Military Service Number
 Social Security Number
Telephone Number
Interviewer Name
Date of Interview
Quality of Interview
Friends who will know future whereabouts

SOCIODEMOGRAPHIC

Date of Birth
Place of Birth
Current Residence
Race/Ethnicity
Marital Status
Education
Religion
Occupation and Income

FAMILY HISTORY OF CANCER

Occurrence of soft tissue sarcomas, lymphomas, and other cancers in first-degree (parents, siblings, and children) and second-degree (aunts, uncles, and grandparents) blood relatives and spouses.

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