2 The Study Design

Since the goal of our study was to gauge the support for and opposition to certain nonstructural disaster-mitigation policies and programs that require state and local government cooperation, the design issues correspondingly centered around how best to measure the views of local and state governments toward such proposed policies and programs.

Ulitmately, governmental policies and programs have to pass the bar of public opinion, but it is rare that specific policies and programs beco issues in local and state elections. Rather, it is the policy and program mix pursued by particular incumbents that provokes voter approval or disapproval, tempered perhaps by the good and bad luck that accompanies the times. Hence the connection between popular views of public policy and programs and those that are pursued by particular officials is scarcely ever clear and direct. This implies that public officials are constantly confronted with the problem of gauging how their constituencies stand on political issues and whether their backers and opponents have any views at all on specific actions they could take. The ambiguity of public opinion at one and the same time provides some freedom to public officials but also increases their vulnerability to those elements within their constituencies who are vocal and articulate. The freedom is rooted in the fact that in many areas of policy and programs public opinion may not be crystallized and hence can

scarcely be said to exist. Thus, for example, there is likely no public opinion on specific provisions of the building codes, although there may be some views on whether or not building codes are desirable social policies. The vulnerability resides in the fact that articulate individuals and groups can easily represent themselves as spokespersons for constituencies or as capable of forming public opinion. Furthermore, the effective world of public opinion, as experienced by decision makers, is often a view of public opinion as mediated by an array of activists.

Because we assumed that public opinion on disaster-mitigation issues had not crystallized, we chose to define and study the articulate elites rather than mass public opinion. Hence our subjects are elected public officials, appointed officials whose positions ordinarily lead them to be concerned with disaster-mitigation issues, and the representatives of organized groups whose material interests would often be engaged in such issues. The specific positions these criteria define are described in more detail later.

Of course, we did not take general public opinion as irrelevant to government decision making. A special study of general public opinion let us compare the opinions of elites with those of the general public in nine California communities.

DEFINING THE UNIVERSE

Although no place in America is completely free from natural hazards risks, there are considerable differences among the states and local communities in the extent to which such risks are objectively important. Some places are subject to relatively frequent natural hazards events and others experience such events only rarely. In some states and localities, natural hazards events cause more damage because there are more persons and property to be harmed. Hence the impact of natural hazards policies and programs is not uniform across the nation but varies by the probability of a natural hazard event and by the population exposed to the risks.

Concern with the acceptability of nonstructural hazard-mitigation policies can reasonably be expected to vary with the potential impact that such policies might have. Thus one would be more concerned with what the elite of Dade County, Florida (including the city of Miami and its suburbs) think about coastal plain management policies than with elite opinion on this issue in Washow County (Reno, Nevada). A sensible sampling strategy for states and local communities hence would take these place-to-place variations into account, weighting more heavily those places which are subject to relatively high risk and with relatively large populations. The universe of concern can therefore be regarded as "amounts" of policy potentially deliv-

erable by policy changes, such "amounts" being directly proportional to risks and to population exposed to risk.

The corresponding sampling strategy was to pick states proportional to risks weighted by population exposed to risks. A similarly defined sampling strategy was used within sampled states to pick local communities.

SAMPLING STATES

Budgetary constraints dictated the overall sample sizes for states and local communities. Since personal interviews were to be conducted with state and local community elites, it was necessary to confine the sample to the contiguous 48 states, among which we would pick a sample of 20 states and 100 local communities within those states.

In choosing states it was necessary to develop measures of risk for each of four natural hazards. The best data sources available to us at the time were as follows:

Earthquakes
"U.S. Population at Risk by Seismic Zones and States," in Ayre, 1975. Contains tables and charts indicating expected earthquake probabilities by county and state.

Floods
General Summary of Flood Losses for 1973, by Haley, 1974. Contains tables summarizing flood losses from 1955 to 1973 by state and county.

Hurricanes
Unpublished data on county and state expected-damage estimates from hurricanes and storm surges.[1] Estimates based on historical experiences, 1945-1973, and on U.S. Census of Population and Housing, 1970.

Tornadoes
Tornadoes per 10,000 square miles by state and county as computed from tornado tape prepared by National Oceanic and Atmospheric Administration

The total risk for the 48 contiguous states was computed by summing each state's risk from each of the four disaster types, weighted by the population within the state; the disaster types were weighted by the proportion of total damage they contributed. Thus, for example, Pennsylvania contributed

[1]Kindly made available from J. Wiggins and Co. by J. Wiggins and W. Petak.

11.3% of the total hazards damage to the United States in contrast to Wyoming, which contributed only .1%.

Rank-ordering the 48 states by their proportionate contributions to the total hazard damage, we found that the 12 highest-ranked states contributed about 66% of the total damage whereas the 20 lowest-ranked states contributed only 20% of the hazard damage.

The resulting rank-order of states (according to proportional hazards risk) was subsequently divided into three risk strata for sampling purposes (see Table 2.1). Each stratum was sampled with a probability proportionate to its total contribution to the overall hazard risk. Owing to the numbers of states involved and their obvious importance to the study, the states in Stratum I were chosen with certainty, and this in turn dictated the sampling probabilities for the remaining two strata. since Stratum II contributes about a third the total risk contributed by Stratum I, the sampling probability for

TABLE 2.1

Sample Design for States and States Chosen

I. SAMPLING DESIGN

Stratum	Percent of Total Risk	Sampling Ratio	Number of States Chosen
I. Highest Risk (12 states)	66.5%	1.00	12
II. Medium Risk (15 states)	22.6%	.33	5
III. Low Risk (21 states)	10.8%	.14	3
		TOTAL =	20

II. STATES CHOSEN

STRATUM I HIGHEST RISK	STRATUM II MEDIUM RISK	STRATUM III LOW RISK
Pennsylvania	Illinois	New Hampshire
Louisiana	North Carolina	Delaware
California	Oklahoma	Utah
Florida	Alabama	
New York	South Carolina	
Massachusetts		
Texas		
Connecticut		
Missouri		
Virginia		
New Jersey		
Colorado		

Stratum II was set at .33, and likewise, the probability for Stratum III was set at .14. In the two lower strata, specific states were chosen with a table of random numbers. The resulting 20-state sample is shown in the bottom of Table 2.1

The state sample reflects two characteristics of the hazard distribution of the 48 states. First, floods and hurricanes produce most of the damage, and hence have heaviest weights in estimating future damage. The states chosen reflect that fact. For example, Pennsylvania's high risk status reflects heavily the damages wrought by Hurricane Agnes and the floods that storm produced along the Susquehanna River. Secondly, populous states are more likely to be in the top stratum because there is more property and people in those states.

The 20-state sample covers 75% of the expected long-run damage from the four hazards for the 48 states as a whole. Hence, to hearken back to the definition of the universe as representing the potential impact of nonstructural hazard-mitigation policy changes, the sample of 20 states represents about three-fourths of the state jurisdictions that would be most affected by such policy changes because these are the areas with the largest amount of property and the highest risk from potential hazard.

SAMPLING LOCAL COMMUNITIES

Our plan called for choosing 100 local communities within the 20 sample states using the same selection process. In addition, since we wanted to have at least a few communities within each state, every state had to be represented in the sample of local communities.

A particularly thorny problem is the definition of *local community* American local government is a patchwork of local governments, variously defined, somewhat nested, and with a maze of overlapping jurisdictions. Some states, for example, Illinois, have *counties* and within counties, *townships, cities,* and *incorporated* places. These last are more autonomous than townships but less autonomous than cities. In addition, school attendance districts, water conservation districts, sewage districts, and even mosquito-abatement districts cross county lines and may disregard smaller subdivision boundaries. Exactly which local governments have the authority to regulate land use and to set building-code standards varies somewhat from state to state, further confounding the problems of definition.

Despite this problem, the specification of localities for the purpose of this study was simplified since the smallest unit with disaster-risk measures is the county

Our sampling procedure was as follows: For each of the 20 states in our

sample, we picked the two counties that had the highest combined weighted risk within the state.[2] This yielded a sample of 39 counties. The remaining counties were pooled across states. The 1724 counties were then ranked according to their combined weighted risk from the four natural hazards in the same way that the states were. Much like the states, 11% of the counties accounted for more than 90% of the risk. Flooding was responsible for most of the hazard risk. Because of their population density, every major city in the sample states was selected for the county sample.

While in some cases county and city boundaries coincided, there were many counties chosen for the study that had no large political jurisdictions. To decide which governmental unit was to be chosen for study within each county, we adopted the following rule: If a county had no political subdivision with a population of at least 25,000 in 1970, the county was considered the political unit to be studied. For all other counties, the largest political subdivision within that county was to be chosen.[3] Under this rule, 39 county governments and 61 city governments were selected, as shown in Table 2.2.

The resulting sample of local political jurisdictions is shown in Table 2.2. Because at least two local governments have been chosen for each state except Delaware, it is possible to contrast local and state governmental elites for each of the 20 states. In addition, the local government sample provides a reasonably good portrait of jurisdictions for which natural hazards present relatively serious problems.

SELECTING POTENTIAL RESPONDENTS

The persons we wanted to interview were of two general classes: *decision makers,* persons occupying formal positions that either had the authority to legislate on hazard-mitigation issues or were in charge of governmental agencies that had jurisdiction over hazard-mitigation policies and hazard emergencies; and *partisans,* persons occupying positions in organizations (companies, associations, etc.) whose interests would likely be engaged in hazard-mitigation issues. Our assumption was that the decision makers and partisans on the state and local levels were most concerned and knowledgeable about the issues involved.

The development of local and state lists of decision maker and partisan

[2]Except for Delaware, which had only four counties, each of very large size. In Delaware, we picked only one county, that with the highest combined risk of the four.

[3]Two New York City counties were chosen, Kings (Brooklyn) and Queens. A mixed strategy was pursued in this special case since local services in New York are somewhat decentralized. The mayor and City Council for New York City as a whole were chosen, but county-level officials were selected when the services in question were decentralized.

TABLE 2.2

Sampling Design for Counties and Counties Chosen

I. SAMPLING DESIGN

		Number Counties Chosen
A. State Purposive Stratum:		
	Two counties with highest risk chosen within each state (except one county from Delaware)	39
B. Counties Sampled by Risk Across States:		
Stratum I:	Top 40 counties sampled with p = .50	20
Stratum II.	Next 400 counties sampled with p = .05	20
Stratum III;	Remaining 1284 counties sampled with p = .016	21
	TOTAL COUNTY SAMPLE =	100

II. COUNTIES AND LOCAL POLITICAL JURISDICTIONS CHOSEN

State	County	Local Political Jurisdiction (if not County)
Alabama	Jefferson	Birmingham
	Mobile	Mobile
	Marengo	
	Lee	
California	Los Angeles	Los Angeles
	El Dorado	
	San Diego	San Diego
	Sacramento	Sacramento
	San Mateo	San Mateo
	Alameda	Oakland
	San Juaquin	Stockton
	Mandocino	
	Shasta	
Colorado	Boulder	Boulder
	Denver	Denver
	Adams	North Glenn City
	Prowers	
	Lake	
	Routt	
	Clear Creek	
Connecticut	Hartford	Hartford
	New Haven	New Haven
	New London	Norwich
Delaware	Sussex	
Florida	Dade	Miami
	Broward	Fort Lauderdale
	Duval	Jacksonville
	Orange	Orlando
	Escambia	Pensacola

(Continued)

TABLE 2.2 (*Continued*)

State	County	Local Political Jurisdiction (if not County)
	Polk	Lakeland
	Pasco	
	Leon	Tallahassee
	Walton	
	Holmes	
Illinois	Cook	Chicago
	Du Page	Elmhurst
	Pope	
	Montgomery	
	Perry	
Louisiana	Orleans Parish	New Orleans
	Jefferson Parish	Metairie
	St. Landry Parish	
	St. Martin Parish	
	St. John the Baptist Parish	
	Tensas Parish	
Massachusetts	Suffolk	Boston
	Essex	Lynn
	Worcester	Worcester
	Plymouth	Brockton
Missouri	St. Louis	Florrissant
	Jackson	Kansas City
	Stoddard	
	Pike	
	Phelps	
	Texas	
	Ripley	
	Knox	
New Hampshire	Rockinham	Portsmouth
	Hillsborough	Manchester
New Jersey	Hunterdon	
	Passaic	Patterson
	Union	Elizabeth
New York	Kings	Brooklyn
	Queens	Queens
	Westchester	Yonkers
	Cattaraugus	Olean
North Carolina	Onslow	
	Chatham	
	Duplin	
	Guilford	Greensboro
Oklahoma	Tulsa	Tulsa
	Oklahoma	Oklahoma City
Pennsylvania	Allegheny	Pittsburgh
	Philadelphia	Philadelphia
	Bucks	Bristol Township
	Montgomery	Norristown Borough

(*Continued*)

TABLE 2.2 (*Continued*)

State	County	Local Political Jurisdiction (if not County)
	Delaware	Chester
	Crawford	
	Northumberland	
	Schuylkill	
South Carolina	Greenville	Greenville
	Charleston	Charleston
	Williamsburg	
	Dillon	
Texas	Harris	Houston
	Dallas	Dallas
	Tarrant	Fort Worth
	Jefferson	Beaumont
	Nueces	Corpus Christi
	Montgomery	
	Maverick	Eagle Pass
	Scurry	Snyder
	Haskell	
	Nolan	Sweetwater
	Concho	
Utah	Salt Lake	Salt Lake City
	Davis	Bountiful
Virginia	Norfolk	Norfolk
	Richmond	Richmond
	Chesterfield	

TOTAL: 39 Counties and 61 Cities

positions was based on our general knowledge of local and state government in the United States plus special advice from our Advisory Committee (see preface), who were especially knowledgeable about such matters. The lists of positions developed are shown in Table 2.3.

We drew up a list of 25 positions in state and local government that were likely to be held by persons interested in hazard-mitigation issues. We also agreed that although other persons and organizations might become involved, such variations were not systematic enough to be captured in an interviewing scheme that could be applied across all the localities we wanted to study. Research assistants ascertained whether there were positions in each sample unit reasonably similar to what we had in mind, and the names, addresses and phone numbers of the incumbents.

All told, 2408 names were obtained. Almost 600 positions did not exist. Most of the "missing" positions occurred in local communities, especially the smaller ones. Some remote rural counties did not have even a majority of the positions we were interested in. For example, we ended up with 9

TABLE 2.3

State and Local Level Key Positions

I. STATE POSITIONS	Number Designated	Number Interviewed
A. State Decision Makers:		
Governor or surrogate[a]	20	19
Republican Leader in House	20	19
Democratic Leader in House	20	18
Chair of House Committee with jurisdiction[b]	20	18
Influential member of House Committee[c]	20	19
Republican Leader of Senate	20	19
Democratic Leader of Senate	20	17
Chair of Senate Committee with jurisdiction[b]	20	17
Influential member of Senate Committee[c]	20	18
Civil Defense Director	20	21
State Planning Head	20	19
State Geologist	20	20
Community Affairs Director	20	17
Water Resources Director	20	19
B. Federal Agency Officials in State or Region:		
State Federal Insurance Administration Coordinator	20	20
State Director Farmers' Home Administration	20	17
State Director Small Business Administration	20	22
C. Partisans:		
State level National Association of Realtors	20	20
State level Association of Homebuilders	20	19
Two leading casualty insurance companies	40	37
Building Trades state lobbyist	20	20
Banking state lobbyist	20	18
Editors of two leading newspapers[d]	40	28
TOTAL =	500	461

II. LOCAL GOVERNMENT POSITIONS	Number Designated	Number Interviewed
A. Decision Makers:		
Local Government Elected Executives (Mayor, County Executive, etc.)[e]	100	79
Local Government Manager (appointed)	100	45
Local Legislators[f]	400	352
Planning Official[g]	100	81

(Continued)

TABLE 2.3 *(Continued)*

Zoning Official[g]	100	47
Fire Chief[f]	100	79
Police Chief	100	94
Public Works Official[g]	100	68
Civil Defense Director	100	89
B. Partisans:		
Executive, Chamber of Commerce	100	87
Director, local Red Cross Chapter	100	93
Head, local Taxpayers' Association[g]	100	24
Chair, local League of Women Voters[g]	100	64
Executive, local Building Trades Council[g]	100	56
Director, leading mortgage bank	100	90
Executive, local Real Estate Board	100	83
Editor, local newspaper	100	96
Executive, local Homebuilders' Association[g]	100	62
Manager, local TV station[g]	100	53
C. Supra-Local Government Positions:		
Executive, Regional Alliance of Local Governments[g]	100	62
Flood Control District Executive[g]	100	43
Director, local Farmers' Home Administration[g]	100	84
TOTAL =	2,500	1,831

[a] Members of governor's staff with special jurisdiction over land use, housing codes, or hazard mitigation issues could be substituted for Governor.

[b] Committee of jurisdiction is defined as the legislative committee to which legislation dealing with hazard mitigation would be referred.

[c] Influential member of committee designated by Chair of that Committee.

[d] Designated as daily newspapers in major cities (over 200,000). Some states did not have two such papers.

[e] Not all local jurisdictions had an elected executive, but were ruled either by local legislature (e.g., County Commission) or had an appointed executive (e.g., County Manager).

[f] Local legislators defined as member of city or county council or equivalent body. In some cases, e g. County Commission government, for legislators could not be defined.

[g] Many local jurisdictions did not have positions defined that met qualifications.

interviews in one rural Texas county and 11 interviews in a similarly isolated Colorado County

The actual number of persons interviewed for each of the positions is shown in the last column of Table 2.3. In most states each of the positions existed, but a unicameral legislature in one state and a totally Democratic state legislature in another ruled out obtaining full complements of interviews in those states.

In many of the local communities, some positions either did not exist or were not filled. Many rural counties had no equivalent of an elected mayor or county executive but were ruled by small commissions or county committees.

INTERVIEWING ELITES

Interviewing was undertaken by the National Opinion Research Center of the University of Chicago under subcontract. Almost all the interviews with elite members were carried out in personal visits.[4] Interviews with state and local elite members took about 1 hr to complete using the standardized schedule we reproduced here as Appendix A. Interviewing took place in the summer of 1977.

Completion rates for the sample were remarkably high (see Table 2.4): over 95% of the persons for whom we had names and addresses were interviewed. About 3% of the persons refused to participate in the study and the remaining 2% were unavailable. Due to the highly articulate nature of the respondents and the high standards of the National Opinion Research Center, the quality of the interviews was very high. For example, missing responses to any of the questions usually ranged under one or two percentage points.

WHO ARE THE ELITE?

Table 2.3 provides a description of the positions from which the samples of state and local elites were selected. Both samples draw heavily from among political positions, both elected and appointed. On the state level, legislators are especially well represented and, similarly, mayors and city councilmen loom on the local scenes.

[4]A few of the interviews were conducted by telephone with persons who were temporarily absent from their normal place of business or residence. Some state legislators who had left the capital while the legislature was out of session were interviewed on the telephone in order to reduce travel costs where long distances were involved

TABLE 2.4

Completion of Interviewing Plan

1.	"Theoretical" Number of Interviews Based on 25 Per State and Local Community (see Table 2.3)		3,000
2.	Names Obtained for Positions Actually Existing and Filled		2,408
3.	Persons Actually Interviewed (see Table 2.3)		2,292
4.	Reasons for Non-Interview:		
	A. Out of sample: Person interviewed for another position, person left position, position abolished, etc.	26	
	Person ill or on extended leave or vacation during field period	6	
	TOTAL =	32	
	B. Refusals, interview broken off	73	
	C. Interviews lost, misplaced, etc.	11	
	TOTAL NON-INTERVIEWS		116
5.	Gross Completion Rate: (completed interviews as proportion of total names obtained)		95%
6.	Net Completion Rate: (completed interviews as proportion of total names less out of sample names)		96%

State and local elites are not drawn equally from all walks of life. As Table 2.5 shows, the state elite is almost all male (97%) and white (98%). Local elite members are also almost always male (90%) and white (96%). Membership in the elite is almost exclusively reserved for the middle aged: more than 75% are over 40, and the average age for both state and local elites is 48 years.

Almost two out of three of the local elite have gone to college and one in five have had some postbaccalaureate education. Members of the state's elite have an even higher level of educational attainment: Over 80% have gone to college and one in three has had graduate education. Twelve percent of state elites and 4% of local elites hold law degrees.

Many elites have lived their entire lives in the state or local community where they hold office. The average length of residence among local elites is 27 years. State elites average 35 years of residence.

The second panel of Table 2.5 shows some of the political characteristics of state and local elite members. Republicans are a decided minority on both levels. About one-half of our elite respondents are Democrats, whereas less

TABLE 2.5

Selected Characteristics of State and Local Elite Members (see also Table 2.3)

		LOCAL	STATE
I.	Demographic Characteristics:		
	A. Proportion Male	90%	97%
	B. Proportion Non-Hispanic White	96%	98%
	C. Average Age	48 yrs.	48 yrs.
	D. Proportion Over 40 Years of Age	76%	77%
	E. Educational Attainment		
	Did not graduate high school	4%	2%
	High school graduate	31%	17%
	Associate, BA or BS Degree	45%	42%
	Law Degree	4%	12%
	MA or equivalent degree	15%	20%
	Doctoral Degree	2%	8%
	F Proportion Currently Married	91%	88%
	G. Average Years Lived in State or Local Community	27 yrs.	35 yrs.
II.	Political Characteristics:		
	A. Political Party Preference		
	Republican	28%	32%
	Independent, but leaning to Republican Party	7%	5%
	Independent	11%	11%
	Independent, but leaning to Democratic Party	6%	2%
	Democratic	49%	50%
	B. Economic Liberalism Self Rated[a]		
	Very Conservative	23%	21%
	Moderately Conservative	56%	57%
	Moderately Liberal	20%	20%
	Very Liberal	1%	3%
	C. Social Liberalism Self Rated[b]		
	Very Conservative	8%	5%
	Moderately Conservative	36%	30%
	Moderately Liberal	42%	46%
	Very Liberal	14%	19%
	D. Government Regulation Attitudes[c]		
	Very Conservative	26%	21%
	Moderately Conservative	49%	50%
	Moderately Liberal	21%	23%
	Very Liberal	4%	5%

(Continued)

TABLE 2.5 (*Continued*)

		LOCAL	STATE
	E. Proportion Who Have Held Other Elected Offices	14%	24%
	F. Proportion Who Have Been Head of State or Local Government Department	14%	16%
	G. Held Office in Civic Association	44%	52%
	H. Held Office in Trade Union	7%	9%
	I. Held Office in Business or Professional Association	43%	51%
	Approximate N =	(1831)[d]	(461)[d]

[a] Based on answers to "On economic issues, such as deficit spending by the Federal Government, do you find yourself usually on the very conservative, moderately conservative...side?"

[b] Based on answers to "How do you stand on social issues, such as civil rights for minority groups...?"

[c] Based on answers to "Finally, how do you stand on issues that involve government regulation, such as regulating the stock market, air transportation, prices on natural gas, pollution controls and zoning regulations.. ?"

[d] Varying amounts of no answers to these items in no case amounting to more than 15 cases.

than one-third are Republicans. In this respect, the elites resemble the general population more than their middle-aged, well-educated peer group This undoubtedly represents the fact that the voters are largely Democratic However, most of our elites considered themselves to be moderately or very conservative on economic issues, moderately *liberal* on social issues, and moderately or very conservative on government-regulation issues.

Finally, respondents are not newcomers to leadership or to government. Relatively large proportions have held public or appointed office in local or state government. Many have been officers in civic, business, or professional associations.

In summary, the typical member of either state or local elites is a middle-aged, male college graduate, a Democrat but not of the most liberal stamp He has been a life-long resident in his district and has held elected posts before either in private associations or in government.

THE CALIFORNIA RESIDENT STUDY

The design for our study initially called only for interviews with members of state and local elites. We budgeted 3000 of these interviews but found only 2400 potential respondents. Since the extent to which elite opinions reflected popular opinion was problematic, we decided to use funds saved from the elite budget to conduct a survey of the general public in a subsample of local communities. Since nine local communities in California were represented in our local community sample, we decided to conduct small-scale population surveys in each of them. In addition, during the fall of 1977, California was suffering from a severe drought and extensive brush fires, thereby presenting an opportunity to study reactions to a clear and present natural hazard risk

The interview schedules used with elites were appropriately modified for use with a general-population sample (see Appendix B). In each of the nine communities in the California sample (see Table 2.2), 100 household interviews were conducted using block-quota sampling methods.[5]

The findings of the California general-population survey are presented in Chapter 5. These studies provide an opportunity to compare the views local elites and general populations hold regarding the seriousness of natural hazards risks and their opinions of hazards policies and programs.

ACKNOWLEDGMENTS

Celia Homans and Wendy Kreitman of the National Opinion Research Center of the University of Chicago were in charge of the assignment, training, and supervision of the interviewing The success of the interviewing venture must be credited in large part to their skillful work

[5] In each of the communities, a sample of blocks or comparable small geographical units was drawn Probabilities were calculated according to the number of residents in each such unit For each block to be sampled, interviewers were given quotas that assured that the resulting sample would be representative with respect to age and sex. Substitutions were permitted for households unavailable for contact within the quotas imposed Block-quota samples are not probability samples; they tend to overrepresent households in which members are more likely to be at home during interviewing hours However, costs of such samples are low enough to warrant their use when exact estimates are not required, as in our case