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GRANT NUMBER DAMD17-96-1-6215

TITLE: Mammography Use by Older Mexican American Women

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REPORT DATE: July 1997

TYPE OF REPORT: Annual

PREPARED FOR: Commander
U.S. Army Medical Research and Materiel Command
Fort Detrick, Maryland 21702-5012

DISTRIBUTION STATEMENT: Approved for public release;
distribution unlimited

REPORT DOCUMENTATION PAGE

Form Approved
OMB No. 0704-0188

1. AGENCY USE ONLY *(Leave blank)*	2. REPORT DATE	3. REPORT TYPE AND DATES COVERED
	July 1997	Annual (1 Jul 96 - 30 Jun 97)

4. TITLE AND SUBTITLE

Mammography Use by Older Mexican American Women

5. FUNDING NUMBERS

DAMD17-96-1-6215

6. AUTHOR(S)

Freeman, Jean L., Ph.D.

7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)

University of Texas Medical Branch
Galveston, Texas 77555-0136

8. PERFORMING ORGANIZATION REPORT NUMBER

9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES)

U.S. Army Medical Research and Materiel Command
504 Scott Street
Fort Detrick, Maryland 21702-5012

10. SPONSORING / MONITORING AGENCY REPORT NUMBER

11. SUPPLEMENTARY NOTES

12a. DISTRIBUTION / AVAILABILITY STATEMENT

Approved for public release; distribution unlimited

12b. DISTRIBUTION CODE

13. ABSTRACT *(Maximum 200 words)*

The purpose of this study is to examine the determinants of mammographic screening in older Mexican-American women, particularly the influence of strong family relationships on promoting screening behavior. Findings are used to suggest alternative designs for screening programs that address both the special barriers of older Mexican-American women in accessing screening services and the unique strengths of their family ties in encouraging screening mammography.

The study surveys 600 Mexican-American women 50-74 years old in southeast Texas regarding their use of mammographic screening. A random sample of subjects is identified through a one stage cluster sample. Data is collected through in-home interviews on determinants of ever having a mammogram and having had a mammogram in the past two years. Reports of mammograms are confirmed with medical records.

During the first year of the study, a questionnaire has been developed, translated into Spanish, back translated, and pre-tested. Based on Census block group data, the primary sampling units have been selected. A subcontract was signed with Louis Harris and Associates to perform survey field work. Under this subcontract, listing and training materials have been developed with UTMB staff, interviewers hired and trained, programming completed for a computerized personal interview, and field procedures pre-tested.

14. SUBJECT TERMS	15. NUMBER OF PAGES
Breast Cancer; mammography, elderly, screening, Mexican American utilization, familism	105
	16. PRICE CODE

17. SECURITY CLASSIFICATION OF REPORT	18. SECURITY CLASSIFICATION OF THIS PAGE	19. SECURITY CLASSIFICATION OF ABSTRACT	20. LIMITATION OF ABSTRACT
Unclassified	Unclassified	Unclassified	Unlimited

NSN 7540-01-280-5500

Standard Form 298 (Rev. 2-89)
Prescribed by ANSI Std. Z39-18 298-102

USAPPC V1.00

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Jon L Freeman 7/25/97

PI - Signature Date

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INTRODUCTION

Background

Although Hispanic women have lower rates of breast cancer, they present at a later stage with a poorer prognosis for survival. Ethnic differences in stage at diagnosis may be explained in part by the lower participation of Hispanic women in breast cancer screening. Hispanic women have been targeted as a special population group under the nation's health care objectives for the year 2000. A year 2000 goal is to increase their rate of receiving biennial mammograms to 60 percent for women 50 years and older.

Two hypotheses have been proposed to explain the under-utilization of preventive services in general among Hispanics. One attributes it to problems with access, such as lack of health insurance or having no usual source of care, which are more prevalent in the Hispanic population. The second attributes it to acculturation or the process of change that individuals undergo (in terms of language, attitudes and personality) as they are exposed to a new culture. This hypothesis argues that the more acculturated one becomes the more likely he(she) is to utilize health services.

A number of studies have examined determinants of mammographic screening behavior among Hispanic women [2-14], but few have focused on the older age group [3-6,10]. Subjects in these studies were predominantly Mexican American residents of urban areas. Mammographic screening was found to increase with age [4,11,14] and educational attainment [4] and breast cancer knowledge [14]. It was greater for measures of access to care - having a regular doctor [3] and transportation services [3] - and engaging in preventive health behaviors [3]. Ethnic differences may disappear when controlling for demographic and other factors [9-11], but may also remain as an independent predictor of screening behavior [12-13]. When acculturation had a significant effect, it was attributed either to language preference [2,6] with Spanish language usage interpreted as a barrier to access [1]. Or, it was also attributed to strong attitudes towards traditional family structure with familism in the less acculturated group providing a positive influence on behavior. [8].

Other research involving Mexican American women in Texas suggests that familism may also be an important factor in reinforcing or hindering screening behavior [8,15,16]. Familism is a central value to the Mexican American culture [17-20] and refers to the "strong identification and attachment of individuals to their families" [20]. Members of Hispanic families have strong feelings of loyalty and a commitment to provide emotional and material support to others within the family. They also have a strong commitment to extended family relationships and rely on family members in time of need. Three dimensions to familism have been identified [20]: 1) familial obligations; 2) perceived support for the family; and 3) family as referents. Perceived support for family members remains unchanged with increased acculturation while the other dimensions decrease [20].

While familism is a value shared with other cultures, high familism is a particularly distinct and important characteristic in Hispanic groups. It is generally seen as a positive influence by providing a buffer against physical and emotional stress [21]. Family responsibilities, however, may also produce adverse effects such as depression in the elderly [22]. It may also inhibit the acceptance of medical practices and act as a barrier to health services utilization [23].

The effect of familism on utilization of health services, however, may be a function of the care being sought. Frequency of family contacts was found to be positively related to seeking prenatal care early in pregnancy but negatively related to consulting with a physician when ill [15]. Further evidence of the reinforcing role of familism in preventive care is found in a study of breast cancer screening participation among Texas women [16]. Among Hispanic women who participated in the screening program 27 percent cited "pressure from family" as an important factor in their decision to participate.

These studies and the familistic orientation of the Mexican American culture suggest that breast cancer screening among older Hispanic women might be enhanced through family oriented interventions. In Mexican American families, relationships between mothers and daughters and other female members are particularly close [17] and could be used to promote mammographic screening across generations. Family focused interventions based on female relationships is further supported by Markides' study of three generations of Mexican Americans [24]. The family was found to be the dominant source of information and help in all generations. Moreover, women were the predominant source of advice regarding minor health problems, with the older generation relying mostly on their daughters.

Relationships among female family members, especially between mothers and daughters, could therefore form the basis of a community based family intervention where daughters (or other younger female relatives) are encouraged to promote screening behavior in their mothers. The underlying rationale is that the younger population of Hispanics is probably on average better educated and more knowledgeable about cancer risks and screening techniques. They also have more exposure to health screening information in their child bearing years through frequent doctor/clinic visits for maternal and child health services. We argue that a strong, supportive mother/daughter (or other younger female relative) relationship promotes the exchange of this information and provides encouragement to participate in mammographic screening.

Purpose of Study

In order to design such an intervention, more information is needed on the screening behavior of elderly Hispanic women and how culturally specific values such as familism might be utilized to promote annual mammography [25,26]. Through a population based survey, the study will identify determinants of ever having a mammogram and having had a mammogram in the past two years, with a focus on factors unique to the Mexican American population that might reinforce or discourage screening behavior. Of particular interest is the negative influence

of low acculturation found in other studies of health services utilization and the potential supportive role of familism. Data is being collected that will assess the nature and extent of family networks and support and their influence on current screening behavior.

We are also gathering information that will evaluate the feasibility of developing and implementing an intervention that targets young Hispanic women and provides them with information on screening risks and benefits that they will be encouraged to relate to their mothers and older female relatives. These younger women will be exposed to screening information as they visit maternal and child health clinics for routine obstetric/gynecological services.

Scope

The principal aim of this study is to conduct a population based survey of Mexican-American women age 50-74 years who reside in the counties of Galveston, Brazoria and Matagorda. Information is collected through a questionnaire, administered in face-to-face interviews, that contains questions on the subject's predisposition to seek screening mammograms, the availability and accessibility of those services and other factors that support or hinder screening behavior. It will also ascertain whether a woman has ever had a mammogram and if she has, whether she has had one in the past two years. Of particular interest in this study are the predisposing and reinforcing factors that are unique to the Mexican-American population, such as level of acculturation and strong family support. The survey is also collecting information on the proximity of daughters and other female friends and relatives that might be targets of a family oriented intervention through local maternal and child health clinics.

The following hypotheses will be tested with data from the survey:

1. Selected predictors of mammographic screening behavior in predominantly non-Hispanic populations will generalize to Mexican Americans. These include education, marital status and barriers to access, in addition to beliefs, knowledge and attitudes about breast cancer.

We hypothesize that mammographic use increases with educational attainment and income and decreases with distance or travel time from a screening facility. Use is also higher with being married, having insurance coverage and having a usual source of care.

Based on theoretical models of health behavior we expect that use will also be associated with knowledge of the risks and symptoms of breast cancer; attitudes about preventive care; beliefs about the efficacy of screening; concerns about radiation, embarrassment, pain and positive findings; and perceived susceptibility to breast cancer. Although there is no strong empirical evidence to support these associations from studies involving urban Hispanic groups, we plan to explore these relationships in a more rural population of Mexican American women.

2. Women with low levels of acculturation are less likely to have had a mammogram/had a mammogram in the past two years than women with high levels of acculturation.

We hypothesize that all dimensions of acculturation as well as the overall scale are significant predictors of not having a mammogram/having had a mammogram in the past two years. Language use and preference, however, will be the strongest predictors. Women who speak only Spanish have lower exposure to television media messages and written material on breast cancer. They also have greater difficulty in locating screening services and making an appointment.

3. Strong social support related to the family is associated with an increased likelihood of ever having a mammogram, after controlling for level of acculturation.

We hypothesize that strong family networks, in terms of number and frequency of contacts, are associated with a high likelihood of having a mammogram/having had a mammogram in the past two years. Functional social support, in terms of emotional and material resources from the family that are available to older women, also increases the likelihood of mammogram use.

Because familism and social support are negatively correlated with level of acculturation and because acculturation may be associated with low utilization of preventive health services we are controlling for level of acculturation to examine the independent effects of familism and social support on mammography screening behavior.

A particular focus of this study is the relationship between elderly women and their daughters. We hypothesize that intergenerational solidarity between mothers and daughters is a significant predictor of mammographic screening. We also hypothesize that: 1) among women who never had a mammogram, at least 75 percent would get one on the advice of her daughter and 2) among women who have had a mammogram, 25 percent will report "encouragement from daughter" as an important reason for having one.

A separate sub-study will be conducted to assess the validity of the mammogram self-reports. Two sources of information will be utilized to verify the mammogram reports: 1) records of the radiology facilities where subjects reported receiving mammograms and 2) Medicare billing files. By comparing self-reported mammography use to these other sources of data we will:

1) obtain estimates of the extent of over-reporting (or under-reporting) of mammograms in the first two years prior to the survey;

2) examine the relationship between patient characteristics and errors in self-reporting.

METHODS

Study Population

Our study population consists of Mexican American women age 50-74 years who reside in three southeast Texas counties: Galveston, Brazoria, Matagorda. The population is being

identified during the period of data collection from August 1997 through November 1997. Based on 1990 Census estimates, the total number of women in our study population is 3760 (Table 1).

The three counties stretch for 140 miles along the Gulf of Mexico and up to 100 miles from Houston in Harris county (see map in Figure 1). All three counties are designated non-metropolitan counties by the U.S. Bureau of the Census and are considered rural for health care delivery issues within the state [27]. Defined by the percent of persons living in rural areas, however, the degree of rurality varies from about 6 percent in Galveston County to 39 percent in Matagorda County. The counties also differ in the percent of their population reporting Mexican American ethnicity in the 1990 Census, from 12 percent for Galveston to 23 percent for Matagorda. The Hispanic population (which is largely Mexican American) in all three counties has roughly half the educational attainment and income of the non-Hispanics. In Galveston, the number of primary care physicians per 10000 population is 6.6, which is close to the ratio for the entire state (6.0) [27]. The ratio is lower for Matagorda (5.3) and Brazoria (3.8) counties.

Conceptual Framework

The determinants of mammographic screening will be investigated in the framework of the PRECEDE-PROCEED ("predisposing, reinforcing, and enabling causes in educational diagnosis and evaluation") model [28], which incorporates concepts from Anderson and Aday's model of access to care [29] and Rosenstock's Health Belief Model [30]. It has been used in previous studies of health screening behavior [31-34]. The PROCEED framework provides the steps for implementation and evaluation.

In this study, we are utilizing phase 4 of PRECEDE where we examine factors that have a potential influence on mammographic screening. Numerous factors are seen to influence health behavior and PRECEDE aggregates them into three broad categories according to the strategies that might be employed to bring about change. Predisposing factors are individual attributes that motivate one to act and reflect personal preferences that serve to promote or inhibit health behavior. These include demographic characteristics such as age, and educational attainment as well as personal knowledge, attitudes, values, and perceptions of breast cancer and mammography.

Enabling factors pertain to the availability and accessibility of screening services. They are personal and community resources that enable a woman to obtain a mammogram. Enabling factors include insurance coverage for screening mammograms, available screening facilities and transportation services, and having a usual source of health care.

Reinforcing factors are external influences that support or hinder screening behavior. They include factors antecedent to screening that may affect a woman's seeking services. Or, they may influence subsequent (routine) use of screening mammograms through reinforcement or discouragement of the behavior. The attitudes and behavior of family, friends, and health care providers are particularly important sources of reinforcement. Exposure to pamphlets and media messages that encourage breast cancer screening can also affect screening behavior.

Table 1: Selected Population Characteristics: Galveston, Brazoria and Matagorda Counties

Characteristic	Galveston	Brazoria	Matagorda
Study Population: Mexican American Women 50-74 Years			
50-74 Years	1236	1991	533
50-54 Years	376	478	133
55-59 Years	308	464	139
60-64 Years	231	459	112
65-69 Years	192	367	88
70-74 Years	129	223	61
Total Population	271,399	191,707	36,928
% Hispanic Origin	14	17	25
% Mexican American	12	16	23
% Persons 25 Years+ With No High School Dipoma/GED			
Total	24	25	33
Hispanic Origin	47	48	61
Not Hispanic Origin	21	21	26
Per Capita Income of Persons 15 years+			
Total	$13,993	$13,468	$11,374
Hispanic Origin	8,468	8,123	5,915
Not Hispanic Origin	15,900	14,444	13,986
% Persons Below Poverty Level			
Total	15	10	21
Hispanic Origin	23	18	46
Not Hispanic Origin	14	9	16
Primary Care Physicians Per 10,000 Population	6.6	3.8	5.3

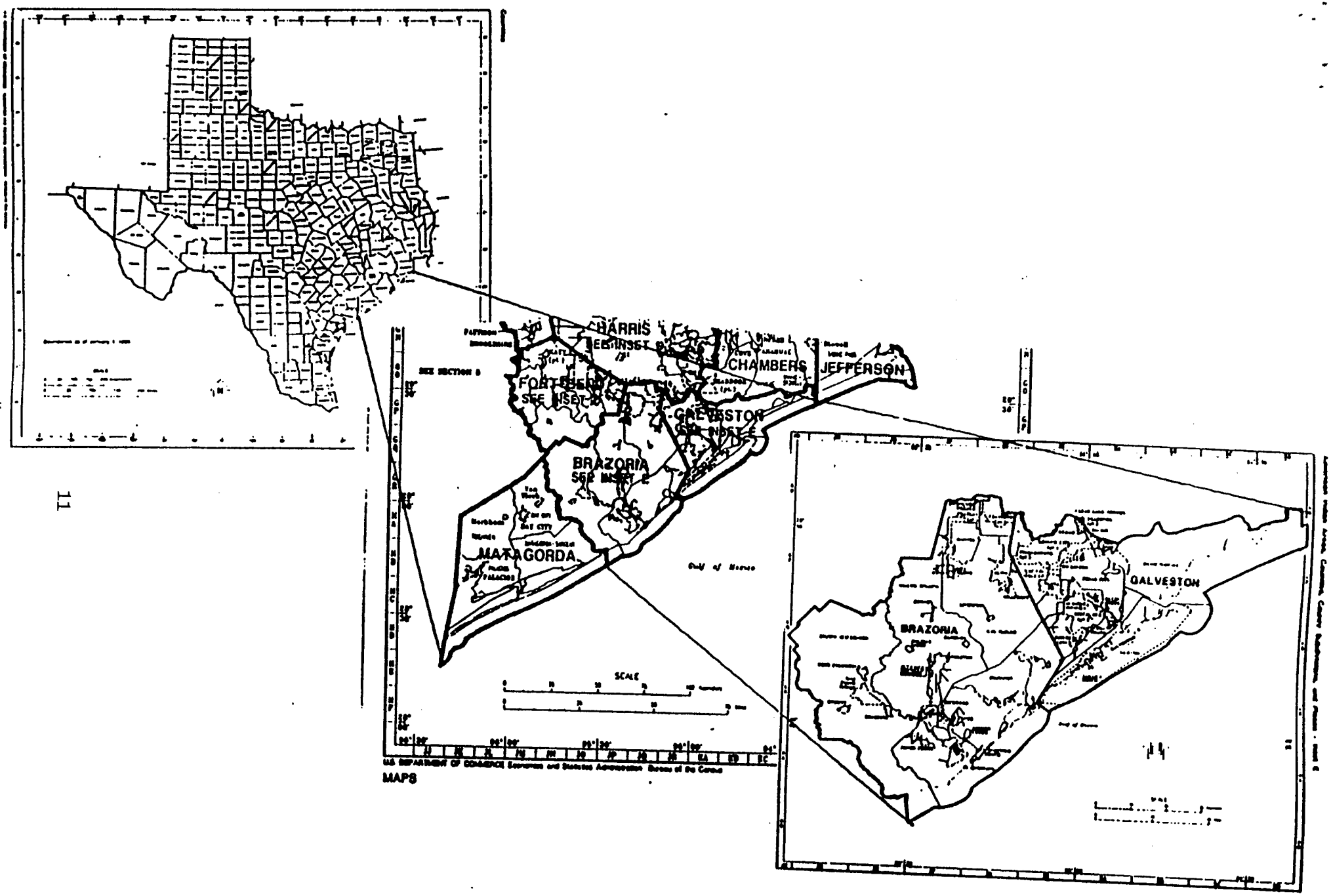
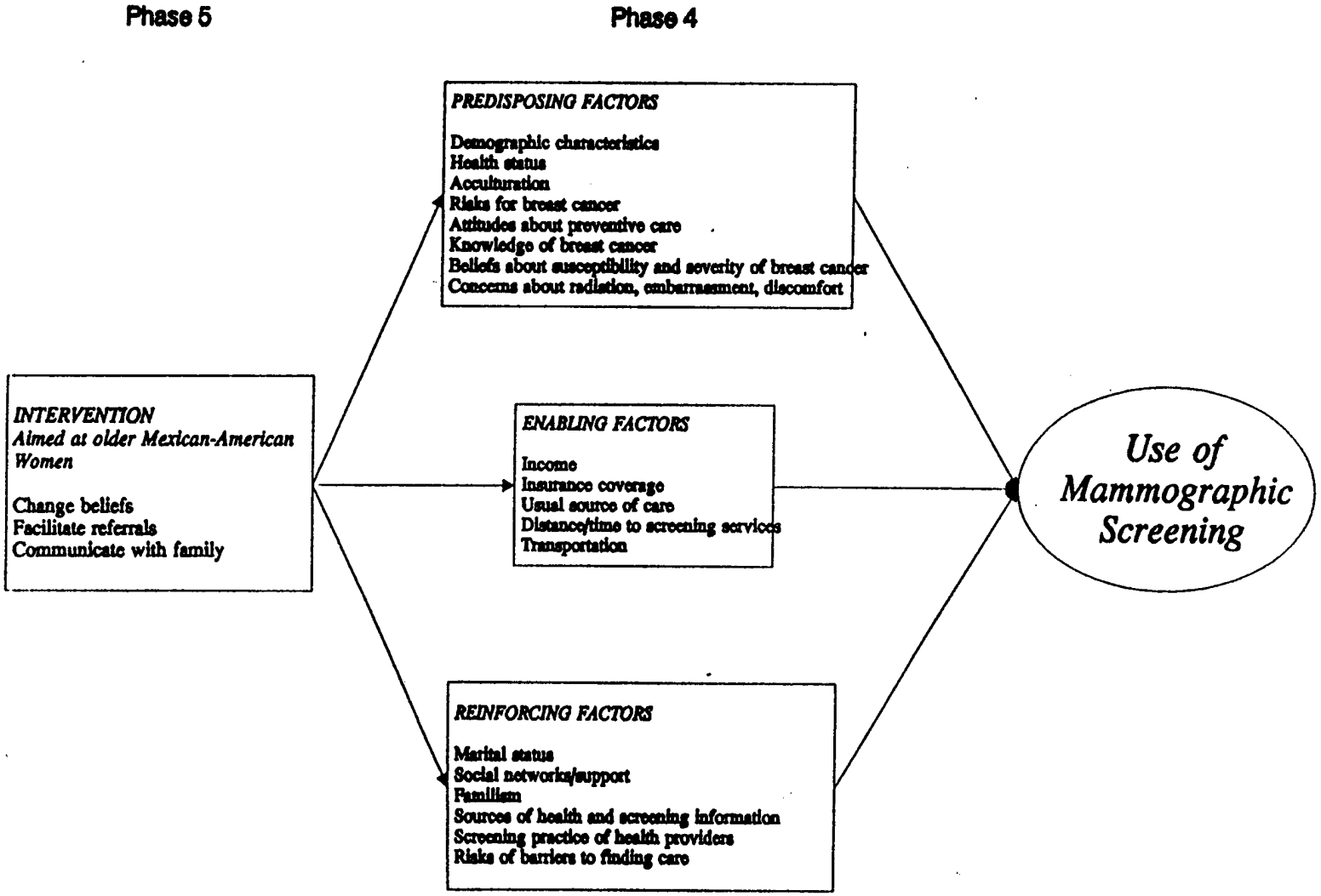


Figure 1. Map of the Three County Study Area

Figure 2. Conceptual Framework: Precede Model



Of particular interest in this study are the predisposing and reinforcing factors that are unique to the Mexican American population, such as level of acculturation and strong family support. The major focus of the research is determining whether these factors are associated with ever having had a mammogram and having had a mammogram in the past two years.

In the PRECEDE model, Phase 4 is the diagnostic phase of the planning process. Significant factors are identified and assigned priorities for focussing the intervention. Priorities are set based on the factor's relative importance, potential for change and available resources. Although this study is limited to Phase 4, we see our results feeding into Phase 5 - the development and implementation of a screening program for older Mexican-American women.

Power Analysis

The specific aims require that we estimate the prevalence of mammography among Mexican American women ages 50 and over. Previous studies suggest rates as high as 30 percent and as low as 10 percent. Table 2 shows the sample sizes required for 90 and 95 percent confidence intervals of width 10 percent. We wish to have an 80 percent probability of covering the true prevalence rate, which is analogous to power in hypothesis testing. Calculations were done using the program PC-SIZE [35]. This means that if the 30 percent of Mexican American women in the survey area have had a mammogram, then a sample of 349 interviewed women will generate a 95 percent confidence interval of length 10 percent which contains 30 percent 80 percent of the time. Put differently, if we interview 248 women we are 90 percent confident the resulting interval from, for example, .25 to .35 will contain the true underlying mammography rate 80 percent of the time. The second major column of Table 2 reflects an adjustment for an 80 percent response rate and a 25 percent design effect due to cluster sampling. These adjustments inflate the required sample sizes by 56.25 percent. Thus we need to identify 616 Mexican American women aged 50-74 to obtain the equivalent of a simple random sample of 394.

Given an approximate combined sample of nearly 400 women we can project the probability of detecting significant predictors of mammography. In Table 3 various combinations of predictor distributions are shown for at least 80 percent power, two sided alternative (α=0.05), and a base screening rate of .25. We have only considered predictor distributions which sum to 400, e.g. 100 and 300 (or less). Thus a shift from a screening prevalence of .25 to .4 will be detected with 80 percent probability for predictors which split 300 versus 100, such as the poverty variable. A shift of .2 can be detected for variables as small as 100 per level with 85 percent probability. With a sample of 322 with a 40 percent positive rate a shift in screening of 15 percent again has an 80 percent power. Thus our sample should address the expected predictors of hypotheses 1 and 2.

The nature and level of family contacts (hypothesis 3) are measured using social support scales from other investigators, the familism scale developed by Sabogal et. al. [20], and the associational, affectual and reliance scales used by Markides [24]. These are all quantitative

Table 2. Sample sizes required for an 80 percent coverage probability by a ±5 percent confidence interval, with 25 percent design effect and 80 percent response rate.

Prevalence	95 percent confidence level		90 percent confidence level	
	Sample Size	Adjusted for Non Response and Design effect	Sample Size	Adjusted for Non Response and Design effect
10 percent	154	241	111	173
20 percent	267	417	190	297
30 percent	349	545	248	387
40 percent	394	616	281	439

Table 3. Power as a function of shift from baseline and predictor distribution

Shift	N1	N2	Power
.15	300	100	.8
.2	101	100	.85
.15	122	200	.8
.2	101	200	.93

scales with standard deviations smaller than those of the prevalence rates, hence the confidence intervals will be smaller.

Sample Design

The goal of the survey is to obtain a representative sample of the Mexican American women 50-74 years of age residing in blocks or block groups of Brazoria, Galveston, and Matagorda counties. Described below is the procedure we used to select the sample with data at the block group level from the Bureau of the Census.

The 1990 census indicates the target population contains about 3760 women. Available block group (BG) data indicate these women are contained in a population of <5760 Hispanic females ages 50-74. The target counties contain 191,541 housing units of which 82% are occupied. Our budget allows for listing and enumerating 12,000 housing units to obtain a sample of 600 Mexican American women age 50 to 74. The objective of the sample design was to identify a random sample within the constraint of listing and enumerating 12,000 housing units.

The first step was to determine the density of Hispanic women 50-74. Block group data allowed us to classify block groups according to the ratio of: 1) total of Hispanics, 2) total Mexican-Americans and 3) Hispanic (but not Mexican-American) women 50-74 to the number of housing units. Block data does not provide information on 1) the number of total Mexican-Americans and 2) the number of Hispanics or Mexican-Americans by gender or age. Therefore, we estimated the number of eligible Mexican-American women in our sample based on the proportion of total Hispanic women 50-74 at the block group level and total Hispanics and number of housing units at the block level.

In the second step we eliminated all blocks which have no Hispanics at the block level. This was done manually from a printout of Hispanics and housing units for each block within the three county sampling area. This reduced by about half the number of housing units containing the target population.

In the third step we determined the target segment size. A segment is a contiguous collection of housing units that are listed and enumerated. Our target sample size was 600 of which we expected an 80% response rate or a total of 480 completed interviews. There were a number of options available to determine the proportion of rural and urban sample sizes, such as over sampling rural areas to obtain equal sample sizes of 300 rural and 300 urban, fixed sizes (200 rural + 400 urban, 100 rural +500 urban) or a proportional sample of target subjects to housing units (81 rural + 519 urban). We have chosen to use a proportional sample with 80% coverage of total households. This resulted in needing 430 rural subjects located in 13,326 units and 2,756 urban subjects in 52,861 units. To locate the proportion of this sample to yield 600 eligible subjects would require about 12,461 housing units, which satisfied our budget requirement.

For segment sizes, these proportions resulted in approximately 31 and 19 units to identify each eligible rural and urban subject, respectively. For practical reasons, we wanted to average 2 eligible women per segment. This suggested an average segment size of about 60 housing units.

Based on available data, an estimated number of Hispanic and Mexican-American females 50-74, the yield or number of housing units required for each eligible subject and the number of Mexican-American females 50-74 expected to be located in each segment was made at the block level.

In the final step we identified and selected the segments for enumeration. After eliminating blocks with no Hispanics, blocks were aggregated within counties, tracts and block groups. Beginning with the first eligible block, consecutive blocks were aggregated until approximately 60 housing units was reached. The corresponding number of Hispanics contained in those blocks was recorded. This resulted in the final listing of segments to be randomized for selection. As expected several blocks contained well over 60 units. These larger blocks were grouped into multiple segments that were "chunked" later if randomly chosen. For example, a block containing about 120 units would be considered 2 separately numbered segments. If one of those segment numbers was chosen, the multiple segments would be chunked to determine which housing units need to be enumerated.

All block aggregations were given a pre-specified segment number. From these a random number of segments was selected equal to the proportion of urban and rural housing units. These selected segments represented primary sample units (PSUs) to be used for enumeration and interviewing. There are 41 rural segments yielding 91 eligible subjects in 2637 housing units and 155 urban segments yielding 502 eligible subjects in 10,123 housing units. A list of these segments is contained in Appendix 1. Note that since each segment and therefore each housing unit has a known probability of selection, this is a random sample of the eligible block group population.

Enumeration and Interviewing Procedures

A contract was developed and signed with Louis Harris and Associates to perform the fieldwork and data processing required for the survey. This includes listing and enumerating all housing units in the sample, then interviewing eligible subjects. This section describes the procedures they are using.

Project staff at UTMB have provided maps of the designated segments for enumeration. An example of the maps for one of the 166 segments is given in Appendix 2. These maps include a 1990 Census map and a Delorme map. The Census maps were purchased from the Bureau of the Census. Delorme maps were created using the Delorme Street Atlas USA software program version 3.0 for Windows. These maps are generally easier to read than the Census maps and may give more detail on street names.

Segments are being released to the interviewers in three replicates as defined by Dr. Daniel Freeman, co-investigator and survey statistician. Each replicate will be representative of the entire sample. With this method, if it looks like there will be more than 600 subjects, the final set of segments can be reduced or eliminated. If it looks like there may be less than 600 eligible subjects, Louis Harris will discuss the possibility of adding subjects with Dr. Freeman and also the cost implications of adding such segments.

Each segment has an identified starting point from which the interviewer will be expected to screen every household for an eligible subject. Where there have been sizable changes in the segment's housing stock, the map is referred back to Mr. Tony DiNuzzo or Dr. Daniel Freeman for clarification. Units are enumerated with the form in Figure 3.

A subject is defined as eligible if she is female, self identifies as Mexican-American and is between the ages of 50 and 74. The screening is door-to-door using the introduction in Figure 4.

Four attempts to screen the household in an occupied unit are made. If no one is at home during any attempt, the composition of the household will be obtained from a neighbor or city directory. This will be used to help us assess the level of coverage of sampled blocks we attain. For women identified as eligible, interviewers attempt an interview immediately. Otherwise, at least five attempts (including screen) are made to contact and interview the woman unless she explicitly refuses.

Louis Harris will provide UTMB staff bi-weekly with the following information on each segment:

number of housing units
number of units enumerated
number of people in enumerated nits
number of eligible subjects in enumerated

This information will be compared to what was expected based on preliminary estimates on each segment as described in Appendix 1.

Interviewer Training

Louis Harris has employed six bi-lingual, female interviewers for this study. They have had extensive experience collecting health survey data as part of Dr. Markides study on the health of elderly Mexican-Americans.

The six interviewers were brought to Galveston on June 30 for a training session that included the following topics:

background and general overview of the study
enumeration procedures
securing the interview (introduction, confidentiality, callbacks,
preventing and turning refusals)
probing guidelines
question by question instructions
informed consent

Figure 3

LISTING SCREENING SHEET MAMMOGRAPHY STUDY

728250

Sample Point #_____ Interviewer_____

Record #	Address or unit description	Unit type	ATTEMPTS 1	2	3	4	Special 5th
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							

Unit type codes:
H - Single-dwelling house
D - Duplex
A - Apartment
T - Trailer/mobile home
C - Condominium, townhouse or Rowhouse

Attempt codes:
A - Appointment
CB - Callback
NA - No Answer
NE Acc - Access
NE DEAF - Deaf
NE HOST - Hostile
NE Ill - Ill
NE LANG - Language
REF - Refused
SO - Screenout
TERM - Terminate
VAC - Vacant
X - Completed Interview

Figure 4

SCREEN FOR ELIGIBLE SUBJECTS

Hello, I'm _____ from Louis Harris and Associates, the national survey research firm in New York. We are conducting a study about the health of women in your community and we'd like to speak to an adult in the household.

To begin, I would like to ask some very general questions about your household.

QS1 How many women in this household are in each of the following age categories: (READ LIST)

under 18 _____ 18-49 _____ 50-74_____ 75+_____

INTERVIEWER:* IF NO ONE IN HOUSEHOLD 50-74 THEN TERMINATE
* IF ONE PERSON 50-74 ASK TO SPEAK TO THAT PERSON
* IF MORE THAN ONE PERSON 50-74, SCREEN ALL FOR FURTHER ELIGIBILITY REQUIREMENT

QS2 Are you of Mexican or Mexican-American origin or descent?

In addition, interviewers were given training in computer assisted personal interviews (CAPI). This is the method used by Louis Harris to administer the questionnaire and collect the data. Materials provided during the session included an interviewer training manual, question by question instructions that could be used as aids during the interview process, and a procedures manual for enumeration.

Following the session, procedures were field tested by two interviewers in five Galveston segments not included in the study sample. Information from the pre-test was reviewed by UTMB staff and several areas identified for further improvement before beginning the survey: correcting errors in the CAPI system, providing additional training to the interviewers in enumeration, and making changes to the questionnaire. It is anticipated that this work will be completed by the end of July and that the survey will go into the field in August.

Questionnaire

A questionnaire was developed that collects information on measures needed to examine the relationships among mammography use and predisposing, enabling and reinforcing factors in the PRECEDE model (Figure 2). The questionnaire also includes questions that will be used to evaluate the feasibility of a family based intervention to encourage screening behavior. Below is a summary of the questions and scales used in the questionnaire. A copy of the questionnaire is contained in Appendix 3. References to specific questions in the text below are given in parentheses with the questions number(s).

Predisposing Factors:

Demographic information is collected on age (A1,A2), education (A5, A5a), and employment status (A8). Education is measured as highest grade or year of regular school completed. Employment status is assessed in terms of whether the subject is currently employed, a homemaker, on disability or retired.

Acculturation is measured with the Hazuda acculturation scale [36]. The items measure proficiency in English (N1-N3), language usage (N4-N5), value placed on culture (N6-N8), attitude toward traditional family structure (N9-N15) and interaction with mainstream society (N16-N21).

We use the SF-36 [37] developed by the Medical Outcomes Trust to measure health status. The SF36 includes scales that measure eight dimensions of health: physical functioning (B3), role limitation (B4a-B4d), bodily pain (B7, B8), social functioning (B6, B10), mental health (B9b-B9d, B9f, B9h), role limitations due to emotional problems (B5a-B5c), vitality, energy or fatigue (B9a, B9e, B9g, B9i) and general health perceptions (B1, B11a-B11d). Changes in self-rated health status compared to the previous year are also assessed (B2).

The subject's attitudes about preventive care are determined from her utilization of breast self exam (E22-E24), breast physical exam (E20-E21a), and yearly routine check-ups (C8). Knowledge of screening recommendations for breast cancer and the benefits of early detection are assessed with questions on the age (G1) and frequency (G2-G3) women should have mammograms and chances of surviving breast cancer if detected early (G5).

Her perceived susceptibility and risk is determined from how much she worries about getting breast cancer (G6, G7), her family/personal history of breast cancer (D1-D5) and whether or not friends have had breast cancer (D6). Fatalistic attitudes are measured with Cuellar's fatalism scale [38] (Q1-Q8).

The impact of concerns about mammography on mammography use is assessed with a question on why a woman has not had a mammogram or not had one in the past two years (E13).

Enabling:

Income and measures of financial strain are measured with questions on income from all sources (R3), reported difficulty meeting monthly bills (R1) and ability to make ends meet (R2). Information on health insurance coverage is also collected (R4-R9). The subject's usual source of care is determined with questions on whether or not the subject has a regular doctor (C4), a usual source of care (C1, C10-C12) and the type of usual source (if any) (C2-C3).

Proximity to screening services is measured as distance and travel time between the subject's residence and the nearest screening facility. Screening facilities will be identified using a data base of mammographic screening facilities maintained the Texas Data Cancer Center. We measure access to transportation with questions on how subjects get to the doctor C5, how long it takes to get there (C6) and any difficulty arranging transportation (C7).

Reinforcing Factors:

Marital status is determined from the questions: Are you married, divorced, widowed or never married (A6)? For those ever married, subjects will be asked the length of time they have been married, separated, divorced or married. Marital satisfaction is measured with a scale from Markides three generations study (M1-M10). The influence of husband's health and his involvement with the subject's health is also assessed (M11-M14).

Social networks and social supports are measured in terms questions from the Berkman-Syme scale of social support [39] (K3-K6). Our specific measures of familism are living arrangement (I1, I2), number of children (J1, J2), frequency of contact with children (J1d, J1e, J2e, J2f) and Sabogal et. al.'s [20] measures of the three factors in his familism scale - familial obligations, support from the family and family as referents (P1-P14).

We also employ scales from Markides' study of three generations of Mexican Americans to measure intergenerational association and reliance of older women on their daughters and/or

other close younger female relatives. The association scale measures objective interactions with questions on how often the respondent (an older women) engages in activities with a close, younger female family member (L6a-L6g). Sources of help between the subject and the younger female relative is assessed with the reliance scale (L7-L13).

The influence of family members is further measured with questions regarding their involvement in the decision to have or not to have a mammogram, including whether any family members ever encouraged the subject to have a mammogram (E15, E15a) and whether she is more likely to get a mammogram if her husband (E17) or any other family member (E17d, L14a) suggests she get one.

Risks for barriers to care will be determined based on whether the subject reports ever postponing getting medical care (C9b). In addition, for a subject who reports never having a mammogram or not having one recently, the interviewer will ask for reasons why - including barriers such as cost or lack of insurance (E13).

Mammography Use

Mammographic screening use is based on whether the subject ever had a mammogram and if so, whether she had one in the past two years (E1-E3). For a subject who reported she had a mammogram, the interviewer will ask what factors influenced her decision to get her most recent one (E8). The questionnaire also collects information the date of the subject's most recent mammogram (E3), why she had the mammogram (health problem or not) (E6) and at what facility she received it (E5).

Spanish Translation of Questionnaire

The questionnaire was initially translated by a member of the study staff (S. Black). To the extent possible, existing translations of questions that have been used in other surveys were incorporated into the initial version of the Spanish questionnaire.

This translation was reviewed by two persons whose primary language is Spanish - Magda Brown (a translator with UTMB's Language Assistance Office) and Dr. Marguerita Alegria (a member of the study's Advisory Group). It was also back translated by a member of the community whose primary language was Spanish and meets the eligibility criteria of our study (Mexican-American, age 50-74). Revisions were made based on Ms. Brown's and Dr. Alegria's recommendations and the results of the back translation. The revised version was pre-tested with a Spanish speaking woman (in the age range 50 to 74) from the local area. Further revisions were made based on this pre-test. A final version was constructed after the interviewer training session and field testing.

Validity of Mammography Self-Reports

We will conduct a separate sub-study to assess the validity of the mammogram self-reports. This will be performed in the second year of the study. The methods for this sub-study are presented below.

The goals of our validation research are:

1) to obtain estimates of the extent of over-reporting (or under-reporting) of mammograms in the first two years prior to the survey;

2) to examine the relationship between patient characteristics and errors in self reporting.

In our evaluation of self-reports, we will investigate reporting errors within the 12 month and 24 month periods prior to the survey. Since we are primarily interested in screening mammograms, women who report having a mammogram for health problems are excluded.

Two sources of information will be utilized to verify the mammogram reports: 1) records of the radiology facilities where subjects reported receiving mammograms and 2) Medicare billing files. These sources of data and our approach for investigating reporting error is described in the following sub-sections.

Radiology Facility Records

When a women has answered the questions on mammography we will ask for her consent to review her medical records (included in informed consent). Based on a study by Sudman et al. [40] we estimate 84% will give us permission. For women who give their consent, we will review their medical records in the facilities where they report having had a screening mammogram. Documentation will be required that one was actually performed (e.g. radiology report) and not just ordered. UTMB is the major provider of screening mammograms in the three counties, performing 70% of all screening mammograms in this area (based on screening services reported in the Texas Cancer Center data base).

Medicare Data

The Health Care Financing Administration maintains a series of statistical files containing billing information on all services provided to Medicare Beneficiaries. Medicare began covering screening mammograms in January 1991 under its supplemental insurance plan (Part B). Radiologists' claims (bills) for their professional fees can be used to confirm self reports of mammograms. Claims for screening mammograms will have a diagnosis code (in ICD-9-CM [41]) of V16.3, V10.3, V72.5, or V15.89 and a procedure code (in Current Procedural Terminology [42]) of 76092.

In terms of coverage, preliminary data from Dr. Markides study of elderly Mexican-Americans in the southwest indicate that approximately 88 percent of Mexican-American women age 65 to 74 are enrolled in Medicare and about 84 percent are covered under Part B, which pays for screening mammograms. Since 65 to 74 year olds will comprise about 28 percent of our sample, we estimate that about 24 percent (.28 x .84 x 100) of all our subjects will have Medicare Part B.

The Medicare data supplement the medical records review in several ways. First, for women who had a screening mammogram but cannot remember where, the physician claims could provide that information if Medicare paid for the mammogram. Second, since the data are extracted by the beneficiary's health insurance claim number, all mammograms paid by Medicare will be available for analysis whether or not they were provided by a Texas radiologist. Mammograms from facilities that are difficult to access (e.g. out of state) can therefore be verified. Third, the data provide an additional source of information on under-reporting. We will be checking the claims of all beneficiaries who consent to have their records reviewed, whether or not they report a mammogram in the survey. Fourth, the claims provide a back-up for cases where the medical records may have been lost or the procedure has not been recorded.

As a supplemental source of information, the Medicare data have some limitations. Previous research has found that a small percent of procedures do not appear in the claims files. Also, women who have their mammograms covered by some other source of funds or who participate in free community screening programs will not have claims for their mammograms in the data base.

Sample Size for Validation

Based on the above estimates, we expect to have 414 subjects participating in our validation study: 0.84 (consenting proportion) x 493 (net interviews) = 414. This allows us to project our likely confidence intervals for the agreement percentage. Several alternatives are shown for a 95% confidence interval in Table 4. If our agreement is poor (≈50%) then the interval width is 0.1. For good agreement (80%) it is slightly narrower (0.08).

Table 4 Confidence interval for agreement (n = 400)

Agreement Proportion	95% Confidence Interval lower	upper	Width
0.50	0.45	0.55	0.10
0.60	0.55	0.65	0.10
0.70	0.66	0.74	0.09
0.80	0.76	0.84	0.08
0.90	0.87	0.93	0.06
0.95	0.93	0.97	0.04
0.99	0.98	1.00	0.02

Analysis

Our study's conceptual framework is based on Phase 4 of the PRECEDE model, where specific factors are identified and assigned priorities for focusing the intervention. One goal of the analysis plan is to evaluate statistically the relative effects of the predisposing, enabling and reinforcing factors on mammographic screening. Other goals are to

evaluate selected aspects of the survey methodology, test hypotheses of interest, and provide information for planning a culturally specific intervention for older Mexican-American women. To meet these goals, the data analysis plan has five objectives:

1) to evaluate the data and the sampling process;

2) to assess the agreement between self reports of mammography and documentation in the medical records and Medicare claims data;

3) to obtain estimates (and their standard errors) of mammographic screening by selected population characteristics;

4) to examine the effect of the predisposing, reinforcing and enabling factors on mammographic screening;

5) to summarize information on family structure and the use of health services that would be useful for program implementation.

The analyses pertaining to these objectives will be performed in the second year of the study once the data have been collected. The analysis plans are described below.

Evaluation of Survey Methodology

The first step in the analysis will be the evaluation of data and the sampling process. The data will be evaluated by univariate statistics and plots to search for unusual or outlying observations. The sampling process will be evaluated by comparing the weighted population counts to those reported by the Bureau of the Census for the target counties (Table 2).

Analysis Plan For Validation

For the subjects participating in the study, we will classify them first as "reported a mammogram in the 12 months prior to the date interviewed" or "reported no mammogram in the 12 months prior to the date interviewed." We will also classify them as "reported a mammogram in the 24 months prior to the date interviewed" or "reported no mammogram in the 24 months prior to the date interviewed." Both their medical records and claims will be checked for documentation of a screening mammogram in the given time period (12 months or 24 months). If either source verifies that at least one screening mammogram was performed in that period, then the self-report is considered "valid."

The data will be arrayed in two 2x2 tables, as shown in Table 5. The diagonal cells represent the cases with agreement between medical records/claims and self report for the two time periods. We will compute both Cohen's kappa and the simple percent agreement. The latter is more useful descriptively, and the former can be employed in logistic regression where the outcome is agree or disagree. In the logistic regression we will search for patient characteristics which may be associated with agreement. These characteristics include age, education, and insurance status, among others. The kappa statistic is given by $\kappa = (p_a - p_o) / (1 - p_o)$, where p_a is the observed agreement and p_o is the expected

Table 5 Agreement data arrays at 12 and 24 months

Self Report 12 Months	Medical Records or Claims 12 Months		Self Report 24 Months	Medical Records or Claims 24 Months	
	Yes	No		Yes	No
Yes	a_{12}	b_{12}	Yes	a_{24}	b_{24}
No	c_{12}	d_{12}	No	c_{24}	d_{24}

agreement under a hypothesis of independence [43]. The observed agreement is $p_i = (a_i + d_i)/(a_i + b_i + c_i + d_i)$, where I = 12 or 24.

The validity study will result in estimates of measurement error. If measurement error exceeds 10 percent of the mean we will adjust our test statistics to reflect this [44].

Estimates of Mammographic Screening

The next step in the analysis will be the preparation of prevalence estimates. These will use the inverse of the probabilities of selection to weight the data up to the county populations. Since a one stage cluster sample design (blocks form the clusters) was employed, the estimation of standard errors of the prevalence rates is a straight-forward exercise [45].

Effects of Predisposing, Enabling and Reinforcing Variables

The conceptual framework based on the PRECEDE model has regular mammographic examination as an end point. This is a binary dependent variable with a variety of qualitative (categorical) and quantitative (continuous) predictor (independent) variables. The usual statistical model is based on a logistic distribution where the parameters are estimated with the usual likelihood ratio methods. We will do this in blocks where each domain of variables in the PRECEDE model is entered. The blocks are compared for statistical significance using a joint

likelihood ratio test. In addition, the net information in each block will be obtained using Somer's D statistic which is a transformation of the area under a Receiver Operating Characteristic Curve. This follows the methodology of Freeman, Alegria, Vera, et al. [46]. This allows the comparison of non-hierarchical logistic regression models.

If one or more blocks are found significant, the specific factors within a block will be assessed using stepwise selection and significance testing. This allows us to examine which components of the blocks in the PRECEDE model need to be manipulated in a specific intervention. When variables of a specific block are being considered, the other, statistically significant, block will be held constant. After the detailed analysis of each block is completed, we finish the analysis by searching among all variables regardless of block membership. This purely statistical model will then be compared to what was obtained from the analysis of the fine structure of the blocks. These comparisons may suggest refinements of the PRECEDE model which would not otherwise be apparent. All analyses will be adjusted for the survey design effects through the use of SUDAN from the Research Triangle Institute.

Descriptive Information on Family Structure, Family Relationships and Use of Health Services

As noted in the Introduction, the motivation for this survey arises from a proposed intervention that would encourage screening behavior in older women through communication with their younger daughters, granddaughters and other female relatives. The younger women can be contacted and exposed to screening information as they visit maternal and child health clinics for routine obstetric/gynecology services and for their children's pediatric services.

Hence, another objective of the survey is to obtain descriptive information on family structure and family relationships. For example, we may find that strong family relationships is a good predictor of mammographic screening through the analysis process described above, but few women may have such strong ties. The prevalence of certain characteristics about the older women is therefore critical to setting priorities and focusing our intervention. For this phase of the analysis, frequency counts (and percent distribution) will be generated for all the predisposing, enabling and reinforcing characteristics.

CONCLUSION

Based on the Statement of Work, the major activities in the first year are: 1) hiring and training the interviewing staff; 2) translating, pre-testing and revising the questionnaire; 3) implementing the sampling design and survey procedures; and 4) writing and testing computer programs for data entry and tracking subjects. A summary of our progress with respect to each of these activities is given below.

Hiring and Training the Interviewing Staff

A subcontract with Louis Harris & Associates was signed to perform the field work. Under this subcontract, experienced bi-lingual interviewers have been hired to conduct the interviews. They were trained in aspects of the questionnaire, informed consent and listing/enumeration procedures that are unique to this survey.

Translating, Pre-testing and Revising the Questionnaire

A questionnaire was developed to collect information required to test the hypotheses of interest in the study. It contains questions that will allow us to measure the predisposing, enabling and reinforcing factors in our conceptual model. The questionnaire was translated, back translated (Spanish to English) through a series of revisions. The final version was pre-tested in the field by the interviewers and resulted in three minor changes.

Implementing the Sampling Design and Survey Procedures

A one stage cluster sample was designed to identify a random sample of Mexican American women age 50-74 residing in the three counties of Galveston, Brazoria and Matagorda, within our budget constraints. Our budget allows for listing and enumerating 12,000 housing units.

This was accomplished using block group and block level data from the Bureau of the Census. Based on these data, the primary sampling units - which are segments or contiguous collections of housing units - were selected. There are 41 rural segments and 155 urban segments.

Individual packets of information on each segment were prepared by UTMB staff. These packets contain maps of all selected segments, with the area to be listed and enumerated highlighted in yellow to help the interviewers locate the housing units to be surveyed. A procedures manual was written for training and reference purposes.

Writing and Testing Computer Programs For Data Entry and Tracking Subjects

Louis Harris is using a computer assisted personal interview (CAPI)to collect the data. They have completed the programming for CAPI and are currently making changes based on

problems identified in the field pre-test. Automatic checks on the data are performed as the interviewer administers the questionnaire. Information captured through CAPI is stored in a computer file that is ready for analysis at the close of the interview. Hence, there are no additional data entry tasks beyond typing in responses during the interview.

In addition, UTMB staff have created dbase files containing information on each segment. These files contain the expected number of housing units and the expected number of eligible women in each segment. This information will be used to track the progress of the survey and to monitor individual interviewer's work in terms of screening housing units for eligible subjects. Large deviations from expected will be identified, reported back to Louis Harris and if necessary, investigated by members of the UTMB staff.

In terms of timing, the original plan was to conduct interviews from February 1997 through February 1998. We are starting the interviews later than expected - in August 1997 - due to subcontract negotiations and more extensive pre-testing of our survey procedures. However, with twice as many interviewers and the efficiencies in data entry and data processing with CAPI, we expect to finish interviewing sooner than expected - in November 1997.

REFERENCES

1 Solis JM, Marks A, Garcia M, Shelton D: Acculturation, access to care, and use of preventive services by Hispanics: Findings from HANES 1982-1984. Am J Pub Health 80 (supplement):11-19, 1990.

2 Stein JA, Fox SA: Language preference as an indicator of mammography use among Hispanic Women: J Natl Cancer Inst 82: 1715-1716, 1990.

3 Longman AJ, Saint-Germain MA, Modiano M. Use of breast cancer screening by older Hispanic Women: Public Health Nursing 9:118-124, 118, 1992.

4 Richardson JL, Marks G, Solis JM, Collins-LM, Birba L, Hisserich JC: Frequency and adequacy of breast cancer screening among elderly Hispanic women. Preventive Medicine 16:761-774, 1987.

5 Ruiz MS, Marks G, Richardson JL: Language acculturation and screening practices of elderly Hispanic women. Journal of Aging and Health 4:268-281, 1992.

6 Marks G, Solis J, Richardson JL, Collins LM, Birba L, Hisserich JC: Health behavior of elderly Hispanic women: Does culture assimilation make a difference? Am J Pub Health 77: 1315-1319, 1987.

7 Zapka JG, Stoddard A, Barth R, Costanza ME. Breast cancer screening utilization by Latina Community health center clients. Health Education Research 4: 461-478, 1989.

8 Suarez L. Pap Smear and mammogram screening in Mexican-American women: the effects of acculturation. American Journal of Public Health 84: 742-746, 1994.

9 Totolero-Luna G, Glober GA, Villareal R, Palos G, and Linares A. Screening practices and knowledge, attitudes and beliefs about cancer among Hispanic and Non-Hispanic white women 35 years old or older in Nueces County, Texas. Journal of the National Cancer Instutute Monographs no. 18: 49-56.

10 Fox SA and Roetzheim RG. Screening mammography and older Hispanic women: current status and issues. Cancer 74: 2028-2033, 1994.

11 Perez-Stable E, Otero-Sabogal R, Sabogal F, McPhee SJ, Hiatt RA. Self-reported use of cancer screening tests among Latinos and Anglos in a prepaid health plan. Archives of Internal Medicine 154: 1073-1081, 1994.

12 Calle EF, Flanders WD, Thun MJ, Martin LM. Demographic predictors of mammography and pap smear screening in US women. American Journal of Public Health 83: 53-60, 1993.

13 Elder JP, Castro FG, de Moor C, Mayer J, Candelaria JI, Campbell N, Talavera G, Ware LM. Differences in cancer-risk-related behaviors in Latino and Anglo adults. Preventive Medicine 20: 751-763, 1991.

14 Morgan C, Park E, Cortes DE. Beliefs, knowledge and behavior about cancer among urban Hispanic women. Journal of the National Cancer Instititute Monographs no. 18: 57-63, 1995.

15 Hoppe SK, Heller PL: Alienation, familism and the utilization of health services by Mexican Americans. Journal of Health and Social Behavior 16: 304-314, 1975.

16 Vernon SW, Vogel VG, Halabi S, Jackson G, Lundy RO, Peters GN: Breast cancer screening behaviors and attitudes in three racial/ethnic groups. Cancer 69: 165-174, 1992.

17 Murillo N: The Mexican American Family. In NN Wagner and MJ Haug (eds), Chicanos: Social and Psychological Perspectives Mosby, St. Louis, 1971.

18 Soriano FI: Hispanic familism: its role in the care of relatives challenged by AIDS or substance abuse. In M Sotomayor and A Garcia (eds), Elderly Latinos: Issues and Solutions for the 21st Century, National Hispanic Council on Aging, Washington DC, 1993.

19 Moore JW: Mexican-Americans. Prentice Hall, Englewood Cliffs, NJ, 1970.

20 Sabogal F, Marin A, Otero-Sabogal R: Hispanic familism and acculturation; What changes and what doesn't?

Hispanic Journal of Behavioral Sciences 9:397-412, 1987.
21 Keefe SE, Padilla AM, Carlos ML: The Mexican American extended family as an emotional support system. Human Organization 38: 144-152, 1979.
22 Markides KS, Kraus N: Intergenerational solidarity and psychological well-being among older Mexican Americans: A three generation study. Journal of Gerontology 40:390-392, 1985.
23 Nall FC, Spielberg J: Social and cultural factors in the responses of Mexican-Americans to medical treatment. Journal of Health and Social Behavior 8: 299-308, 1967.
24 Markides KS, Boldt JS, Ray LA: Sources of helping and intergenerational solidarity: A three-generations study of Mexican Americans. Journal of Gerontology 4:506-511, 1986.
25 Ramirez AG, MacKellar DA, Gallion K. Reaching minority audiences: A major challenge in cancer reduction. The Cancer Bulletin 40:334-343, 1988.
26 Ramirez AG, Villareal R, Suarez L, Flores ET. The emerging Hispanic population: a foundation for cancer prevention and control. Journal of the National Cancer Institute Monographs no. 18: 1-9, 1995.
27 Wilson SL, Heckler J, eds: The Special Task Force on Rural Health Care Delivery in Texas, Report to 71st Legislature, February, 1989.
28 Green LW, Kreuter MW: Health Promotion Planning: An Educational and Envirnomental Approach. Mayfield Publishing Company, Mountain View, CA, 1991.
29 Aday LA, Andersen R: A framework for the study of access to medical care. Health Services Research 9:208-220, 1974.
30 Rosenstock IM. The health belief model and preventive health behavior. Health Education Monographs 2:354-386, 1974.
31 Rimer B, Jones W, Wilson C, Bennett D, Engstrom P: Planning a cancer control program for older citizens. The Gerontologist 23:384-389, 1983.
32 Zapka JG, Mamon JA. Integration of theory, practitioner standards, literature findings and baseline data: A case study in planning breast self examination education. Health Education Quarterly 9: 330-357, 1982.
33 Brailey LJ. Effects of health teaching in the workplace on women's knowledge, beliefs and practices regarding breast self-examination. Research in Nursing and Health 9:223-231, 1986.
34 Green LW, Rimer B, Elwood TW. "Public Education," in Cancer Epidemiology and Prevention, D. Shottenfeld and J Fraumeni, Jr. Eds. Philadelphia: W.B. Saunders, 1982.
35 Dallal GE: PC-SIZE: Consultant -- a program for sample size determinations, The American Statistician 44: 243, 1990.
36 Hazuda HP, Stern MP, Haffner SM: Acculturation and assimilation among Mexican Americans: scales and population-based data. Social Science Quarterly 69: 687-706, 1988.
37 Ware JE, Sherbourne CD: The MOS 36 Item Short-Form Health Survey: I Conceptual framework and item selection. Medical Care 30:473-483, 1992.
38 Cuellar I, Arnold B, Gonzales G: Cognitive referents of acculturation: Assessment of cultural constructs in Mexican Americans. Journal of Community Psycholody 23: 339-356, 1995.
39 Berkman LF, Syme SL: Social networks, host resistance, and mortality: a nine-year follow up study of Alameda County residents. Am J Epidemiol 109: 186-204, 1979.
40 Sudman S, Warnecke R, Johnson T, O'Rourke D. Cognitive aspects of reporting cancer prevention examinations and tests. National Center for Health Statistics. Vital and Health Stat 6(7), 1994.
41 International Classification of Diseases, Ninth Revision, Clinical Modification, Fourth Edition, Practice Management Information Corporation, 1993.

42 American Medical Association, Physicians' Current Procedural Terminology, Fourth Edition, 1993.
43 Fleiss JL: Statistical Methods for Rates and Proportions, 2nd Ed., John Wiley and Sons, New York, 1981.
44 Gibbons RD, Hedeker D, Charles SC, Frisch P. A random effects probit model for predicting medical malpractice claims. Journal of the American Statistical Association 89: 760-767, 1994.
45 Cochran, WG: Sampling Techniques, 3rd Ed., John Wiley and Sons, New York, 1977.
46 Freeman DH, Alegria M, Vera M, Munoz CA, Robles RR, Jimenez AL, Calderon JM, Pena M: A receiver operating characteristic (ROC) curve analysis of a model of mental health services use by Puerto Rican poor, Medical Care 30: 1142-53, 1992.

APPENDIX 1

List of Segments

URBAN SEGMENT SAMPLE

10/9/96

Sample #	SEGMENT	BNA	BLOCK GROUP (BG)	BLOCK LIST AREA	# HU (average)	# HISPAN (BLA)	HOUSIN UNITS (HU (BLA)	HISPANI FEMALE 0-74 (BG)	HISPANI OTAL (B	# MEX TOTAL (BG)	# HISPANIC FEMALES 50-74 (BLA) Est.	# MEX FEMALES 50-74 (BLA) Est.	YIELD # HU/SUB (BLA)	# Mex Females 50-74 per segment
1	4, 5	601.1	3	312-316B	63.3	143	190	10	305	294	4.69	4.52	42.04	1.51
2	7	601.1	4	442-445	56	144	56	41	564	530	10.47	9.84	5.69	9.84
3	8	601.1	4	435B-447	69	85	69	41	564	530	6.18	5.81	11.88	5.81
4	12	601.1	5	509-517	77	46	77	9	143	115	2.90	2.33	33.07	2.33
5	15	601.2	4	403-07	50	13	50	15	137	116	1.42	1.21	41.49	1.21
6	22	601.2	5	506-08	71	40	71	8	121	117	2.64	2.56	27.76	2.56
7	25	601.12	1	108-11	82	36	82	18	224	201	2.89	2.60	31.59	2.60
8	26	601.12	1	112-23	56	96	56	18	224	201	7.71	6.92	8.09	6.92
9	43	603.2	1	107	78	7	78	15	259	253	0.40	0.39	200.00	0.40
10	44	603.2	1	108-114	54	38	54	15	259	253	2.20	2.15	25.10	2.00
11	45	603.2	1	115	50	14	50	15	259	253	3.42	3.34	54.53	3.34
12	51-53	604.1	4	416A	56.6	43	170	9	118	98	3.28	2.72	62.41	0.91
13	56	604.2	1	122-26	65	31	65	10	150	129	2.07	1.78	36.57	1.78
14	62	604.2	3	308-15	73	72	73	14	254	234	3.97	3.66	19.97	3.66
15	65	604.2	3	334-44	82	20	82	14	254	234	1.10	1.02	80.74	1.02
16	66	604.2	3	345-51	57	59	57	14	254	234	3.25	3.00	19.03	3.00
17	78	605.2	5	503	31	42	31	10	175	166	2.40	2.28	13.62	2.28
18	80	610	1	101-22	61	44	61	3	93	93	1.42	1.42	42.98	1.42
19	92	612	1	104-07	71	48	71	10	193	173	2.49	2.23	31.85	2.23
20	99	614	1	103-07	57	21	57	5	64	61	1.64	1.56	36.45	1.56
21	108	619.98	4	412-18	54.5	50	56	7	79	76	4.43	4.26	25.57	4.26
22	112	625.23	2	214-18	81	81	81	5	113	102	3.58	3.24	25.04	3.24
23	113	625.23	2	219	66	32	66	5	113	102	1.42	1.28	51.64	1.28
24	118	626.12	1	109	54	83	54	17	675	642	2.09	1.99	27.16	1.99
25	122	626.12	2	209-10A	103	124	103	15	374	349	4.13	3.85	26.75	3.85
26	134	626.22	2	201-03	64	92	64	26	657	609	3.64	3.37	18.96	3.37
27	136	626.22	2	205-06	68	92	68	26	657	609	3.64	3.37	20.15	3.37
28	140	626.22	2	214-15	48	113	48	26	657	609	4.47	4.15	11.58	4.15
29	155	628	5	502-11	62	127	62	7	424	399	2.10	1.97	31.42	1.97
30	179	629	3	324-25	55	59	55	32	589	533	3.21	2.90	18.96	2.90

URBAN SEGMENT SAMPLE

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31	181	629	3	328-29	56	85	56	32	589	533	4.62	4.18	13.40	4.18
32	185	629	4	422-26	64	57	64	14	347	326	2.30	2.16	29.62	2.16
33	191-192	629	5	505-08	57.5	105	115	13	401	375	3.40	3.18	36.13	1.59
34	199-201	1204	3	301	57.7	230	173	15	375	338	9.20	8.29	20.86	2.77
35	202-203	1204	3	302-12	61	145	122	15	375	338	5.80	5.23	23.34	2.61
36	204-207	1205	2	201	56.3	300	225	24	388	354	18.56	16.93	13.29	4.24
37	212	1205	3	331-37	64	34	64	15	183	172	2.79	2.62	24.43	2.62
38	222	1208	1	115-20	82	68	82	19	389	349	3.32	2.98	27.52	2.98
39	225	1208	1	129B-33	54	52	54	19	389	349	2.54	2.28	23.70	2.28
40	227	1208	2	201-07	60	51	60	17	371	305	2.34	1.92	31.23	1.92
41	232	1208	2	230-37	79	35	79	17	371	305	1.60	1.32	59.92	1.32
42	233	1208	2	238-40	76	32	76	17	371	305	1.47	1.21	63.05	1.21
43	235	1210	4	402-12	67	46	67	5	67	63	3.43	3.23	20.76	3.23
44	239	1212.01	6	603-05	65	9	65	4	26	25	1.38	1.33	48.82	1.33
45	242	1212.02	1	111-27	57	62	57	15	229	213	4.06	3.78	15.09	3.78
46	246	1212.02	3	309-16	89	68	89	9	115	114	5.32	5.28	16.87	5.28
47	247	1212.02	3	317-23	55	47	55	9	115	114	3.68	3.65	15.08	3.65
48	250	1213	2	203-204	66	27	66	9	152	137	1.60	1.44	45.80	1.44
49	252	1213	2	205-213	54	17	54	9	152	137	1.01	0.91	59.50	0.91
50	254	1213	2	222-27	69	50	69	9	152	137	2.96	2.67	25.86	2.67
51	261	1214	2	212-14	62	12	62	13	117	108	1.33	1.23	50.38	1.23
52	264,265-267	1216.2	2	205	60	76	240	25	331	305	5.74	5.29	45.37	1.32
53	276	1217	4	403-09	59	40	59	14	269	246	2.08	1.90	30.99	1.90
54	280	1217	4	423	25	21	25	14	269	246	1.09	1.00	25.01	1.00
55	287	1220	1	101-102	67	41	67	29	327	289	3.64	3.21	20.85	3.21
56	289	1220	1	106-07	60	52	60	29	327	289	4.61	4.08	14.72	4.08
57	291	1220	1	110-12	65	40	65	29	327	289	3.55	3.14	20.73	3.14
58,59,60	296, 297, 298	1220	2	207-211	67.7	146	203	11	299	263	5.37	4.72	42.97	1.57
61	302	1220	4	410-15	60	84	60	13	161	154	6.78	6.49	9.25	6.49
62	309	1220	6	608-09	62	24	62	17	214	191	1.91	1.70	36.44	1.70
63	311	1220	6	612-24	55	36	55	17	214	191	2.86	2.55	21.55	2.55
64	315	1220	7	716-28	73	79	73	32	336	313	7.52	7.01	10.42	7.01
65	316	1220	7	729-30	93	38	93	32	336	313	3.62	3.37	27.59	3.37
66	323	1221	1	101-02	56	14	56	14	178	168	1.10	1.04	53.88	1.04
67	324	1221	1	103-06	56	14	56	14	178	168	1.10	1.04	53.88	1.04

URBAN SEGMENT SAMPLE

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68	328	1221	1	115-16	71	51	71	14	178	168	4.01	3.79	18.75	3.79
69	340	1222	1	111-114	56	20	56	14	178	164	1.57	1.45	38.64	1.45
70	342	1222	1	120-22	95	63	95	14	178	164	4.96	4.57	20.81	4.57
71	344	1222	2	206-09	66	21	66	13	101	88	2.70	2.36	28.02	2.36
72	353	1222	4	410-14	83	39	83	15	171	144	3.42	2.88	28.81	2.88
73	356	1222	5	501-06	70	29	70	10	121	115	2.40	2.28	30.73	2.28
74	361	1223	1	101-118	46	14	46	7	60	59	1.63	1.61	28.64	1.61
75	371	1223	3	335B	80	46	80	24	147	131	7.51	6.69	11.95	6.69
76	374	1224	1	117-23	87	26	87	16	108	104	3.85	3.71	23.46	3.71
77	377	1224	2	210B	56	13	56	6	52	51	1.50	1.47	38.07	1.47
78	382	1226	3	311-15	71	104	71	32	242	223	13.75	12.67	5.60	12.67
79	386	1227	3	312-14	89	24	89	20	154	148	3.12	3.00	29.71	3.00
80	387	1227	3	315-17	79	14	79	20	154	148	1.82	1.75	45.21	1.75
81	401	1228.02	1	118-23	85	46	85	18	187	177	4.43	4.19	20.28	4.19
82	403	1228.02	2	206-09	76	28	76	14	142	133	2.76	2.59	29.39	2.59
83	408	1229.12	1	110-14	65	11	65	5	38	30	1.45	1.14	56.88	1.14
84	418-423	1231	3	301	61.7	151	370	22	232	191	14.32	11.79	31.39	1.97
85	424-425	1231	3	302	78	35	156	22	232	191	3.32	2.73	57.09	1.37
86	430	1232	2	209	78	15	78	19	171	148	1.67	1.44	54.07	1.44
87	438	1232	3	312-13	62	39	62	26	211	176	4.81	4.01	15.47	4.01
88	446	1232	5	507-508	61	34	61	11	92	80	4.07	3.53	17.26	3.53
89	451	1232	6	606-07	68	19	68	18	184	143	1.86	1.44	47.07	1.44
90	463	1232	8	812-15	69	83	69	57	503	458	9.41	8.56	8.06	8.56
91	465	1233	1	103-05	85	52	85	28	183	154	7.96	6.70	12.70	6.70
92	477;478;479	1233	3	313-16	72.3	34	217	20	205	190	3.32	3.07	70.58	1.02
93	480	1233	4	401-02	71	37	71	30	212	192	5.24	4.74	14.97	4.74
94	487	1233	5	507-09	78	57	78	35	228	189	8.75	7.25	10.75	7.25
95	488	1233	5	510-12	73	55	73	35	228	189	8.44	7.00	10.43	7.00
96	494	1233	6	612-13	73	23	73	30	224	211	3.08	2.90	25.16	2.90
97	499-502	1234	1	124	67.3	28	269	15	135	109	3.11	2.51	107.09	0.63
98	510	1235	1	112-13	60	47	60	17	155	135	5.15	4.49	13.36	4.49
99	511	1235	2	201-03	66	29	66	25	221	195	3.28	2.89	22.80	2.89
100	515	1235	2	212-14	73	14	73	25	221	195	1.58	1.40	52.24	1.40
101	535	1241	1	115-17	66	9	66	24	148	127	1.46	1.25	52.70	1.25
102	544	1241	3	312-16	85	39	85	24	234	213	4.00	3.64	23.35	3.64

URBAN SEGMENT SAMPLE

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103	552	1242	2	209-10	87	61	87	29	225	188	7.86	6.57	13.24	6.57
104	557	1242	3	308-11	73	56	73	22	212	179	5.81	4.91	14.88	4.91
105	564	1243	1	113-15	70	53	70	54	351	309	8.15	7.18	9.75	7.18
106	577	1244	1	101-05	63	42	63	10	72	47	5.83	3.81	16.54	3.81
107	581	1244	2	214-26	62	15	62	14	71	67	2.96	2.79	22.21	2.79
108	582	1244	2	227	86	34	86	14	71	67	6.70	6.33	13.59	6.33
109	583	1245	1	101-03	42	26	42	36	362	343	2.59	2.45	17.14	2.45
110	589	1245	1	121-24	63	35	63	36	362	343	3.48	3.30	19.10	3.30
111	595	1245	2	216-19	79	67	79	29	323	279	6.02	5.20	15.20	5.20
112	597	1246	1	101-03	66	55	66	39	354	313	6.06	5.36	12.32	5.36
113	602	1246	2	201-05	90	89	90	33	265	208	11.08	8.70	10.35	8.70
114	608	1246	3	313-16	84	121	84	48	427	379	13.60	12.07	6.96	12.07
115	618	1247	4	401-09	54	48	54	24	221	195	5.21	4.60	11.74	4.60
116, 117	625;626;627	1248	1	105	127.4	34	191	22	160	146	4.68	4.27	44.77	2.85
118	628	1248	1	107-10	69	64	69	22	160	146	8.80	8.03	8.59	8.03
119	642,643-645	1249	2	208-10	57.3	118	229	19	170	149	13.19	11.56	19.81	2.89
120	650	1250.02	1	107	59	10	59	25	207	182	1.21	1.06	55.56	1.06
121	653	1250.02	1	111	107	70	107	25	207	182	8.45	7.43	14.40	7.43
122	654-656	1250.02	1	112-113	83.5	46	167	25	207	182	5.56	4.88	34.19	4.88
123	661-662	1250.02	3	305-06	59	16	118	29	145	116	3.20	2.56	46.09	2.56
124, 125	665-666	1250.02	3	311-312	60	33	120	29	145	116	6.60	5.28	22.73	2.64
126-129	72,74,75,80,83-68	1250.02	4	408	242.4	249	849	49	518	434	23.55	19.73	43.02	5.63
130	688-692	1250.02	4	414	62.2	109	311	49	518	434	10.31	8.64	36.00	1.73
131-133	694,95,96	1250.02	4	419	140	21	210	49	518	434	1.99	1.66	126.18	1.11
134-135	698,699,700-703	1251	2	203	119.6	180	359	42	492	451	15.37	14.09	25.49	4.69
136	708	1251	2	210	84	54	84	42	492	451	4.61	4.23	19.88	4.23
137	716	1251	5	501-04	78	46	78	26	273	225	4.38	3.61	21.60	3.61
138-140	717,18,19,22-724	1251	5	505	180	158	480	26	273	225	15.05	12.40	38.70	4.65
141	727-729	1252	1	101	67	51	201	7	84	79	4.25	4.00	50.29	1.33
142	734	1301	1	110-13	58	98	58	63	767	728	8.05	7.64	7.59	7.64
143	736	1301	1	123-26	64	87	64	63	767	728	7.15	6.78	9.44	6.78
144	748	1302.98	1	112-116	58	105	58	44	628	595	7.36	6.97	8.32	6.97
145	756	1302.98	2	234-50	59	91	59	49	534	498	8.35	7.79	7.58	7.79
146	758	1302.98	3	301-10	65	19	65	16	289	276	1.05	1.00	64.70	1.00
147	765	1303	1	102-15	72	69	72	21	282	244	5.14	4.45	16.19	4.45

URBAN SEGMENT SAMPLE

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148	768	1303	1	142-47	76	67	76	21	282	244	4.99	4.32	17.60	4.32
149	770	1303	2	202-09	67	36	67	8	209	195	1.38	1.29	52.11	1.29
150	774	1303	3	311-17	66	61	66	8	248	227	1.97	1.80	36.64	1.80
151	782	1304	2	201-48	54	50	54	4	87	75	2.30	1.98	27.25	1.98
152	797	1306	3	332-37	57	120	57	71	713	666	11.95	11.16	5.11	11.16
153	799	1306	3	343-47	51	72	51	71	713	666	7.17	6.70	7.62	6.70
154	805	1306	5	501-05	78	46	78	8	157	136	2.34	2.03	38.42	2.03
155	806	1306	5	506-14	66	23	66	8	157	136	1.17	1.02	65.01	1.02
					10151.8							608.1973		499.39
					65.4987									

RURAL SEGMENT SAMPLE -10/9/96

Sample #	SEGMENT	BNA	BLOCK GROUP	BLOCK LIST AREA	# HU Avg	# HISPAN (BLA)	# HOUSING UNITS (HU) (BLA)	# HISPANIC FEMALES	# HISPANIC TOTAL (BG) 50-74 (BG)	# MEX TOTAL (BG)	# HISPANIC FEMALES 50-74 (BLA) Est.	# MEX FEMALES 50-74 (BLA) Est.	YIELD # HU/SUB (BLA)	# MEX FEMALE 50-74 pe SEGMEN
1	4	602.11	3	330A,330D	97	53	97	20	399	378	2.66	2.52	38.54	2.52
2	10	602.32	1	104B-105B	79	23	79	9	146	133	1.42	1.29	61.17	1.29
3	13	602.32	2	205	105	83	105	14	190	178	6.12	5.73	18.33	5.73
4	15	602.32	2	209-15	43	43	43	14	190	178	3.17	2.97	14.49	2.97
5 , 6	16,17,19-22	602.32	3	303B	123.4	287	432	27	613	553	12.64	11.40	37.88	3.26
7	24	602.32	3	306C-07B	66	42	66	27	613	553	1.85	1.67	39.55	1.67
8	29	603.1	1	101B, 02	47	57	47	59	744	696	4.52	4.23	11.11	4.23
9	32-33	603.1	1	112C	80	116	160	59	744	696	9.20	8.61	18.59	4.30
10	38	604.1	1	107	93	75	93	43	799	763	4.04	3.85	24.13	3.85
11, 12	39,40,41-43	604.1	1	108-109B	121.6	171	304	43	799	763	9.20	8.79	34.59	3.52
13	46	604.1	1	122,23,30B	78	89	78	43	799	763	4.79	4.57	17.05	4.57
14	54	605.2	1	121-23	81	27	81	17	249	239	1.84	1.77	45.78	1.77
15	55-57	605.2	4	402B,405C	52.7	208	158	8	307	197	5.42	3.48	45.43	1.16
16	59	605.2	5	501B-09	73	29	73	10	175	166	1.66	1.57	46.44	1.57
17	81	612	1	113-121	59	74	59	10	193	173	3.83	3.44	17.17	3.44
18	82-84	612	2	201C	66	70	198	12	202	183	4.16	3.77	52.56	1.26
19	85	612	2	208C	92	36	92	12	202	183	2.14	1.94	47.48	1.94
20	86	612	2	202,207,211C,212	63	24	63	12	202	183	1.43	1.29	48.78	1.29
21	87	612	2	217C	59	48	59	12	202	183	2.85	2.58	22.84	2.58
22	89	612	2	226-228	37	19	37	12	202	183	1.13	1.02	36.18	1.02
23	106	616	1	146-166	49	70	49	6	167	160	2.51	2.41	20.34	2.41
24	110	620.12	1	104-106	82	23	82	8	170	152	1.13	1.01	81.19	1.01
25	116 117	620.22	2	210C	69	64	138	5	103	92	3.11	2.78	49.73	1.39
26	124	624	1	106B-116	64	41	64	4	104	89	1.58	1.35	47.43	1.35
27	126 127128	1208	4	403B	54.3	64	163	5	148	131	2.16	1.91	85.17	0.64
28	133	1214	4	420-424	65	42	65	9	151	151	2.50	2.50	25.97	2.50
29	143	1223	4	402B-404	76	11	76	19	181	176	1.15	1.12	67.69	1.12
30	148	1223	4	417	48	12	48	19	181	176	1.26	1.22	39.19	1.22
31	150	1223	4	419	48	27	48	19	181	176	2.83	2.76	17.42	2.76
32	154	1223	6	601B-605	55	40	55	22	259	247	3.40	3.24	16.97	3.24

RURAL SEGMENT SAMPLE -10/9/96

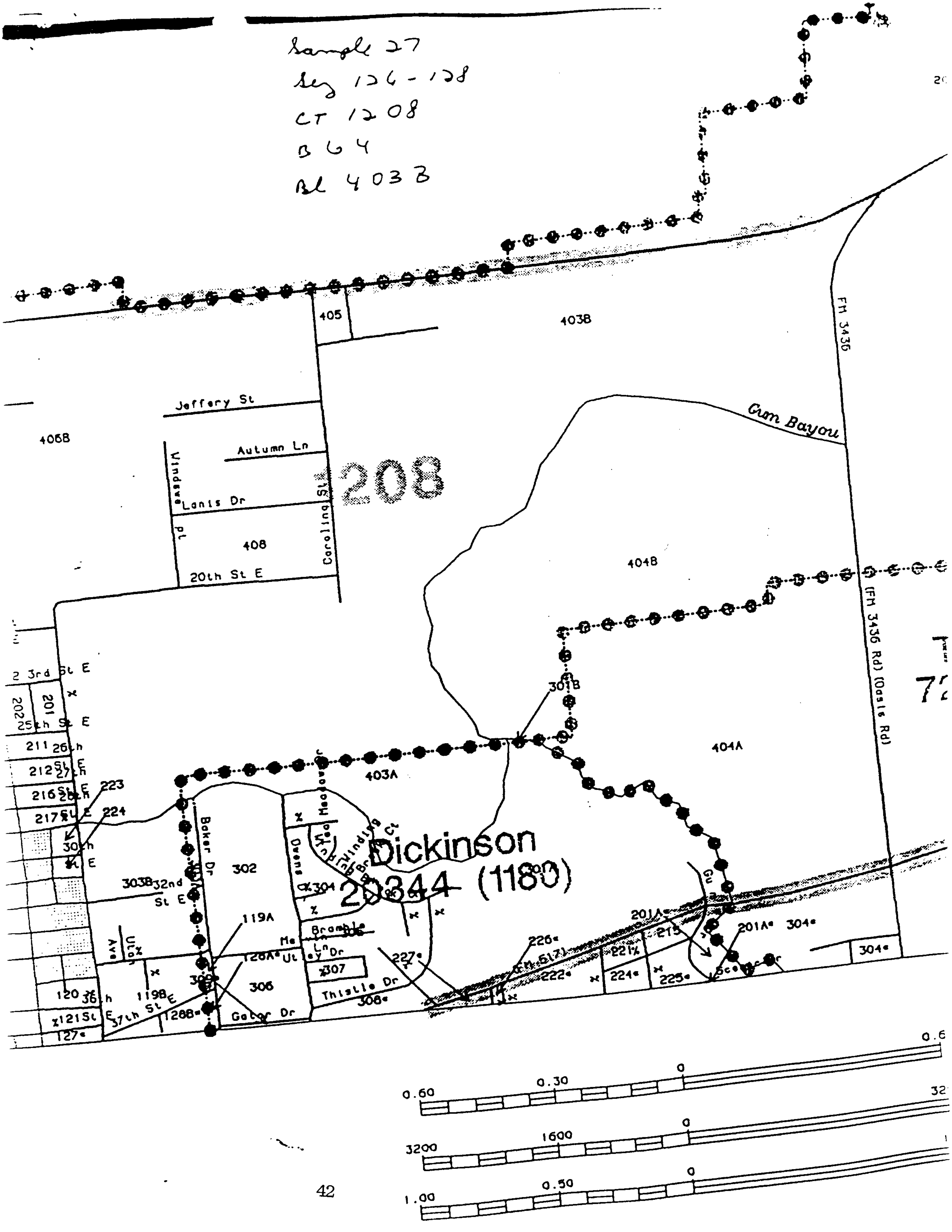
33	155-157	1223	6	610	64	92	192	22	259	247	7.81	7.45	25.76	2.48
34	174	1302.98	6	630-647	54	70	54	20	254	251	5.51	5.45	9.91	5.45
35	176	1302.98	8	850A,855A	69	24	69	6	146	139	0.99	0.94	73.48	0.94
36	179	1302.32	8	813-823	61	24	61	6	146	139	0.99	0.94	64.96	0.94
37	186	1305	5	507511	49	18	49	6	93	80	1.16	1.00	49.05	1.00
38	188	1305	5	530538539	44	23	44	6	93	80	1.48	1.28	34.47	1.28
39	206	1307	2	245-278	55	21	55	7	121	120	1.21	1.20	45.65	1.20
40	211	1307	3	307-330	68	33	68	21	381	353	1.82	1.69	40.35	1.69
41	218	1307	4	414-437	57	64	57	22	327	310	4.31	4.08	13.96	4.08
					2647									88.61
					64.56									

APPENDIX 2

Examples of Maps

(For rural sample #27, segment numbers 126-128)

Sample 27
Seg 126 - 128
CT 1208
B G 4
Bl 4038



Sample 27, Seg 127, CT1208 BG 4, 403B

29.602220N
95.327184W

LEGEND

SYMBOL DESCRIPTION	SYMBOL	NAME STYLE	FIPS CODE	CENSUS CODE
International	★ ★ ★ ★ ★ ★ ★ ★ ★	CANADA		
American Indian Reservation	X X X X X X X X X	CAMPO RESVN	10522	(0450)
Trust Land	X X X X X X X X X		10522	(0450T)
Alaska Native Regional Corporation	♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦	ALEUT ANRC		(14)
Alaska Native Village Statistical Area, Tribal Jurisdiction Statistical Area, or Tribal Designated Statistical Area	♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦	KAW TJSA	38870	(5340)
State[1]	▰ ▰ ▰ ▰ ▰ ▰ ▰ ▰ ▰	NEW YORK	(36)	
County[1]	■ ■ ■ ■ ■ ■ ■ ■ ■	ERIE COUNTY	(029)	
Minor Civil Division[2]	● ● ● ● ● ● ● ● ●	YORK TWP	83908	(070)
Census County Division	● ● ● ● ● ● ● ● ●	KULA DIV	91890	(030)
Incorporated Place	● ● ● ● ● ● ● ● ●	Rome City	63418	(3120)
Census Designated Place	● ● ● ● ● ● ● ● ●	Zena	84187	(4100)
Corporate Corridor	O O O O O O O O O	19900		
Census Tract or Block Numbering Area		5702.01		
Block Number (With Asterisk)[3]	326*			
Fishhook[4]				
Crew-of-Vessel	↓Tract ↓Block	↓2130.99 ↓9012		

Note: An international boundary also depicts a state boundary and a county boundary; a state boundary also depicts a county boundary. The symbols for all other coincident boundaries are shown alternately, as shown in the example:
e.g.: ■ ● ● ■ ● ● ■ ● ●

FEATURE	SYMBOL	NAME STYLE
Interstate Highway and Limited Access Road[5]		Interstate 535
Other Highway[5]		Rte 101
City Street, Other Connecting Road, or Dirt Road[5]		Marsh Ln
Jeep Trail, Walkway, or Stairway		Labelle Walk
Railroad		
Ferry Crossing	FERRY	
Pipeline or Power Transmission Line		
Ridge, Fence, Canyon, or Other Physical Feature		RIDGE
Nonvisible Boundary or Other Feature Not Elsewhere Classified		PROPERTY LINE
Perennial Stream, or Shoreline of Perennial Water Body		*Tumbling Creek*
Intermittent Stream, or Shoreline of Intermittent Water Body		*Piney Creek*
Large River, Lake, or Other Water Body		*Pleasant Lake*
Military Installation	N/A	Fort Belvoir
Park (National, State, or Local)		Yosemite
Mountain Peak		*Pikes Peak*
Inset Area	A	

[1] State or County; or their equivalent area for statistical purposes.

[2] A five-spoked asterisk following a minor civil division indicates that the minor civil division is coextensive with an incorporated place and has the same name.

[3] An asterisk following a block number indicates that the block number is repeated elsewhere in the block or is shown partially on an adjacent map sheet.

[4] A fishhook across a map feature or boundary indicates that the areas on both sides of the feature or boundary belong to the same census block.

[5] A % symbol indicates that there was insufficient [illegible] to plot a road name. Road names in parentheses indicate that the road has more t[illegible]me.

29.602220N
95.327184W

LEGEND

SYMBOL DESCRIPTION	SYMBOL	NAME STYLE	FIPS CODE	CENSUS CODE
International	★ ★ ★ ★ ★ ★ ★ ★ ★	CANADA		
American Indian Reservation	X X X X X X X X X	CAMPO RESVN	10522	(0450)
Trust Land	X X X X X X X X X		10522	(0450T)
Alaska Native Regional Corporation	♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦	ALEUT ANRC		(14)
Alaska Native Village Statistical Area, Tribal Jurisdiction Statistical Area, or Tribal Designated Statistical Area	♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦	KAW TJSA	38870	(5340)
State[1]	▰ ▰ ▰ ▰ ▰ ▰ ▰ ▰ ▰	NEW YORK	(36)	
County[1]	■ ■ ■ ■ ■ ■ ■ ■ ■	ERIE COUNTY	(029)	
Minor Civil Division[2]	● ● ● ● ● ● ● ● ●	YORK TWP	83908	(070)
Census County Division	● ● ● ● ● ● ● ● ●	*KULA DIV*	*91890*	*(030)*
Incorporated Place	● ● ● ● ● ● ● ● ●	Rome City	63418	(3120)
Census Designated Place	● ● ● ● ● ● ● ● ●	*Zena*	*84187*	*(4100)*
Corporate Corridor	○ ○ ○ ○ ○ ○ ○ ○ ○	19900		
Census Tract or Block Numbering Area		5702.01		
Block Number (With Asterisk)[3]	326*			
Fishhook[4]				
Crew-of-Vessel	‡ Tract ⊥ Block	‡ 2130.99 ⊥ 901Z		

Note: An international boundary also depicts a state boundary and a county boundary; a state boundary also depicts a county boundary. The symbols for all other coincident boundaries are shown alternately, as shown in the example:
e.g.: ▰ ● ● ■ ● ● ■ ● ●

FEATURE	SYMBOL	NAME STYLE
Interstate Highway and Limited Access Road[5]		Interstate 635
Other Highway[5]		Rte 101
City Street, Other Connecting Road, or Dirt Road[5]		Marsh Ln
Jeep Trail, Walkway, or Stairway		Labelle Walk
Railroad		
Ferry Crossing	FERRY	
Pipeline or Power Transmission Line		
Ridge, Fence, Canyon, or Other Physical Feature		RIDGE
Nonvisible Boundary or Other Feature Not Elsewhere Classified		PROPERTY LINE
Perennial Stream, or Shoreline of Perennial Water Body		*Tumbling Creek*
Intermittent Stream, or Shoreline of Intermittent Water Body		*Piney Creek*
Large River, Lake, or Other Water Body		*Pleasant Lake*
Military Installation	N/A	Fort Belvoir
Park (National, State, or Local)		Yosemite
Mountain Peak		*Pikes Peak*
Inset Area	A	

[1] State or County; or their equivalent area for statistical purposes.

[2] A five-spoked asterisk following a minor civil division indicates that the minor civil division is coextensive with an incorporated place and has the same name.

[3] An asterisk following a block number indicates that the block number is repeated elsewhere in the block or is shown partially on an adjacent map sheet.

[4] A fishhook across a map feature or boundary indicates that the areas on both sides of the feature or boundary belong to the same census block.

[5] A % symbol indicates that there was insuffici… to plot a road name. Road names in parentheses indicate that the road has mar… name.

APPENDIX 3

Questionnaire

Revised 22 July 97

WOMEN'S HEALTH SURVEY

MAMMOGRAPHY USE AMONG OLDER MEXICAN AMERICAN WOMEN

CENTER ON AGING
UNIVERSITY OF TEXAS MEDICAL BRANCH
GALVESTON, TX

Table of Contents

A. DEMOGRAPHICS

I am going to start by asking about your background.

A1 What is your date of birth? ____ ____ ____ ____ ____ ____
M M D D Y Y

98 DK
99 RF

A2 How old were you on your last birthday? ___ ___ ___ (years)

98 DK
99 RF

A3 In which country were you born?

1 United States ➪ **GO TO A5**

2 Mexico
3 Other, **(SPECIFY):** _____ } **ASK A4**
98 DK
99 RF

A4 How many years have you lived in the United States? **[IF <1 YEAR ENTER 1; ROUND OFF TO NEAREST YEAR, eg. 18 months = 2years]**

____ ____ Years OR since 19 ___ ___ (year)

98 DK
99 RF

A5 What is the highest grade or year of regular school that you have completed? **(RECORD HIGHEST GRADE) (DO NOT INCLUDE VOCATIONAL SCHOOL, i.e. BEAUTY OR BARBER SCHOOL ETC.)**

___ ___ (number of years) **CODE 12 FOR HIGH SCHOOL OR GED**
CODE 16 FOR COLLEGE

98 DK
99 RF

A5a **IF LESS THAN 12 YEARS ASK:** Have you obtained a GED, that is, the Graduate Equivalency Examination?

1 Yes, obtained GED
2 No, did not obtain GED

98 DK
99 RF

A6 Are you currently married, widowed, divorced, separated or have you never been married? **(INCLUDE COMMON LAW MARRIAGES UNDER MARRIED)**

1 married
2 widowed
3 divorced
4 separated
} **ASK Q.A7**

5 never married
98 DK
99 RF
} **GO TO Q.A8**

A7 How long have you currently been (married/separated/divorced/widowed) **[Answer from Q.A6]**? **[IF <1 YEAR ENTER 1; ROUND OFF TO NEAREST YEAR, eg. 18 months = 2years]**

_____ _____number of years) OR since 19____ ____year

98 DK
99 RF

IF LESS THAN ONE YEAR, CODE 01.

A8 Are you currently employed, a homemaker, on disability, retired, or have you never worked?

1 employed full time
2 employed part time
3 homemaker
4 on disability
5 retired
6 self-employed - full time
7 self-employed - part time
8 never worked
9 unemployed
98 DK
99 RF

B. (SF-36) GENERAL HEALTH AND HEALTH CARE

The next set of questions asks for your views about your current health and your daily activities. Try to answer each question with the best possible answer.

B1 In general, would you say your health is:

1 Excellent
2 Very good
3 Good
4 Fair
5 Poor
98 DK
99 RF

B2 *Compared to one year ago*, how would you rate your health in general *now*? Would you say...

1 much better now than one year ago
2 somewhat better now than one year ago
3 about the same now as one year ago
4 somewhat worse now than one year ago
5 much worse now than one year ago
98 DK
99 RF

B3 The following questions are about activities you might do during a typical day. After I read each question, please tell me if your health limits you in these activities a lot, a little or not at all. **[SHOW CARD] (IF THE RESPONDENT SAYS SHE DOES NOT DO THIS ACTIVITY, PROBE "IS IT BECAUSE OF YOUR HEALTH?" AND IF "YES" RECORD RESPONSE AS "YES, LIMITED A LOT"; IF "NO" RECORD AS NA)**

Activities:	Yes, limited a lot	Yes, limited a little	No, not limited at all	DK	RF	NA
a. *Vigorous activities*, such as running, lifting heavy objects, or participating in strenuous sports.						
b. *Moderate activities*, such as moving a table, pushing a vacuum cleaner, bowling, or playing golf.						
c. Lifting or carrying groceries						
d. Climbing *several* flights of stairs						
e. Climbing *one* flight of stairs						
f. Bending, kneeling, or stooping						
g. walking *more than one mile*						
h. Walking *several* blocks						
I. Walking *one block*						
j. Bathing or dressing yourself						

B4a During the *past 4 weeks* have you cut down on the *amount of time* you spent on work or other regular daily activities as a result of your physical health?

1 yes
2 no
98 DK
99 RF

B4b During the past 4 weeks have you *accomplished* less than you would like as a result of your physical health?

1 yes
2 no
98 DK
99 RF

B4c During the past 4 weeks were you limited in the *kind* of work or other regular daily activities as a result of your physical health?

1 yes
2 no
98 DK
99 RF

B4d During the past 4 weeks have you had *difficulty* performing your work or other regular daily activities as a result of your physical health (for example, it took extra effort)?

1 yes
2 no
98 DK
99 RF

B5a During the past *4 weeks*, have you cut down on the *amount of time* you spent on work or other regular activities as *a result of any emotional problems* (such as feeling depressed or anxious)?

1 yes
2 no
98 DK
99 RF

B5b During the past *4 weeks, have you accomplished less* than you would like as *a result of any emotional problems* (such as feeling depressed or anxious)?

1 yes
2 no
98 DK
99 RF

B5c During the past *4 weeks*, did you not do work or other regular activities as *carefully* as usual as *a result of any emotional problems* (such as feeling depressed or anxious)?

1 yes
2 no
98
99

B6 During the *past 4 weeks*, to what extent has your physical health or emotional problems interfered with your normal social activities with family, friends, neighbors, or groups? Have they interfered...

1 Not at all
2 Slightly
3 Moderately
4 Quite a bit
5 Extremely
98 DK
99 RF

B7 How much *bodily* pain have you had during the *past 4 weeks*? Have you had. . .?

1 No pain
2 Very mild
3 Mild
4 Moderate
5 Severe
6 Very severe
98 DK
99 RF

B8 During the past 4 weeks, how much did pain interfere with your normal work (including work both outside the home and housework)? Has it interfered...

1 Not at all
2 A little bit
3 Moderately
4 Quite a bit
5 Extremely
98 DK
99 RF

B9 These questions are about how you feel and how things have been with you *during the past 4 weeks*. After I read each question, please tell me the one answer that comes closest to the way you have felt. **[SHOW CARD]**

How much of the time during the *past 4 weeks*:

	All of the time	Most of the time	A good bit of the time	Some of the time	A little of the time	None of the time	DK	RF
a. Did you feel full of pep?								
b. Have you been a very nervous person?								
c. Have you felt so down in the dumps that nothing could cheer you up?								
d. Have you felt calm and peaceful?								
e. Did you have a lot of energy?								
f. Have you felt downhearted and blue?								
g. Did you feel worn out?								
h. Have you been a happy person?								
I. Did you feel tired?								

B10 During the *past 4 weeks*, how much of the time has *your physical health or emotional problems* interfered with your social activities (like visiting with friends, relatives, etc.)? Would you say...

1 All of the time
2 Most of the time
3 Some of the time
4 A little of the time
5 None of the time
98 DK
99 RF

B11 Now I am going to read you a list of statements. After each one, please tell me if it is definitely true for you, mostly true, mostly false or definitely false. If you do not know, tell me. **[SHOW CARD]**

	Definitely true	Mostly true	DK	Mostly false	Definitely false	RF
a. I seem to get sick a little easier than other people						
b. I am as healthy as anybody I know						
c. I expect my health to get worse						
d. My health is excellent						

C. HEALTH SERVICE USE

C1 Is there one particular clinic, health center, doctor's office, or other place that you usually go if you are sick or need advice about your health? **[INTERVIEWER: RECORD YES IF MORE THAN ONE PARTICULAR PLACE]**

1 Yes ⇨ **ASK Q.C2**

2 No
98 DK } **GO TO C10**
99 RF

C2 Where do you usually go when you need help with a physical health problem?

1 doctor's office
2 hospital emergency room
3 hospital outpatient clinic
4 public health clinic
5 HMO/prepaid group practice
6 clinic at any workplace
7 other **(Specify)**_____
98 DK
99 RF

C3 What is the name of this **[insert response from Q. C2]**?
[INTERVIEWER: PROBE FOR FULL NAME. DO NOT ABBREVIATE]

_____

98 DK
99 RF

C4 Do you usually see the same physician or health professional when you go there?

1 Yes
2 No
98 DK
99 RF

C5 What mode of transportation do you usually use to get there?

1 Drive yourself
2 Driven by someone else **SPECIFY RELATIONSHIP**_____
3 City/regional bus
4 Taxi
5 Other **(Specify)**_____
98 DK
99 RF

C6 How long does it take you to get there?

1 < 15 minutes
2 15 - 29 minutes
3 30 - 59 minutes
4 1 hour
5 more than 1 hour, less than 2 hours
6 > 2 hours
98 DK
99 RF

C7 How often do you find it difficult to arrange transportation to see a doctor?

1 Never
2 Sometimes
3 Often
4 Always
98 DK
99 RF

C8 Some people visit a doctor for a routine check-up, even though they are feeling well and have not been sick. When was the last time you visited a doctor for a routine check-up?

SPECIFIED DATE: ___ ___ (MONTH) 19___ ___ (YEAR) ➪ **Go to C9**

98 DK
99 RF } **ASK Q.C8a**

C8a **If DK then probe:** Was it less than 1 year ago, at least 1 year but less than 2 years ago, or 2 or more years ago?

1 less than 1 year ago
2 at least 1 year but less than 2 years ago
3 2 or more years ago
98 DK
99 RF

[INTERVIEWER; PROBE EXTENSIVELY IF DK FOR C8a]

C9 When was the last time you went to a doctor for care or advice, other than a routine check-up?

SPECIFIED DATE: ___ ___ (MONTH) 19___ ___ (YEAR) ➪ **GO TO Q.C9b**

98 DK
99 RF

C9a **If DK then probe:** Was it less than 1 year ago, at least 1 year but less than 2 years ago, or 2 or more years ago?

1 less than 1 year ago
2 at least 1 year but less than 2 years ago
3 2 or more years ago
98 DK
99 RF **[INTERVIEWER; PROBE EXTENSIVELY IF DK FOR C9a]**

C9b In the past 12 months, have you ever put off or postponed seeking medical care you felt you needed?

1 Yes, put off or postponed
2 No, did not put off or postponed
98 DK
99 RF

C10 **IF NO USUAL SOURCE OF CARE**, What is the main reason that you do not have a regular place where you go for health care? **[DO NOT READ OPTIONS]**

1 have not needed a doctor/ don't get sick
2 have several doctors depending on what is wrong
3 previous doctor is not available any more
4 haven't been able to find an appropriate doctor/don't know where to go
5 recently moved here
6 not enough money/cost
7 no physicians in the area
8 don't like doctors
9 don't think doctors can help
10 other **(Specify)**_____
98 DK
99 RF

C11 Where do you usually get your female health care? **probe: IF HOSPITAL:**"Do you usually go to an outpatient clinic or an emergency room?" **IF CLINIC:** "Is this a public health clinic or some other kind of clinic?"

1 doctor's office
2 hospital emergency room
3 hospital outpatient clinic
4 public health clinic
5 HMO/prepaid group practice
6 clinic at any workplace
7 no particular place
8 do not get female care ⇨ **GO TO C13**

9 other **(Specify)**_____
98 DK
99 RF

C12 Do you usually get your female health care at the same place you usually get your other medical care?

1 yes
2 no
98 DK
99 RF

C13 When you go for medical or female health care, do you usually go by yourself or does someone usually go with you?

1 By yourself ⇨ **GO TO D1**
2 With someone else ⇨ **ASK C14**

If "With someone else" specify relationship_____

98 DK } **Go to D1**
99 RF }

C14 Why does **[insert who is specified in C13]** usually go with you?

1 Companionship/support
2 Need for translator
3 Transportation
4 Other **(Specify)**_____
98 DK
99 RF

D. PERSONAL HISTORY OF BREAST CANCER

D1 Has a medical doctor ever told you that you had cancer of any kind?

1 yes ⇨ **Ask Q.D2**

2 no
98 DK
99 RF
} **GO TO D4**

D2 What kind of cancer was it? **[Multiple record if necessary]**
1 breast
2 lung
3 colon/rectum
4 cervical
5 other **(Specify)**_____
98 DK
99 RF

IF BREAST CANCER NOT MENTIONED IN Q.D2 THEN ASK D3; IF BREAST CANCER MENTIONED IN Q.D2 GO TO D4;

D3 Has a doctor ever told you that you had breast cancer?

1 yes
2 no
98 DK
99 RF

D4 Are there any female members of your immediate family who have or have had breast cancer? By immediate family, I mean your mother, sister, aunt, daughter or grandmother? **[INCLUDE THESE FAMILY MEMBERS WHETHER IN-LAWS OR NOT]**

1 yes ⇨ **ASK D5**

2 no
98 DK
99 RF
} **GO TO Q.D6**

D5 Who? **[Multiple record if necessary]**

1 mother
2 sister
3 aunt
4 daughter
5 grandmother
98 DK
99 RF

D6 Other than female members of your immediate family, are there any other relatives or close friends who have or have had breast cancer?

1 yes
2 no
98 DK
99 RF

E. MAMMOGRAMS AND BREAST PHYSICAL EXAMS

Now I am going to ask you some questions about different kinds of breast examinations.

E1 A mammogram is an x-ray taken only of the breasts by a machine that presses the breast between two plates. Have you ever heard of a mammogram?

1 yes, heard of mammogram ⇨ **Ask E2**

2 no, never heard of mammogram
98 DK
99 RF
} **Go to instructions above E20**

E2 Have you ever had a mammogram?

1 yes ⇨ **ASK E3**

2 no
98 DK
99 RF
} **GO TO E11**

E3 When did you have your (most recent) mammogram?

___ ___ month 19___ ___ year OR _____ Number of _____ 1=Days 2=Weeks 3=Months 4=Years ago ⇨ **GO TO E4**

98 DK
99 RF
} **Ask E3a**

[Record # of appropriate response]

E3a If DK then probe: Was it less than 1 year ago, at least 1 year but less than 2 years ago, or 2 or more years ago?

1 less than 1 year ago
2 at least 1 year but less than 2 years ago
3 2 or more years ago
98 DK
99 RF

E4 Where was this mammogram done? In a private doctor's office, a clinic, a hospital, a mammography van or some other place? **[PROBE IF NECESSARY. INCLUDE HOSPITAL BASED MAMMOGRAPHY FACILITIES, SUCH AS RADIOLOGY DEPARTMENTS, UNDER HOSPITAL]**

1 doctor's office
2 clinic
3 hospital
4 mammography van
5 other **[Specify]**_____
98 DK
99 RF

E5 What is the name and address (location) of this (office, clinic, hospital, van, facility) where you had this mammogram? **[IT IS IMPORTANT TO BE AS SPECIFIC AS POSSIBLE ON THE NAME AND LOCATION. Interviewer: DO NOT ABBREVIATE]**

Name _____

Address_____

City _____

State_____

E6 Did you go for your last mammogram because of a health problem or just as part of a routine check-up?

1 health problem ⇨ **[ASK E7]**

2 routine check-up
98 DK
99 RF
} **[GO TO E8]**

E7 What was the problem? **[MULTIPLE RECORD IF NECESSARY- DO NOT READ OPTIONS]**

1 discharge
2 lumps
3 pain
4 soreness
5 swelling
6 thickness
7 other **(SPECIFY)** _____
98 DK
99 RF
} **GO TO E9**

E8 Why did you decide to have this mammogram? Was it because. . .
[MULTIPLE RECORD IF NECESSARY]

1 It had been a year or longer since you had one
2 You never had one and thought you should
3 A friend suggested it
4 A family member suggested it
5 Of something you saw, heard or read
6 Of a doctor or nurse's advice
7 Some other reason **(Specify)**_____

_____

98 DK
99 RF

E9 How many mammograms have you had in the last 10 years?

___ ___ mammograms

98 DK
99 RF

E10 Have you ever gone to get a mammogram without a doctor ordering it?

1 yes
2 no
98 DK
99 RF

E11 Have you ever asked a doctor to order a mammogram for you?

1 yes
2 no
98 DK
99 RF

E12 Has a doctor ever recommended you get a mammogram but you didn't get it?

1 yes
2 no
98 DK
99 RF

[Ask QE13 if QE3 >= 2 years; Go to E14 if E3 less than 2 years, DK or RF]

E13 What is the most important reason why you have (never had a mammogram/not had a mammogram in the past two years)?

1 no reason/never thought about it/didn't know I should
2 not needed/haven't had any problems
3 put it off/laziness
4 costs too much/no insurance
5 doctor didn't recommend it
6 don't go to or don't like doctors
7 afraid exam would be painful
8 afraid x-rays would be harmful to my health
9 afraid to find out I have cancer
10 Other **(SPECIFY)**_____

_____

E14 How likely is it that you will have a mammogram in the next 12 months? Would you say it is..

1 very likely
2 somewhat likely
3 not very likely
4 not likely at all
98 DK
99 RF

E15 Have any of your family members ever encouraged you to have a mammogram?

1 yes ⇨ **ASK E15a**

2 no
98 DK } **Go to E16**
99 RF

E15a Which family members have ever encouraged you to have a mammogram? **PROBE AFTER EACH RESPONSE:** "Has anyone else encouraged you to have a mammogram?" **[MULTIPLE RECORD IF NECESSARY]**

1 husband
2 daughter
3 mother
4 sister
5 son
6 daughter-in-law
7 granddaughter
8 niece
9 another family member, (**SPECIFY RELATIONSHIP**)_____
98 DK
99 RF

E16 Has anyone other than a family member ever encouraged you to have a mammogram?

1 yes ➪ **ASK E16a**

2 no
98 DK
99 RF
} **GO TO E17**

E16a Other than a family member, who has encouraged you to have a mammogram? **PROBE AFTER EACH RESPONSE:** "Has anyone else encouraged you to have a mammogram?" **[MULTIPLE RECORD IF NECESSARY]**

1 a friend
2 a doctor
3 a nurse
4 another health professional
5 someone else, **(SPECIFY RELATIONSHIP)** _____
6 no one
98 DK
99 RF

E17 How likely would you be to go for a mammogram...**[READ EACH QUESTION]** Would you be...; **[SHOW CARD]**

	very likely	somewhat likely	not very likely	not at all likely	DK	RF
a. Without having a problem or without being asked by a doctor?						
b. If you were urged by a church program?						
c. [SKIP IF NOT MARRIED IN QA6] if your husband suggested you get one?						
d. if any other relative or family member suggested you get one?						
e. if a friend recommended that you get one?						
f. if a doctor recommended that you get one?						

E18 Is there anything else that would motivate you to get a mammogram?

1 yes, **(SPECIFY)**_____

_____

2 no
98 DK
99 RF

E19 What do you consider to be the main obstacle for women your age to get a mammogram?

21

1 no reason/never thought about it
2 not needed/haven't had any problems
3 put it off/laziness
4 costs too much/no insurance
5 doctor didn't recommend it
6 don't go to or don't like doctors
7 afraid exam would be painful
8 afraid x-rays would be harmful to health
9 afraid to find out they have cancer
10 unaware of benefits of screening
11 Other, **(SPECIFY)**_____

98 DK
99 RF

The next set of questions are about breast (physical) exams. A breast physical exam is when the breast is felt for lumps by a doctor or other health professional.

E20 Have you ever had a breast physical examination done by a doctor or other health professional?

1 yes ➪ **ASK E21**

2 no
98 DK } **(GO TO E22)**
99 RF

E21 When did you have your most recent breast physical exam?

___ ___ month 19___ ___ year OR _____ Number of _____ 1=Days 2=Weeks 3=Months 4=Years ago ➪ **Go to E22**

98 DK
99 RF

[Record# of appropriate response]

E21a **If DK then probe:** Was it less than 1 year ago, at least 1 year but less than 2 years ago, or 2 or more years ago?

1 less than 1 year ago
2 at least 1 year but less than 2 years ago
3 2 or more years ago
98 DK
99 RF

BREAST SELF EXAMINATION

E22 Do you examine your breasts for lumps?

1 yes ⇨ **Ask Q.E23**

2 no
98 DK
99 RF
} **[GO TO F1]**

E23 About how often do you examine your breasts for lumps?

___ ___ (number of times) per

1 day
2 week
3 month
4 year
5 never
98 DK
99 RF

E24 How did you learn how to examine your breasts?

1 doctor showed me
2 nurse showed me
3 friend showed me
4 other health professional showed me
5 learned in a class/meeting
6 read in a book, pamphlet, etc.
7 saw a television program
8 saw a video
9 my mother showed me
10 my sister showed me
11 my daughter showed me
12 other female relative showed me
13 other **(SPECIFY)**_____
98 DK
99 RF

F. PAP SMEARS

F1 A pap smear is a routine test in which a doctor examines the cervix to check for cancer of the cervix. Have you ever had a pap smear?

1 yes, have had ⇨ **ASK F2** **24**

2 no, have not had
98 DK
99 RF
} **(GO TO G1)**

F2 How many pap smears have you had in the past 10 years?

___ ___ pap smears

98 DK
99 RF

F3 When did you have your (most recent) pap smear?

___ ___ month 19___ ___ year **OR** _____ Number of _____ ago ⇨ **GO TO F4**

1=Days
2=Weeks
3=Months
4=Years
} **[Record # for appropriate response]**

98 DK
99 RF
} **ASK F3a**

F3a **If DK then probe:** Was it less than 1 year ago, at least 1 year but less than 2 years ago, or 2 or more years ago?

1 less than 1 year ago
2 at least 1 year but less than 2 years ago
3 2 or more years ago
98 DK
99 RF

F4 Was your last pap smear done because of a health problem or just as part of a routine check-up?

1 health problem ⇨ **Ask Q.F5**

2 routine check-up
98 DK
99 RF
} **(GO TO G1)**

F5 What was the problem? **[MULIPLE RECORD]**

1 bleeding
2 burning
3 discharge
4 infection
5 itching
6 pain
7 other **(SPECIFY)**_____
98 DK
99 RF

G. CANCER KNOWLEDGE/AWARENESS

Now I would like to ask you a few questions about breast cancer in general. There are no right or wrong responses. We care about your opinions.

G1 What is the age doctors recommend a woman should start having mammograms? **[ENCOURAGE RESPONDENT TO GUESS EVEN IF SHE IS NOT SURE OR DOESN'T KNOW]**

__ __ years old

OR

1 when she stops having periods
2 controversial - doctors do not agree
3 other **(SPECIFY)**_____
98 DK
99 RF

G2 How often do you think a woman of your age should have a mammogram?

1 yearly
2 every 2 years
3 when the doctor says so
4 never
5 other **(SPECIFY)**_____
98 DK
99 RF

G3 Is there an age when women no longer need to have mammograms? **[ENCOURAGE RESPONDENT TO GUESS EVEN IF SHE IS NOT SURE OR DOESN'T KNOW]**

___ ___ years old

OR

1 when menstrual periods stop
2 when she is no longer sexually active
3 there is no age limit
98 DK
99 RF

G4 If a close family member had cancer, should only that person be told, only the family, both the person and the family, or should no one be told?

1 only the person her/himself
2 only other family members
3 both the person and the family
4 no one
5 depends on situation
98 DK
99 RF

G5 What are a person's chances of surviving cancer of the breast if it is found and treated early? Would you say

1 good : greater than a 50-50 chance
2 fair : about a 50-50 chance
3 poor : less than a 50-50 chance
98 DK
99 RF

G6 How much do you worry about getting breast cancer? Would you say

1 a lot
2 some
3 not at all
98 DK
99 RF

G7 Do you worry about any of your female relatives (e.g., daughters, daughters-in-law, nieces, sisters, mother, aunts) getting breast cancer?

1 Yes
2 No
98 DK
99 RF

H. RELIANCE AND SOLIDARITY: PART 1

H1 Among the members of your family, who do you rely on the most for advice on health matters?

Name:_____ Relationship:_____

Age:_____ Gender_____

0 No family member identified
98 DK
99 RF

IF SUBJECT DOES NOT IDENTIFY A FAMILY MEMBER OR IDENTIFIES HUSBAND, GO TO Q I.1

H2 Does _____**(NAME OF PERSON)** live within 1 hour of you?

1 yes, lives within 1 hour from subject
2 no, does not live within 1 hour from subject
98 DK
99 RF

H3 Where does _____**(NAME OF PERSON)** live? **[PROMPT FOR TOWN]**

___ ___ REFER TO LIST OF TOWNS

OTHER TOWN **(SPECIFY; DO NOT ABBREVIATE)**_____

98 DK
99 RF

H4 About how often have you seen _____**(NAME OF PERSON)** in the past month?

1 almost never or never
2 once or twice
3 about once a week
4 several times a week
5 almost every day or every day
98 DK
99 RF

H4a How often have you spoken with _____**(NAME OF PERSON)** by phone in the past month?

1 almost never or never
2 once or twice
3 about once a week
4 several times a week
5 almost every day or every day
6 no phone
98 DK
99 RF

H5 Where does _____**(NAME)** go for most of (her/his) health care?

1 doctor's office
2 hospital emergency room
3 hospital outpatient clinic
4 public health clinic
5 HMO/prepaid group practice
6 clinic at any work place
7 no partcular place
8 Hasn't needed health care
9 other **(SPECIFY)**_____
98 DK
99 RF

I. LIVING ARRANGEMENT

I1 Including yourself, how many people live in this household? **[COUNT EVERYONE LIVING IN HOUSEHOLD, INCLUDING CHILDREN AND INDIVIDUALS NOT RELATED TO SUBJECT]**

___ ___ (people)

98 DK
99 RF

IF ONLY ONE PERSON IN Q.I1, GO TO Q.J1 ALL OTHERS ASK Q.I2

I2 How many of these are under 21 years of age?

____ ____number under 21

98 DK
99 RF

J. FAMILY CONTACTS/SOCIAL SUPPORT

Now I am going to ask you a few questions about your family and friends.

J1 How many living sons do you have, including adopted, foster and step-sons?

___ ___ number of sons

0 None
98 DK } **Go to J2**
99 RF

J1a How many of your sons are **[If 1 son, ask "Is your son..."]** less than 18 years of age?

_____ _____Less than 18 years of age

98 DK
99 RF

J1b How many of your sons are **[If 1 son, ask "Is your son..."]** 18 - 35 years of age?

_____ _____ 18-35 years of age

98 DK
99 RF

J1c How many of your sons are **[If 1 son, ask "Is your son..."]** older than 35 years of age?

____ ____>35 years of age

98 DK
99 RF

J1d How many of your sons have you seen in the last month?

____ ____sons seen in last month

98 DK
99 RF

J1e How many of your sons have you talked to by phone in the last month?

____ ____sons talked to by phone in last month

98 DK
99 RF

J2 How many living daughters do you have, including adopted, foster and step-daughters?

___ ___ number of daughters

0 None
98 DK
99 RF
} **GO TO K1**

J2a How many of your daughters are **[If 1 daughter, ask "Is your daughter..."]** less than 18 years of age?

_____ _____Less than 18 years of age

0 None
98 DK
99 RF

J2b How many of your daughters are **[If 1 daughter, ask "Is your daughter..."]** 18 - 35 years of age?

_____ _____ 18-35 years of age

98 DK
99 RF

J2c How many of your daughters are **[If 1 daughter, ask "Is your daughter..."]** older than 35 years of age?

____ ____>35 years of age

98 DK
99 RF

J2d Of these **[INSERT # FROM J2b]** daughters 18-35, how many live within 1 hour from you?

____ ____number of daughters < 1 hour

98 DK
99 RF

J2e How many of your daughters have you seen in the last month?

____ ____daughters seen in last month

98 DK
99 RF

J2f How many of your daughters have you talked to by phone in the past month?

_____ ____daughters talked to by phone in last month

98 DK
99 RF

K. RELIANCE AND SOLIDARITY: PART 2

K1 How many other female family members between the ages of 18 - 35 do you have? **[INCLUDING DAUGHTERS-IN-LAW, NIECES, SISTERS, AND GOD-DAUGHTERS]**

____ ____ ____ No. Of female family members

0 None
98 DK
99 RF
} **GO TO K3**

K2 Of these **[Insert # from K1]** female family members, how many live/does this family member live within 1 hour from you?

____ _____ _____No. Of female family members

98 DK
99 RF

K3 With how many of your relatives do you feel **very close** to? Include parents, husband, children, brothers or sisters, aunts or uncles, or other relatives with whom you feel very close to.

____ ____ Number of very close relatives

98 DK
99 RF

K4 With how many of your relatives do you feel **somewhat close** to? Include parents, husband, children, brothers or sisters, aunts or uncles, or other relatives with whom you feel somewhat close to.

____ ____ Number of somewhat close relatives

98 DK
99 RF

K5 In general, how many close friends do you have, other than relatives? (People with whom you feel comfortable, with whom you can talk about private matters, and whom you can call to ask for help)

___ ___ number of close friends

98 DK
99 RF

K6 In general, how many other people, excluding people you have mentioned, do you feel that you can talk to or ask for advice or information? (People you work with, from church, other activities)

___ ___ number of other people

98 DK
99 RF

L. RELIANCE AND SOLIDARITY: PART 3

L1 How many female friends between the ages of 18 and 35 do you have?

____ ____ ____No. Female friends 18-35

0 None
98 DK
99 RF

} **GO TO L3**

L2 How many of these **[insert # from L1]** friends/does this friend live within 1 hour from you?

____ ____ ____No. Within 1 hour

0 None
98 DK
99 RF

L3 **[IF PERSON MENTIONED IN H1 IS A FEMALE, 18 - 35 YEARS OF AGE AND LIVES WITHIN 1 HOUR FROM SUBJECT (H2=1), THEN GO TO L5]**

[If J2d + K2 + L2 = 0 then go to M1]

[If J2d + K2 + L2 = 1 THEN ASK L3a]

[If J2d + K2 + L2 >1 THEN ASK L3b]

L3a What is the age and name of your daughter/female relative/female friend who is between the ages of 18 and 35 and lives within 1 hour from you?

Age:_____ Name:_____

Relationship:_____

} **GO TO L4**

98 DK
99 RF

L3b Of the **[insert # J2d]** daughter(s), the **[insert # from K2]** female relative(s) and **[insert # from L2]** female friend(s) you have mentioned who are between the ages of 18 and 35 and live within 1 hour from you, whom do you rely on the most for advice on health matters,? **[IF SUBJECT SAYS THEY DON'T RELY ON ANY, ASK WHO THEY <u>WOULD</u> RELY ON IF THEY HAD TO; IF UNABLE TO NAME SOMEONE GO TO M1 IF MARRIED; IF NOT MARRIED GO TO N1]**

Age:_____ Name:_____ Relationship:_____

0 No one
98 DK
99 RF

L4 Where does _____**(NAME OF PERSON)** live? **[PROMPT FOR TOWN]**

___ ___ REFER TO LIST OF TOWNS

Other **(SPECIFY; DO NOT ABBREVIATE)**_____

98 DK
99 RF

AFFECTUAL SOLIDARITY

L5 Generally, how well do you and _____**(NAME)** get along together?

1 extremely well
2 very well
3 pretty well
4 somewhat
5 not too well
6 not well
98 DK
99 RF

ASSOCIATIONAL SOLIDARITY

L6 How often do you do the following with _____**(NAME OF PERSON)? [SHOW CARD]**

	Almost never or never	About once a year	Several times a year	Every other month or so	About once a month	About once a week	Several times a week	Almost every day	DK
a. Have recreation outside the home (movies, picnics, swimming, trips etc...)?	1	2	3	4	5	6	7	8	98
b. Have visits just to talk?	1	2	3	4	5	6	7	8	98
c. Have family gatherings like birthdays, holidays or other special occasions where a lot of family members get together?	1	2	3	4	5	6	7	8	98
d. Talk over things that are important to you?	1	2	3	4	5	6	7	8	98
e. Go to religious activities of any kind?	1	2	3	4	5	6	7	8	98
f. Telephone each other?[1]	1	2	3	4	5	6	7	8	98
g. Have dinner together?	1	2	3	4	5	6	7	8	98

1 - IF NO TELEPHONE = CODE 9

L7 How often do you

a. Help _____**(NAME)** out with her chores or errands? **[SHOW CARD]**

1 almost never or never
2 about once a year
3 several times a year
4 every other month or so
5 about once a month
6 about once a week
7 several times a week
8 almost every day
98 DK
99 RF

b. How often does _____**(NAME)** help you out with chores or errands? **[SHOW CARD]**

1 almost never or never
2 about once a year
3 several times a year
4 every other month or so
5 about once a month
6 about once a week
7 several times a week
8 almost every day
98 DK
99 RF

L8 How often do you help _____**(NAME)** when she is sick?

1 every time she is sick
2 usually when she is sick
3 sometimes when she is sick
4 never
5 never sick
98 DK
99 RF

L9 How often does _____**(NAME)** help you when you are sick?

1 every time I am sick
2 usually when I am sick
3 sometimes when I am sick
4 never when I am sick
5 never sick
98 DK
99 RF

L10 In the past year, have you given _____**(NAME)** any financial help?

1 yes, have given financial help ⇨ **Ask L10a**

2 no, have not given help
98 DK
99 RF
} **Go to L11**

L10a Have you given **(NAME)** financial help regularly, occasionally, or only rarely?

1 regularly
2 occasionally
3 only rarely
98 DK
99 RF

L11 In the past year, have you received any financial help from _____**(NAME)**?

1 yes, have received financial help ⇨ **Ask L11a**

2 no, have not received help
98 DK
99 RF
} **Go to L12**

L11a Have you received financial help from **(NAME)** regularly, occasionally, or only rarely?

1 regularly
2 occasionally
3 only rarely
98 DK
99 RF

L12 How often do you give any advice to _____**(NAME)** regarding health?

1 almost never or never
2 about once a year
3 several times a year
4 every other month or so
5 about once a month
6 about once a week
7 several times a week
8 almost every day
98 DK
99 RF

L13 How often does _____**(NAME)** give you any advice regarding your health?

1 almost never or never
2 about once a year
3 several times a year
4 every other month or so
5 about once a month
6 about once a week
7 several times a week
8 almost every day
98 DK
99 RF

L14 Do you always follow her advice, almost always, sometimes, almost never, or never ?

1 always
2 almost always
3 sometimes
4 almost never
5 never
98 DK
99 RF

L14a How likely would you be to go for a mammogram if _____**(name)** suggested you get one? Would you be. . .

1 very likely
2 somewhat likely
3 not very likely
4 not at all likely
98 DK
99 RF

L15 Where does _____**(NAME)** go for most of her health care?

0 nowhere ⇨ **GO TO INSTRUCTIONS ABOVE M1**

1 no usual place ⇨ **ASK L15a AS "PLACE GONE MOST OFTEN"**

2 doctor's office
3 hospital outpatient clinic
4 hospital emergency room
5 clinic
6 haven't needed health care ⇨ **GO TO INSTRUCTIONS ABOVE M1**
7 other _____
98 DK
99 RF

L15a What is the name of this place where_____**(NAME)** goes for her health care? **[INTERVIEWER: PROBE FOR FULL NAME. DO NOT ABBREVIATE]**

_____

_____

98 DK
99 RF

IF RESPONDENT NOT CURRENTLY MARRIED, SKIP TO Q.N1

M. MARITAL SATISFACTION

Now, I am going to read a list of things that husbands and wives may do when they are together. For each, could you tell me how often it happens between you and your husband. **[SHOW CARD]**

		Hardly ever or never	Not usually but sometimes	Fairly often	Quite often	Very often or all the time	DK	RF
M1	You calmly discuss something together.	1	2	3	4	5	98	99
M2	One of you is sarcastic.	1	2	3	4	5	98	99
M3	You work together on something (dishes, yardwork, etc.).	1	2	3	4	5	98	99
M4	One of you refuses to talk in a normal manner.	1	2	3	4	5	98	99
M5	You laugh together.	1	2	3	4	5	98	99
M6	You have an interesting exchange of ideas.	1	2	3	4	5	98	99
M7	You disagree about something important.	1	2	3	4	5	98	99
M8	One of you becomes critical or belittling.	1	2	3	4	5	98	99
M9	You have a good time together.	1	2	3	4	5	98	99
M10	One of you becomes angry.	1	2	3	4	5	98	99

M11 Overall, how would you rate your HUSBAND'S health -- excellent, good, fair, or poor?

1 excellent
2 good
3 fair
4 poor
98 DK
99 DF

M12 When your husband wants help with care for a physical health problem, where does he usually go?

0 nowhere
1 no usual place
2 doctor's office
3 hospital outpatient clinic
4 hospital emergency room
5 clinic
6 hasn't needed health care
7 other **(SPECIFY)**_____
98 DK
99 RF

M13 How often do you accompany your husband when he goes to see a doctor? Would you say...

1 Always
2 Usually
3 Sometimes
4 Rarely
5 Never
98 DK
99 RF

M13a How often does your husband accompany you when you see a doctor? Would you say...

1 Always
2 Usually
3 Sometimes
4 Rarely
5 Never
98 DK
99 RF

M14 How often do you and your husband discuss health problems with one another? Would you say...

1 Always
2 Usually
3 Sometimes
4 Rarely
5 Never
98 DK
99 RF

N. ACCULTURATION - CUELLAR and HAZUDA SCALES

In this next part of the interview, I will be asking some more questions about your background, attitudes, and beliefs. First, I'm going to ask you about your use of language, in particular, English and Spanish, in various situations.

N1 What was the first language that you learned to speak?

1 English
2 English and Spanish simultaneously
3 Spanish
4 Other **(Specify)**_____
98 DK
99 RF

N2 What language was spoken in your home when you were a child? Would you say: **[SHOW CARD]**

1 Only English
2 Mostly English
3 Spanish and English equally
4 Mostly Spanish
5 Only Spanish
6 Other **(Specify)**_____
98 DK
99 RF

N3 In your opinion, how well do you: **[SHOW CARD]**

	Very Well	Pretty Well	Not Too Well	Not At All Well	DK	RF
Understand spoken English						
Speak English						
Read English						
Write English						
Understand spoken Spanish						
Speak Spanish						
Read Spanish						
Write Spanish						

N4 What language do you usually use: **[SHOW CARD]**

	Only English	Mostly English	Both Equally	Mostly Spanish	Only Spanish	DK	RF	NA
a. With your spouse?								
b. With your children?								
c. With your parents?								
d. With most of your friends?								
e. With most of your neighbors?								
f. With most of the people at work?								
g.At family gatherings, such as Christmas or other holidays?								

N5 In what language are the: **[SHOW CARD]**

	Only English	Mostly English	Both Equally	Mostly Spanish	Only Spanish	DK	RF	NA
a.TV programs you watch								
b.Radio stations you listen to								
c. Books and magazines you read								

N6 How important do you feel it is for (your) children to know something about the history of Mexico? Would you say . . .?

1 very important
2 somewhat important
4 not very important
5 not important at all

3 not sure
99 refused

N7 How important do you feel it is for (your) children to follow Mexican customs and ways of life?

1 very important
2 somewhat important
4 not very important
5 not important at all

3 not sure
99 refused

N8 How important do you feel it is for (your) children to celebrate Mexican holidays such as Cinco de Mayo or El Diesyseis de Septiembre?

1 very important
2 somewhat important
4 not very important
5 not important at all

3 not sure
99 refused

Now I would like you to turn your attention to some of the preferences and beliefs that you have about life in general. The first questions ask about family life - the way that families are organized and the way that members of a family work with one another. Think carefully about each statement that I read and then tell me **(SHOW CARD)** whether you strongly agree with the statement, agree, disagree or strongly disagree with the statement. There are no right or wrong answers; we would just like to know how you yourself feel about these statements. The first statement is:

N9 Knowing your family ancestry or lineage, that is, tracing your family tree, is an important part of family life. Would you say you...

1 strongly agree
2 agree
4 disagree
5 strongly disagree

3 not sure
99 RF

N10 It is important to know your cousins, aunts, and uncles and to have a close relationship with them.

1 strongly agree
2 agree
4 disagree
5 strongly disagree

3 not sure
99 RF

N11 Brothers have a responsibility to protect their sisters while they are growing up.

1 strongly agree
2 agree
4 disagree
5 strongly disagree

3 not sure
99 RF

N12 A person should remember other family members who have passed away on the anniversary of their death, All Soul's Day, or other special occasions.

1 strongly agree
2 agree
4 disagree
5 strongly disagree

3 not sure
99 RF

N13 In the absence of the father, the most important decisions should be made by the eldest son rather than the mother, if the son is old enough.

1 strongly agree
2 agree
4 disagree
5 strongly disagree

3 not sure
99 RF

N14 If they could live anywhere they wanted to, married children should live close to their parents so that they can help each other.

1 strongly agree
2 agree
4 disagree
5 strongly disagree

3 not sure
99 RF

N15 While they're growing up, sisters have an obligation to respect their brothers' authority.

1 strongly agree
2 agree
4 disagree
5 strongly disagree

3 not sure
99 RF

Now I would like to ask you some questions about your neighbors and friends when you were growing up.

N16 When you were growing up, were your neighbors mostly Mexican or Mexican-American, mostly Anglo, or about equal numbers of each?

1 Mostly Mexican or Mexican-American
2 Mostly Anglo
3 About equal numbers of each
4 Other **(Specify)**_____
98 DK
99 RF

N17 When you were growing up, were your school mates mostly Mexican or Mexican-American, mostly Anglo, or about equal numbers of each?

1 Mostly Mexican or Mexican-American
2 Mostly Anglo
3 About equal numbers of each
4 Other **(Specify)**_____
98 DK
99 RF

N18 When you were growing up, were your close personal friends mostly Mexican or Mexican-American, mostly Anglo, or about equal numbers of each?

1 Mostly Mexican or Mexican-American
2 Mostly Anglo
3 About equal numbers of each
4 Other **(Specify)**_____
98 DK
99 RF

Now I would like to ask you some questions about the people you see most often, day to day. **[IF NEVER WORKED GO TO N20]**

N19 (Are the people with whom you work closely on the job/Are the people with whom you worked closely on your last job) mostly Mexican or Mexican-American, mostly Anglo, or about equal numbers of each?

1 Mostly Mexican or Mexican-American
2 Mostly Anglo
3 About equal numbers of each
4 Other **(Specify)** _____
5 Never worked
98 don't know
99 refused

N20 Throughout most of your adult life, have your neighbors been mostly Mexican or Mexican-American, mostly Anglo, or about equal numbers of each?

1 Mostly Mexican or Mexican-American
2 Mostly Anglo
3 About equal numbers of each
4 other **(Specify)**_____
98 don't know
99 refused

N21 Throughout your adult life, have your close, personal friends been mostly Mexican or Mexican-American, mostly Anglo, or about equal numbers of each?

1 Mostly Mexican or Mexican American
2 Mostly Anglo
3 about equal numbers of each
4 other **(Specify)**_____
98 don't know
99 refused

P. FAMILISM - SABOGAL SCALE

Now I am going to read you some statements about parents and children. After I read each statement, please tell me if you very much disagree, disagree, are not sure, agree or very much agree with the statement. **[SHOW CARD]**

	Very Much Dis-agree	Dis-agree	Not Sure	Agree	Very Much Agree	DK	RF
1. When one has problems, one can count on the help of relatives	1	2	3	4	5	98	99
2. The family should consult close relatives (uncles, aunts) concerning its important decisions	1	2	3	4	5	98	99
3. A person should share his/her home with uncles, aunts or first cousins if they are in need	1	2	3	4	5	98	99
4. Children should live in their parents' house until they get married	1	2	3	4	5	98	99
5. I would help within my means if a relative told me that she/he is in financial difficulty	1	2	3	4	5	98	99
6. One should be embarrassed about the bad things done by his/her brothers or sisters	1	2	3	4	5	98	99
7. When someone has problems s/he can count on help from his/her relatives	1	2	3	4	5	98	99
8. One of the most important goals in life is to have children	1	2	3	4	5	98	99
9. One should have the hope of living long enough to see his/her grandchildren grow up	1	2	3	4	5	98	99
10. One should help economically with the support of younger brothers and sisters	1	2	3	4	5	98	99

	Very Much Dis-agree	Dis-agree	Not Sure	Agree	Very Much Agree	DK	RF
11. Aging parents should live with their relatives	1	2	3	4	5	98	99
12. Much of what a son or daughter does should be done to please the parents	1	2	3	4	5	98	99
13. One can count on help from his/her relatives to solve most problems	1	2	3	4	5	98	99
14. One should make great sacrifices in order to guarantee a good education for his/her children	1	2	3	4	5	98	99

Q. FATALISM

Now, I am going to make some statements about how people feel about life. After I read each statement, please decide whether it is true as applied to you or false as applied to you. Not every statement is completely true or completely false for everyone, but if it is mostly true or mostly false for you, please tell me. Remember to give your own opinion.

Q1 It is more important to enjoy life now than to plan for the future.

1 True/mostly true
2 False/mostly false
98 don't know
99 refused

Q2 People die when it is their time and there is not much that can be done about it.

1 True/mostly true
2 False/mostly false
98 don't know
99 refused

Q3 We must live for the present, who knows what the future may bring.

1 True/mostly true
2 False/mostly false
98 don't know
99 refused

Q4 If my doctor said I was disabled, I would believe it even if I disagreed.

1 True/mostly true
2 False/mostly false
98 don't know
99 refused

Q5 It is not always wise to plan too far ahead because many things turn out to be a matter of good and bad fortune anyway.

1 True/mostly true
2 False/mostly false
98 don't know
99 refused

Q6 It doesn't do any good to try to change the future because the future is in the hands of God.

1 True/mostly true
2 False/mostly false
98 don't know
99 refused

Q7 When I make plans, I am almost certain I can make them work.

1 True/mostly true
2 False/mostly false
98 don't know
99 refused

Q8 I sometimes feel that someone controls me.

1 True/mostly true
2 False/mostly false
98 don't know
99 refused

R. INCOME AND INSURANCE

Finally, I'd like to ask you a few questions about your income and insurance.

R1 How much difficulty do you have in meeting monthly payments on your bills -- a great deal, some, a little, or none? **USE SHOW CARD**

1 A great deal
2 Some
3 A little
4 None
98 DK
99 RF

R2 At the end of the month, do you usually end up with some money left over, just enough to make ends meet, or not enough to make ends meet? **USE SHOW CARD**

1 Some money left over
2 Just enough to make ends meet
3 Not enough money to make ends meet
98 DK
99 RF

R3 **(SHOW RESPONDENT CARD)** Please look at this card and tell me about how much was your yearly HOUSEHOLD income for the past year? Household income includes income from all individuals living in the household at the present time. Include income from all sources, such as wages, salaries, Social Security, retirement benefits, help from relatives, rent from property and so forth.

01 less than $1000
02 1,000-4,999
03 5,000-9,999
04 10,000-14,999
05 15,000-19,999
06 20,000-24,999
07 25,000-29,999
08 30,000-34,999
09 35,000-39,999
10 40,000-49,999
11 50,000 and over
98 DK
99 RF

R4 Are you covered by Medicare?

1 yes ⇨ **ASK Q.R5**

2 no
98 DK
99 RF
} **GO TO Q.R7**

R5 Do you have Part A of Medicare that covers hospital bills, Part B that covers doctors bills, or both?

1 Part A only
2 Part B only
3 Both Parts
98 DK
99 RF

R6 Could I please see your Medicare card?

1 yes **(RECORD NUMBER)** __ __ __ __ __ __ __ __ __ __ __ __
2 no, don't have access to it
98 DK
99 no, refused

R7 Are you covered by Medicaid or any other public program such as welfare that pays all or part of your medical care?

1 yes
2 no
98 DK
99 RF

R8 Are you covered by any other health insurance plan (other than Medicare or Medicaid) such as Blue Cross/BlueShield, an HMO, or CHAMPUS?

1 yes
2 no
98 DK
99 RF

R9 For our confidencial records, may we please have your social security number?

1 yes **(RECORD NUMBER)** __ __ __-__ __-__ __ __ __
2 no, does not know number
3 no, does not have Social Security Card/number

98 DK
99 no, refused

S. INTERVIEWER OBSERVATIONS

S1 Final status of respondent interview?

1 Complete
2 Incomplete, interviewer broke off
3 Incomplete, respondent broke off
4 Incomplete, other (SPECIFY)_____
5 Not applicable

S2 Was someone else present during the interview?

1 yes ⇨ **ASK S3**

2 no } **Go to S5**
98 DK }

S3 What was this person's relationship to the respondent?

1 spouse or partner
2 son
3 daughter
4 son-in-law
5 daughter-in-law
6 grandchild
7 parent
8 brother
9 sister
10 nephew
11 niece
12 cousin
13 aunt
14 uncle
15 great grandchild
16 sister-in-law
17 brother-in-law
18 other relative (Specify)_____
19 friend
20 boarder or roomer
21 paid employee
22 all other (Specify)_____
98 DK
99 RF

S4 About what percentage of all responses to the questionnaire were provided by this other person rather than the respondent?

/___/____/____/ percent

98 DK

S5 Type of dwelling **(CHOOSE ONE)**

1 Detached single-family house
2 Apartment (including duplexes)
3 Trailer, mobile home
4 Row house or townhouse, condominium
98 DK

S6 Was this a retirement community or housing restricted solely for older adults?

1 yes
2 no
98 DK