

# Appendix A.

## Sample Characteristics

**Age: Descriptive Information on Survey Sample (Question 5)**  
**Northwest Salt Lake Valley Community Residents, 1999.**

<u>Demographic Subgroup</u>	Northwest SL Valley Unweighted Sample Distribution	
	Percentage Distribution	Number of Persons
Age Group		
17 or Under	35.9%	1,456
18-34	27.6%	1,120
35-49	17.6%	714
50-64	9.2%	375
65+	8.5%	343
Not Reported	1.2%	49
Total, All Persons	100.0%	4,057

**Sex: Descriptive Information on Survey Sample (Question 4)**  
**Northwest Salt Lake Valley Community Residents, 1999.**

<u>Demographic Subgroup</u>	Northwest SL Valley Unweighted Sample Distribution	
	Percentage Distribution	Number of Persons
Sex		
Males	50.3%	2,040
Females	49.6%	2,014
Not Reported	0.1%	3
Total, All Persons	100.0%	4,057

**Marital Status: Descriptive Information on Survey Sample (Question 47)**  
**Northwest Salt Lake Valley Community Adults Age 18 or Over, 1999.**

<u>Demographic Subgroup</u>	Northwest SL Valley Unweighted Sample Distribution, Adults Age 18 or Over	
	Percentage Distribution	Number of Persons
Marital Status		
Single, Never Married	25.7%	657
Married	58.3%	1,488
Separated/Divorced	10.1%	258
Widowed	5.6%	143
Not Reported	0.2%	6
Total, Age 18 or Over	100.0%	2,552

**Languages Spoken: Descriptive Information on Survey Sample (Question 45)  
Northwest Salt Lake Valley Community Residents, 1999.**

<u>Demographic Subgroup</u>	Northwest SL Valley Unweighted Sample Distribution	
	<u>Percentage Distribution</u>	<u>Number of Persons</u>
Languages Spoken and Understood Well		
English	83.4%	3,385
Spanish	36.5%	1,482
Tongan	5.4%	221
Vietnamese	2.5%	102
Bosnian	1.7%	69
Samoan	0.8%	34
Russian	0.2%	9
Cambodian	0.0%	1
Laotian	0.0%	-
Other	7.4%	299
Not Reported	0.2%	8
Total, All Persons <sup>1</sup>	100.0%	4,057

1 Figures in this row sum to greater than 100% because respondents were allowed to select multiple answers.

**English Fluency: Descriptive Information on Survey Sample (Question 45)  
Northwest Salt Lake Valley Community Residents, 1999.**

<u>Demographic Subgroup</u>	Northwest SL Valley Unweighted Sample Distribution	
	<u>Percentage Distribution</u>	<u>Number of Persons</u>
English Spoken and Understood Well		
Yes	83.4%	3,385
No	16.4%	664
Not Reported	0.2%	8
Total, All Persons	100.0%	4,057

**Religion: Descriptive Information on Survey Sample (Question 41)**  
**Northwest Salt Lake Valley Community Residents, 1999.**

<u>Demographic Subgroup</u>	Northwest SL Valley Unweighted Sample Distribution	
	<u>Percentage Distribution</u>	<u>Number of Persons</u>
Religion		
LDS (Mormon)	37.4%	1,517
Catholic	33.2%	1,345
Muslim	2.8%	112
Protestant	2.2%	88
Buddhist	1.9%	78
Jewish	0.1%	6
Other	11.4%	464
No Religion	9.7%	392
Not Reported	1.4%	55
Total, All Persons	100.0%	4,057

**Religious Activity: Descriptive Information on Survey Sample (Question 42)**  
**Northwest Salt Lake Valley Community Residents, 1999.**

<u>Demographic Subgroup</u>	Northwest SL Valley Unweighted Sample Distribution	
	<u>Percentage Distribution</u>	<u>Number of Persons</u>
Attends Religious Services		
At Least Once a Week	43.2%	1,751
At Least Once a Month	12.8%	520
Less Than Once a Month	16.9%	684
Never Attends	25.6%	1,038
Not Reported	1.6%	64
Total, All Persons	100.0%	4,057

**Household Size: Descriptive Information on Survey Sample (Question 2)**  
**Northwest Salt Lake Valley Community Households, 1999.**

<u>Demographic Subgroup</u>	Northwest SL Valley Unweighted Sample Distribution	
	<u>Percentage Distribution</u>	<u>Number of Households</u>
Household Size		
1 Person	17.0%	206
2 People	23.3%	282
3 People	16.8%	203
4 People	18.0%	218
5 People	11.6%	140
6 People	7.0%	85
7 People	3.7%	45
8 People	1.2%	15
9+ People	1.3%	16
Not Reported	0.0%	-
Total, All Households	100.0%	1,210

**Moved in Last 12 Months: Descriptive Information on Survey Sample (Question 50)**  
**Northwest Salt Lake Valley Community Households, 1999.**

<u>Demographic Subgroup</u>	Northwest SL Valley Unweighted Sample Distribution	
	<u>Percentage Distribution</u>	<u>Number of Households</u>
Number Times Moved Last 12 Months		
1 Time	16.0%	194
2 Times	3.9%	47
3 Times	1.7%	21
Has Not Moved	77.5%	938
Not Reported	0.8%	10
Total, All Households	100.0%	1,210

**Telephone in Household: Descriptive Information on Survey Sample (Question 1)**  
**Northwest Salt Lake Valley Community Households, 1999.**

<u>Demographic Subgroup</u>	Northwest SL Valley Unweighted Sample Distribution	
	<u>Percentage Distribution</u>	<u>Number of Households</u>
Phone in Home		
Yes	91.2%	1,103
No	4.8%	58
Not Reported	4.0%	49
Total, All Households	100.0%	1,210

**Race: Descriptive Information on Survey Sample (Question 43)**  
**Northwest Salt Lake Valley Community Residents, 1999.**

<u>Demographic Subgroup</u>	Northwest SL Valley Unweighted Sample Distribution	
	Percentage Distribution	Number of Persons
Race		
White	47.8%	1,941
Pacific Islander		
Samoan	1.0%	39
Native Hawaiian	0.0%	2
Guamanian or Chamoro	0.0%	-
Oth. Pacific Islander	5.9%	240
Total Pacific Islander	6.9%	281
Asian		
Vietnamese	2.5%	102
Chinese	0.5%	19
Asian Indian	0.4%	17
Japanese	0.3%	14
Filipino	0.1%	4
Korean	0.1%	3
Other Asian	0.7%	27
Total Asian	4.6%	186
Black, African American	4.4%	177
Am. Indian, Alaskan Native	2.1%	84
Some Other Race	25.8%	1,047
Not Reported	12.6%	512
Total, All Persons <sup>1</sup>	100.0%	4,057

<sup>1</sup> Figures in this row sum to greater than 100% because respondents were allowed to select multiple answers.

# Appendix B.

## Technical Notes

## *Northwest Salt Lake Valley Community Survey Methodology and Technical Notes*

The purpose of this section is to provide the reader with a general methodological overview of the project. Persons interested in obtaining additional or more detailed information may contact:

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610 South 200 East Room #218  
Salt Lake City, UT 84111-3878  
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### *Overview*

Following a protocol developed by the Salt Lake Valley Health Department (SLVHD) and the Utah Department of Health (UDOH), in-person interviews were conducted with randomly-selected households within selected census tracts in Northwest Salt Lake Valley. Ten census tracts were identified for study. These census tracts coincide closely with postal ZIP codes 84116 and 84104, and include members of primarily Jordan Meadows, Poplar Grove, Rose Park, State Fairgrounds, Westpointe, and West Salt Lake communities. These are adjacent neighborhoods with a population of about 45,000 residents. These neighborhoods cover an area of 41 sq. miles and are located in an area with distinct geographical boundaries. They are bordered by Highway 201 (21<sup>st</sup> South) to the South, Interstate-15 to the East, oil refineries to the north, and an airport to the west. Since the geographic area was small and clearly defined, it was believed it would be logistically feasible to perform an area cluster-sample survey of households in these areas.

### *Questionnaire Design*

From initial meetings in 1998 until the beginning of data collection time was spent crafting the survey instrument; first deciding what items needed to be included and then refining the items and clarifying their intent. The Behavioral Risk Factors Surveillance System (BRFSS) survey provided question wording for several items. The questionnaire format was fashioned after the U.S. Bureau of the Census decennial census form, and included questionnaire items in rows, with columns provided to record information for individual household members.

The Healthy People 2000 initiative has established objectives to be met by state, county and municipal governments regarding health and health care for all Americans. Several of the priority areas were used to help operationalize constructs for the survey. Specifically, Priority Area 21 (Clinical Preventive Services, objectives 21.3 and 21.4) which deals with health care access and health care coverage, the Oral Health (13.10, 13.12, 13.13, and 13.14) and Maternal and Infant Health (14.11) areas provided guidelines for questions.

Input on questionnaire content was sought from a number of offices within both agencies. As could be expected, more areas of interest were identified than were possible to include on the survey instrument.

## ***Sampling Methodology***

### ***Overview***

The community survey utilized a standard geographic cluster sampling method as described in detail by the Centers for Disease Control and Prevention (CDC) and the World Health Organization (WHO)<sup>4,5</sup>. The method has been used extensively by the Expanded Programme on Immunization (EPI) to estimate immunization coverage in developing nations. EPI advocates the use of a modified version of a technique called “probability proportionate to size” in which sample selection is done in such a way that the probability of a census block being selected is directly proportional to the number of households on that block. That is, more blocks are selected in densely-populated areas, and fewer blocks are selected in sparsely-populated areas. The sampling method identifies a survey sample that is representative of the population of inference, and may be best described as a two-stage cluster sample where households had known probabilities of selection and were selected with probability proportionate to size. At Stage 1, households are clustered within U.S. Census blocks, and at Stage 2, persons are clustered within households.

### ***Determination of Sample and Cluster Size***

For this project, the population of inference was defined as persons living in households in adjacent census tracts, numbered 1001, 100302, 100303, 100304, 1004, 1005, 1006, 1026, 1027, and 1028. These 10 census tracts included 32 census block groups, and 529 individual blocks.

It was decided that a sample of approximately 1,130 households would produce a total sample size of 2,938 persons. With an estimated intraclass correlation coefficient of .2 for most health variables (Sudman<sup>6</sup>, Bennett<sup>7</sup>), and a cluster size of  $n_h = 5$ , this would produce a design effect<sup>8</sup> of 1.8, for an effective sample size of a little over 1,500 persons. It was decided that this would provide reasonably stable estimates for some of the small community and ethnic populations under consideration, and given budget restrictions, was probably the largest sample size that could be accommodated. The targeted census tracts were estimated to contain 18,539 households and 45,682 persons, for an average household size of 2.6 persons.

### ***Selection of Blocks***

Blocks were identified from which the clusters were to be sampled. The 1990 decennial U.S. Census information on the number of households per block was used to select blocks with “probability proportional to size.” Prior to selecting blocks for the sample, population estimates were updated using recent U.S. Census Bureau estimates of the rate of increase from 1990 to 1997 of Salt Lake County racial and ethnic populations, and estimates from a commercial vendor<sup>9</sup> of the rate of increase from 1992-1997 of the population size of the two postal ZIP code areas that closely coincided with the selected census tracts.

The block groups were sorted in the order of Census Bureau block numbers, within block groups, within census tracts. A sampling interval of 82 households was used to identify a total of 226 clusters. A total of 279 of the 529 census blocks were represented in the sample (several blocks were too small to support an entire cluster, and the cluster was allowed to span across multiple sequential blocks).

### ***Selection of Households***

The first household sampled was the first household on the right side of the street, starting at the southwestern-most corner of the Census block. The targeted households consisted of sequential house-

holds, going clockwise around the block to the north of the first household, following a pre-determined protocol for sampling side streets.

### ***Selection of Respondents***

The targeted survey respondent was the adult household member who was most knowledgeable about the health of all household members. This person provided survey information for all other household members. Persons over the age of 18 were selected to provide this information, unless the oldest household member was age 17 or younger.

### ***Response Rate***

A total of 2,052 households were visited from October through December 1999, with the purpose of obtaining the needed information. A total of 1,210 families completed the survey. Households that refused to participate (393) and vacant homes (83) accounted for 23.2% of the addresses visited. There were 27 addresses (1.3%) where there was no resolution reported, such as a refusal, a third attempt or a completed survey. Of these 27, only one household had requested a follow-up visit, which was not done due to an error in transferring the information to the follow-up logs. The remaining 340 homes had a final disposition of “no completed interview after three or more attempts.” The response rate may be calculated as completed interviews/(completed + eligible not completed), or  $1,210/(1,210+393+27+340) = 61.4\%$ .

## ***Data Collection Procedures***

### ***Interviewer Training***

Survey interviewers were not required to have previous survey interviewing experience. Many of the interviewers were students working on bachelor degrees, master’s degrees or ESL (English as a Second Language) courses. Other interviewers were full time or part time professionals, educators, or adults who were not otherwise employed. A training manual was produced in order to familiarize the interviewers with the rationale for conducting the survey, the specific methodology being used, and guidelines for conducting the survey.

Interviewers hired before fieldwork had begun attended a mandatory 4-hour orientation. The orientation went over the material in a data collection procedures manual that had been constructed specifically for this purpose, and covered basics of survey interviewing (e.g., the importance of following the sampling protocol, avoiding interviewer bias, etc.). In addition, there was close supervision and one-on-one training at the beginning of fieldwork to quickly correct unwanted behaviors. Interviewers hired after the onset of data collection read the training manual and were oriented to the survey procedures in one-on-one training sessions.

### ***Targeting Specific Addresses***

We provided computer-generated maps for each targeted census block. These maps included the census block boundaries, along with landmarks such as freeways and street names. These were very helpful, both for identifying where to begin sampling, and to help the interviewers locate unfamiliar areas. One of the senior fieldworkers visited cluster locations to identify the initial addresses to be contacted before any interviewers were dispatched. This procedure minimized mistakes that resulted from: 1) confusion about where the appropriate houses were located, 2) confusion about how the cluster sampling methodology works, and 3) selection bias introduced by any given pair of interviewers.

Within each cluster, teams identified the first eight residences according to the instructions on how to identify eligible residences (initially, 10 homes were used, and this was later reduced to improve the response rate). From these eight residences, a total of five survey interviews were to be completed. In the event that five households could not be interviewed after three attempts at each residence, the team was to add residences, one at a time, in an effort to complete the five household interviews. Once a household had been contacted, interviewers were required to keep it in the sample, even if five interviews had been completed in the cluster.

Due to the varying response rate from cluster to cluster, along with varying numbers of vacant homes, anywhere from seven to 15 addresses were identified to obtain the required five completed surveys, with an average of nine addresses per cluster. Twenty-three clusters had fewer than five completed surveys, 121 clusters had exactly five, and 82 clusters had more than five completed surveys (average = 5.35 interviews per cluster).

### ***Advance Notice***

A letter was sent to leaders of local religious, neighborhood, and ethnic community organizations to announce the presence of interviewers in the area. The letter included a description of the goals and rationale for the survey. Leaders were asked to inform their parishioners and community members of the survey and encourage their participation.

Colorful 1/2 sheet flyers, printed in both English and Spanish (on reverse sides), were also produced. The flyers were left at homes at the time of the initial visit if there was no one at home. The flyer alerted residents to the survey and presence of interviewers on their block, and asked potential participants to call us when they came home and found the flyer. Although very few respondents called, the flyer did serve to alert the household that they had been selected for the survey.

Interviewers carried a letter to validate the legitimacy of the survey. The letter was printed on SLVHD letterhead and signed by Ilene Risk, the SLVHD epidemiologist. The letter stated the purpose of the survey, the responsible parties, and other relevant information. This letter helped legitimize the survey, and provided additional information for those participants who were interested. Interviewers carried additional copies of the letter and showed it to residents as needed to elicit cooperation. This letter was clearly useful, and copies were distributed by interviewers to at least 10% of the addresses visited.

### ***Incentives***

For this project, monetary donations from the Alta Cottonwood Foundation allowed the purchase of over 1000 smoke alarms, bicycle helmets, and flashlights. We used these items as incentives to participate in the study. We asked interviewers to make it very clear that this was a thank-you gift only, and was not to be seen as payment for participation. These incentives were very popular with both our interviewers and participants, and clearly helped us gain cooperation in cases where the participants were initially reluctant. The use of incentives helped many interviewers feel like they were able to give something for the family's time. Furthermore, these incentives allowed us to promote household safety and improve public relations in the communities. In one case, we learned that a family had used the flashlight given to them by our interviewers to help them escape during a home fire. Clearly, we were very glad to have the incentives available, and would encourage the use of similar incentives in any future studies.

### ***Daily Survey Log***

The Daily Survey Log (DSL) was a standard form that was used by all interviewers to record all attempts made to conduct interviews with each selected household. The DSL included, for each household: 1) address and phone number, 2) dates and times at which up to three contacts had been attempted, 3) the outcomes of each of those three attempts, 4) suggested or scheduled times to complete a follow-up visit, and 5) a space to record what gift (incentive) had been given to participants who completed the survey. One DSL was completed for each of the 226 clusters surveyed, and included space to record information on every targeted household.

### ***Scheduling of Interviews***

As we had originally anticipated, the times that were most productive for interviewing were the early evenings on weekdays and all day Saturday. These were the times when we concentrated our efforts, although some of our teams worked throughout the day on weekdays with a fair amount of success.

When participants asked that they be re-visited at a certain time, or if they wanted to complete the survey over the telephone, this information was recorded on the DSL as well as a follow-up log. The follow-up log served two primary functions: 1) it served as a guide for the supervisory staff to help direct interviewers in their daily work, and 2) it provided a list of names and numbers of people who could be called when a scheduled interview had to be rescheduled.

When non-English-speaking respondents were encountered, an interviewing team that spoke the language was asked to return to the home to do the survey in the family's native language. Multi-lingual interviewers were able to complete interviews in English, Spanish, Bosnian, Vietnamese, Tongan, Somalian, and Arabic. There were only one or two families that had to be excluded due to a language barrier. Younger children who might have been able to translate for non-English-speaking adults in the household were not allowed to serve as interpreters for purposes of survey data collection.

### ***Data Collection***

Data collection for the survey began on October 6, 1999, and continued through December 31, 1999. The primary mode of data collection was through face-to-face interviews conducted by interviewers who were hired and trained by participating SLVHD survey staff. At any given time during the data collection process, there were between 24 and 30 interviewers on staff, each working from 10 to 40 hours per week.

Interviews were conducted on a total of 68 days; thus the average number of surveys completed per day was 17.7, with a range of approximately 5-35. The total numbers of hours recorded by the interviewers was approximately 3330. The average cost to obtain one completed survey was \$27.80. This cost includes interviewer salaries, only, and does not include salaries paid to supervisory staff, support staff, cost of incentives, or overhead costs. During the data collection period, an estimated 1.0 F.T.E. was assigned to managing the data collection and monitoring the survey interviewers.

### ***Telephone Interviews***

Whenever possible, interviewers obtained telephone numbers at the time of the initial contact with the household. As a secondary mode of data collection, some interviews were conducted over the telephone. Telephone surveys were conducted in one of three cases: 1) a participant called the SLVHD after receiving a flyer and requested to be interviewed by telephone, 2) a participant was contacted at their home by an interviewer and requested to be contacted by telephone at a later time, or 3) there was a language

barrier and the participant was later called by an interviewer who spoke their language. At the conclusion of the project, 5-10% of the surveys had been completed over the telephone.

### ***Field Supervision***

Field supervision was provided by SLVHD. Field managers were available and on call whenever interviewers were in the field. These individuals provided constant monitoring of data quality and completeness as paper questionnaires were submitted by interviewers. Training of interviewers was essentially ongoing throughout the project as field managers discovered, solved, and remedied data collection problems.

Quality-assurance/verification interviews were conducted by telephone with 20 surveyed households. The address and household size information was verified, and all 20 households acknowledged that they had participated in an in-person survey interview.

Interviewers needed to be reminded of protocols regularly, and their behavior brought into alignment with them. One means for providing increased supervision and training was to conduct supervision in the field. When observing interviewers while they were working, it was a straightforward process to catch mistakes and provide immediate feedback on how to correct them.

### ***Interviewer Safety***

To ensure interviewer safety, interviewers worked in teams of two during daylight hours only. The expectation was that interviewers would leave the area when it was still light and travel either back to the health department or to their homes. Because interviewers were typically in the field unsupervised, they were given the freedom to decide for themselves when their safety may be threatened and to leave the area if they believed it was. If a house did not appear safe to the interviewers, they were to make a note on the survey log and move on. Surprisingly, very few interviewers considered homes to be unsafe. They usually did not pursue a home if large or unfriendly dogs were present in the yard, the gate was locked or there were other visible signs they were not welcome.

### ***Miscellaneous***

For this project, the SLVHD acquired cellular phones for use by the interviewers. These phones afforded interviewers an additional safety mechanism, and facilitated communication with the field supervisors. In at least one case, an interviewer team used a SLVHD cellular phone to call the police when they observed a crime in progress. In many cases, SLVHD field staff were able to prevent errors from occurring when interviewers used the phones to call in with questions when confusion arose while in the field.

All interviewers wore a SLVHD identification badge while they were in the field. The feedback we received was that these badges legitimized the interviewers presence on the block and allowed them to achieve greater cooperation than would have been possible otherwise.

## ***Data Analysis and Presentation***

### ***Population Size Estimates***

The report tables provide estimates for the numbers of persons living in the area sampled for this project. These numbers should be considered estimates. 1990 U.S. Census estimates of area populations of total persons and households were used as a starting point, and projections to 1999 were made based on what little additional information was available. (see "Selection of Blocks", p. 138)

To derive estimates of the population distributions by the grouping variables that appear in the data tables, the percentage distribution of persons in the survey sample were used to compute population size estimates. For instance, the total number of households was estimated at approximately 18,500. Survey analyses yielded an estimate that 50.7% of households contained children age 17 or under. The number of area households with children was estimated as 50.7% X 18,500, or 9,400 households.

The population estimates are reasonable estimates given the information available. However, it is likely that the 2000 U.S. Census numbers, when they come out, will be quite different.

The data presented in this report are representative of all persons living in the 10 sampled census tracts. It should be noted that the estimates provided for the six communities include only those community members who also live in the 10 selected census tracts. Although we believe that the 10 census tracts included all or almost all member of all six communities, it is possible that some community members were not sampled because they lived outside of the population of inference for this project.

### ***Missing Values***

A consideration that affected the presentation of the population estimates in table format was the inclusion or exclusion of missing values (“don’t know” and “refused to answer”). Population percentage estimates were calculated after removing the “don’t know” and “refused to answer” responses from the denominator. This, in effect, assumed that persons who gave those answers were distributed identically on the variable of interest to those who gave a valid answer to that variable. For instance, that among those who did not know whether they were insured, we assumed that 76.8% of them were insured and 23.2% were not insured — percentages identical to those found among the sample members who answered the question with a valid response.

### ***Survey Error***

Estimates developed from the sample may differ from the results of a complete census of all households in the Northwest Salt Lake Valley Communities due to two types of error, sampling and non-sampling error. Each type of error is present in estimates based on a survey sample. Good survey design and data collection techniques serve to minimize both sources of error.

*Sampling error* refers to random variation that occurs because only a subset of the entire population is sampled and used to estimate a finding for the entire population. It is often mis-termed “margin of error” in popular use. Sampling error is expressed as a *confidence interval*. The 95% confidence interval (calculated as 1.96 times the standard error of a statistic) indicates the range of values within which the statistic would fall 95% of the time if the researcher were to calculate the statistic (e.g., a percentage) from an infinite number of samples of size= $n$  drawn from the same base population. It is typically expressed as the “plus or minus” term, as in the following example:

“The percentage of those polled who said they would vote for Al Gore was 52%, plus or minus 2%.”

Because the Northwest Salt Lake Valley Communities Survey used a cluster survey design, it must be considered a complex survey sample. Estimating the sampling error for a complex survey sample requires special statistical techniques, to calculate the standard error for each estimate. SUDAAN software (Research Triangle Institute) was used to estimate the standard errors of the survey estimates because it employs a statistical routine (Taylor-series expansion) that accounts for the complex survey sample design.

Figures in this report include bars showing the estimated value of a percentage, plus a confidence interval around the estimate. In cases where the confidence interval was greater in magnitude than the estimate, the estimate was suppressed. Further, estimates were not computed where the sample denominators were less than  $n=50$ . Readers should note that we have always presented the confidence interval as though it were symmetric, that is, of equal value both above and below (plus and minus) the estimate. It is often the case, however, that a confidence interval will be nonsymmetric. This occurs when the distribution is positively or negatively skewed, such as when a percentage is close to 0% or 100%. However, because the software program we use provides only symmetric confidence intervals, we were unable to provide the asymmetric estimates without some difficulty.

*Non-sampling error* also exists in survey estimates. Sources of non-sampling error include idiosyncratic interpretation of survey questions by respondents, variations in interviewer technique, household non-response to questions, coding errors, and so forth. Good data collection techniques serve to minimize non-sampling survey error. No specific efforts were made to quantify the magnitude of non-sampling error.

### ***Comparability With Other Data Sources***

Comparability with other data sources is an issue with all surveys. Differences in survey design, survey questions, estimation procedures, the socio-demographic and economic context, and changes in the structure and financing of the health care delivery system may all affect comparisons between the Northwest Salt Lake Valley Communities Survey and other surveys, including those conducted by the U.S. Bureau of the Census, the Behavioral Risk Factor Surveillance System surveys, and Utah Department of Health, Health Status Surveys.

1 Bureau of Surveillance and Analysis (1998). Community Health Status: Selected Measures of Health Status by Small Area in Utah. Salt Lake City, UT: Utah Department of Health.

2 Bureau of Surveillance and Analysis (1998). Overview of the 1996 Health Status Survey (1996 Utah Health Status Survey Report). Salt Lake City, UT: Utah Department of Health.

3 Office of Public Health Assessment (2000). 2000 Utah Child Health Survey: General Population Overview. Salt Lake City, UT: Utah Department of Health.

4 University of Utah Research and Evaluation Program. (1997). Utah Health Status Survey on Ethnic Populations-- Qualitative Component. Salt Lake City, UT: Utah Department of Health.

5 Serfling, RE, Sherman, IL. (1965). Attribute Sampling Methods for Local Health Departments with Special Reference to Immunization Surveys. Atlanta, GA: U.S. Centers for Disease Control, Epidemiology Program Office; DHEW publication no. (PHS) 1230.

6 Brogan, D., Flagg, E.W., Deming, M, and Waldman, R. (1994). Increasing the Accuracy of the Expanded Programme on Immunization's Cluster Survey Design. AEP, 4 (4), 302-311.

7 S. Sudman (1976). Applied Sampling. San Diego: Academic Press. pp. 229-230

8 S. Bennett, T. Woods, W.M. Liyanage, & D.L. Smith (1991). A simplified general method for cluster-sample surveys of health in developing countries. World Health Statistical Quarterly, 44, 98-105.

9 Lee, E.S., Forthofer, R. N., & Lorimer, R. J. (1989) Analyzing Complex Survey Data. Newbury Park, CA: Sage Publications, Inc.

10 CACI Marketing Systems, 1100 North Glebe Road, Arlington VA 22201 USA, (800) 394-3690