

CHAPTER 2. SURVEY CONTENT AND INTERVIEWS

2-A. INTERVIEW PROCESS

OVERVIEW

An understanding of the data collection for the NPTS is essential to the proper use and interpretation of the data. FHWA staff and other survey sponsors occasionally monitored the data collection interviews from the Telephone Survey Unit at Research Triangle Institute. Everyone who had the experience of monitoring the interviews came away with a better understanding of the survey data.

For purposes of this User's Guide we have attempted to give the reader a better understanding of the interview process by using the Typical NPTS Household example. Basic background on the interview process, as contained in the next few sections, will aid the reader in understanding the Typical Household's involvement in the survey.

THREE PHASES

The NPTS data collection consists of three main phases:

Household Interview - collects information about the household, the household members, vehicles owned by or available to the household, and to obtain the mailing address for the travel diaries. It is conducted once per household.

Person Interview - collects the travel day data, the long trip (travel period) data, information about worker status and the typical trip to work, baseline data on occasional use of transit and occasional working from home, and customer satisfaction with the transportation system. A person interview is attempted for each household member 5 years and older, with an adult reporting the travel of those 5-13 years old. For the household to be included in the final data set, interviews had to be completed with at least half of the household adults (defined as persons 18 years and older)

Odometer Readings - are collected for each household vehicle at two points in time. The first is at or around the time of the person interviews. The second is 2-6 months later.

2-B. INTERVIEWS

HOUSEHOLD INTERVIEW

Once a sample telephone number was selected, an advance letter was sent to the household if a mailing address for that telephone number was available from computerized telephone directory services. After the advance letter mailing, an interviewer would call the number, ask some screening questions to determine that it was a household, and complete the household interview portion of the survey by interviewing one of the adult household members. The household interview questions are contained in Sections A through D of the CATI questionnaire (see **Appendix E.**) Exhibit 1 describes screening and interviewing in the sample household.

Exhibit 1- Household Screening and Interview Contents

Data Collected	<ol style="list-style-type: none"> 1. Information to determine whether the selected telephone number is a household and not a business, fax line, etc. 2. Characteristics of the household members, vehicles, and address for mailing the travel diaries.
Who is contacted	<ol style="list-style-type: none"> 1. Any household member who can respond (screening questions). 2. A household member 18 years or older can answer the questions about household members and vehicles.
When collected	The first contact with the household can occur any time after the telephone number is placed in the sample. Follow-up contacts are scheduled as part of the data collection
Why collected	<ol style="list-style-type: none"> 1. To insure the sampled number is a household, not group quarters, business, etc. 2. To introduce the survey and obtain the household-level and address information.

How collected	<ol style="list-style-type: none"> 1. Telephone screening contact (1 to 2 minutes) 2. Household interview (8 to 10 minutes)
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AFTER THE HOUSEHOLD INTERVIEW

At the time the household interview was completed, the computer would assign a pre-selected travel day 12 to 18 days in the future. The travel diaries would be prepared and mailed to the household, along with odometer forms, a reminder to complete the diaries on the travel day, response incentive money (\$2.00 per person), and other instructions to the household. On the day before the household's travel day, an NPTS interviewer would call and briefly remind the person answering the telephone to ask the members to complete their travel diaries on the following day.

PERSON INTERVIEW

Attempts to complete the person interviews began on the day following the travel day, and generally continued (with a maximum limit of six days) until all person interviews had been completed for all household members 5 years of age and older. Proxy interviews would be conducted, for persons 5 to 13 years of age, by interviewing another household member 14 or older. Persons 14 and older would be interviewed individually as often as possible, with proxy interviews allowed with other household members when necessary. Exhibit 2 describes the person interview.

Exhibit 2 - Person Interview Content by Age of Household Member

	Age 16 and older	Age 5 to 15 years
Data Collected	Customer satisfaction Driver information Education level Usual travel to work Travel day trip information Travel period trip information	Travel day trip information Travel period trip information
Who is contacted	Each household member 16 years and older	Each household member 14 and 15 years old, Proxy for those 5 to 13 years of age.
When collected	Within 6 days following travel day	Within 6 days following travel day
Why collected	To obtain the person-level data. The travel day trip information collected in the person interview is considered the core NPTS data	To obtain the person-level data. The travel day trip information is considered the core NPTS data
How collected	Travel diaries mailed; Person interview by telephone (10 - 15 minutes)	Travel diaries mailed; Person interview by telephone (5 - 10 minutes)

ODOMETER READINGS

The third portion of the NPTS survey involves collecting odometer readings two times for each of the household's vehicles. A form listing each vehicle and requesting the information was mailed with the travel diaries. The first odometer readings and the dates they were made were collected during the person interviews if possible. If the readings were not available, household members were asked to record the readings within a few days. Additional odometer reading call back attempts were made if the readings had not been obtained when person interviews were completed for the household, or when the six day interviewing window had

expired.

At least 2 months after the first odometer readings, another letter was mailed to the sample household. This letter also listed the vehicles and requested that another reading be taken and the date recorded on the form, for each of the vehicles.

Subsequently, NPTS interviewers called the households to collect the second odometer reading information. The exhibit that follows describes the odometer reading contacts.

Exhibit 3 - Contents of the Odometer Reading Contacts

	First Odometer Reading	Second Odometer Reading
Data Collected	Date and odometer reading for each vehicle	Date and odometer reading for each vehicle
Who is contacted	Any household member who can provide the information	Any household member who can provide the information
When collected	During person interviews, or shortly after	From 2 to 6 months following the first readings
Why collected	Obtain better information on vehicle miles of travel	Obtain better information on vehicle miles of travel
How collected	Recording form mailed with travel diaries; results collected by phone	Recording form sent in separate mailing; results collected by phone

2-C. NPTS CORE DATA

There is a group of data that is considered "core" NPTS data, and it is largely composed of the items that have been collected in all five NPTSs to date. It is very likely that this core data will be included in future NPTS efforts. The data items that are considered core and their item number on the 1995 NPTS questionnaire are:

**HOUSEHOLD
LEVEL**

FOR EACH HOUSEHOLD:

Household size - item D.1

Household composition - derived from items D.1-D.4, D.7-D.8

Number of vehicles - item B.1

Race & Hispanic status of household respondent - items D.5-D.6

Household location - items D.17-D.18, J.1-J.2, plus information
from the sample frame

Income - Sections K and I

Availability of public transportation - items C.1 - C.5

**PERSON
LEVEL**

FOR EACH HOUSEHOLD MEMBER:

Age - item D.3

Sex - item D.4

Education level - item F.1

Worker status- items D.12 and F.2

If worker - typical work trip- items F.5-F.9

Driver status - items D.11 and E.6

If driver- annual miles driven - item E.8

If driver- drive as part of work - items G.3-G.8

**VEHICLE
LEVEL**

FOR EACH HOUSEHOLD VEHICLE:

Make - item B.2

Model - item B.2

Model year - item B.2

Purchased new or used - item B.6

Annual miles driven - item B.7

Primary driver - item D.15

TRAVEL DAY

FOR EACH TRIP EACH HOUSEHOLD MEMBER 5 YEARS AND
OLDER TOOK ON THE HOUSEHOLD'S ASSIGNED TRAVEL
DAY:

Time trip began - item G.17

Trip purpose - item G.20

Distance to destination - G.22

Time trip took - G.27

Means of transportation - item G.25

If private vehicle trip, was household vehicle used - item G.23

If household vehicle used, which vehicle - item G.24

If private vehicle trip, did a household member drive - G.37
If household member drove, which one - item G.38
Any other household members on trip - item G.35
If household members, which ones - item G.36
Any non-household members in trip- item G.39
If non-household members on trip, how many - item G. 40

The answers to this series of core questions about each trip taken by the members of the household on their travel day provide the most sought after and most used data from NPTS and all other household travel surveys.

TRAVEL PERIOD

FOR EACH TRIP OF 75 MILES OR MORE (ONE-WAY) TAKEN IN THE TWO WEEK PERIOD ENDING ON, AND INCLUDING, TRAVEL DAY:

Trip purpose - item H.6
Means of transportation - item H.8
Destination - item H.2

SEGMENTED TRIPS

FOR EACH PORTION OF A TRIP TAKEN BY PUBLIC TRANSIT OR AMTRAK:

Means of transportation - item G.28
Travel time - G. 30

2-D. SURVEY CONTENT CHANGES IN 1995

The core questions in the 1995 survey remained the same as in previous NPTS surveys. However, a number of content changes were made in the 1995 NPTS, as described in this section.

ODOMETER READINGS

Two odometer readings and the associated date of the readings, planned to be taken two to six months apart, were attempted for each household vehicle. A model to estimate annual miles driven from these two readings and other information was developed. The odometer readings were collected and annualized to produce a separate estimate of vehicle miles of travel (VMT), in addition to the owner's estimate and the summation of travel day trips made

in that vehicle.

**CENSUS
TRACT AND
BLOCK
GROUP
CHARACTER-
ISTICS**

The first three NPTS surveys were conducted by the U.S. Census Bureau using an area household sample in 1969, 1977 and 1983. However, because the Census Bureau had conducted the survey, there were very strict confidentiality requirements and the neither the address nor the Census tract could be identified outside the Bureau. For the 1990 NPTS FHWA chose not to collect address information. It was not necessary to do so because the survey was conducted totally by phone with no diary mailings.

Home and work addresses were collected in the 1995 NPTS. The purpose of collecting the addresses in 1995 was to mail the travel diaries, and also to add additional geographic detail to the data files. However, addresses are not part of the dataset. Appending a series of characteristics of the area of the residence and workplace locations to the data files will allow analyses of the land use-transportation connection, and may also facilitate the potential creation of synthetic travel survey data for states or metropolitan areas.

**CUSTOMER
SATISFAC-
TION
QUESTIONS**

For the first time in the NPTS series, the 1995 survey contained questions on the public's opinion of transportation services and systems. The data user can analyze these attitudes in the context of how much the respondent travels, which modes are used, vehicle ownership, income, and so forth. It is anticipated that customer satisfaction questions will continue to be incorporated in future NPTS work.

**SEAT BELT
USE**

Questions were included on how often people use seat belts. For those using seat belts some or most of the time, additional questions were asked on the reasons for not using them all of the time. This will benefit safety analysis of seat belt use, and provide a thorough catalog of reasons people do not always use seat belts.

TRIP PURPOSES

In an effort to better understand travel, more detailed trip purpose data were collected. New trip purpose categories in the 1995 NPTS are:

- return to work
- take someone somewhere
- pick up someone
- out to eat
- return home.

The collection of trip purposes changed from a descriptive format (e.g., what best describes your reason for making this trip) to a FROM-TO format (e.g., a trip from "other family and personal business" to "home"). This is a more objective and more straightforward way to collect the data. This approach also allows for an improved analysis of trip chaining.

See **Appendix M** for a more detailed explanation of trip purpose coding and the trip purpose variables on the 1995 NPTS dataset.

2-E. TYPICAL NPTS HOUSEHOLD

HOUSEHOLD INTERVIEW

At this point, we continue the example of the hypothetical household mentioned in Section E of Chapter 1. Here we describe their interactions with the 1995 NPTS project, by walking through the types of information collected.

First, an interviewer called and spoke with Terry; the household was screened to verify that it was a legitimate household sample and the household interview was conducted. In this example case, only one call was required to both screen, and complete the household interview.

Household Interview - Terry gave the household interview on October 15, 1995 and she is termed the Household respondent

- the '89 Camry was driven 14,000 miles in the past year
- the Ford Contour was driven 11,000 miles in the past year
- there is a bus stop one block from the townhouse they own
- there is a subway, but the nearest stop is about 2 miles away
- Terry is 37 years old, a female, an African-American. She is employed and is the primary driver of the Ford Contour.
- Keith is 39, a male, the husband of Terry, employed, and the primary driver of the Toyota Camry.
- Lucy is 16, female, and has begun driving.
- Ben is 10 years old, male.
- their mailing address is 2370 SW Fifth Street, Anytown, Anystate

(Note that the mailing address is used to send the diaries. It is not kept on the datafile.)

**AFTER
HOUSEHOLD
INTERVIEW**

At the end of the household interview, the interviewer told Terry that the computer had selected October 29, 1995 as the random travel day for the household and asked that each family member keep a diary with key information about their travel on that day. The diaries were prepared and mailed to the household on October 22, along with instructions, \$8.00 in incentives, the odometer reading form, and a reminder that their travel day was October 29.

**PERSON
INTERVIEW**

On November 1, after several no-answer calls, an interviewer reached Terry at home and completed her person-level interview.

Person Interview with Terry - about 2 weeks after the Household Interview

- highway congestion is not a problem for her
- rough pavement on the highways is a small problem for her
- she has used public transportation three times in the past two months
- she is a driver and always wears her seat belts when in a private vehicle
- she drove about 12,500 miles in the past year
- she has completed some college, but does not have a Bachelor's degree
- she works full time--her workplace is at 123 Frontage Road, which is 9 miles from her home
- she usually leaves home at 7:45 AM to go to work--the trip usually takes 20 minutes one-way and she drives alone in the Contour
- she does not pay to park at work
- she never works at home in place of going to her workplace

Person Interview continues with Terry's Travel Day

Inventory of Terry's trips on the travel day,
October 29:

7:45 am - to work
12:30 pm - to lunch
1:20 pm - return to work
5:15 pm - leave work
5:35 pm - stop at bank
5:45 pm- return home
7:25 pm - walk the dogs,
with Keith

Detailed information collected on sample trip to lunch:
started at 12:30 pm
from work to eat out
walked 3 blocks to
restaurant,
took 10 minutes
was with two coworkers

Detailed information collected on sample trip to the Bank
started at 5:15 pm
from work to other family & personal business
trip was 8 miles, it took 20 minutes
she drove alone in the Contour.

**TRAVEL
PERIOD**

Terry has not made any trips of 75 miles or more one-way in the two week period ending on Travel Day

Additional information gathered from Terry at the end of her person interview

- they have one phone number for their household
- their annual household income is in the \$35,000-\$40,000 range

Interviewer asked for the odometer readings but they were not available. Terry agreed to make the readings and the interviewer said she would call back to record them.

**FIRST
ODOMETER
READINGS**

The same interviewer called again on November 3 and completed the odometer readings and the date they were taken for both vehicles.

Callback for odometer reading two days after Terry's person interview

- Contour is 14,355, Camry is 73,940
- both readings were recorded on November 2, 1995

**SECOND
ODOMETER
READINGS**

Around February 1, Terry received a letter from RTI asking that another recording be made of the odometer readings of the two vehicles. Keith completed the form and placed it by the telephone. On February 20, another interviewer called for the readings. Lucy was the only person home at the time; she found the completed form by the phone and gave the information to the interviewer.

Callback for second odometer reading three months later

- Contour has 17,923, Camry has 78,125
- both readings were recorded on February 5,1996.