Appendix C

1999 NHSDA Procedure for Adding Missed Dwelling Units

1. Introduction

The 1999 National Household Survey on Drug Abuse (NHSDA) requires field interviewers (FIs) to visit sample segments and screen and interview dwelling units (DUs) that were selected from an ordered list. The list of DUs, which includes housing units and group quarters, was constructed by the counting and listing staff during the summer and fall of 1998. Because the listing was done a short time before the 1999 screening and interviewing activities began, one would hope that no major discrepancies would be found. However, factors such as new construction, demolition, and inaccurate listing may be present in some cases. More commonly, DUs may have been "hidden" and therefore overlooked by the counter and lister.

In order for all DUs to be given a chance of being selected, the NHSDA has in place a procedure for locating and adding missed DUs. The current procedure requires FIs to look both on the property of selected DUs and between that DU and the next listed DU (half-open interval rule). If the number of added DUs linked to any particular DU does not exceed three or if the number for the entire segment is less than or equal to six, the FI is instructed to consider these DUs as part of their assignment. However, if either of these limits is exceeded, the FI will contact RTI for subsampling to be considered.

This document outlines the proposed procedures for RTI to use when discrepant segments are found in the field. For the purposes of this document, procedures for adding missed DUs will be classified into three categories: adding housing units (HUs), adding group quarter units, and "busts."

2. Motivation

In previous years, if the number of added DUs exceeded three for the DU or six for the segment, the added DUs were subsampled at the same rate of the original selection for the segment. In order to maintain unequal weighting effect and to control costs associated with adding DUs, a new subsampling procedure is proposed:

Number of Added DUs	Sampling Rate
0	No Action
1-6	Automatic (all DUs added to the sample)
7-10	1 (take all)
11-25	½
26-40	1/3
41-50	¼
50+	1/5

3. Procedure for Adding Housing Units

This section refers to housing units that are obtained through the half-open interval rule. This method of dealing with added HUs is preferable to all others because it is probability-based and maintains the integrity of the sample. When possible, this methodology will be used to resolve added DU problems.

1. Once the limit of three (or six) rule is exceeded, the FI should stop Screening and Interviewing activities on added HUs and contact RTI. The FI will be instructed to do a quick check of the segment to see if any other listing problems might arise. At this time, the FI will complete a paper list of added HUs for the entire segment.

2. Once the final list of added HUs has been received by RTI:

   a) Sampling will examine the added HUs and determine whether they are linked to a sample dwelling unit (SDU).
   b) If the number of added HUs linked to any SDU exceeds 50, these units will be treated as a "bust." (See Section 6)
   c) If the number of added HUs linked to any one non-sampled DU exceeds 50, these units will also be treated using the procedure for "busts." (see Section 6)
   d) Sampling will calculate the total number of added DUs by adding the number of sampling units obtained through the "bust" procedure to the number of added DUs obtained through the half-open interval rule.
   e) If the total number of added DUs exceeds 10, a subsampling rate will be determined using the criteria above.

3. RTI will add the HUs to the system and subsample if necessary:

   a) Data entry of the added HUs will be done. Lines will be entered for all units that collectively qualify as a "bust" and units obtained through the half-open interval rule, and not for all missed DUs found in the segment. At this time, the link number will be entered and a line number will be assigned. For lines obtained through the "bust" procedure the SLN or sampling link number will also be recorded. Finally, it will be necessary to check that none of the lines have already been entered in the Newton so that lines don't appear in the system twice.
   b) Select lines from the added HUs at the rate defined above. Record the subsampling rate in a data field.
   c) For all cases that have no CAI or PAPI assignment (i.e. added HUs that were not previously entered in the FI's Newton), assign CAI or PAPI at the same rate as for the entire segment.
   d) Bring over CAI or PAPI probabilities of selection as appropriate for the segment.
   e) Add a random number for the Newton selection algorithm.

4. Selected lines will be added to the FI's assignment during the next transmission.

4. Procedure for Adding Group Quarter Structures

In the case of an entire group quarter structure not being listed (or erroneously being listed as a HU), the half-open interval rule will be applied. For example, if the DU preceding the GQ was selected or if the HU that is really a GQ was selected, the entire GQ structure will be

added to the sample. The exception to this rule will be if the number of GQ units in the missed GQ structure exceeds 50. In this last case, the "bust" procedure will be applied (see Section 6).

5. Procedure for Adding Group Quarter Units

In the case of discrepant GQ listings, we will know in advance the number of sampling units (rooms, persons, or beds) and the number of selected units. If the actual number of sampling units equals the amount listed in advance, the Newton will only need to be notified of the new unit type in order to function properly. However, if the actual units do not equal the advance units, two approaches will be taken.

5.1. Number of Actual GQ Units Less Than Number of Advance GQ Units

In the case that there are extra GQ units listed, the units at the end of the list will be assigned an ineligible code such as "Not A DU." All other units will remain eligible.

5.2. Number of Actual GQ Units Greater Than Number of Advance GQ Units

If there are more GQ units in the structure than were previously listed, a complete list will be made and the units will be consecutively numbered. Assume, for example, that 11 units were listed and 45 were actually found. Also, assume that units 1, 5, and 10 were selected for Screening and Interviewing.

Original list: **1**
2
3
4
5
6
7
8
9
10
11

Then, the additional units will be numbered consecutively and a Sampling Link Number (SLN) corresponding to each of the originally listed units will be assigned. Next, the added GQ units with SLNs corresponding to the original selected units will be added to the sample. The new sampled unit will be assigned the same method, CAI or PAPI, as the originally selected unit.

Unit Number	SLN
12	**1**
13	2
14	3
15	4

16	**5**
17	6
18	7
19	8
20	9
21	**10**
22	11
23	**1**
24	2
25	3
26	4
27	**5**
28	6
29	7
30	8
31	9
32	**10**
33	11
34	**1**
35	2
36	3
37	4
38	**5**
39	6
40	7
41	8
42	9
43	**10**
44	11
45	**1**

6. "Busts"

Any segment listing with a major discrepancy (defined by 50 or more unlisted units or 50 or more added DUs linked to an SDU) or that is completely unrepresentative of what is actually found is called a "bust." In the case of a fictitious listing, RTI will relist the segment as quickly as possible. Otherwise, the following approach will be employed. First, if any DUs have disappeared since the time of the listing, all selected "disappears" will be assigned an "ineligible" Final Screening Code. Then, any new DUs will be listed consecutively, assigned a SLN, and added to the sample if the SLN corresponds to the line number of an originally selected DU. CAI or PAPI for the new sampled DU will be taken from the originally selected unit. Note that if the DU was coded "ineligible" in the first step, the new DUs having its line number as the SLN will still be added. This procedure is identical to the procedure for adding extra GQ units, however the list can contain any combination of HUs and GQ units in this case. Again, if the number of DUs added is greater than 6, then resampling will occur from all non-finalized DUs as in Section 3.

7. Quality Control

In order to ensure the quality of the work done, RTI will employ several quality control checks:

1. Mapping will ensure that the correct information has been keyed by data entry.
2. Checks within the computing division.
3. Sampling will check the number of selected lines and the person probabilities of selection assigned to each DU selected in the subsampling routine.