

2007

Cervical Cancer Screening Supplement

Visit File Data Documentation

Table of Contents

	Page
I. Introduction	3
A. NAMCS and NHAMCS	3
B. Cervical Cancer Screening Supplement	4
II. Data Variables.....	5
A. Patient Record Data	5
B. CCSS Provider Data.....	5
C. Design Variables	6
D. Additional Derived Variables	6
III. Weighting	7
A. Patient visit weight.....	7
B. Reliability of Estimates	7
IV. Analytical Guidelines	8
A. Using weight variables	8
B. NAMCS versus NHAMCS	8
C. Combining years of data	8

Appendixes

Appendix A Patient Visit Form Instructions.....	9
Appendix B Summary Tables.....	12
Appendix C Sample SUDAAN Code To Produce Summary Table 2	14
Appendix D Sample SUDAAN Code To Produce Summary Table 3	16
Appendix E Marginal Data Frequencies	18

I. INTRODUCTION

This micro-data file contains data collected in 2007 from the National Ambulatory Medical Care Survey (NAMCS), National Hospital Ambulatory Medical Care Survey (NHAMCS) and the Cervical Cancer Screening Supplement to the NAMCS and NHAMCS. NAMCS and NHAMCS are national probability sample surveys conducted by the Division of Health Care Statistics, National Center for Health Statistics (NCHS), Centers for Disease Control and Prevention (CDC).

For the 2007 NAMCS, a national sample of office-based physicians and community health centers (CHCs) provided data on patient visits to physician offices and CHC's. For the 2007 NHAMCS, a national sample of hospitals provided data on patient visits to emergency departments (EDs) and outpatient departments (OPDs). In 2007, office-based physicians, CHCs, and outpatient clinics of specific specialties completed the Cervical Cancer Screening Supplement (CCSS), providing information on their cervical cancer screening practices. This micro-data file combines the patient visit data from NAMCS and NHAMCS and matched provider-level data on cervical cancer screening practice from the CCSS. The purpose of this micro-data file is to provide visit-level data for female patients of ambulatory medical care providers who perform cervical cancer screening.

A. NAMCS and NHAMCS

Ambulatory medical care is the predominant method of providing health care services in the United States. Since 1973, data on ambulatory patient visits to physicians' offices have been collected through the National Ambulatory Medical Care Survey (NAMCS). NAMCS has provided a wide range of data describing the public's use of physician services. In 1992, the National Hospital Ambulatory Medical Care Surveys (NHAMCS) began collecting data on visits to hospital emergency departments (EDs) and outpatient departments (OPDs) to give a more complete picture of ambulatory care services. Together NAMCS and NHAMCS comprise the ambulatory care component of the National Health Care Surveys. Valid data concerning both office and hospital ambulatory medical care are needed to make rational decisions regarding the allocation of resources and training of health professionals, to aid in efforts to control medical care costs, and to plan for the provision of ambulatory medical care. These data have been used extensively for medical care research, education, administration, and public policy decision making.

NAMCS. The basic sampling unit for the NAMCS is the physician-patient encounter or visit. Traditionally, only visits to the offices of nonfederally employed physicians classified by the American Medical Association (AMA) or the American Osteopathic Association (AOA) as "office-based, patient care" are included in the NAMCS. Physicians in the specialties of anesthesiology, pathology, and radiology are excluded from the physician universe. However, for 2007, in addition to the traditional sample, the NAMCS included a sample of community health centers, using information from the Health Resources Services Administration and the Indian Health Service to construct a sampling frame. From each sampled community health center, an additional sample of health care providers was selected, which could include physicians as well as mid-level health care providers such as physician assistants, nurse-midwives, and nurse practitioners. A visit was defined as a direct, personal exchange between a patient and a physician, or a staff member acting under a physician's direction, for the purpose of seeking care and rendering health services. Visits solely for administrative purposes, such as payment of a bill, and visits in which no medical care was provided, such as visits to deliver a specimen, were out of scope. Approximately 30 patient visits are targeted for completion from each provider. In 2007, a total of 29,028 Patient Record forms (PRFs) were received from office-based physicians and 5,664 PRFs from CHC-based providers who participated in the NAMCS.

NHAMCS. The basic sampling unit for the NHAMCS is the patient visit or encounter. Only visits made in the United States by patients to EDs and OPDs of non-Federal, short-stay, or general hospitals were included in the 2007 NHAMCS. Within emergency service areas or outpatient department clinics, patient visits were systematically selected over a randomly assigned 4-week reporting period. A visit was defined as a direct, personal exchange between a patient and a physician, or a staff member acting under a physician's direction, for the purpose of seeking care and

rendering health services. Visits solely for administrative purposes, such as payment of a bill, and visits in which no medical care was provided, such as visits to deliver a specimen, were out of scope. The target numbers of PRFs to be completed for EDs and OPDs in each hospital were a total of 100 and 150-200, respectively, across all ambulatory units in each respective department. In ambulatory units with volumes higher than these desired figures, visits were sampled by a systematic procedure which selected every *n*th visit after a random start. Visit sampling rates were determined from the expected number of patients to be seen during the reporting period and the desired number of completed PRFs. During the 2007 NHAMCS, PRFs were completed for 35,490 ED visits and 34,473 OPD visits.

B. Cervical Cancer Screening Supplement

The 2007 Cervical Cancer Screening Supplement (CCSS) was sponsored by the Centers for Disease Control and Prevention's (CDC) National Center for Chronic Disease Prevention and Health Promotion (NCCDPHP) to examine provider practices regarding cervical cancer screening. Specifically, the supplement examined the provision of HPV tests for approved and non-approved uses, cervical cancer screening methods, the use of HPV tests as an adjunct to Pap testing, the use of HPV test results in managing patients with abnormal Pap tests, and the potential impact of HPV testing on Pap test screening intervals. Data from the CCSS will allow evaluation of adherence to recent national guidelines about the use of HPV testing a) as an adjunct to Pap testing and b) in the management of patients with abnormal Pap tests.

The CCSS, a 15-minute questionnaire, was administered in physician offices as part of the NAMCS and in hospital OPD clinics as part of the NHAMCS. Field representatives were instructed to leave a paper copy of the CCSS supplement with eligible NAMCS providers and NHAMCS OPD clinics after the visit reporting period, so as not to bias patient interactions. Providers had the option of completing the form on internet or on paper, and the micro-data file has 16,839 (24.5%) records of providers who chose to complete the supplement.

NAMCS physicians were considered eligible if their specialty was general and family practice, internal medicine, or obstetrics & gynecology. NHAMCS outpatient clinics were considered eligible if they were categorized as general medicine or obstetrics & gynecology.

CHC providers were also eligible in the CCSS if they performed cervical cancer screening. The NAMCS collects information from CHCs about their facility and then samples the providers that work within the CHCs for visit data. All providers who worked at CHC were eligible to participate in the CCSS.

In 2007, the response rate for the NAMCS CCSS, for physicians and CHCs, was 27.6% weighted (33.6% unweighted). The response rate for the NHAMCS CCSS was 54.4% weighted (74.4% unweighted).

The CCSS was commissioned for five years, from 2006 through 2010. This visit file was created to accompany the 2007 CCSS data file.

II. DATA VARIABLES

The micro-data file contains many variables. Among these variables are patient record data, Cervical Cancer Screening Supplement data from providers, SUDAAN design variables, and additional derived variables.

A. Patient Record Data

The patient record data on this micro-data file are from the NAMCS and NHAMCS visit file. This file contains data on patient visits to NHAMCS and NAMCS providers. It also includes visits to mid-level providers in CHC's which are not included on the public use files. Data for all variables are provided for female patients in physician offices, CHC's and OPD clinics. For more information on how patient visit forms were completed, see Appendix A.

Patient record data. The variables associated with patient visits include demographic variables (e.g. sex, age, race, etc.), height and weight, reason for visit, provider diagnosis, and diagnostic/screening services (e.g. examinations, blood tests, imaging, scope, etc.).

Numeric recodes for diagnoses and procedures. A prefix of '1' was added to ICD-9-CM codes in the range of 001.0[-] through 999.9[-]. A prefix of '20' was substituted for the letter 'V' for codes in the range of V01.0[-] through V82.9[-]. Inapplicable fourth or fifth digits were zero-filled. This conversion was done to facilitate analysis of ICD-9-CM data using Ambulatory Care Statistics software systems. These recodes apply to diagnosis variables DIAG1R, DIAG2R, DIAG3R, and diagnostic and screening variables DIAGSC1 and DIAGSC2.

Imputed variables. Some variables were imputed to replace blanks, or missing data. Both the original (unimputed) variables and the imputed variables have been provided, and are designated with the suffix -FL. Imputed variables are BDATEFL, SEXFL, ETHNICFL, RACEFL, and TIMEMDFL.

Missing values. Values for provider-level NAMCS-specific variables are missing for NHAMCS visits, and values for provider-level NHAMCS-specific variables are missing for NAMCS visits. For most patient-level data, all data from visits by males and all visits (both male and female) to emergency departments have been recoded as missing except for the variables SEX and SETTYPE. The visit file data dictionary also denotes which variables have values for males and EDs. Male and ED visits were retained on the file because the SUDAAN variables related to these visits are needed for calculating accurate standard errors. See Section II.C for more information on SUDAAN design variables.

B. CCSS Provider Data

Data from the Cervical Cancer Screening Supplement are included in this file. These variables correspond to the CCSS questionnaire administered to eligible NAMCS and OPD providers. For each patient visit to providers who completed the CCSS, the providers' answers to the CCSS are matched with the patient visit.

In the 2007 CCSS survey, some ineligible providers completed the supplement. For OPD providers, these data were recoded as blank. For NAMCS providers, however, the data was not recoded as missing so eligibility status must be taken into account when analyzing these data. **When analyzing the CCSS provider data, use the variable ELIG (1='Eligible', 2='Not eligible') to identify eligible providers.**

The CCSS provider data included in this micro-data file enable users to estimate patient visits to CCSS providers. For example, a user can estimate the number of visits made by female patients to providers that routinely conduct conventional Pap tests. **Users must be advised that provider-level estimates cannot be made with this file. For example, a user cannot use the data to estimate the number of visits by females over 21 years old to one particular provider.**

C. Design Variables

The SUDAAN design variables included on this file are necessary for calculating estimates and standard errors. The design variables should be incorporated into SUDAAN analysis code as shown below:

```
NEST CSTRAT CPSU PROVIDE DEPT SUSTRAT SU CLINIC/MISSUNIT;  
TOTCNT POPCPSU POPCPROV _ZERO_ _ZERO_ POPSU _ZERO_ POPVIS;  
WEIGHT PATWT;
```

D. Additional Variables

Additional variables were derived from patient visit data variables themselves and visit data variables that were linked with other data sources. These variables can be grouped by source of information: visit data, Census demographic information, and county-level data from the Area Resource File (ARF).

Visit data. Variables from the OPD and NAMCS visit files to describe clinic or office setting characteristics. These variables give the percent of female visits with a certain visit characteristic to that provider. For example, the variable PCTF1524 gives the percent of visits by females ages 15-24 years of age seen in that particular medical setting (clinic or office.)

Census. Variables derived from Bureau of Census data describe demographic characteristics of the visit population, such as median household income (variable CSMEDHHY) or percent of patients with a bachelor's degree (variable CSPCTBA).

ARF. The Area Resource File is a national county-level health resource information database maintained by the Health Research and Services Administration (HRSA). Variables derived from the ARF file describe the demographic characteristics of the county in which the hospital or physician office is located.

III. WEIGHTING

The micro-data file is intended to be used to estimate patient visits by females to providers of cervical cancer screening. This micro-data file contains patient visits to office-based physicians, CHC physicians, hospital emergency departments, and hospital outpatient departments. Data on male patients and patients to emergency departments are included in the file for calculating estimates and standard errors, however, visit characteristics for these patient populations are recoded as missing.

Patient visits on this micro-data file are weighted to allow the user to produce national estimates.

Provider-level weights are not included in this micro-data file. The file should only be used to make estimates on patient visit characteristics. In order to generate estimates of provider-level characteristics, the user is referred to the 2007 CCSS provider file.

Users must include weight and SUDAAN design variables whenever analyzing the data. Appendix B contains summary data tables and Appendices C and D contain sample SUDAAN code to guide users in creating estimates and using design variables appropriately. Appendix E contains marginal data frequencies.

A. Patient Visit Weight

The "patient visit weight" is a vital component in the process of producing national estimates from sample data, and its use should be clearly understood by all micro-data file users. The statistics contained on the micro-data file reflect data concerning only a sample of patient visits, not a complete count of all the visits that occurred in the United States. Each record on the data file represents one visit in the sample of 69,165 visits. In order to obtain national estimates from the sample, each record is assigned an inflation factor called the "patient visit weight" (variable name PATWT). By aggregating the patient visit weights on the 104,655 sample records for 2007, the user can obtain the estimated total of 1,209,365,175 ambulatory care visits made in the United States.

B. Reliability of Estimates

Users should also be aware of the reliability or unreliability of certain estimates, particularly the smaller estimates. The National Center for Health Statistics considers an estimate to be reliable if it has a relative standard error of 30 percent or less (i.e., the standard error is no more than 30 percent of the estimate). Therefore, it is important to know the value of the lowest possible estimate in this survey that is considered reliable, so as not to present data in a journal article or paper that may be unreliable. It should be noted that estimates based on fewer than 30 records are also considered unreliable, regardless of the magnitude of the relative standard error.

IV. ANALYTICAL GUIDELINES

This micro-data file includes data on visits to both NAMCS and NHAMCS providers, as well as some data about the providers. This file differs from previous files issued to NCCDPHP in that it includes visit-level variables. In order to identify which variables are visit-level variables, and which are provider-level variables, users should refer to the Microsoft Excel file entitled "2007 CCSS Visit File Data Dictionary," which identifies the source of each variable.

Users should note that complete visit-level data has been provided for all female visits to NAMCS physicians and CHCs and NHAMCS OPDs, but only limited variables are provided for visits from males and all visits to NHAMCS EDs.

A. Using weight variables

When creating estimates for the visit data, the weight variable "PATWT" must always be used. This weight variable is consistent across visits to the ED, OPD, and NAMCS providers.

NOTE: The variable "CCSSWT" is only on the CCSS provider data file, and only applies to provider-level data analysis using the provider file. The "CCSSWT" variable was not included on the visit file because the visit file is only to be used when analyzing visit-level data, not provider-level data.

B. Analyzing only NAMCS or NHAMCS visits

In order to isolate NAMCS visits or OPD clinic visits for analysis, researchers should use the entire dataset but use the SUBPOP statement in SUDAAN to specify which visits to analyze. In the SUBPOP statement, the variable "SETTYPE" should be used as follows:

For NAMCS visits: SUBPOP SETTYPE = 1;
For NHAMCS visits: SUBPOP SETTYPE = 2;

When combining multiple years of visit data, this same method of using "SETTYPE" as the subpopulation applies.

C. Combining years of data

The 2007 CCSS visit data file was created uniquely for NCCDPHP using public-use visit data and provider data from the CCSS supplement. This data file only contains visit data for the year 2007. If researchers wish to analyze data for multiple years of visits, they should refer to the NCHS website (http://www.cdc.gov/nchs/ahcd/ahcd_questionnaires.htm) for public-use visit data from other years. However, researchers must be aware that visit data files from other survey years will not contain data from the CCSS provider supplement.

Currently on the NCHS website, public-use data sets for survey years 1973 to 2008 are available for download for NAMCS and survey years 1992 to 2008 are available for download for NHAMCS. When analyzing multiple years of data, it is recommended that the user create a combined data set including NAMCS visit data and NHAMCS ED and OPD visit data. Once the data sets have been combined, the user should use the SUBPOP statement with the "SETTYPE" variable to specify which medical setting (1=NAMCS, 2=OPD, or 3=ED) to analyze.

D. Limitations

This micro-data file can only be used to analyze visit-level data, and cannot be used to make provider-level estimate. The previously-issued 2007 CCSS provider-level data file should be used for making provider-level estimates.

**Appendix A:
2007 NAMCS/NHAMCS PATIENT RECORD FORM - INSTRUCTIONS AND DEFINITIONS**

The following instructions are given to Field Representatives and staff of physician offices and hospitals that are responsible for completing Patient Record forms. Item numbers refer to the item numbers on the patient record form used in abstraction.

1. PATIENT INFORMATION

ITEM 1d. SEX

Please check the appropriate category.

ITEM 1e. ETHNICITY

Ethnicity refers to a person's national or cultural group. The Patient Record form has two categories for ethnicity, Hispanic or Latino and Not Hispanic or Latino. Mark the appropriate category according to your knowledge of the patient or from information in the medical record. You are not expected to ask the patient for this information. If the patient's ethnicity is not known and is not obvious, mark the box which in your judgment is most appropriate. The definitions of the categories are listed below. Do not determine the patient's ethnicity from their last name.

Ethnicity	Definition
1 Hispanic or Latino	A person of Cuban, Mexican, Puerto Rican, South or Central American, or other Spanish culture or origin, regardless of race.
2 Not Hispanic or Latino	All other persons.

ITEM 1f. RACE

Mark *all* appropriate categories based on observation, or your knowledge of the patient, or from information in the medical record. You are not expected to ask the patient for this information. If the patient's race is not known or not obvious, mark the box(es) which in your judgment is (are) most appropriate. Do not determine the patient's race from their last name.

Race	Definition
1 White	A person having origins in any of the original peoples of Europe, the Middle East or North Africa.
2 Black/African American	A person having origins in any of the black racial groups of Africa.
3 Asian	A person having origins in any of the original peoples of the Far East, Southeast Asia, or the Indian subcontinent including, for example, Cambodia, China, India, Japan, Korea, Malaysia, Pakistan, the Philippine Islands, Thailand, and Vietnam.
4 Native Hawaiian/ Other Pacific Islander	A person having origins in any of the original peoples of Hawaii, Guam, Samoa, or other Pacific Islands.
5 American Indian/ Alaskan Native	A person having origins in any of the original peoples of North America, and who maintains cultural identification through tribal affiliation or community recognition.

ITEM 1h. EXPECTED SOURCE OF PAYMENT FOR THIS VISIT

Mark (X) ALL appropriate expected source(s) of payment.

Expected Source of Payment	Definition
1 Private insurance	Charges paid in-part or in-full by a private insurer (e.g., Blue Cross/Blue Shield) either directly to the physician or reimbursed to the patient. Include charges covered under a private insurance sponsored prepaid plan.
2 Medicare	Charges paid in-part or in-full by a Medicare plan. Includes payments directly to the physician as well as payments reimbursed to the patient. Include charges covered under a Medicare sponsored prepaid plan.
3 Medicaid/SCHIP	Charges paid in-part or in-full by a Medicaid plan. Includes payments made directly to the physician as well as payments reimbursed to the patient. Include charges covered under a Medicaid sponsored prepaid plan or the State Children's Health Insurance Program (SCHIP).
4 Worker's compensation	Includes programs designed to enable employees injured on the job to receive financial compensation regardless of fault.
5 Self-pay	Charges, to be paid by the patient or patient's family, which will not be reimbursed by a third party. "Self-pay" is perhaps a poor choice of wording since we really have no interest in whether the patient actually pays the bill. This category is intended to include visits for which the patient is expected to be ultimately responsible for most of the bill. DO NOT check this box for a copayment or deductible.
6 No charge/Charity	Visits for which no fee is charged (e.g., charity, special research, or teaching). Do not include visits paid for as part of a total package (e.g., prepaid plan visits, post-operative visits included in a surgical fee, and pregnancy visits included in a flat fee charged for the entire pregnancy). Mark the box or boxes that indicate how the services were originally paid.
7 Other	Any other sources of payment not covered by the above categories, such as CHAMPUS, state and local governments, private charitable organizations, and other liability insurance (e.g., automobile collision policy coverage).
8 Unknown	The primary source of payment is not known.

3. REASON FOR VISIT**ITEM 3. PATIENT'S COMPLAINT(S), SYMPTOM(S), OR OTHER REASON(S) FOR THIS VISIT (in patient's own words.)**

Enter the patient's complaint(s), symptom(s), or other reason(s) for this visit *in the Patient's own words*. Space has been allotted for the "most important" and two "other" complaints, symptoms, and reasons as indicated below.

- (1) Most important
- (2) Other
- (3) Other

The *Most Important* reasons should be entered in (1). Space is available for two other reasons in (2) and (3). By "most important" we mean the problem or symptom which in the physician's judgment, was most responsible for the patient making this visit. Since we are interested only in the patient's *most important complaints/symptoms/reasons*, it is not necessary to record more than three.

This is one of the most important items on the Patient Record form. No similar data on office based physician visits are available in any other survey and there is tremendous interest in the findings. Please take the time to be sure you understand what is wanted--especially the following three points:

We want the patient's principal complaint(s), symptom(s) or other reason(s) in the patient's own words. The physician may recognize right away, or may find out after the examination, that the real problem is something entirely different. In item 3 we are interested in how the patient defines the reason for the visit (e.g., "cramps

after eating," or "fell and twisted my ankle").

The item refers to the patient's complaint, symptom, or other reason for *this visit*. Conceivably, the patient may be undergoing a course of treatment for a serious illness, but if his/her principal reason for this visit is a cut finger or a twisted ankle, then that is the information we want.

There will be visits by patients for reasons other than some complaint or symptom. Examples might be well baby check-up or routine prenatal care. In such cases, simply record the *reason for the visit*.

Reminder: If the reason for a patient's visit is to pay a bill, ask the physician to complete an insurance form, or drop off a specimen, then the patient is not eligible for the sample. A Patient Record form should not be completed for this patient.

4. CONTINUITY OF CARE

ITEM 4a. ARE YOU THE PATIENT'S PRIMARY CARE PHYSICIAN/PROVIDER?

The primary care physician/provider plans and provides the comprehensive primary health care of the patient. Mark "Yes" if the health care provided to the patient during this visit was from his/her primary care physician/provider and skip to Item 4b. If the physician/provider seen at this visit was substituting for the primary care physician/provider, also check "Yes." Mark "No" if care was not from the primary care physician/provider or "Unknown" if it is not known.

If "No" or "Unknown" is checked, also indicate whether the patient was referred for this visit by another physician or health care provider. This item provides an idea of the "flow" of ambulatory patients from one physician/provider to another. Mark the "Yes," "No," or "Unknown" category, as appropriate.

Notice that this item concerns referrals to the sample physician by a *different* physician/provider. The interest is in referrals for this visit and not in referrals for any prior visit.

Referrals are any visits that are made because of the advice or direction of a clinic or physician/provider other than the physician/provider being visited.

5. PHYSICIAN'S DIAGNOSIS FOR THIS VISIT

ITEM 5a. AS SPECIFICALLY AS POSSIBLE, LIST DIAGNOSES RELATED TO THIS VISIT INCLUDING CHRONIC CONDITIONS.

- (1) Primary diagnosis
- (2) Other
- (3) Other

This is one of the most important items on the Patient Record form. Item 5a(1) refers to the physician's primary diagnosis for this visit. While the diagnosis may be tentative, provisional, or definitive it should represent the physician's best judgment at this time, expressed in acceptable medical terminology including "problem" terms. If the patient was not seen by a physician, then the diagnosis by the main medical provider should be recorded.

If a patient appears for *postoperative* care (follow up visit after surgery), record the postoperative diagnosis as well as any other. The postoperative diagnosis should be indicated with the letters "P.O."

Space has been allotted for two "other" diagnoses. In Items 5a(2) and 5a(3) list the diagnosis of other conditions related to this visit. Include chronic conditions (e.g., hypertension, depression, etc.) if related to this visit.

6. VITAL SIGNS

- | | | |
|-----|----------------|--|
| (1) | Height | Record the patient's height if measured at this visit. If it was not measured at this visit and the patient is 21 years of age or over, then review the chart for the last time that height was recorded and enter that value. Mark the appropriate box (ft/in or cm). |
| (2) | Weight | Record the patient's weight if measured at this visit. If it was not measured at this visit and the patient is 21 years of age or over, then review the chart for the last time that weight was recorded and enter that value. Mark the appropriate box (lbs or kg). |
| (3) | Temperature | Record the patient's temperature if measured at this visit. Mark the appropriate box (C or F). |
| (4) | Blood pressure | Record the patient's blood pressure if measured at this visit. |
-

7. DIAGNOSTIC/SCREENING SERVICES

Mark all services that were ordered or provided during this visit for the purpose of screening (i.e., early detection of health problems in asymptomatic individuals) or diagnosis (i.e., identification of health problems causing individuals to be symptomatic). EACH SERVICE ORDERED OR PROVIDED SHOULD BE MARKED. At visits for a complete physical exam, several tests may be ordered prior to the visit, so that the results can be reviewed during the visit. Since these services are related to the visit, the appropriate box(es) should be marked.

Mark the "NONE" box if no Diagnostic/Screening Services were ordered or provided.

For "Electrolytes," include any of the following tests: electrolytes, sodium (Na), chloride (Cl), potassium (K), calcium (Ca), or magnesium (Mg).

For "Lipids/Cholesterol," include any of the following tests: cholesterol, LDL, HDL, cholesterol/HDL ratio, triglycerides, coronary risk profile, or lipid profile.

For "Biopsy," include any form of open or closed biopsy of lesions or tissues.

For "Chlamydia test," only include the following tests if chlamydia is specifically mentioned: enzyme-linked immunosorbent assay (ELISA, EIA), direct fluorescent antibody test (DFA), nucleic acid amplification test (NAAT), nucleic acid hybridization test (DNA probe testing), or chlamydia culture.

"Pap test – conventional" refers to a smear spread on a glass slide and fixed.

"Pap test – liquid-based cytology" refers to a specimen suspended in a liquid solution.

"HPV DNA test" detects the presence in women of human papillomavirus and is performed by collecting cells from the cervix.

If a scope procedure was ordered or provided, mark the "Scope procedure - Specify" box and write-in the type in the space provided.

If services were ordered or provided, but are not listed on the form, mark the "Other test/service - Specify" box and write-in the service(s) in the space provided.

13. TIME SPENT WITH PHYSICIAN

Include here the length of time the physician spent with the patient. DO NOT include the time the patient spent waiting to see the physician or receiving care from someone other than the physician. For example, DO NOT include the time the nurse spent giving the patient an inoculation or the time a technician spent administering an electrocardiogram. It is entirely possible that for visits such as these, the patient would not see the doctor at all. In that case, "0" minutes should be recorded. DO NOT include physician's time spent preparing for a patient such as reviewing the patient's medical records or test results before seeing the patient.

If more than one patient is seen by the doctor at the same time, apply the following rule: If the doctor can easily separate the time spent with each (e.g., 3 minutes with one and 27 minutes with the other), he/she should record that on the Patient Record forms. If the doctor cannot easily estimate how much time was spent with each, he/she should divide the total time equally among the patients seen together.

**Appendix B:
Summary Tables**

TABLE 1: NUMBER OF OUTPATIENT VISITS TO PROVIDERS IN 2006 CCSS VISIT FILE			
	<u>Number of Records</u>	<u>Estimate</u>	<u>Std error</u>
All visits	104,655	1,209,365,175	43,003,880
NAMCS ¹ & OPD visits	69,165	1,092,563,146	41,499,282
Female visits (NAMCS ¹ & OPD)	41,730	642,205,865	25,716,600
TABLE 2: NUMBER OF VISITS IN NAMCS¹ AND OPD			
	<u>Number of Records</u>	<u>Estimate</u>	<u>Std error</u>
<u>CCSS ELIGIBLE</u>			
CCSS Completed			
All visits ²	13,858	160,084,222	16,963,405
Female visits ²	10,331	109,607,662	11,252,994
Pap test ordered or performed at visit ²	1,331	11,234,778	1,482,733
CCSS Refused			
All visits ²	9,526	230,464,732	18,008,086
Female visits ²	6,379	153,061,773	12,704,610
Visits w/pap ordered/performed ²	658	17,227,130	2,714,124
<u>CCSS INELIGIBLE</u>			
All visits ²	45,781	702,014,192	29,874,233
Female visits ²	25,020	379,536,430	16,489,621
Visits w/pap ordered/performed ²	305	4,096,230	1,607,708
TABLE 3: NUMBER OF VISITS TO PROVIDERS THAT OFFER LIQUID-BASED CYTOLOGY			
Provider offers liquid-based cytology	<u>Number of Records</u>	<u>Estimate</u>	<u>Std error</u>
Yes	All visits ²	11,856	127,506,559
	Female visits ²	8,921	86,044,814
	Visits w/pap ordered/performed ²	1,207	9,916,074
No	All visits ²	755	13,457,051
	Female visits ²	561	10,372,435
	Visits w/pap ordered/performed ²	54	527,613
Unknown ⁴	All visits ²	3,527	50,476,560
	Female visits ²	--	--
	Visits w/pap ordered/performed ²	--	--

1 NAMCS visits include visits to physicians and mid-level providers in CHCs.

2 Visit level variable.

3 Provider level variable from Cervical Cancer Screening Supplement.

4 Unknown category includes records with values marked as "unknown", those with blank values, and those with missing values.

5 Analysis of provider -level variables should not be performed using visits from providers who were ineligible for or who refused the Cervical Cancer Screening Supplement.

Appendix C: Sample SUDAAN Code to Produce Summary Table 2

```

*SUMMARY TABLE 2: NUMBER OF VISITS IN NAMCS AND OPD;
LIBNAME CVIS 'X:\xxxx'; *Insert file path;
FILENAME SETABLE 'X:\xxxx\TABLE2.XLS'; *File path for output;

DATA CCSSVIS;
SET CVIS.CCSSVISIT07;
PAPLIQDR=PAPLIQD;
IF PAPLIQDR IN (3,9,..) THEN PAPLIQDR=3; *Recodes blank and missing values to unknown;
IF PAP=. THEN PAP=0; *Recodes missing values to zero/blank value;
PAP=PAP+1; *Recodes values from 0-1 range to 1-2 for ease of use in SUDAAN;
KEEP PATWT CSTRAT CPSU PROVIDE DEPT SUSTRAT SU CLINIC
POP CPSU POPC PROV POPSU POPVIS
ELIG CCSSRESP SETTYPE
SEX PAP PAPLIQ PAPCONV PAPUNSP HPVDNAO PAPLIQD PAPLIQDR;
*Keep statement retains the variables of interest for the current analysis.
Variables PATWT through POPVIS are needed for NEST and TOTCOUNT statements.
Variables ELIG CCSSRESP and SETTYPE are needed to identify the subpopulation
Variables SEX through PAPLIQDR can be replaced with other variables of interest;
RUN;

*SETTING PAP TO 0 FOR ED;
PROC FREQ DATA=CCSSVIS;
TABLES ELIG *CCSSRESP*SEX ELIG*CCSSRESP*SEX*PAP
/ LIST MISSING;
WEIGHT PATWT;
WHERE SETTYPE IN (1,2);
RUN;

PROC FREQ DATA=CCSSVIS;
TABLES ELIG*CCSSRESP*PAPLIQDR/ LIST MISSING;
WHERE SETTYPE IN (1,2);
WEIGHT PATWT;
RUN;

PROC FREQ DATA=CCSSVIS;
TABLES ELIG*CCSSRESP*PAPLIQDR/ LIST MISSING;
WHERE SETTYPE IN (1,2);
RUN;

*Sort the data prior to running analysis commands;
PROC SORT DATA=CCSSVIS;
BY CSTRAT CPSU PROVIDE DEPT SUSTRAT SU CLINIC;

*Analysis statement;
PROC CROSSTAB DATA=CCSSVIS DESIGN = WOR;
NEST CSTRAT CPSU PROVIDE DEPT SUSTRAT SU CLINIC/MISSUNIT;
TOTCNT POP CPSU POPC PROV _ZERO_ _ZERO_ POPSU _ZERO_ POPVIS;
SETENV COLWIDTH=15 DECWIDTH=2;
WEIGHT PATWT;
SUBPOPN SETTYPE = 1 OR SETTYPE = 2;
OUTPUT / FILENAME = WORK.SUDOUT TABLECELL = DEFAULT REPLACE;
/* The variables below will change based on the variables of interest*/
CLASS ELIG CCSSRESP SEX PAP/ NOFREQ;
TABLES ELIG*CCSSRESP*SEX*PAP;
RUN;
[CONTINUED ON NEXT PAGE]

PROC PRINT DATA=SUDOUT;
VAR TABLENO ELIG CCSSRESP SEX PAP NSUM WSUM SEWGT;
RUN;

```

```

DATA SET1; SET SUDOUT;
IF ELIG = 0 THEN DELETE;
IF CCSSRESP = 0 THEN DELETE;
IF PAP = 1 THEN DELETE;
IF SEX = 0 AND PAP = 2 THEN DELETE;
IF ELIG=1 AND CCSSRESP=1 AND SEX IN (0,1) THEN OUTPUT ;
IF ELIG=1 AND CCSSRESP=2 AND SEX IN (0,1) THEN OUTPUT ;
IF ELIG=2 AND CCSSRESP=2 AND SEX IN (0,1) THEN OUTPUT ;

DATA ELIG REF NONELIG; SET SET1;
LENGTH PRNTROW $30; *Specifies the length of the printed row;
IF SEX=0 THEN PRNTROW = 'All visits';
IF SEX = 1 THEN PRNTROW = 'Female visits';
IF PAP = 2 THEN PRNTROW = 'Visits w/pap ordered/performed';
IF ELIG = 1 AND CCSSRESP = 1 THEN OUTPUT ELIG;
IF ELIG = 1 AND CCSSRESP = 2 THEN OUTPUT REF;
IF ELIG = 2 AND CCSSRESP = 2 THEN OUTPUT NONELIG;

/* CREATING HEADER DATASETS FOR PRINTING*/
DATA HEADER1; SET ELIG;
IF _N_ =1 ;
PRNTROW = 'CCSS Eligible';
WSUM= '';
NSUM = '';
SEWGT = '';

DATA HEADER2; SET HEADER1;
PRNTROW = 'CCSS Refused';

DATA HEADER3; SET HEADER2;
PRNTROW = 'CCSS Ineligible';

DATA PRINT; SET HEADER1 ELIG HEADER2 REF HEADER3 NONELIG;
run;

*ODS Statement refines the printout so that it resembles Table 2 (Appendix B),
except for the breakdown of providers who offer liquid based cytology;
ODS HTML FILE=SETABLE
HEADTEXT="
```

**Appendix D:
Sample SUDAAN Code to Produce Summary Table 3**

```

*SUMMARY TABLE 3: Data on providers that offer liquid-based cytology;
LIBNAME CVIS 'X:\xxxx';
FILENAME SETABLE 'X:\xxxx\TABLE3.XLS';

TITLE 'Number of Visits in NAMCS and OPD';
TITLE2 'USING SUBPOPN FOR SETTYPE NAMCS & OPD';

DATA CCSSVIS;
SET CVIS.CCSSVISIT07;
FREQWT=PATWT/1000;
PAPLIQDR=PAPLIQD;
IF PAPLIQDR IN (3,9,.) THEN PAPLIQDR=3; *Recodes blank and missing values to unknown;
IF PAP=. THEN PAP=0; *Recodes missing values to zero/blank value;
PAP=PAP+1; *Recodes values from 0-1 range to 1-2 for ease of use in SUDAAN;
KEEP FREQWT PATWT CSTRAT CPSU PROVIDE DEPT SUSTRAT SU CLINIC
POPCPSU POPCPROV POPSU POPVIS
ELIG CCSSRESP SETTYPE
SEX PAP PAPLIQ PAPCONV PAPUNSP HPVDNAO PAPLIQD PAPLIQDR;
*Keep statement retains the variables of interest for the current analysis.
Variables PATWT through POPVIS are needed for NEST and TOTCOUNT statements.
Variables ELIG CCSSRESP and SETTYPE are needed to identify the subpopulation
Variables SEX through PAPLIQDR can be replaced with other variables of interest;
RUN;

PROC SORT DATA=CCSSVIS; *Sort the data prior to running analysis commands;
BY CSTRAT CPSU PROVIDE DEPT SUSTRAT SU CLINIC;

*Analysis statement;
PROC CROSSTAB DATA=CCSSVIS
DESIGN = WOR;
NEST CSTRAT CPSU PROVIDE DEPT SUSTRAT SU CLINIC/MISSUNIT;
TOTCNT POPCPSU POPCPROV _ZERO_ _ZERO_ POPSU _ZERO_ POPVIS;
SETENV COLWIDTH=15 DECWIDTH=2;
WEIGHT PATWT;
SUBPOPN SETTYPE = 1 OR SETTYPE = 2;
OUTPUT / FILENAME = WORK.SUDOUT TABLECELL = DEFAULT REPLACE;
/* THE DESIGN STATEMENTS BELOW CHANGE FROM TABLE TO TABLE */
CLASS ELIG CCSSRESP PAPLIQDR SEX PAP/ NOFREQ;
TABLES ELIG*CCSSRESP*PAPLIQDR*SEX*PAP;
RUN;

PROC PRINT DATA=SUDOUT;
VAR TABLENO ELIG CCSSRESP PAPLIQDR SEX PAP NSUM WSUM SEWGT;
RUN;

[CONTINUED ON NEXT PAGE]

```



```
DATA YES NO UNK;
SET SUDOUT;
IF ELIG = 0 THEN DELETE;
IF CCSSRESP = 0 THEN DELETE;
IF PAPLIQDR = 0 THEN DELETE;
IF SEX = 2 THEN DELETE;
IF PAP = 1 THEN DELETE;
IF SEX = 0 AND PAP = 2 THEN DELETE;
LENGTH PRNTROW $45;
IF SEX=0 THEN PRNTROW = 'All visits';
IF SEX = 1 THEN PRNTROW = 'Female visits';
IF PAP = 2 THEN PRNTROW = 'Visits w/pap ordered/performed';
IF ELIG = 1 AND CCSSRESP = 1 THEN DO;
    IF PAPLIQDR = 1 THEN OUTPUT YES;
    IF PAPLIQDR = 2 THEN OUTPUT NO;
    IF PAPLIQDR = 3 THEN OUTPUT UNK;
END;

* CREATING HEADER DATASETS FOR PRINTING;
DATA HEADER1;
SET YES;
IF _N_ =1 ;
PRNTROW = 'Providers offer liquid based cytology';
WSUM= ' ';
NSUM = ' ';
SEWGT = ' ';

DATA HEADER2;
SET HEADER1;
PRNTROW = 'Yes';

DATA HEADER3;
SET HEADER2;
PRNTROW = 'No';

DATA HEADER4;
SET HEADER1;
PRNTROW = 'Unknown';

DATA PRINT;
SET HEADER1 HEADER2 YES HEADER3 NO HEADER4 UNK;
run;

ODS HTML FILE=SETABLE HEADTEXT="<STYLE>@page {margin:.50in .30in .50in .30in;
mso-header-margin:.36in;mso-footer-margin:.36in;
mso-horizontal-page-align:center;} BR {mso-data-placement:same-cell}
</STYLE>";

PROC PRINT DATA=PRINT;
LABEL PRNTROW = 'Patient characteristic'
      NSUM='Sample'
      WSUM='Estimate'
      SEWGT='Std error';
VAR PRNTROW NSUM WSUM SEWGT;
FORMAT WSUM COMMA13. SEWGT COMMA13.;
RUN;

ODS HTML CLOSE;
RUN;
```

**Appendix E:
Marginal Data Frequencies**

ETHNIC	Sample Size	Weighted Size	SE Weighted	Total Percent
1='Hispanic or Latino'	7,452	89,897,396	7,404,477	14.0
2='Not Hispanic or Latino'	34,278	552,308,469	23,857,398	86.0

PAYTYPE	Sample Size	Weighted Size	SE Weighted	Total Percent
-9='All sources for payment are blank'	443	9,406,202	3,047,126	1.5
-8='Uknown'	1,480	19,256,449	4,678,073	3.0
1='Private Insurance'	15,335	330,269,095	15,365,959	51.4
2='Medicare'	7,015	133,246,335	9,108,545	20.7
3='Medicaid/SCHIP'	11,850	95,139,464	6,108,936	14.8
4='Worker's compensation'	253	4,990,594	737,572	0.8
5='Self Pay'	2,755	31,366,526	3,047,852	4.9
6='No charge/charity'	1,247	3,927,943	1,079,422	0.6
7='Other'	1,352	14,603,257	2,022,343	2.3

SPECR	Sample Size	Weighted Size	SE Weighted	Total Percent
1='General/Family practice'	4,202	132,283,296	11,517,205	22.5
3='Internal Medicine'	1,508	84,202,215	8,747,905	14.4
4='Pediatrics'	1,676	63,062,300	6,087,073	10.7
5='General Surgery'	688	12,295,948	1,905,085	2.1
6='Obstetrics & Gynecology'	2,040	73,835,913	7,317,300	12.6
7='Orthopedic Surgery'	741	26,236,486	3,684,977	4.5
8='Cardiovascular Diseases'	884	16,198,895	2,488,473	2.8
9='Dermatology'	802	23,376,770	3,010,867	4.0
10='Urology'	453	5,164,795	818,852	0.9
11='Psychiatry'	885	19,816,546	2,462,184	3.4
12='Neurology'	1,136	10,444,849	1,416,223	1.8
13='Ophthalmology'	862	34,080,228	4,484,657	5.8
14='Otolaryngology'	742	10,693,173	1,333,811	1.8
15='Other specialties'	1,193	59,193,651	6,795,262	10.1
16='Oncologists'	1,064	9,656,941	1,209,667	1.6
99='Mid-level provider'	1,272	6,169,427	1,181,513	1.1

CLINTYPE	Sample Size	Weighted Size	SE Weighted	Total Percent
1='GM'	7,421	29,727,799	3,687,444	53.6
2='SURG'	3,422	7,113,493	1,457,982	12.8
3='PED'	2,018	4,871,354	957,877	8.8
4='OBG'	5,156	8,106,877	1,042,766	14.6
5='Substance Abuse'	257	268,242	103,823	0.5
6='Other'	3,308	5,406,667	1,103,282	9.7

PRIMCARE	Sample Size	Weighted Size	SE Weighted	Total Percent
-9='Blank'	871	15,878,749	3,543,146	2.5
-8='Unknown'	2,223	31,723,633	5,276,003	4.9
1='Yes'	13,731	271,164,416	15,932,330	42.2
2='No'	24,905	323,439,067	13,916,749	50.4

NOSCREEN	Sample Size	Weighted Size	SE Weighted	Total Percent
0='Box is not marked'	36,817	567,228,632	23,768,560	88.3
1='Box is marked'	4,441	68,800,963	4,847,981	10.7
2='No entries made, entire item blank'	472	6,176,270	1,156,175	1

TOTDIAG	Sample Size	Weighted Size	SE Weighted	Total Percent
-9='Blank'	472	6,176,270	1,156,175	1.0
0	4,441	68,800,963	4,847,981	10.7
1	4,485	73,394,080	4,709,018	11.4
2	5,284	94,017,883	6,497,809	14.6
3	6,953	112,002,241	6,320,054	17.4
4	7,354	111,194,930	6,128,213	17.3
5	4,819	68,092,315	4,419,881	10.6
6	2,832	41,871,627	3,107,858	6.5
7	1,759	23,223,714	1,863,784	3.6
8	1,175	17,454,006	1,641,992	2.7
9	797	10,959,421	1,125,748	1.7
10	497	6,059,556	684,101	0.9
11	315	3,716,252	585,947	0.6
12	191	2,410,084	5,754,600	0.4
13	110	1,356,451	325,919	0.2
14	68	481,818	174,589	0.1
15	60	413,751	129,159	0.1
16	51	343,819	149,559	0.1
17	38	180,787	100,393	0
18	20	38,786	26,984	0
19	5	10,869	10,607	0
20	1	2,223	2,223	0
21	2	2,042	1,978	0
22	1	1,977	1,977	0

BREAST	Sample Size	Weighted Size	SE Weighted	Total Percent
0='Box is not marked'	38,233	590,164,540	23,682,333	91.9
1='Box is marked'	3,497	52,041,325	4,718,376	8.1

PELVIC	Sample Size	Weighted Size	SE Weighted	Total Percent
0='Box is not marked'	37,202	582,652,176	24,023,304	90.7
1='Box is marked'	4,528	59,553,689	5,357,502	9.3
RECTAL	Sample Size	Weighted Size	SE Weighted	Total Percent
0='Box is not marked'	40,798	624,725,120	25,058,616	97.3
1='Box is marked'	932	17,480,745	2,358,100	2.7
SKIN	Sample Size	Weighted Size	SE Weighted	Total Percent
0='Box is not marked'	36,653	557,237,966	22,972,885	86.8
1='Box is marked'	5,077	84,967,899	6,423,600	13.2
DEPRESS	Sample Size	Weighted Size	SE Weighted	Total Percent
0='Box is not marked'	41,093	632,487,505	25,226,776	98.5
1='Box is marked'	637	9,718,360	2,066,514	1.5
ANYIMG	Sample Size	Weighted Size	SE Weighted	Total Percent
0='Box is not marked'	34,241	538,118,519	21,403,694	83.8
1='Box is marked'	7,489	104,087,346	6,201,805	16.2
BONEDENS	Sample Size	Weighted Size	SE Weighted	Total Percent
0='Box is not marked'	41,500	638,554,024	25,540,529	99.4
1='Box is marked'	230	3,651,841	541,098	0.6
MAMMO	Sample Size	Weighted Size	SE Weighted	Total Percent
0='Box is not marked'	40,393	621,845,146	24,487,276	96.8
1='Box is marked'	1,337	20,360,719	2,303,617	3.2
MRI	Sample Size	Weighted Size	SE Weighted	Total Percent
0='Box is not marked'	40,888	630,927,566	25,150,502	98.2
1='Box is marked'	842	11,278,299	1,351,718	1.8

	Sample Size	Weighted Size	SE Weighted	Total Percent

XRAY				
0='Box is not marked'	39,253	603,382,566	24,179,877	94.0
1='Box is marked'	2,477	38,823,299	3,077,212	6.0

CBC				
0='Box is not marked'	36,442	564,830,968	22,789,853	88.0
1='Box is marked'	5,288	77,374,897	5,599,724	12.0

ELECTROL				
0='Box is not marked'	39,823	618,643,122	25,067,663	96.3
1='Box is marked'	1,907	23,562,743	2,406,370	3.7

GLUCOSE				
0='Box is not marked'	39,208	607,910,964	24,624,972	94.7
1='Box is marked'	2,522	34,294,901	2,790,545	5.3

HGBA1C				
0='Box is not marked'	40,406	625,680,936	25,086,639	97.4
1='Box is marked'	1,324	16,524,929	1,917,062	2.6

CHOLEST				
0='Box is not marked'	39,502	598,722,564	23,832,213	93.2
1='Box is marked'	2,228	43,483,301	3,717,160	6.8

OTHERBLD				
0='Box is not marked'	36,201	568,672,033	23,375,624	88.5
1='Box is marked'	5,529	73,533,832	4,784,084	11.5

SCOPPROC				
0='Box is not marked'	40,744	631,187,208	25,466,432	98.3
1='Box is marked'	986	11,018,657	1,312,424	1.7

	Sample Size	Weighted Size	SE Weighted	Total Percent

BIOPSY				
0='Box is not marked'	41,087	632,233,716	25,312,029	98.4
1='Box is marked'	643	9,972,149	989,684	1.6

CHLAMYD				
0='Box is not marked'	40,877	637,405,909	25,567,926	99.3
1='Box is marked'	853	4,799,956	640,354	0.7

PAPCONV				
0='Box is not marked'	41,146	634,646,500	25,663,707	98.8
1='Box is marked'	584	7,559,365	1,077,259	1.2

PAPLIQ				
0='Box is not marked'	40,597	623,417,209	24,791,600	97.1
1='Box is marked'	1,133	18,788,656	3,061,600	2.9

PAPUNSP				
0='Box is not marked'	41,152	635,966,817	25,621,576	99.0
1='Box is marked'	578	6,239,048	1,305,752	1.0

HPVDNA				
0='Box is not marked'	41,311	639,511,583	25,622,132	99.6
1='Box is marked'	419	2,694,282	642,882	0.4

EKG				
0='Box is not marked'	40,751	625,818,659	25,007,468	97.4
1='Box is marked'	979	16,387,206	2,245,619	2.6

SPIRO				
0='Box is not marked'	41,537	638,337,678	25,535,561	99.4
1='Box is marked'	193	3,868,187	1,001,734	0.6

URINE	Sample Size	Weighted Size	SE Weighted	Total Percent
0='Box is not marked'	37,609	589,232,038	23,769,998	91.8
1='Box is marked'	4,121	52,973,827	3,898,877	8.2
