2008

Cervical Cancer Screening Supplement

Visit File Data Documentation

National Center for Health Statistics
12/23/2011

Table of Contents

Page

Appendixes

I. INTRODUCTION

This micro-data file contains data collected in 2008 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 2008 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 2008 NHAMCS, a national sample of hospitals provided data on patient visits to emergency departments (EDs) and outpatient departments (OPDs). In 2008, 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 non-federally 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 2008, 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 2008, a total of 28,741 Patient Record forms (PRFs) were received from office-based physicians and 2,405 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 2008 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 nth 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 2008 NHAMCS, PRFs were completed for 34,134 ED visits and 33,908 OPD visits.

B. Cervical Cancer Screening Supplement

The 2008 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 completed the paper form, and the micro-data file has 17,514 (17.7%) 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 2008, the response rate for the NAMCS CCSS, for physicians and CHCs, was 58.0% weighted (61.8% unweighted). The response rate for the NHAMCS CCSS was 60.9% weighted (59.4% unweighted).

The CCSS was commissioned for five years, from 2006 through 2010. This visit file was created to accompany the 2008 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 2008 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 2008 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 65,054 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 99,188 sample records for 2008, the user can obtain the estimated total of 123,761,309 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 "2008 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" in 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 SUBPOPN statement in SUDAAN to specify which visits to analyze. In the SUBPOPN statement, the variable "SETTYPE" should be used as follows:

For NAMCS visits: SUBPOPN SETTYPE = **1**;
For NHAMCS visits: SUBPOPN 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 2008 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 2008. 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 NAMCS survey years 1973 to 2009 are available for download, as well as NHAMCS survey years 1992 to 2009. 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 SUBPOPN 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 2008 CCSS provider-level data file should be used for making provider-level estimates.

Appendix A:
2008 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 <u>before</u> 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 2008 CCSS Visit File

Patient visits	Number of Records	Estimate	Std error
All visits	99,188	1,202,103,373	41,612,573
NAMCS[1] & OPD VISITS	65,054	1,078,342,064	40,379,912
Female visits (NAMCS[1] & OPD)	38,828	648,425,007	25,120,110

TABLE 2: Number of Visits in NAMCS[1] and OPD, 2008 CCSS VISIT FILE

CCSS ELIGIBLE	Number of Records	Estimate	Std error
CCSS Completed			
All visits[2]	17,514	357,746,576	24,534,982
Female visits[2]	12,830	251,812,220	16,490,414
Pap test ordered or performed at visit[2]	2,009	33,957,982	3,156,882
Providers offer liquid based cytology[3]	8,641	277,986,191	22,488,464
CCSS Refused			
All visits[2]	8,287	62,495,758	10,119,856
Female visits[2]	5,302	37,627,366	6,249,957
Pap test ordered or performed at visit[2]	127	2,617,321	1,056,270
Providers offer liquid based cytology[3]	.	.	.
CCSS Ineligible			
All visits[2]	39,253	658,099,730	28,267,123
Female visits[2]	20,696	358,985,421	15,940,314
Pap test ordered or performed at visit[2]	236	2,977,284	1,085,859
Providers offer liquid based cytology[3]	.	.	.

Table 3: Number of Visits to Providers That Offer Liquid-Based Cytology, CCSS Visit File 2008

	Number of Records	Estimate	Std error
Providers offer liquid based cytology			
Yes			
All visits[2]	15,729	311,428,367	22,239,688
Female visits[2]	11,588	218,148,982	14,888,701
Visits w/pap ordered/performed[2]	1,864	28,985,471	2,561,828
No			
All visits[2]	683	12,718,632	4,660,205
Female visits[2]	421	7,253,660	2,722,402
Visits w/pap ordered/performed[2]	22	314,708	172,239
Unknown[4]			
All visits[2]	1,069	33,580,800	7,957,289
Female visits[2]	788	26,390,801	6,450,921
Visits w/pap ordered/performed[2]	116	4,653,820	1,916,201

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

[2]Visit level variable.

[3]NAMCS only, provider level variable from Cervical Cancer Screening Supplement.

[4]Unknown category includes records with values marked as unknown, those with blank values, and those

[5]Analysis of provider-level variables should not be performed using visits from providers who were

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.CCSSVISIT08;
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
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;


*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 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 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="<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 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.CCSSVISIT08;
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

Variables	Labels	N	Weighted Estimate	Standard Error	Percent
ETHNIC	1 = Hispanic or Latino	6,554	83,793,263	6,843,624.53	12.92
	2 = Not Hispanic or Latino	32,274	564,631,744	22,557,232.50	87.08
PAYTYPE	1= Private insurance	8,824	319,274,718	14,078,453.50	54.95
	2 = Medicare	3,848	135,853,006	8,000,790.26	23.38
	3 = Medicaid or CHIP/SCHIP	2,954	66,516,812	5,627,342.63	11.45
	4 = Worker's compensation	114	4,218,000	1,343,318.56	0.73
	5 = No charge/ charity	178	2,807,280	801,915.61	0.48
	6 = Other	567	10,908,948	1,810,571.87	1.88
	7 = No charge/ charity	178	2,807,280	801,915.61	0.48
	-8 = Unknown	595	12,211,668	2,603,210.78	2.10
	-9 = All sources for payment are blank	164	3,930,098	533,381.30	0.68
SPECR	1 = General/Family practice	4,217	130,478,104	10,088,980.60	22.46
	3 = Internal Medicine	1,585	93,066,370	8,435,968.82	16.02
	4 = Pediatrics	1,567	58,229,189	5,206,757.33	10.02
	5 = General Surgery	578	9,729,478	1,716,740.74	1.67
	6 = Obstetrics & Gynecology	1,834	81,810,137	8,044,097.68	14.08
	7 = Orthopedic Surgery	832	28,051,476	3,512,411.90	4.83
	8 = Cardiovascular Diseases	745	19,646,181	2,986,749.20	3.38
	9 = Dermatology	854	19,135,458	2,779,784.99	3.29
	10 = Urology	350	6,082,845	967,847.09	1.05
	11 = Psychiatry	677	13,343,814	1,749,717.20	2.30
	12 = Neurology	1,063	7,716,386	802,609.85	1.33
	13 = Ophthalmology	822	39,853,232	4,342,434.63	6.86
	14 = Otolaryngology	691	9,855,684	1,549,181.94	1.70
	15 = Other specialties	936	55,698,848	6,063,119.06	9.59
	99 = Mid-level provider	1,616	8,354,156	1,700,064.10	1.44
CLINTYPE	1 = GM	7,297	41,003,397	4,758,873.38	60.86
	2 = SURG	3,431	6,950,647	1,003,970.33	10.32
	3 = PED	1,990	5,962,679	1,118,639.85	8.85
	4 = OBG	4,501	8,429,690	1,096,504.17	12.51
	5 = Substance Abuse	286	204,559	81,246.84	0.30
	6 = Other	2,956	4,822,677	757,984.13	7.16
PRIMCARE	1 = Yes	12,943	294,437,556	15,058,410.70	45.41

	2 = No	22,838	312,362,592	14,819,416.80	48.17
	-8 = Unknown	2,432	29,534,409	4,104,152.82	4.55
	-9 = Blank	615	12,090,450	2,038,827.25	1.86
NOSCREEN	0 = Box is not marked	34,516	585,940,693	24,148,182.60	90.36
	1 = Box is marked	3,995	58,878,572	4,989,519.51	9.08
	2 = Entire item blank	317	3,605,742	633,906.06	0.56
TOTDIAG	-9 = Blank	317	3,605,742	633,906.06	0.56
	0	3,995	58,878,572	4,989,519.51	9.08
	1	4,028	66,002,359	4,159,687.94	10.18
	2	4,698	81,260,921	6,175,248.43	12.53
	3	6,522	120,068,574	6,955,911.19	18.52
	4	6,824	117,311,937	6,053,180.91	18.09
	5	4,522	73,042,821	4,656,236.58	11.26
	6	2,654	42,029,272	2,889,690.60	6.48
	7	1,660	28,645,989	2,084,707.78	4.42
	8	1,157	21,090,502	2,157,566.06	3.25
	9	794	14,070,337	1,523,905.87	2.17
	10	465	9,622,566	1,105,773.61	1.48
	11	284	5,071,760	713,958.33	0.78
	12	188	2,561,338	451,538.90	0.40
	13	164	2,020,231	392,054.41	0.31
	14	131	985,161	239,196.28	0.15
	15	119	777,403	218,436.08	0.12
	16	112	864,365	316,032.32	0.13
	17	83	280,218	104,916.67	0.04
	18	50	138,004	64,400.88	0.02
	19	31	47,260	19,110.76	0.01
	20	18	32,324	17,114.14	0.00
	21	11	15,973	7,889.08	0.00
	22	1	1,378	1,378.00	0.00
BREAST	0 = Box is not marked	35,535	592,259,317	23,016,221.00	91.34
	1 = Box is marked	3,293	56,165,690	5,222,503.87	8.66
PELVIC	0 = Box is not marked	34,489	576,962,669	22,258,349.50	88.98
	1 = Box is marked	4,339	71,462,338	6,338,145.25	11.02
RECTAL	0 = Box is not marked	37,988	628,051,548	24,515,301.40	96.86
	1 = Box is marked	840	20,373,459	3,019,221.34	3.14

SKIN	0 = Box is not marked	33,380	554,625,281	21,601,821.80	85.53
	1 = Box is marked	5,448	93,799,726	8,813,842.06	14.47
DEPRESS	0 = Box is not marked	38,262	640,095,954	25,057,351.30	98.72
	1 = Box is marked	566	8,329,053	1,179,678.15	1.28
ANYIMG	0 = Box is not marked	31,445	536,771,905	21,396,525.00	82.78
	1 = Box is marked	7,383	111,653,102	5,305,131.01	17.22
BONEDENS	0 = Box is not marked	38,574	641,768,511	24,933,588.80	98.97
	1 = Box is marked	254	6,656,496	895,428.66	1.03
MAMMO	0 = Box is not marked	37,481	624,243,854	24,203,552.10	96.27
	1 = Box is marked	1,347	24,181,153	2,288,138.60	3.73
MRI	0 = Box is not marked	38,085	638,266,370	24,751,310.30	98.43
	1 = Box is marked	743	10,158,637	1,023,639.54	1.57
XRAY	0 = Box is not marked	36,420	609,900,161	23,941,852.80	94.06
	1 = Box is marked	2,408	38,524,846	2,302,709.25	5.94
CBC	0 = Box is not marked	34,106	571,397,451	22,276,073.50	88.12
	1 = Box is marked	4,722	77,027,556	5,574,165.68	11.88
ELECTROL	0 = Box is not marked	36,669	618,534,411	24,540,452.70	95.39
	1 = Box is marked	2,159	29,890,596	2,966,627.25	4.61
GLUCOSE	0 = Box is not marked	36,048	609,799,302	23,726,802.20	94.04
	1 = Box is marked	2,780	38,625,705	3,161,750.04	5.96
HGBA1C	0 = Box is not marked	37,010	625,713,366	24,133,955.90	96.50
	1 = Box is marked	1,818	22,711,641	2,561,128.03	3.50
CHOLEST	0 = Box is not marked	36,284	597,342,270	23,341,730.30	92.12
	1 = Box is marked	2,544	51,082,737	3,755,425.03	7.88
PSA	0 = Box is not marked	38,828	648,425,007	25,120,110.10	100.00
OTHERBLD	0 = Box is not marked	33,529	561,624,254	21,923,858.10	86.61
	1 = Box is marked	5,299	86,800,753	6,098,938.17	13.39
SCOPPROC	0 = Box is not marked	37,787	630,966,031	24,638,283.20	97.31

	1 = Box is marked	1,041	17,458,976	1,756,459.01	2.69
BIOPSY	0 = Box is not marked	38,195	639,407,978	24,835,850.70	98.61
	1 = Box is marked	633	9,017,029	842,074.74	1.39
CHLAMYD	0 = Box is not marked	37,787	642,326,916	25,084,995.20	99.06
	1 = Box is marked	1,041	6,098,091	805,753.10	0.94
PAPCONV	0 = Box is not marked	37,904	635,918,224	24,338,032.10	98.07
	1 = Box is marked	924	12,506,783	2,153,087.13	1.93
PAPLIQD	0 = Box is not marked	37,897	629,300,393	24,974,010.60	97.05
	1 = Box is marked	931	19,124,614	2,471,760.36	2.95
PAPUNSP	0 = Box is not marked	38,311	640,503,817	24,791,397.10	98.78
	1 = Box is marked	517	7,921,190	1,488,000.10	1.22
HPVDNA	0 = Box is not marked	38,343	643,305,413	25,105,441.60	99.21
	1 = Box is marked	485	5,119,594	1,225,245.65	0.79
EKG	0 = Box is not marked	37,656	630,566,232	24,467,368.10	97.25
	1 = Box is marked	1,172	17,858,775	2,011,296.80	2.75
SPIRO	0 = Box is not marked	38,606	645,054,450	24,982,114.80	99.48
	1 = Box is marked	222	3,370,557	768,786.92	0.52
URINE	0 = Box is not marked	34,811	584,879,639	22,654,988.00	90.20
	1 = Box is marked	4,017	63,545,368	5,891,309.75	9.80