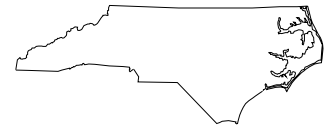


Statistical Brief



State Center for Health Statistics

www.schs.state.nc.us/SCHS/

January 2000

North Carolina Hospitalizations for Hysterectomy, 1998

by Kathleen Jones-Vessey

Introduction

Hysterectomy is one of the most common surgical procedures performed on women in the United States.¹ An estimated one-fourth of American women will undergo this procedure by the age of 65.² Research conducted by the American College of Obstetricians and Gynecologists suggests that hysterectomies may be more prevalent in the southern regions of the United States.³ This report examines the prevalence of hysterectomy procedures in North Carolina hospitals during 1998.

Methods

Data on hospitalizations for hysterectomy are obtained from North Carolina's 1998 inpatient hospital discharge files. The hospital discharge file contains information on all inpatient hospital stays from the state's non-federal, short-stay general and specialty hospitals.⁴ In keeping with previous research, this report examines only "simple hysterectomies" (ICD-9-CM procedure codes 68.3, 68.4, 68.5) for women ages 15 and over.⁵ Radical hysterectomy procedures, pelvic evisceration, and other unspecified hysterectomy procedures (ICD-9-CM codes 68.6-68.9) are excluded (n=268). In addition, hysterectomies for women under age 15 (n=6) are also excluded due to small numbers.²

Consistent with previous research, women were divided into seven different age groups: 15-24, 25-29, 30-34, 35-39, 40-44, 45-54, and those ages 55 and

over. Given that hysterectomies are uncommon among women in younger age groups and elderly women, hospitalizations for women in these ages were grouped into age spans greater than five years.² Analysis by race was not undertaken due to problems with missing data.

Results

As shown in Table 1, nearly 18,000 North Carolina women were hospitalized for hysterectomy procedures during 1998 (N=17,807). This figure represents almost four percent of all hospitalizations among women ages 15 and over and a rate of 56.8 hysterectomies per 10,000 North Carolina resident women ages 15 and over. Hysterectomy procedures resulted in over \$140 million in total charges, an average hospital charge of \$7,885, and an average hospital stay of about 3 days. The number of hysterectomies performed in 1998 is consistent with previous years. From 1995 to 1998, an average of approximately 17,000 hysterectomy hospitalizations were reported per year, with the annual numbers showing little variation over time.

With the exception of procedures related to labor and delivery (such as cesarean section or episiotomy), hysterectomy was the most commonly performed surgical procedure among hospitalized women ages 15 and over during 1998.

Approximately 99 percent of all hysterectomies were "total" involving the removal of both the uterus and the cervix. Although research suggests that supracervical hysterectomies (which leave the cervix intact) are becoming more prevalent in the United States, they are still relatively rare in North Carolina, comprising less than one percent of all simple hysterectomies (n=211).⁶



Statistical Brief No. 20
North Carolina
Department of Health and Human Services
Division of Public Health

Table 1
1998 North Carolina Resident Inpatient Hospitalizations
for Hysterectomy by Age

	Age	Total Number of Hospitalizations	Total Hospital Charges	Average Hospital Stay	Average Charge per Stay	1998 Hospitalization Rate per 10,000 Pop ²
Hysterectomy Hospitalizations¹	15 to 24	148	\$1,374,096	3.0	\$9,284	2.9
	25 to 29	766	\$5,420,200	2.5	\$7,076	27.2
	30 to 34	1,793	\$13,012,179	2.6	\$7,257	62.6
	35 to 39	3,150	\$22,508,905	2.6	\$7,146	102.7
	40 to 44	4,097	\$30,560,308	2.6	\$7,459	135.7
	45 to 54	4,813	\$37,159,062	2.8	\$7,721	94.1
	55+	3,040	\$30,380,043	4.0	\$9,993	32.3
	Total	17,807	\$140,414,793	2.9	\$7,885	56.8
All Hospitalizations for Women	15 to 24	62,831	\$301,297,116	3.1	\$4,795	1245.6
	25 to 29	42,897	\$210,306,185	3.0	\$4,903	1525.8
	30 to 34	38,841	\$216,034,159	3.3	\$5,562	1357.1
	35 to 39	30,911	\$217,788,023	4.0	\$7,046	1007.7
	40 to 44	25,616	\$219,308,586	4.4	\$8,561	848.5
	45 to 54	49,975	\$497,526,468	4.8	\$9,956	977.3
	55+	232,783	\$2,599,209,755	6.2	\$11,166	2475.2
	Total	483,854	\$4,261,470,292	4.9	\$8,807	1544.7

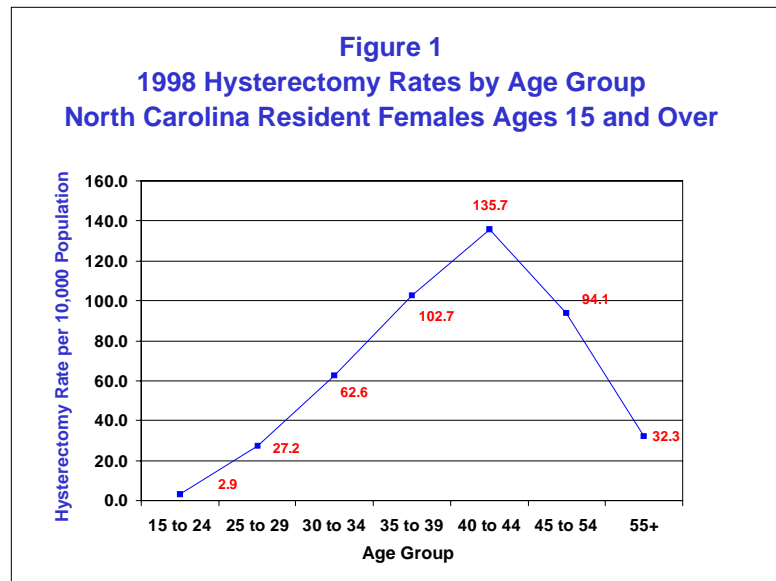
¹Represents all hospitalizations for simple hysterectomies: ICD-9CM procedure codes 68.3, 68.4, & 68.5.

²Rates are per 10,000 female population in each age group category in 1998.

Figure 1 reveals that hysterectomies vary significantly by age group. Hysterectomy rates increase with age, peaking at ages 40 to 44, and decline steeply thereafter. Women between the ages of 40 and 44 have a hysterectomy rate of 135.7 per 10,000 women.

One third of hysterectomy hospitalization records had a primary diagnosis of uterine leiomyomas/fibroids (Figure 2). Other common diagnoses associated with hysterectomies include genital prolapse, disorders of menstruation, and endometriosis. There is little variation in the pattern of diagnoses across age groups. Cancer was associated with six percent of all simple hysterectomies in the state.

Three-quarters of the hospitalizations for hysterectomy procedures in 1998 were covered by private insurance. Medicare accounted for another 10 percent of all hysterectomy discharges. Medicaid covered less than 10 percent of all hysterectomy hospitalizations.



The majority of women hospitalized for hysterectomies were admitted to the hospital via physician referral (91%), and for most, it was either an elective procedure (66%) or an urgent admission (30%). Nearly all hysterectomy hospitalizations resulted in a routine discharge (98%). However, in 26 cases women died during a hospitalization for a hysterectomy procedure. The majority of the women who died were age 55 and over (n=18).

Figure 2
1998 Inpatient Hospitalizations for Hysterectomy by Primary Diagnosis

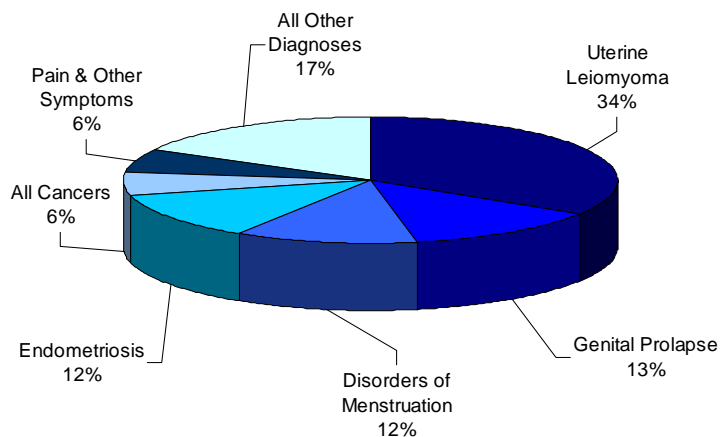


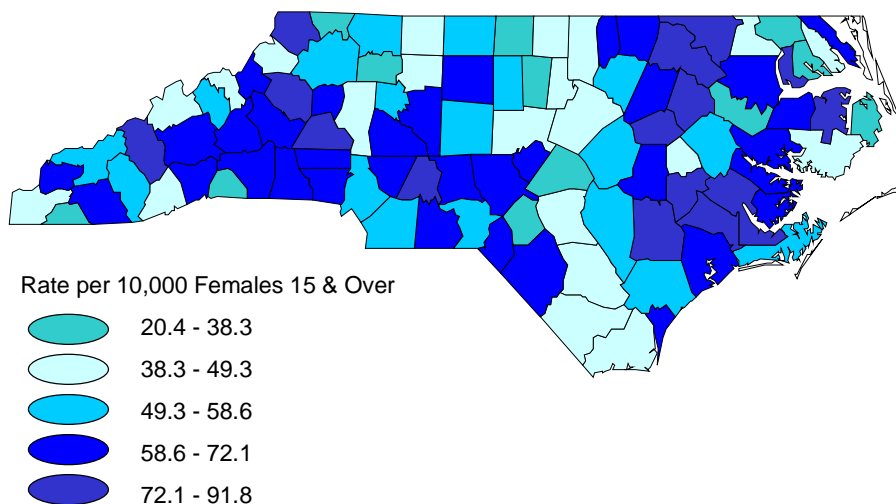
Figure 3 presents a map of hysterectomy rates by county. Hysterectomy rates appear to be somewhat higher in North Carolina’s rural counties. It should also be noted that rates might be artificially low in counties adjacent to other states due to the fact that the North Carolina hospital discharge files do not contain data for residents hospitalized out of state. In addition, the hospital discharge file does not contain data from federal or military hospitals; therefore, counties with a large military population, such as Onslow and Cumberland, will also have reduced rates.

Conclusions

North Carolina’s overall simple hysterectomy rate of 56.8 per 10,000 women ages 15 and over is comparable to the national rate of 55.0 per 10,000.² Hysterectomy hospitalization rates in the state were highest among women between the ages of 35 and 44. This may be related to the fact that women in this age group are leaving their child-bearing years and therefore may be more likely than younger women to choose a hysterectomy when facing gynecological health problems. The lower hysterectomy rates among women in older age groups could be partly because a number of these women have already had a hysterectomy.

Consistent with other research, hysterectomy rates tend to be higher in North Carolina’s rural counties. Studies suggest that physicians located in rural areas may be more likely to advocate hysterectomies over alternative therapies for women with gynecological complaints.³ However, some of this pattern may be due to differences in age distributions between urban and rural counties.

Figure 3
1998 Hysterectomy* Rates by County of Residence
Females Age 15 and Over



* Hospitalizations for simple hysterectomy procedures only (ICD-9CM codes 68.3, 68.4, 68.5). Rates may be artificially low in counties adjacent to other states and counties with a large military population. See text.

References

1. Graves E, Owings M. 1995 Summary: National Hospital Discharge Survey. *Advance Data from Vital and Health Statistics* 1997; 291. Hyattsville, MD, National Center for Health Statistics.
2. Lepine L, Hillis S, Marchbanks P, et al. Hysterectomy surveillance – United States, 1980-1993. *MMWR* 1997; 46 (No. SS-4):1-15.
3. Hysterectomy and its alternatives. Health Pages: The voice of the health care consumer. 1998, <http://www.thehealthpages.com/ar-hyste.html> [August 11, 1999].
4. Surlles K, Jones-Vessey K. North Carolina hospital discharges: 1996 summary. *SCHS Studies* January 1998, No. 109. North Carolina Department of Health and Human Services, State Center for Health Statistics.
5. *International Classification of Diseases, 9th Revision, Clinical Modification*. 4th ed., 1995. Washington, DC: Public Health Service, Health Care Financing Administration.
6. Sills E, Saini J, Steiner C, McGee M, et al. Abdominal hysterectomy practice patterns in the United States. *International Journal of Gynecology and Obstetrics* 1998; 63: 277-83.

For more information about this publication, contact:

Kathleen Jones-Vessey at (919) 715-9692
e-mail: Kathleen.Jones-Vessey@ncmail.net

For a list of other publications by the State Center for Health Statistics call:
SCHS Information Services Branch
(919) 715-4490 or 715-4489
e-mail: SCHS.Info@ncmail.net



State of North Carolina
Department of Health and Human Services
State Health Director
Andrew D. McBride, M.D., M.P.H.
Division of Public Health
Ann Wolfe, M.D., M.P.H., Director
State Center for Health Statistics
John M. Booker, Ph.D., Director

Department of Health and Human Services
State Center for Health Statistics
1908 Mail Service Center
Raleigh, NC 27699-1908
919/733-4728

