Use of Obstetrical Care Compared Among Military and Civilian Families

Data from the National Natality Survey (NNS) allow studies of factors involved in pregnancy outcome and comparisons of subgroups within the population that are not possible with data available from vital statistics alone.

U.S. military active duty personnel and their dependents are a well-defined, diverse, and generally healthy subgroup whose medical care is available without charge. We compared the social and demographic characteristics of military and civilian families included in NNS and examined differences in obstetrical care practices among the two subgroups. Although the study was limited by the small number of military families in NNS, our comparisons advance the understanding of the utility of obstetrical care and identify aspects needing further study.

Methods

A detailed discussion of the methods used in NNS has been published (*1*). Briefly, NNS is a nationally representative survey based on a probability sample of live birth certificates of infants born to U.S. residents during 1980. Sampling and selection procedures were designed to oversample low birth weight infants. Information for our study of social and demographic characteristics was obtained from questionnaires mailed to married mothers who were in the sample. Information on obstetrical care practices was obtained from data supplied by medical care providers.

A military family was defined as one with at least one parent on active duty. The 407 military families in the sample were 5.2 percent of the total number of families. By definition, military families have at least one employed parent. The 7,363 civilian families in the sample had at least one parent employed, with neither parent on active military duty. Fifty-five births (0.7 percent) to parents with both parents unemployed were excluded from the analysis.

The chi-square test was used in the data analysis with a significance level of 0.05. Differences referred to in this report as "less" or "higher" indicate statistical significance unless otherwise specified.

Results

Military and civilian families in NNS were similar, but with a few noteworthy exceptions. More than 99 percent of births in both civilian and military families occurred in hospitals. While the civilian families reported a wide range of attendants at delivery, including lay midwives and family members, mothers in military families were less likely to have been delivered by a physician. Slightly more than 3 percent of births in military families were attended by certified nurse midwives (table).

Although, on the average, the pregnancies of women in military and civilian families both were confirmed by the seventh week, military family women were more likely to begin prenatal care after the third month of pregnancy. Sixty-four percent of civilian family women began care in the first trimester, compared to 57 percent of military family women. Furthermore, military family women were nearly twice as likely as civilian family women to begin care in the third trimester and were less likely to report a postpartum visit, as shown in the table.

Assessment of the content of prenatal care included questions concerning the advice given to expectant mothers and recorded in the prenatal record. According to data from hospital and physician questionnaires, pregnant women in military families were less likely to be advised to restrict their salt intake or to use a vitamin or mineral supplement. They also were somewhat less likely to be advised to use a calorie-restricted diet (P more than 0.05).

During pregnancy, women in both military and civilian families were equally likely to receive an ultrasound examination. Amniocentesis was performed on only 5 percent of the women in the survey, and the proportion performed on military family women was slightly higher (6.4 percent) than for civilian family members. However, this estimate is probably unreliable because of the small number of women involved.

Pregnant women in military families (57 percent of the total) were more likely than those in civilian families (47 percent) to receive electronic fetal monitoring (EFM) during labor. Concern that increased use of EFM leads to unnecessary cesarean delivery has been noted (*2, 3*). However, 61 percent of both populations had normal, vaginal deliveries. There was no difference in the proportion of women who had primary cesarean sections (12 percent). The rate of repeat cesarean delivery was slightly lower for mothers in military families (5 percent) than for those in civilian families (7 percent). The rates of antepartum and intrapartum complications were similar for both groups.

Demographically, 87 percent of births to mothers in civilian families and 81 percent of those to military family mothers were classified as white. Mothers and fathers of military families were an average of 1 year younger than the civilians. Military families were more likely to live in the South or the West than civilian families, probably a reflection of the concentration of military bases in those areas.

There was no difference in the average birth weight (approximately 3,200 grams), gestational age (39 weeks), or Apgar scores (8 at 1 minute and 9 at 5 minutes) between infants born to either group.

Discussion

Findings were similar in many respects for obstetrical care obtained by mothers in either military or civilian families. Some findings, such as the parents' age difference, were expected. However, the finding that mothers in military families were more likely to begin prenatal care after the third month of pregnancy than civilian mothers is of interest.

One of the Public Health Service's 1990 Priority Objectives for Pregnancy and Infant Health states that the proportion of women who do not obtain prenatal care during the first trimester of pregnancy shall not exceed 10 percent (*4*). In the study, 32 percent of the women in military families did not begin prenatal care until the second trimester. Some of this delay may be because of administrative processing,

Obstetric care practices among military and civilian families, United States, 1980

Characteristic	Military		Civilian	
	Number	Percent	Number	Percent
Prenatal care begun: [1]				
First trimester	229	57	4672	64
Second trimester	129	32	2114	29
Third trimester	44	11	475	6
Attending delivery: [2]				
Physician	391	96	7265	99
Other	16	4	98	1
Postpartum visit: [3]				
Yes	359	88	6719	91
No	48	12	644	9

[1] $P = 0.001$; [2] $P = 0.036$; [3] $P = 0.003$.

which may take longer in the armed services than in civilian life. However, this would not explain why 11 percent did not begin care until the seventh month or later. Although utilization patterns may have improved since these data were collected, if military organizations are to meet the 1990 Objective, further measures may be needed to facilitate early enrollment. Furthermore, mothers in military families were less likely to report a postpartum visit. This suggests that although care is available without cost, it may not be adequately used.

We found that pregnant women in military families were less likely to be told to restrict their diet or to take vitamin supplements during pregnancy. Data from NNS cannot be used to determine whether a procedure or recommendation was used appropriately or whether the lack of use represents inappropriate or inadequate care (2). Interpretation of the findings must be made with this limitation in mind. Since the number of military families in NNS is small, study of a larger sample needs to be undertaken to investigate factors that may confirm and explain the findings. Knowledge of prior patterns of obstetrical care practices among the military population should be useful in planning and implementing future programs.

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This research was supported by the Uniformed Services University of the Health Sciences, grant R08765.

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Food and Nutrition Service Research and Support Encourage Breastfeeding

The U.S. Department of Agriculture's Food and Nutrition Service (FNS), administering the Special Supplemental Food Program for Women, Infants, and Children (WIC), promotes breastfeeding through Federal requirements, cooperative efforts, research, and technical assistance materials. Federal regulations for WIC provide for encouraging breastfeeding by

- requiring that information be provided on the benefits of breastfeeding as part of nutrition education sessions for pregnant women
- offering breastfeeding participants in the nutrition program a greater variety and quantity of food than nonbreastfeeding post-partum participants
- considering breastfeeding women at a higher level of nutritional risk, thus allowing them to be served before nonbreastfeeding postpartum women when maximum caseloads are reached and waiting lists are in effect
- providing funding incentives to States serving high proportions of high-risk persons that include breastfeeding women
- allowing a breastfeeding woman without a nutritional risk condition to receive benefits based on the eligibility of her at-risk, breastfed infant
- allowing breastfeeding women to receive benefits for up to 1 year while nonbreastfeeding women are eligible for only 6 months of benefits postpartum.

FNS works cooperatively with professional organizations and government agencies to promote maternal and infant health. FNS participates in the national Healthy Mothers, Healthy Babies Coalition and is active on its Subcommittee on Breastfeeding Promotion. Materials produced by the subcommittee have included a resource package on breastfeeding for health professionals and resource materials for hospitals.

FNS first funded research efforts related to breastfeeding education with three prototype grants in 1979. The grants were to Baylor College of Medicine, Houston, TX, to develop and evaluate breastfeeding education curriculums, training manuals, and teaching methods and materials for use in WIC; Papago Nutrition Improvement Program, Sells, AZ, to develop a breastfeeding education network with six other health agencies on a reservation; and Windham Community Action Program, Windham, CT, to determine, identify, and understand psychological and cultural barriers to breastfeeding and to develop and test strategies to overcome reluctance about breastfeeding.

In 1986, FNS contracted for a 3-year WIC Breastfeeding Promotion Study and Demonstration to identify, evaluate, and demonstrate approaches to effectively promote breastfeeding in WIC. The early phases of the study collected information from exemplary WIC sites on breastfeeding promotion. The findings were compiled into the publication "Promoting Breastfeeding in WIC: A Compendium of Practical Approaches" (FNS–256), which was

distributed to all WIC State agencies for use by nutrition educators.

In the final phase, a 15-month demonstration, seven WIC sites were awarded grants to develop and test breastfeeding promotion approaches. All breastfeeding approaches were required to include

- a prenatal component that addresses participants' concerns and lack of knowledge about breastfeeding and incorporates positive peer influence
- a postpartum component that provides early support and followup
- a special group to coordinate breastfeeding promotion and support activities for participants in the prenatal and postpartum periods, including in-hospital activities

The results of the demonstrations are to be reported in 1990. A list of the seven demonstration sites, a brief description of their proposed breastfeeding promotion approaches, and the name of the appropriate technical person follow.

Valley Opportunity Council, Inc., Chicopee, MA. Proposed approaches include conducting focus groups with participants to develop appropriate breastfeeding messages and public service announcements for local radio and television stations, developing a breastfeeding package for hospitals to distribute to mothers at discharge, assigning a bilingual staff person to answer breastfeeding questions by telephone, developing a bilingual flipchart for improved communications between postpartum women and hospital staff members, and organizing a breastfeeding task force.

Karen Gelles, Demonstration Coordinator, Valley Opportunity Council, 36 Center St., Chicopee, MA 01013; tel. (413) 534–0291.

Family Health Council, Pittsburgh, PA. The council proposed to develop a breastfeeding pamphlet for expectant fathers, offer evening appointments, conduct group breastfeeding promotion sessions that provide a layette as a door prize, utilize postcards for notification of delivery and to arrange for followup by a peer counselor, maintain a lending library on breastfeeding information, and formalize a coordinating committee.

Karen Virostek, WIC Field Supervisor, Family Health Council of Western Pennsylvania, Inc., 625 Stanwix St., Pittsburgh, PA 15222; tel. (412) 763–9080.

Palm Beach County Health Unit, West Palm Beach, FL. Approaches proposed include conducting focus groups to identify breastfeeding barriers, questions, and services desired, employing a breastfeeding counselor-records manager to provide breastfeeding information and support, providing staff education and training, establishing a hotline, working with hospital staff members for support, preparing a monthly newsletter for breastfeeding mothers, and establishing a working breastfeeding task force.

Cynthia Bartosek, Public Health Nutrition Supervisor, Palm Beach Public Health Unit, 1826 Evernia St., West Palm Beach, FL 33401; tel. (407) 844-3561.

La Crosse County Health Department, La Crosse, WI. Proposed approaches are to develop and use a peer counseling system for Hmong participants, develop a slide-tape presentation to address breastfeeding barriers among Hmong participants, begin weekly telephone contact with new mothers, provide breastfeeding support classes, and utilize a WIC breastfeeding council.

Linda Lee, WIC Program Coordinator, La Crosse County Health Department, 1707 Main St., La Crosse, WI 54601; tel. (608) 785-9865.

Cherokee Nation WIC Program, Tahlequah, OK. Proposed approaches include introducing a videotape addressing modesty concerns, printing a breastfeeding poster with an American Indian emphasis, training peer counselors, conducting a media campaign, developing a breastfeeding "how to" flipchart, providing breastfeeding mothers with hospital discharge packets which do not contain infant formula, developing a postpartum telephone contact system, and establishing a professional committee to implement and support activities.

Brenda Kirk, WIC Director, Cherokee Nation WIC Program, P.O. Box 948, Tahlequah, OK, 74465; tel. (918) 456-0671.

Columbia-Boone County Health Department, Columbia, MO. Proposed approaches include hiring a breastfeeding consultant, providing prenatal home visits, matching peer counselors with participants, utilizing public service announcements to increase community awareness, providing postcards to allow for early followup, conducting support and teaching group sessions, and organizing a breastfeeding coordinating group.

Gladys Mason, WIC Program Coordinator, Columbia-Boone County Health Department, 600 E. Broadway, Columbia, MO 65201; tel. (314) 874-7384.

Public Health District V, Twin Falls, ID. Approaches proposed include developing culturally sensitive prenatal classes, creating a peer counselor group with both English- and Spanish-speaking participants, establishing a "warm line" to answer breastfeeding questions, using return postcards to provide early postpartum contact and followup, forming a breastfeeding coordinating group, and conducting a workshop for health professionals.

Mary Decker, WIC Coordinator, Public Health District V, P.O. Box 547, Twin Falls, ID 83301; tel. (208) 734-5900.

A second FNS publication designed to assist local agency staff in teaching participants about breastfeeding is "Promoting Breastfeeding: A Guide for Health Professionals Working in the WIC and CSF Programs" (FNS-247). The publication contains technical information on breastfeeding, promotion and support strategies, lesson plans, and references and resources for health professionals.

Single copies of both publications are available from USDA, Food and Nutrition Service, Nutrition and Technical Services Division, Alexandria, VA 22302.

—BRENDA LISI, MS, RD, Nutrition and Technical Services Division, Food and Nutrition Service, U.S. Department of Agriculture

New Information Resource, the National Practitioner Data Bank

The National Practitioner Data Bank (NPDB), which will affect many health practitioners, represents a new facet in the relationship of the Federal Government and the State and private credentialing bodies. Although the Bank will be operated under a $15.9 million contract awarded to Unisys Corporation, it remains a Federal data bank, monitored closely by the Federal Project Officer to make certain the operation follows the law and the approved policies and procedures.

The NPDB is mandated by two laws.

The first is Public Law (P.L.) 99–660, Title IV, the Health Care Quality Improvement Act of 1986, subsequently amended by P.L. 100–177. Compliance with all facets of this law in regard to physicians and dentists is mandatory. Some parts relate to other licensed health practitioners.

Title IV. Data Reporting

Malpractice data. Any entity, such as an insurance company or self-insured hospital, that makes a malpractice payment on behalf of any licensed health care practitioner as the result of a court judgment or out-of court settlement must report requisite data to the NPDB and to the appropriate licensing board. Failure to report may result in a penalty of up to $10,000. It is important to note that the nature of the malpractice data that will be in the Bank does not constitute evidence that the practitioner is incompetent to provide care safely.

Licensure data. State medical and dental licensing boards must report to the NPDB the disciplinary actions that they execute against a physician or dentist regarding the individual's license. Examples of such actions include revocation, probation, and suspension of the license.

Clinical privileges. Hospitals and other health care entities, such as health maintenance organizations and group medical practices, must report any adverse action the entity takes against a physician's or dentist's clinical privileges under the following conditions. The action will be in effect more than 30 days and is the result of peer review (following due process) when the practitioner's professional competency and/or professional conduct was assessed. Such entities, if they so choose, may report actions taken against other licensed health practitioners.

Membership data. Professional societies must report their adverse actions taken against the membership of a physician or dentist when they have reached that action through peer review and when the practitioner's professional competency and/or conduct was assessed.

Professional societies of other health fields, if they so choose, may report adverse actions taken against the membership of a practitioner. They too must have acted through peer review when they assessed the practitioner's competency or conduct.

The health care entities and professional societies submit their reports to the appropriate State medical or dental board in duplicate for physicians and dentists and in triplicate for other practitioners. The Board retains one copy for its own use, sends one to the NPDB and, if the action affects other than a physician or dentist, sends the third copy to the appropriate other licensing board.

Querying the Bank

All hospitals must query the Bank every 2 years regarding those on their medical staff or holding clinical privileges. Hospitals also must query the NPDB when negotiating to bring practitioners onto their medical staff or grant them privileges; and they may query at other times, as they wish, about physicians, dentists, and other health practitioners.

Other health care entities may query the Bank when they are negotiating to bring an individual practitioner onto their staff. This access is only for entities that use peer review when they are taking adverse actions regarding the professional competency and/or professional conduct of one of their practitioners.

State licensing boards for any health field may query the Bank regarding an individual when they need information to achieve their mission.

When a law suit is filed against a hospital and one of its practitioners, a plaintiff or a plaintiff's attorney may access the NPDB regarding a given practitioner, if the plaintiff or plaintiff's attorney can prove the hospital has failed to query the Bank as required by the law.

Individuals may query the Bank, at no cost, regarding their own records. They, however, will receive from NPDB a copy of all data as the data are being entered into their records in the Bank.

Confidentiality

Title IV emphasizes that NPDB data shall be held confidential, and the law provides for a penalty of up to $10,000 for each violation of confidentiality. Greater detail will be provided in the final regulations published in the Federal Register.

User Fees

All entities and individuals, other than the person with a record in the Bank, will pay a users fee to obtain title IV data from the Bank. Prior to the Bank's opening, and periodically thereafter, a user fee schedule will be published in the Federal Register.

Data Reporting

Section 5 of P.L. 100–93, the Medicare and Medicaid Patient and Program Protection Act of 1987, expands the NPDB in two ways. First, it requires that, rather than just the medical and dental licensing boards reporting as required under title IV, now the licensing boards for all licensed health fields must report their disciplinary actions to the NPDB. Second, section 5 requires that States, or political subdivisions thereof, which execute disciplinary action on the licenses of health care entities under their authority, must report requisite data to the NPDB.

Querying the Bank

Section 5 permits hospitals, health care entities, and licensing boards to access the data reported to the NPDB under its authority just as they can access title IV data. Section 5, however, adds a cadre of different entities that can access section 5 data even though they cannot access title IV data. Included in this group are the Peer Review Organizations funded by the Health Care Financing Administration, the State Medicaid Fraud Control units, the Attorney General, and other law enforcement officials. Publication of a fuller list of these entities must wait for their identification in the section 5 final regulations which will appear in the Federal Register later this year.

Closure

The information provided in this article is a brief overview, but prior to the opening of the Bank toward the end of this fiscal year there will be wide distribution of information regarding its operation. Various opportunities will be provided for those who will be affected by the Bank to learn about it as well as their responsibilities and opportunities in relation to it.

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☆U.S. G.P.O. 1989-241-269:00003

HIV Screening Test Is Developed Using Recombinant-DNA Technology

The Food and Drug Administration has licensed a 5-minute screening test for detecting antibodies to the human immunodeficiency virus (HIV). The test is the first diagnostic test related to acquired immunodeficiency syndrome (AIDS) that is based upon a protein engineered by recombinant-DNA technology.

The test is appropriate when a quick screening result is required, and it was designed to be used by trained health professionals in settings where other types of AIDS antibody detection tests cannot be performed because of a lack of refrigeration or other sophisticated equipment.

FDA Commissioner Frank E. Young, MD, PhD, said that the test is the first for HIV infection to be developed through the application of gene-splicing techniques. "This technical advance," Dr. Young said, "should help make testing available to all who want to be tested. It will also be particularly useful in remote areas of the world that lack the facilities for earlier approved tests and may also be very useful as a preliminary screening measure in emergency situations in this country. It is not, however, intended to replace the current tests used by blood banks for screening donated blood. Furthermore, any positive reactions using this screening test must be confirmed, because false-positive reactions can occur," he said.

Called a latex agglutination test kit, the new test is a suspension of microscopic latex beads coated with a genetically engineered protein which contains portions of the outer surface, or envelope, of the AIDS virus. The engineered protein is produced by a process in which a part of the AIDS virus genetic material is inserted into *Escherichia coli* bacteria. As the bacteria grow, a large amount of the modified AIDS virus envelope protein is produced. The engineered virus protein is purified further before it is coated onto the latex beads. This production process is much safer than previous methods relying on growing live AIDS viruses in a cell culture.

When a sample of whole blood, plasma, or serum is mixed with the protein-coated latex beads, AIDS antibodies, if present in the sample, will bind to the beads, causing them to clump, or agglutinate. A trained professional can visually detect this clumping reaction using a bright light.

The agglutination test supplements a series of other approved AIDS antibody test kits that have been used to screen the blood supply. The screening test which is recommended for routine use in blood banks and clinical laboratories, the enzyme-linked immunosorbent assay, or ELISA, was first licensed by FDA in March 1985. Another, more specific test, known as the Western blot, was approved in April 1987. The universal use of the two types of blood screening kits by blood establishments within the United States, along with voluntary self-exclusion from donation by persons in high-risk groups, has helped to protect the blood supply from contamination with the AIDS virus.

When properly performed by trained medical professionals, the latex agglutination test can provide a highly sensitive assay for AIDS virus antibodies within 5 minutes, compared with several hours for other tests. The new test kit is not well adapted, however, for screening very large numbers of samples. In addition, false-positive reactions can occur because of interpretation errors, some medical conditions, and problems of sample quality that do not ordinarily affect the ELISA test. As with other screening tests, positive test results should be further investigated by repeat testing, including a test with a fresh sample, and by validation with additional, more specific tests based on independent methods such as the Western blot.

The approved test kit will be manufactured by Cambridge Bioscience Corp. of Worcester, MA, and distributed by Baxter Health Care Corp. under the trade name Recombigen HIV-1 Latex Agglutination Test.

Interim Programs for Methadone Therapy Proposed

Public Health Service agencies, in an effort to help prevent AIDS among intravenous heroin addicts, have proposed inferim programs that permit clinics to provide doses of methadone to heroin users waiting to get into comprehensive treatment programs.

Heroin users frequently share unsterile needles and, in doing so, may become infected with the AIDS virus and can infect their sex partners and fetuses. Methadone, used in a treatment program to help relieve an addict's craving for heroin, is taken by mouth, eliminating the risk from needles.

Methadone treatment is most effective when used as part of a comprehensive treatment program, but there are waiting lists of up to 6 months at some clinics. Since the backlogs cannot be quickly eliminated, the proposal, by the Food and Drug Administration and the National Institute on Drug Abuse (NIDA), seeks to improve addicts' access to methadone. NIDA estimates that 1.1 to 1.3 million Americans are intravenous drug abusers, of whom 500,000 are heroin addicts. Treatment backlogs exist in three out of every four cities with clinics, according to NIDA. Under the proposal, methadone could be made available at clinics and satellite medication units during the interim period, but would not be provided for take-home use. A pilot interim treatment program at Beth Israel Medical Center in New York City appears to have reduced the use of needles. Counseling on avoiding AIDS would be made a part of each clinic's program.

NIDA research shows that methadone maintenance is an effective treatment for heroin addiction. Federal methadone regulations were first issued in 1972 to establish the appropriate use of the drug in treating and rehabilitating addicts. The last major revisions to the regulations were in 1980, but a regulation designed to streamline regulations and permit more flexibility in the treatment programs became final March 1, 1989.