

Student Learning in the Community Promotes Maternal Health

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Abstract

The University of North Dakota College of Nursing Expectant Family Program has over a thirty year history of service by upper division nursing students to expectant families in the area of Grand Forks. A change over time has been in the population of pregnant women who are now more often single and high risk. Student learning experiences include home visits, physical assessments, monitoring for danger signs, individualized instruction on prenatal and family health, attending clinic and Lamaze classes and support during labor and delivery. Anecdotal information consistently reveals positive impact on the family's birthing experience and on the students' learning.

Keywords: education, learning, public health nursing, maternal-child nursing, home care services

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Various organizations promote community-based models of nursing education to enable graduates to work across various health care settings and provide care which is focused on the needs of particular populations (American Association of Colleges of Nursing, 1993; National League for Nursing, 1999; Shugars, O'Neill, & Badger, 1991). The ecological model of Urie Bronfenbrenner (1979) is useful in characterizing a multilevel approach of care for the individual in the context of their life situation in the home and community (Tyree, Henly, Schauer, & Lindsey, 1998). Seeing the family in the community, instead of a hospital, helps bridge learning about continuity of care across settings. The hospital is viewed as an institution in the community, supporting family care of the individual. This article describes the Expectant Family Program, a component in the *Family in the Community* course at the University of North Dakota. The course deals with family-centered, community based care for child-bearing and child-rearing families.

Home visiting is the primary activity in this clinical experience. Support of self-care in the home is fundamental to home visiting programs (Rice, 1998). Kadner and Brandt (1998) describe potential lessons for students from home visiting including comparison of inpatient and home settings, continuity of care across settings, the family as the unit of intervention and the case management process.

The impact of home visiting by nurses on improving the outcome of pregnancy has been measured by Olds et al. (1999) in randomized trials over twenty years in Elmira, New York and Memphis, Tennessee. In these studies child bearing women and their children were followed with home visits until the children reached two years of age. Long term benefit of home visiting was seen when the children reached 15 years of age, most markedly in those families with

compounded risk factors of poverty, single mothers, teenagers and lowest psychological resources. The benefits for these children included fewer arrests and convictions, less smoking and drinking and fewer sexual partners.

Zotti and Zahner (1995) evaluated a public health nursing home visiting program for 398 Women, Infants and Children (WIC) registrants with high risk status, divided into a group of 301 who received WIC services only and a group of 97 who received WIC plus public health nurse visits. They found no difference in prenatal care or birth outcomes between the group visited and WIC registrants who were not visited. Zotti and Zahner (1995) reported lessons learned in care-coordination for the population at risk.

In reporting on the effects of advanced practice nurses in improving the outcome of pregnancy through home visiting, Brooten and Naylor (1995), discuss the type of maternal outcomes which are important to measure. Brooten, Brooks, Madigan, and Youngbult (1998) looked at "nurse doses" associated with various complicating risk factors. Nurse dose refers to the actual amount of nursing contact time which was spent by expert nurses. Brooten et al. (1998) highlight the importance of knowing how much time is needed to reach improved outcomes in a health care system unfettered by current financial constraints on home care.

Program Development

The Expectant Family Program at the University of North Dakota (UND) was initiated to provide students home visiting experiences in the community as well as to fill a gap in follow-up of pregnant women. In the Fall of 1969, the UND College of Nursing developed a program that combined learning experiences for two senior nursing classes, community health and maternity nursing, into one clinical. Senior nursing students were assigned to follow primigravida women in their homes as part of a requirement for both classes. The development of this program was

described in the article by Helgeson, and Neuberger (1977). In the Fall of 1980, the Maternity course was relocated to the junior year and the Community Health course remained in the senior year. In the Fall of 1992, after more curriculum modifications to address changes in the health care system toward more community based education, the Expectant Family Program and a counterpart Child Health Program, which links students with families of children with special needs, became a new course entitled Family in the Community. The course was placed in the eight-semester sequential curriculum in the second semester junior year.

The sixteen week Family in the Community course focuses on family-centered, community based services for expectant families and families caring for children with special needs. Emphasis was on standards of prenatal care, risk assessment, parenting children with chronic illness and/or disability and multi-disciplinary services. The purpose of this article is to describe the Expectant Family portion of the course.

Program Description

The Family in the Community course at UND focused on family-centered, community-based services in an ecological model based on Bronfenbrenner (1979). It includes one hour of didactic lecture, two hours of clinical conference and approximately four hours of independently scheduled clinical time per week. About 48 students every semester are involved in the expectant family program.

Expectant Family student encounters included home visits, attendance at prenatal appointments, classes and diagnostic tests such as ultra-sound and, if the timing was right, labor and delivery. The students were expected to make a visit of about an hour in duration every other week. Wide variation in frequency and length of visits was accepted depending on the stage of pregnancy and family needs. Cases were located by the students themselves, through

newspaper announcements and brochures placed in clinic prenatal packets. Feature articles in area newspapers that enhanced visibility in the community were published about the program every few years.

Students received preparation for home visiting from an "expert panel" of home visitors, faculty, and community health nurses, emphasizing safety and the autonomy of families in selecting their own priorities for learning and intervention. A printed learning packet gave students additional guidance for beginning visits. A brochure explaining the purpose of the program and topics the student might discuss on home visits was used as a guide for case-finding.

Learning Experiences

A signed consent to participate was requested from the woman on the first contact. The consent also informed the client that a record was kept in the College of Nursing which might be used for research purposes. The client's signed Release of Information form enabled the student to request health records from other agencies. Assessment began with a maternal history. The history was a structured, concrete form which facilitates an easy exchange of information between student and mother and "breaks the ice." Hands-on assessments usually began in subsequent visits and included Doppler fetal heart tone auscultation, fundal height, dip-stick urine tests, blood pressure, weight and an interview for danger signs. The Doppler assessment was usually the most valued by the family. As a sign of well-being, the Doppler brought home the reality of a developing fetus to the partner, siblings and other family members. Serial assessments were recorded on a maternal flow sheet. Danger signs and interventions were documented in nurses notes and students had home and office phone numbers for at least eight faculty members prepared to consult about decision-making in questionable situations such as,

absence of fetal heart tones, increased blood pressure and positive results on dip-sticks. Other assessments included an Ecomap, which is a pictorial constellation of external support of the family identifying associations such as work, church, extended family, social contacts and others; and Genogram, which is a pedigree, usually completed with active participation by the family (Wong, 1996). Prenatal weight-gain grids were available for tracking weight gain. A Family Roster was completed which notes other agencies or community services involved with the family unit and a home environment assessment. Labor and delivery summaries, postpartum progress and infant assessment were also charted. Faculty provided written feedback weekly on the case management and the documentation in the health record.

Learning was mediated in weekly two hour clinical conferences consisting of 12 students and a faculty member during which they reflected on the case assignments. An emphasis was placed on listening to the "family story" in the experience of pregnancy. Students shared case stories and discussed approaches to intervention with an emphasis on listening to family members. Teaching families about stages of pregnancy, labor and delivery, infant feeding and cares and many other topics of interest was the most frequent intervention. Students followed up on specific questions about teratogens and genetics by consulting the Nurse Geneticist in the UND School of Medicine and by doing their own research. All the students joined a national maternity care listserv for specific questions requiring expert consultation, for example, breast-feeding following breast reduction surgery. The students also found timely new teaching materials on the Internet, especially related to gestational development, work-related exposures, and other individual concerns expressed by the expectant family. They discussed the material found in clinical conference with the supervising faculty member as to the appropriateness and reliability of the information before the information was shared with the family. Reinforcing

gestational diabetes and pregnancy-induced hypertension management was a common intervention. Teen mothers and mothers with mental retardation were given particularly sensitive and individual attention with teaching aids for populations with low literacy which were acquired. Working with families collaboratively on the families' priorities was stressed.

The Expectant Family Program was seen as particularly valuable to single mothers, who are often abandoned by the significant other or family and whose numbers have grown. Social support was recognized as an important factor in the development of comfort in the parental role (Daro & Harding, 1999).

The program looked at the issues of personal and professional boundaries which are so common in real-world work. Students were encouraged to bring personal and professional reflections to clinical conferences within the bounds of appropriate levels of self-disclosure. On occasion, the clinical experience touched unresolved memories of abuse in the student him/herself, and a counseling referral was made for the student. When domestic violence or child abuse surfaced in the case family, faculty worked with the student to report the family to social services, as required by North Dakota law, and to the local crisis center if appropriate. Case-finding was directed toward referrals of well-functioning families. Nonetheless, it happens that the student may have been the first person to identify abuse in a family or the first person to whom a history of abuse was confided.

Grief and loss are ever-present as the students encounter miscarriage, fetal demise, and stillbirths. One clinical section of twelve students suffered the loss of three infants and two miscarriages in one semester time period. At a time like that the whole class and group of faculty grieved together and supported each other. This overt acknowledgment of the impact of

loss on a professional may be a result of consciousness-raising over the last three decades about death and dying.

Graduate students were available for case consultations to undergraduate students.

Graduate students followed some highly complex cases which were not appropriate for beginning students. Graduate students as case managers, consultants and sometimes as faculty moved the program forward in its clinical sophistication. They also brought an energy and excitement to the work which was contagious. They communicated that this work was important and not just another assignment. They were good role models of committed, engaged professionals.

If follow-up of the families was needed after the school year had ended, arrangements were made for the family to be followed by the Public Health Department or another appropriate agency. The faculty member and the student discussed the proper referral and proceeded in a team approach for follow-up. Some families did not wish to have follow-up after the school year had ended and refused. The wishes of the family were followed unless there was a legal or safety concern that required follow-up.

Evaluation

The number of expectant women visited yearly was about 90, equaling the number of students that participated in the program per academic year. The average number of home visits per family was 11.5. Students made an average of 359 contacts with other programs and providers serving the women per year. It is this entry into the service system which illustrated to the students the complex web of community-based services which are available.

In the 1995-96 academic year 190 Patient Satisfaction Surveys were sent to individuals who received home visits from nursing students (Lindsey, Henly, & Tyree, 1997). A total of 101

patients returned the survey. The numbers included child nursing visits as well as expectant family visits. A total of 86 expectant families were visited during that academic year.

Representative comments included:

- "It has been a wonderful program and people can benefit from it."
- "Very informative, reassuring; provided me with information that exceeded Lamaze."
- "Seems really easy to talk to the student nurse about things you maybe wouldn't bother to talk to the doctor about."

Respondents remarked in particular that the program can be of most help to a first-time expectant woman.

Anecdotal information is rich in giving the flavor of the impact of the program on families. One mother who has a developmental disability associated with fetal alcohol exposure called the College two years after participating in the Expectant Family Program and asked to have the opportunity to speak to the current class of students. The students were assembled to hear the woman's story, and also present was an advocate with the local Advocacy Resource Center (formerly Association for Retarded Citizens) chapter to assist the woman in her presentation. She spoke about how much help the student had been and suggested to the students some activities which she found particularly helpful. The main message was to encourage the students to tell their case mothers not to drink during pregnancy. The woman described problems in her own daily living activities, which she attributed to her mother's drinking during pregnancy. She also stated that her two-year-old child was just "labeled" developmentally disabled. She thought that perhaps if she herself had not had a development disability, life would be different for her son, and she was visibly aggrieved to have heard him described that way.

The students responded with gratitude for her sharing and recognition of her courage in telling her story. They reported to faculty that the mother had a profound impact on their realization of the importance of their work.

Word about the help the students can be to parents has spread among that population group. The Clinical Coordinator of the Program received a call from a mother in the hospital asking, "Is this the program that keeps your baby from being taken away?" Sadly, that decision had been made already, and she was to leave the hospital without the baby.

Written evaluation of the Expectant Family Program was done in 1999 by a sampling of 24 students. The students as a group evaluated the program as a real asset to the curriculum. Representative remarks regarding the program were as follows:

- "Provided us opportunity to do a lot of education, which also helps us learn better."
- "I like the independence, our clients regard us as real professionals."
- "I like the Expectant Family program because it forces me to look things up. I have to have a good understanding of the topic to explain to someone else."
- "The expectant mom is a very good program. Lots of experience is to be gained by educating these women."
- "The Expectant Family Program opened my eyes to safety hazards and concerns I wouldn't ever have thought of for my family."
- "I was part of this program when I was pregnant and now as a student. My family has said that they love having a student nurse."

The Expectant Family Program is notable for its longevity and deep roots in the regional system of care for pregnant women. The program was evaluated by the students as well as the

expectant women as an excellent learning experience. Outcomes of pregnancy associated with home visiting programs, based on the work of David Olds (1999), Dorothy Brooten (1995) and others, should be researched further in the evaluation of the Expectant Family Program at UND.

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