

Student Research Symposium

ATMCH Conference

Sunday, March 9, 2003
Arlington, Virginia

Abstract Compendium

The goal of the Student Research Symposium at the Spring ATMCH meeting is to showcase current student research and to foster discourse among students and faculty in the field of maternal and child health. Students and faculty at the University of Alabama at Birmingham School of Public Health organized this year's call for abstracts, selection process, and logistics of the symposium. Student liaisons at other universities also participated in the selection process.

There were six available presentation spots at the symposium, three oral presentations and three poster presentations. In total, we received 11 abstract submissions from students at six different universities, and topics included survey research, case studies, and literature reviews. The criteria for judging abstracts were: originality/innovation (25%); timeliness (20%); quality of research (15%); and quality of writing (15%).

This compendium contains all of the submitted abstracts, beginning with those selected for presentation at the conference. We would like to congratulate all who submitted abstracts and wish you the best success in your future research and endeavours.

Oral presentations

Why Do Women Choose To Deliver At Home And Not In A Hospital? The Guatemala Case Study

Irina Zablotska, MD, MPH, PhD candidate and Fannie Fonseca-Becker, DrPH, MPH
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Background

Maternal mortality in Guatemala is one of the highest in Latin America with approximately 190 maternal deaths per 100,000 live births. The majority of mothers deliver at home with the support of a traditional birth attendant, or of some family member. Factors to predict where a pregnant woman delivers are numerous and poorly understood. Behavioral theories that identify and classify predictive factors are useful but not predictive of institutional delivery. The objectives of this study are to test a conceptual framework of predictive factors for delivery and to investigate how previous experience with health services and ideational factors (knowledge of danger symptoms, attitudes towards health sector, perceptions and freedom to seek and exchange information) are associated with institutional delivery.

Methods

Data on 1008 women 15-45 years of age were collected by a cross-sectional probability sample in the Altiplano region. We utilized model building with regression techniques to identify predictors influencing women's choice of place of delivery.

Results

Women with positive attitudes towards the health sector were 2.19 times more likely to deliver in a hospital (CI 1.52-3.16). Perceived freedom to seek services and information were also significantly associated with hospital delivery. Socio-demographic characteristics such as low education, high parity, being Mayan and rural residence were significant constraints to institutional delivery.

Conclusion

Ideational factors and socio-demographic characteristics are significant predictors of whether a woman will deliver or not in a hospital setting. Addressing these factors in programs to improve maternal survival is especially important in countries with high maternal mortality.

An Analysis Of Children, Adolescents, And Young Adults In Hillsborough County, FL (research is currently in progress; expected completion date is 6/30/03)

Janet Hess, Project Director; MPH student in Health Education Program, Department of Community and Family Health, University of South Florida College of Public Health

The purpose of this study is to improve the quality of life for children, adolescents, and young adults with special needs and their families in Hillsborough County by examining the strengths, gaps, and barriers in the current system of care. The population of interest is defined as individuals from birth to 24 years who have been identified as having or at risk of having a

chronic physical, developmental, behavioral, or emotional condition, and who also require health and related services of a type or amount beyond that required of children generally.

This community-based participatory research project is accomplished by 1) conducting a consumer-focused needs assessment that identifies the availability, quality, and affordability of community services and supports, 2) identifying strategies to empower parents, and 3) recommending actions to enable the community to better serve these children. The study is grounded in a holistic, ecological, and strengths-based approach to understanding children with special needs. Study areas include health care, education, inclusion, employment, independent living, social opportunities, and community involvement.

Methodology consists of quantitative and qualitative research strategies utilizing primary and secondary data. The study uses surveys, telephone interviews, and focus groups as mechanisms for data collection, including over 4,000 surveys in nine different versions mailed to families, teens, young adults, educators, and service providers. The Precede-Proceed model is utilized in the program planning phase of the study.

The analysis supports concurrent initiatives at the state and federal levels to implement family-focused, comprehensive, coordinated, and culturally competent community systems of care.

The Effect Of Interpregnancy Interval On Birthweight Outcomes In North Carolina

Krissy Simeonsson, MSPH in Maternal and Child Health student
University of North Carolina at Chapel Hill

Objectives

Infants born at low birthweight have an increased risk of long-term disabilities as well as an increased rate of mortality. 8.9% of all births occurring in North Carolina last year were low birthweight compared to 7.7% for the United States. The purpose of this study was to evaluate the effect of the length of time between consecutive pregnancies, defined as the interpregnancy interval (IPI), on low birthweight outcomes for infants born in North Carolina.

Methods

Data from the birth certificates of 67,344 singleton infants born in North Carolina in 2000 were used for the analysis. Logistic regression was used to identify any association between IPI and birthweight.

Results

When compared to the reference IPI (24-60 months), infants conceived after a short IPI (0-6 months) had an odds ratio of 1.59 and 1.48 for low birthweight and very low birthweight respectively. When compared to the reference IPI, infants conceived after a long IPI (> 120 months) had an odds ratio of 2.56 and 2.96 for low birthweight and very low birthweight respectively.

Conclusion

Both very short and very long IPIs are associated with low birthweight outcomes.

Poster presentations

Future Pregnancy Intentions In Women Diagnosed With Human Papillomavirus

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Diagnosis with a sexually transmitted infection is of significant concern to women of childbearing age. As part of a study to assess the social and emotional impact of a Human Papillomavirus (HPV) diagnosis, we examined pregnancy intentions among recently diagnosed HPV+ women. One-on-one in-depth interviews with 46 women were performed concerning their HPV knowledge, emotional response to diagnosis, disclosure to sexual partner(s) and significant others, and previous and anticipated future sexual behaviors. Interviews were tape recorded and transcribed. A theme analysis was performed on the transcriptions by multiple coders and key content was extracted. Among emerging themes were concerns about pregnancy and fertility. Although most women responded that having HPV would not affect *intentions* to get pregnant (n=27), they did express concerns about pregnancy, including mother-to-fetus HPV transmission (n=36), ability to get pregnant (n=15), and a need for more information about HPV's effects on pregnancy (n=15). Of particular note is that more than one-third of the women reported that pregnancy issues were a concern, despite receiving no prompt or cue from the interviewer. Whereas genital warts and oncogenic strains of HPV have been implicated in conditions emanating from mother-to-fetus transmission, no evidence presently suggests that fertility or ability to conceive are adversely affected by HPV. The majority of the women *did intend* to get pregnant in the future, and of those, most reported wanting to have 2 or 3 children. Significant educational issues exist for HPV+ women as well as for the practitioners who provide diagnostic care and follow-up counseling.

Complexity Of HPV Research Leads To Confusion In Patient Education Materials

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University of South Florida College of Public Health, Tampa FL, USA

Although HPV may be the most common STD in the U.S., this study compares the current HPV research literature to the HPV patient education materials and demonstrates that printed messages exceed the reading skills of the general population and are not up-to-date with research literature. A previous study assessed the content and readability indices of 20 HPV widely disseminated patient education materials. Four reading indices were applied to each of the brochures and the text of the brochures was content analyzed using Ethnograph v.5.0 software. Whereas the U.S. general population reads at about an 8th grade level, the results showed that no brochure was written below a 9th grade level, and 50% or more rated at a collegiate reading level or higher including medically complex language and replete with factual inaccuracies. Content themes varied by brochure, but focused mainly on HPV statistics, symptoms, transmission, prevention, treatment, cancer risk, and inconsistent information about condom use. Information concerning social, emotional, and behavioral variables was virtually ignored. Their utility for patient education is brought into serious question. Since the research literature is in constant flux due to technological changes, it is essential that the patient materials be updated routinely. Implications for improving health education materials development and practitioner education related to HPV abound.

Does Prenatal Care Make A Difference In Mortality Of Triplets?

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Although the risk of triplet pregnancies has quadrupled since 1980 in the United States, the potential public health impact of intensive prenatal care utilization on birth outcomes among triplet gestations has not been explored. In a retrospective cohort study based on data from the National Center for Health Statistics, we analyzed birth outcomes among 4345 matched and complete sets of triplet gestations in the US between 1995 and 1997 according to the level of prenatal care utilization. Adjusted odds ratios and population attributable risk were calculated with the generalized estimation equation models after controlling for confounding characteristics. Compared to women with intensive care, women with adequate care were less likely to have preterm birth, but more likely to: have low birth weight and very low birth weight infants, have more risk of stillbirth (OR 2.66; 95% confidence interval 1.80, 3.42), neonatal death (OR 3.02; 95% confidence interval 2.33, 3.93) and perinatal death (OR 2.41; 95% confidence interval 1.90, 3.07). More intensive level of prenatal care service for triplet gestations may reduce the risk for fetal, neonatal and perinatal death and low birth weight.

Further Submissions

Preconceptional And Prenatal Genetic Testing: The Ethical Challenges On The Road To Disease Prevention

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The sequencing of the human genome is a thrilling accomplishment, but with it comes tremendous responsibility. Within the arena of maternal and child health as it relates to preconceptional and prenatal genetic testing, this responsibility is profound and perhaps one of the most difficult ethical challenges today. Working from a public health perspective and within a framework of prevention, clinicians present the individual mother or couple undergoing prenatal genetic testing for their potential child with an overwhelmingly difficult decision – the decision to continue with the pregnancy or to select abortion. Further, because the development of therapies to reduce the risk through treatment and interventions will lag behind the ability to assess the risk through testing – and even that has distinct challenges because of the complexities between gene-gene interactions and gene-environment interactions – it is imperative that clinicians and the public are thoroughly educated regarding the interpretation of genetic tests. The challenge to ethicists, legal scholars and policy makers is to guard against the potential abuses and misuses of genetic information while at the same time supporting continued research and development in the genomics field. These issues, coupled with the complex legal, social and ethical issues linked to preconceptional and prenatal genetic testing raise myriad concerns and questions. It is the aim of this research paper to explore the interplay of these issues and to begin a discussion of plausible policy solutions to incorporate preconceptional and prenatal genetic testing into clinical care, while tempering the trend toward *geneticization* of disease.

Maternal Mortality In Nigeria: A Source Of Concern

Osasu Osayimwen, MPH student, Boston University School of Public Health

As the Maternal and Child Health (MCH) community in the US contemplates a change towards "global MCH" in the teaching curriculum, MCH issues in other parts of the world become more relevant. Maternal mortality is a universal source of concern reflecting women's status in community, levels of healthcare services and the socio-economic and political development of a community. This paper thus sets out to examine the issue of the high maternal mortality in Nigeria, a representative developing nation. It is a literature review exploring this problem; how it is defined, the contributory factors and consequences, and offers a critical appraisal of what we know. The statistics are grim: A maternal mortality rate of 1,100 per 100,000 (compared to 12 in the US) and one in 13 Nigerian women are expected to die from pregnancy related complications in their life time. However, these are mere estimates and the limitations of defining the problem are addressed. Most of the published literature available for review are hospital-based studies which may suffer from a selectivity bias since only about 30% of Nigerian women deliver in Hospital. The review also identifies a paucity of research in the area of the consequences of the problem, and a need for newer research to reflect the changing patterns of contributory factors. In certain aspects, projections are made from studies done in other parts of the world. A lot still needs to be done in the area of research in order to better understand this problem and offer solutions.

Co-Sleeping In Washington State: Findings From 2000 PRAMS Data

Teresa A. Vollan, BA/BS, University of Washington; Diane Pilkey, MPH, RN, Washington State Department of Health; Melissa Allen, MSW, Washington State Department of Health

Parental bed sharing, or co-sleeping, with infants and children is common in many cultures and within the United States. In 2000, the Washington State Pregnancy Risk Assessment Monitoring System (PRAMS) reports that approximately 33.6% of Washington State mothers report always or almost always co-sleeping with their new babies. Between 1999-2001, Washington State Child Death Review reports approximately 51% of the Sudden Infant Death Syndrome (SIDS) deaths in Washington took place while the infant was co-sleeping, usually with a parent. This percentage of SIDS deaths while co-sleeping is similar, though somewhat higher than other population-based studies in the US.

While some case-control studies have reported a positive association between SIDS and co-sleeping, research controlling for confounding factors have found no increased risk of SIDS while co-sleeping, as long as the mother did not smoke. PRAMS data show that of the mothers that always or almost always co-sleep, 16.4% were also smokers. The total percent of infants that co-sleep with a mother that smokes was approximately 5.6% of infants in Washington State, or approximately 4,300 out of the 78,000 infants under age one in Washington State in 2000.

Recent data from PRAMS also tells us about the prevalence of co-sleeping in the population by race and ethnicity, age, and mothers' education, as well as the prevalence of co-sleeping in combination with breastfeeding, infant position, post-partum smoking status for the mother, and

LBW. These data, together with known risk factors associated with SIDS, relay important information for public health practice.

Perinatal Depression Screening Practices Among OB/GYN Attending Physicians And Residents

Cynthia H. Cassell, MA, Doctoral Student in Maternal and Child Health University of North Carolina at Chapel Hill and Lee Chaix McDonough, Masters Student in Maternal and Child Health and in Social Work University of North Carolina at Chapel Hill

Approximately 14% of pregnant women experience depression during pregnancy. Adverse health outcomes for mother and infant include increased risk of premature delivery, operative deliveries, fetal growth retardation, poor mother-infant attachment, and additional depressive episodes during future pregnancies. However, obstetricians and gynecologists (OB/GYNs) significantly underreport perinatal depression, partly due to ineffective or absent screening procedures. The aim of this study is to assess OB/GYNs comfort level with screening and managing perinatal depression in pregnant women.

Questionnaires regarding comfort level, previous training, and experience with diagnosing depression in pregnant women were administered to OB/GYN residents and attending physicians at three residency programs. Semi-structured interviews were conducted at each site to determine current screening procedures.

Overall, OB/GYN attending physicians were more comfortable screening, diagnosing, and managing pregnant women with depression than residents. Residents with previous experience in behavioral medicine were more comfortable than residents with little or no previous experience. Most respondents agreed that additional training in perinatal depression screening is necessary. No program had a clear protocol for perinatal depression screening nor did they regularly use diagnostic instruments during pregnancy.

Additional training in screening for perinatal depression is needed by OB/GYN residents and attending physicians. Screening can be improved by: 1) providing training in behavioral medicine and among maternal and child health practitioners; 2) implementing an explicit screening protocol; and 3) using instruments designed specifically for pregnant women. Development of such an instrument, increased training, and future research in this area is warranted.

Lack Of HPV Knowledge: What You Don't Know Could Hurt You

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Human Papilloma Virus (HPV) is one of the most commonly diagnosed sexually transmitted infections (STIs) in the United States. Whereas most Americans have some awareness of the so-called classic STIs such as gonorrhea, syphilis, and genital herpes, studies demonstrate that women lack knowledge about this STI of emerging importance, especially the relationship

between HPV and subsequent risk of cervical cancer. As part of a study to assess the social and emotional impact on women of an HPV-related diagnosis, data were collected from 830 women 18-35 years of age during their annual gynecological exam at two Planned Parenthood clinics in Florida. Just 22% of the women had some knowledge about HPV. Six percent reported previous abnormal pap smears, 3% reported a previous diagnosis of HPV or genital warts, 4% knew about HPV and genital warts, and 2% knew about the HPV-cervical cancer connection. These findings confirm a lack of HPV awareness in this vulnerable sexual risk-taking population. Educational programs and strategies should be developed to improve HPV knowledge, not only among young adult women, but among their sexual partners, and health care practitioners. Moreover, the importance of regular Pap smears and early detection of cervical abnormalities is underscored.

Thank you

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