

# **G3**

# **Supporting Breastfeeding in the NICU**

**ATTACHMENT B**  
**Educational Design I**  
 Documentation Format

**Title of Activity: Supporting Breastfeeding in the NICU**


**Total Number of Contact Hours:**

<i>Objectives</i>	<b>Content (topics)</b>	<i>Time Frames</i>	<b>Presenter(s)</b>	<i>Teaching Strategies</i>
List the educational objectives. At the end of this activity the learner will be able to:	Provide outline of content presented and indicate to which objectives(s) the content is related.	Provide time frame for each content area.	List presenter for each content area.	List the teaching strategies by each presenter for each content area.
<ol style="list-style-type: none"> <li>1. List 2 nutritional goals for premature babies</li> <li>2. Describe 2 best practices in the NICU</li> <li>3. Discuss 3 ways babies fed human milk have better outcomes than those fed formula</li> <li>4. Describe 3 challenges faced by breastfeeding mothers and ways each may be overcome</li> </ol> <p>Please allow for 5-10 minute evaluation period during the session.</p>	<ol style="list-style-type: none"> <li>1. Nutritional goals unique to premature infants               <ol style="list-style-type: none"> <li>a. feeding intolerance</li> <li>b. NEC</li> <li>c. Standards</li> </ol> </li> <li>2. Best Practices               <ol style="list-style-type: none"> <li>a. Minimal enteral feeds</li> <li>b. Early initiation</li> </ol> </li> <li>3. Improved Outcomes from Human Milk               <ol style="list-style-type: none"> <li>a. Survival</li> <li>b. Morbidity</li> <li>c. Developmental</li> <li>d. Economic</li> </ol> </li> <li>4. Challenges               <ol style="list-style-type: none"> <li>a. Emotional Issues</li> <li>b. Pumping</li> <li>c. Maternal/Infant Issues</li> <li>d. NICU Environment</li> </ol> </li> <li>5. Questions/eval</li> </ol>	<ol style="list-style-type: none"> <li>1. 15 min</li> <li>2. 15 min</li> <li>3. 20 min</li> <li>4. 20 min</li> <li>5. 5 min</li> </ol>	C. Glick, MD	Slides and lecture

Slide 1

**Human Milk and the Premature Infant**

Christina Glick, MD,  
FAAP, IBCLC



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Slide 2

**AAP Policy Statement 2007**

- Hospitals and physicians should recommend human milk for premature and other high-risk infants
- Maternal support and education on breastfeeding and milk expression should be provided from the earliest possible time.
- Mother-infant skin-to-skin contact and direct breastfeeding should be encouraged as early as feasible.
- Fortification of expressed human milk is indicated for many very low birth weight infants.
- Barked human milk may be a suitable feeding alternative for infants whose mothers are unable or unwilling to provide their own milk.
- Fresh human milk from unscreened donors is not recommended because of the risk of transmission of infectious agents.



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Slide 3

**Breast Feeding: Best Practices**

Breast feeding reduces the post-neonatal infant mortality rate by **21%**.

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Slide 4

**Nutritional Goals for Premature Infants**

- Standard for short-term growth
- Meet unique nutritional needs
- Prevent feeding related morbidities
- Optimize long-term outcome

Best Medicine: Human Milk...Wight, et al 2008

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Slide 5

**Breast Feeding: Best Practices for Premature Infants**

- Withholding enteral nutrition: historic tradition
- Trophic or minimal enteral nutrition: beneficial
  - Induces maturation and hormonal stimulation (all measures of gut function)
  - Better weight gain
  - Shorter time to full feeds
  - No change or reduction in NEC
    - Beneficial microflora

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Slide 6

**Breast Feeding: Best Practices for Premature Infants**

- Improved survival in ELBW (p=0.0002)
- Decrease in severity and incidence of NEC
- Decrease in infection rate in NICU patient
- Neurodevelopmental advantage
  - Methodological challenges
- Economic advantage in NICU population
  - Saves \$11/day/human milk fed infant
  - Long-term benefit
    - Infectious
    - Inflammatory/allergic

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Slide 7

**Stool Microflora in ELBW Infants**

- Paucity of bacterial species (< 3 at 10 days)
- Breast milk increases diversity
- Antibiotic exposure decreases colonization
- Only 1/29 colonized by Bifidobacteria or Lactobacilli
- ? Risk for overgrowth of pathogenic strains
  - From Michael Caplan

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Slide 8

**Risk of NEC**

- NEC 4.5 X more likely when NOT feed human milk
- Risk increased 28X if respiratory support required in early neonatal period without human milk
- Retrospective case controlled trial

www.sciencedirect.com/science/article/pii/S0378512209001044

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Slide 9

**Breast Feeding in the NICU**

- Barriers
  - Misinformation
    - Staff
    - Parental/family
  - Illness
  - NICU environment
- Promoters
  - Kangaroo Care
  - Early maternal contact
  - Education



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Slide 10

**Challenges**

- Production
  - Delay after premature birth
  - Pump dependence
- Nutritional needs of premature infant
  - Ca and Ph
  - Protein
  - Fortification



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Slide 11

**Premature Infant Feedings**

- When?
- How much?
- How?
- What?
  - Duh!



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Slide 12

**Effects of Gut Starvation** LaGamma and Shwartz

- Nutritional
  - Steatorrhea and protein losing enteropathy
  - Decreased gut peptides and enzyme levels
  - Decreased nutrient transport
- Morphologic/Developmental
  - Reduction of new epithelial cells
  - Cells fuse and flatten
- Host Resistance
  - Decreased IgA
  - Bacterial overgrowth
  - Increased uptake of macromolecules and mucosal damage

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Slide 13

**Study Problems**

- Few RCTs for exclusive EBM in premies
- Trials guiding feeding practices are based on artificial feedings
- Much of feeding dogma is "belief" based, not scientific

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Slide 14

**Summary Of Results – Minimal Enteral Feedings vs Enteral Feedings** (Cochrane 2001)

- Improved feeding tolerance
- More rapid advancement to full feeds
- More rapid advancement to full feeds
- Improved weight gain
- Shortened duration of TPN
- Serum gastrin levels rose sooner
- Less phototherapy
- Reduction in direct bilirubin

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Slide 15

**Volume of Initiation and Advancement**

- Several studies using EBM
- "Slow"
  - 15-20cc/k/d
- "Fast"
- 30-40cc/k/d
- Results
  - Shorter time to full feeds and calories
  - No difference in NEC

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Slide 16

**FEEDING PROTOCOLS  
REDUCE INCIDENCE OF NEC**

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Slide 17

**My Goals**

- Provide human milk for all premature born in Mississippi
  - Reduce infant mortality rate
  - Reduce premature death rate
  - Decrease incidence of NEC
  - Improve long term outcomes for premature babies

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## CURRICULUM VITAE

**NAME:** Christina Glick, M.D., F.A.A.P., IBCLC

**PRESENT TITLE:** Neonatologist  
Newborn Associates  
PO Box 5569  
Flowood, MS 39288-5569

Clinical Professor of Pediatrics  
Department of Pediatrics  
University of Mississippi Medical Center  
2500 N. State Street  
Jackson, Mississippi 39211

**ADDRESS:** 2361 Twin Lakes Circle  
Jackson, Mississippi 39211

**BIRTH DATE:** September 8, 1953

**PLACE OF BIRTH:** Wooster, Ohio

**CITIZENSHIP:** U.S.A.

**LANGUAGE PROFICIENCY:** English

**MARITAL STATUS:** Married: Thomas Edward Guillot, Jr.  
3 children

Mathew: May 8, 1980  
Michael: August 16, 1983  
Megan: October 4, 1985

**UNDERGRADUATE EDUCATION:** Goshen College (1972-1973)  
Goshen, Indiana

University of Southern Mississippi  
Hattiesburg, Mississippi (1973-1976) BS

**GRADUATE EDUCATION:** University of Mississippi Medical School  
Jackson, Mississippi (1976-1980) MD

**POSTGRADUATE EDUCATION:** University of Mississippi Medical Center  
Jackson, Mississippi  
Residency in Pediatrics  
(July 1, 1980 - June 30, 1983)

University of Texas Medical School  
Fellowship in Neonatal/Perinatal Medicine  
(October 1, 1983-September 30, 1985)

**LICENSURE:** Mississippi License #9307  
Texas License #G5987

**CERTIFICATION:** American Board of Pediatrics #32103

Sub-board of Neonatal/Perinatal Medicine  
of The American Board of Pediatrics  
#1530

International Board Certification of Lactation  
Consultant Examiners 2008

**ACADEMIC APPOINTMENTS:** Clinical Instructor  
Department of Pediatrics  
University of Texas  
Health Science Center  
1983-1985

Assistant Professor of Pediatrics  
Department of Pediatrics  
University of Mississippi Medical Center  
1985-1994

Associate Professor of Pediatrics  
Department of Pediatrics  
University of Mississippi Medical Center  
1994-2000

Professor of Pediatrics  
Department of Pediatrics  
University of Mississippi Medical Center  
July 1, 2000 - October 31, 2002

Clinical Professor of Pediatrics  
Department of Pediatrics  
University of Mississippi Medical Center  
November 1, 2002 - present

## **PROFESSIONAL SOCIETY**

### **MEMBERSHIPS:**

American Academy of Pediatrics  
American Medical Association  
Mississippi State Medical Association  
National Perinatal Association  
Southern Society for Pediatric Research  
Central Mississippi Pediatric Society  
Mississippi Perinatal Association  
Mississippi Chapter American Academy of Pediatrics  
American Board of Breastfeeding Medicine  
International Board of Breastfeeding Consultants

## **UNIVERSITY AND**

### **DEPARTMENT ACTIVITIES:**

Medical Director of Newborn Transport Team, UMC, June 1986-January 1988

Residency Evaluation Committee, UMC, 1987-1988

National Faculty Neonatal Resuscitation Program, 1987-1992

Transfusion Committee, UMC, 1988-July 1992

Chairperson Transfusion Committee, UMC, 1991-1992

AAP Liaison for Continuing Education of the Department of Pediatrics, UMC, January 1989-Present

Medical Director, Neonatal Intensive Care Unit, UMC, November 1989-1992

Credentials Committee, UMC, 1990

Chairperson, NICU Performance Improvement  
Committee, 1993-2003

UMC Ethics Committee, 1995-2003

UMC Patient Care Committee,  
July 1, 1999-June 30, 2000

University Hospital Medical Staff Executive  
Committee, Member-At-Large,  
July 1, 2001-November 1, 2002

## **OTHER ACTIVITIES:**

### **Course Coordinator:**

Mississippi Chapter of the American Academy of Pediatrics:  
Convening Forum for Recovery Services for Children  
and Adolescents. Orange Grove Community Center, Gulfport,  
MS: January 12, 2006

Department of Pediatrics and American Academy of Pediatrics,  
Spring and Fall Conferences, 1990-Present

Pediatric Spring Meeting: Potpourri of Topics, May 1-2,  
2008.

Pediatric Spring Meeting: A Festschrift honoring  
Dr. Jeanette Pullen, February 22 - 24, 2006.

Pediatric Fall Meeting: "Pay Attention!" September 9,  
2005

Pediatric Spring Meeting: May 7, 2004, Jackson, MS.

Pediatric Fall and Neonatal Pre-conference Meeting  
September 25, 26, 2003: Choctaw, MS.

Pediatric Spring Meeting, May 2, 2003, Jackson, MS  
"Potpourri: Current Practices, Trends, and Progress"

2002

Infant Mortality/Morbidity Conferences, NICU, 1990-October

Neonatal Resuscitation Program for Pediatric and Obstetric House Officers,  
Summer 1990-June 2002

Perinatal Postgraduate Course, 1998

Mississippi Perinatal Association Annual Meeting, 1998, 1999

Advisory Board Meeting and Provider Training Course for  
Tobacco Cessation, National Cancer Institute, December 1999

National Perinatal Association Annual Meeting:

Milwaukee, WI 1999

Charlotte, NC 2000

Alexandria, VA 2001

Spring Conference, Baton Rouge 2002

San Antonio, TX 2001

Savannah, GA 2002

Bethesda, MD 2003

San Diego 2004

Chicago 2005

Washington DC 2006

New Orleans, LA 2007

International Symposium: Improving Adolescent Health  
Through Reduction of Tobacco Use, October, 2002

**Director of Newborn Transport Team**, Newborn Associates and Women's  
Hospital 2006-present.

**STABLE Course Director**, Newborn Associates 2005-present

**Other:**

AAP Chapter Breast Feeding Coordinator for Mississippi, 2004  
present

NPA liason to the Executive Committee, Perinatal Section of  
the American Academy of Pediatrics, 2004 - Jan 2007

**Awards:**

Academy of Pediatrics Special Achievement Award, 1995

Award of Chapter Excellence, 1995, 1996

Best Doctors in America Award, 2002, 2003, 2005,  
2006, 2007

Stan Graven Award: Outstanding Contribution to the National  
Perinatal Association, 2007

**Presided:**

Southern Regional Meeting of the Southern Society for Pediatric Research, New  
Orleans, LA, 1995.

SSPR Pulmonary Critical Care,  
February 4, 1995

SSPR Perinatal Concurrent Session,  
New Orleans, LA, February 6, 1996

**Elected / Board Positions:**

President, MS Perinatal Association,  
July, 1989-January 1992

Vice-President, MS Chapter American Academy of Pediatrics,  
1993-94

President, MS Chapter American Academy of Pediatrics,  
1995-1996

Mississippi Chapter of the American Academy of Pediatrics  
Representative to the Governor's Infant Mortality Task Force,  
1996-2002

McNeil Consumer Products Company  
Pediatric Analgesic/Antipyretic  
Consultants Board 1996-January, 2000

Council Member, Southern Society for Pediatric Research,  
1997-1998

Delegate, MS State Medical Association,  
1997-1998

Co-Chairman SIDS Task Force,  
April 15, 1997-January, 2000

Forest Pharmaceutical Speaker Board, Infasurf,  
1998-2002

Board of Directors of the National Perinatal Association,  
November 1997-2007

Vice-President, National Perinatal Association,  
December 1, 1998 - December 2000

Executive Board, National Perinatal Association,  
December 1998-2007

President-Elect National Perinatal Association,  
January 1, 2000 - December 2002

President, National Perinatal Association  
January 1, 2003 - 2005

National Perinatal Association: Director of Transcultural Development,  
November 2001 - January 2008

Associate Editor: *Transcultural Aspects of Perinatal Health Care: A  
Resource Guide*

Board of Directors; Mississippi Chapter of the March of Dimes, 2005 -  
present.

Board of Directors, National Perinatal Foundation, October, 2007 to  
present.

Consultant to AAP for Nutrition during Disaster. Mar 2007- present.

Board of Trustees, Millsaps College, Jackson, Mississippi, October 2008 to  
present.

**Journal Reviewer:**

*Clinical Pediatrics*, August 2002

National Advisory Council: *Friendly Access*, The Lawton and  
Rhea Chiles Center for Healthy Mothers and Babies.  
January 2003 - January 2005.

Journal of Perinatology 2007

## PUBLICATIONS:

1. Rhodes PG, Glick MC nee Puckett CG: Staphylococcus aureus infections in newborn. *Perinatol Neo* 7:69, 1983.
2. Ferguson MG, Rhodes PG, Morrison JC, Glick MC nee Puckett CG: Clinical amniotic fluid infection and its effect on the neonate. *Am J Obstet Gynecol* 151:1058-1061, 1985.
3. Glick MC nee Puckett CG: Unusual bacterial pathogens in neonatal sepsis. *Mississippi Perinatal Update* 3:3, 1986.
4. Glick MC nee Puckett CG: Bronchopulmonary dysplasia. *Mississippi Perinatal Update* 3:6, 1986.
5. Robinson LK, O'Brien NC, Glick MC nee Puckett CG, Cox MA: Multiple pterygium syndrome: a case complicated by malignant hyperthermia. *Clin Genet* 32(1): 5-9, 1987.
6. Carvajal HF, Glick MC nee Puckett CG, Adcock EW, Krudy GA: The relationship of lactic dehydrogenase to epithelial cells in the urine of normal neonates. *Clin Pediatr* 27(8): 378-380, 1988.
7. Glick MC nee Puckett CG, Graves GR, Feldman, S. *Torulopsis Glabrata* in the Neonate: An Emerging Fungal Pathogen. *South Med J* 85(8): 969-970, 1993.
8. Glick MC, Graves GR, Hess LW, Peavey MT. Perinatal Outcome of Cordocentesis: A descriptive report. *Neonatal Intensive Care* 6:51-52,1993.
9. Glick MC, Graves GR, Feldman, S. Neonatal Fungemia and Amphotericin B. *South Med J* 86(12): 1368-71,1993.
10. Patel DM, LeBlanc MH, Morrison JC, Martin JN, Graves GR, Glick MC, Rhodes PG, Chauhen SP. Postnatal Penicillin Prophylaxis and the Incidence of Group B Streptococcal Sepsis in the Neonate. *South Med J* 87(1): 1117-1120,1994.
11. Glick MC, Patel R, Johnson, W. Feti in Fetu. *Neonatal Intensive Care* 8:34-36,Sept/Oct. 1995.
12. Glick MC, Evans OB, Parks BR. Muscle Rigidity with Fentanyl Infusion in the Pediatric Patient. *Sou Med J* 89(11): 1119-1120, Nov. 1996.
13. Glick MC, Feldman S, Butler J. Norris MR. Serologic Status to Measles, Mumps, and Rubella in Extremely Low Birth Weight Infants <1000 Grams. *South Med J* 91(2): 159-160,1998.
14. Glick CG, Partnering with Families: End of Life Decision Making for Neonates. *Healthy Baby Update*. 12(1) Aug/Sept. 1998.

15. Patel DM, Rhodes PG, Graves GR, LeBlanc MH, Glick MC, Morrison J, Martin JN. Role of Postnatal Penicillin Prophylaxis in Prevention of Neonatal Group B Streptococcus Infection. *Acta Paediatr Scand* 88:874-9, 1999.
16. Kattwinkel J, Bloom BT, Glick C, Brown D, et al. High versus Low Threshold Surfactant Re-treatment for Neonatal RDS. *Pediatrics* 106(2) 282-288, 2000.
17. Glick C, LeBlanc MH. Resuscitation of the Newborn. Robert E. Rakel and Edward T. Bope edition. *Conn's Current Therapy*. 1065-69, 2001
18. Patel DM, LeBlanc MH, Glick MC, Graves GR, Rhodes PG, Joransen JA, Braden DS, Gaymes CH. The effect of Nitric Oxide on Oxygenation in Infants with Persistent Pulmonary Hypertension. *Southern Medical Journal* (submitted)
19. Glick MC. Surfactant in Neonatal Respiratory Distress Syndrome. *Health B Baby Update* 15(4), Aug. 2002.
20. Bloom, BT, Clark, RH, and Infasurf Survanta Clinical Trial Group. Comparison of Infasurd (Calfactant) and Survanta (Beractant) in the Prevention and Treatment of Respiratory Distress Syndrome. *Pediatrics*: 116 (2); 392-399, 2005.
21. Glick, Christina. Resuscitation of Infants Born at the Limit of Viability. *J of Perinatology*. (25); 623,2005.

#### CHAPTERS IN BOOKS:

1. Glick MC nee Puckett CG, Brown EG, Morrison JC, Sweet AY, et al. "Heart Disease in Pregnancy", *Fetal and Neonatal Effects of Maternal Disease*. St. Louis, Mosby Year Book, 1991, 214-223.
2. Glick MC nee Puckett CG. "Resuscitation of the Newborn." Robert E. Rakel, ed. *Conn's Current Therapy*. Houston, TX 1992:973-977.
3. Glick C, LeBlanc MH. "Resuscitation of the Newborn". Robert E. Rakel and Edward T. Bope (53<sup>rd</sup>) edition. *Conn's Current Therapy*. 2001:1065-69.
4. Botti J, Glick C. "Professional Competence: Cultural/Religious Efficacy and the Principles of Family Centered Care". Shah MA, Campbell D, Fullerton J, Glick, C. *Transcultural Aspects of Perinatal Health Care: A Resource Guide*". Academy of Pediatrics, 2004.

#### BOOKS:

1. Shah MA, Campbell D, Fullerton J, Glick C. " *Transcultural Aspects of Perinatal Health Care: A Resource Guide*". Academy of Pediatrics, 2004.

## ABSTRACTS:

1. Glick MC nee Puckett CG, Aversano R, Adcock EW, Carvajal HF: Effect of epithelial cells on urinary lactic dehydrogenase isoenzymes. *Clin Res*, 1984.
2. Glick MC nee Puckett CG, Cox MA, Hoskins SK, Fisher DJ: Prophylactic indomethacin for the prevention of patent ductus arteriosus. *Clin Res*, 1984.
3. Glick MC nee Puckett CG, Cox MA, Hoskins SK, Fisher DJ: Prophylactic indomethacin for the prevention of patent ductus arteriosus. *Pediatr Res* 19:358A, 1985.
4. Glick MC nee Puckett CG, Graves GR, Sabbatini P, Rhodes PG: Postnatal growth in infants with birth weights of 501 to 800 grams. *Clin Res* 35(1): 80A, 1987.
5. Glick MC nee Puckett CG, Graves GR, Sabbatini P Rhodes PG: Comparison of postnatal growth of premature infants of two birthweight subgroups (500-800 and 801-1000 grams). *Clin Res* 36(1): 75A, 1988.
6. Glick MC nee Puckett CG, Feldman S. Toxicity and Efficacy of Low Dose Amphotericin B (Amp B) for Systemic Neonatal Candidiasis. *Clin Res* 38(4): 926A, 1990.
7. Glick MC nee Puckett CG, Graves GR, Hess LW, Peavey MT. Perinatal Outcome Following Cordocentesis: Procedure Risk Assessment. *J Perinatol* XII: 91, 1992.
8. Glick MC, Puckett CG, Graves GR, Hess LW, Peavey MT. Fetal and Neonatal Outcome Following Cordocentesis. *Clin Res* 39(4): 882A, 1992.
9. Glick MC nee Puckett CG, Graves GR, Hess LW, Peavey MT. Risk of Cordocentesis for the Fetus and Neonate. *Pediatr Res* 31:218A, 1992.
10. Glick C, Butler J, Feldman S. Serologic status to measles, mumps and rubella in extremely premature infants. *Clin Res* 41(4): 735A, 1993.
11. Patel DM, Graves GR, Rhodes PG, LeBlanc MH, Glick MC. Transfer of very low birthweight infants to home hospital: potential follow-up problem. *Clin Res* 41(4): 736A, 1993.
12. Patel DM, Rhodes PG, LeBlanc MH, Graves GR, Glick MC, Martin JN, Morrison JC. A Prospective Randomized Trial of Penicillin Prophylaxis in Prevention of Group B Streptococcus Sepsis (GBS) in Neonates. *J Invest. Med.* 43 (Suppl 1): 72A, 1995. Presented at SSPR meeting in New Orleans, February 2, 1995.
13. Patel DM, Butler JM, Feldman S, Rhodes PG, LeBlanc MH, Graves GR, Glick MC. Hepatitis B Vaccine in very low birthweight infants. *J Invest. Med.* 43 (Suppl. 1):39A, 1995. Presented at SSPR meeting in New Orleans, February 2, 1995.

14. Patel DM, Rhodes PG, LeBlanc MH, Graves GR, Glick MC, Martin JN, Morrison, JC. A Two Year Update of Prospective Randomized Trial of Penicillin Prophylaxis in Prevention of Group B Streptococcus Sepsis (GBS) in Neonates. *J Invest. Med.* 44(1)45A, February 1996. Presented at SSPR meeting in New Orleans, February, 1996.
15. Patel DM, LeBlanc MH, Glick MC, Rhodes, PG, Graves GR, Joransen JA, Gaymes, CH. Use of Nitric Oxide. *Pediatric Research* 39:345A, 1996.
16. Glick MC, Feldman S, Butler J. Norris, MR. Serologic Status to Measles, Mumps, and Rubella in Extremely Low Birth Weight Infants <1000 Grams. *South Med J* 91(2): 159-160,1998.
17. Kattwinkel, and the INFASURF Study Group (Bloom BT, Delmore P, Glick MC, Brown D, Lopez S, Willett L.) High vs Low Threshold Surfactant Re-treatment for Neonatal RDS. *Pediatr Res* 43(4)179A, 1998. Presented at the Society for Pediatric Research, May 1998.
22. Yu CW, Bock GOH, Rhodes PG, Graves GR, LeBlanc, MH, Glick C, Ross E, Shenefelt RE. University of MS Medical Center, Jackson, MS. Presented at the 48<sup>th</sup> Annual Meeting of the American Society of Human Genetics, Denver, CO, October 27-31, 1998.
21. Glick MC, Smith S, NNP, Wingate T, RN. Orogastric Sterile Water for Prevention of Hypernatremic Dehydration in Extremely Low Birthweight Premature Infants. *J Invest Med* 49(1)148A, January 2001.
22. Glick MC, Smith S, NNP, Wingate T, RN. Orogastric Sterile Water for Prevention of Hypernatremic Dehydration in Extremely Low Birthweight Premature Infants. Presented at SSPR meeting in New Orleans, March 3, 2001.

#### LETTERS:

Glick MC nee Puckett CG. Aids and Homosexuality (letter). *J Miss State Med. Assoc.* 32(11): 414, 1991.

#### PRESENTATIONS:

##### To Scientific Meetings:

1. Glick MC nee Puckett CG, Aversano R, Adcock EW, Carvajal HF. Effect of epithelial cells on urinary lactic dehydrogenase isoenzymes. Abstract presented at the Southern Society for Pediatric Research, January 1985.
2. Glick MC nee Puckett CG, Cox MA, Hoskins SK, Fisher DJ. Prophylactic indomethacin for the prevention of patent ductus arteriosus. Presented at Southern Society for Pediatric Research, January 1985.

3. Glick MC nee Puckett CG, Cox MA, Hoskins SK, Fisher DJ. Prophylactic indomethacin for the prevention of patent ductus arteriosus. Presented at Society for Pediatric Research, May 1985.
4. Glick MC nee Puckett CG, Graves GR, Sabbatini P, Rhodes PG. Postnatal growth in infants with birth weights 501 to 800 grams. Abstract presented to Southern Society for Pediatric Research, January 1987.
5. Glick MC nee Puckett CG, Graves GR, Sabbatini P, Rhodes PG. Comparison of postnatal growth of premature infants of two birthweight subgroups (500-800 and 800-1000 grams). Abstract presented at the Southern Society for Pediatric Research, February 1988.
6. Glick MC nee Puckett CG, Feldman S. Toxicity and Efficacy of Low Dose Amphotericin B (Amp B) for Systemic Neonatal Candidiasis. Abstract presented at the Southern Society for Pediatric Research, January 30 - February 1, 1991.
7. Glick MC nee Puckett CG, Graves GR, Hess LW, Peavey MT. Perinatal Outcome Following Cordocentesis. Abstract presented at the National Perinatal Association, Boston, MA, November 1991.
8. Glick MC nee Puckett CG, Graves GR, Hess LW, Peavey MT. Risk of Cordocentesis for the Fetus and Neonate. Abstract presented to the Southern Society for Pediatric Research, New Orleans, LA, January 1992.
9. Glick MC nee Puckett CG, Graves GR, Hess LW, Peavey MT. Risk of Cordocentesis for the Fetus and Neonate. Presented at the APS and SPR meeting, Baltimore, MD, May 3-7, 1992.
10. Glick MC, Neonatal Pulmonary Monitoring. *Medical Specialties*, November 16, 1993.
11. Glick MC, Butler J, Feldman S. Serologic Status to Measles, Mumps, and Rubella in Extremely Low Birthweight Infants (VLBW). Presented at the Southern Society for Pediatric Research Meeting, New Orleans, LA, February 3-5, 1994.
12. Glick MC, Butler J, Feldman S. Serologic Status to Measles, Mumps, and Rubella in Extremely Low Birthweight Infants (ELB). Presented at the APS and SPR meeting, Seattle, Washington, May 2-5, 1994.
13. Yu CW, Bock GOH, Rhodes PG, Graves GR, LeBlanc, MH, Glick C, Ross E, Shenefelt RE. University of MS Medical Center, Jackson, MS. Clinical and Cytogenetic Studies in Four Cases of Trisomy 22. Presented at the 48<sup>th</sup> Annual Meeting of the American Society of Human Genetics, Denver, Co, October 27-31, 1998.
14. Glick MC, Smith S, NNP, Wingate T, RN. Orogastic Sterile Water for Prevention of Hypernatremic Dehydration in Extremely Low Birthweight Premature Infants. Presented at the Southern Society for Pediatric Research Meeting, New Orleans, LA, March 2-3, 2001.

15. Glick, C. Transcultural Education and Competency: A Description of Training for Perinatal Health Care Professionals. Presented at AAP Perinatal Practice, Scottsdale, AZ, April 3-6, 2003.

#### **RESEARCH and SERVICE GRANTS:**

1. Serologic Status to Measles, Mumps, and Rubella in Pre-Term Infants in the Neonatal Intensive Care Unit. Christina Glick, Principal Investigator. Approved January 1992. Budgeted amount \$2595.
2. Community Access to Child Health (CATCH) Visiting Professorship in Community Pediatrics, American Academy of Pediatrics. Funded through the AAP Partnership for Children. Joe Donaldson and Gail Megason, participants. February 1997, \$4500.00
3. Infasurf Protocol. ONY, Inc., Amherst, NY. Beginning date June, 1993-January 3, 1998. Approximately \$200,000.
4. Starting at the Beginning: Professional and Public Education Project date January 1998-June, 1999. Amount \$14,400.00.
5. Alternate Infasurf Protocol. ONY, Inc. Amherst, NY. Alternate Surfactant Therapy for Surfactant Failure: A Preliminary Study. Beginning date January 13, 1998-July, 1999. \$100,000.00.
6. Neonatal Candidiasis Study inVLBW Infants. Neonatal Candidiasis Study Group. Sandor Feldman, MD and Christina Glick, MD, participants. Beginning Date, January 1999. Amount \$1,000.00.
7. Adolescent and Child Tobacco (ACT) Training Center for research and Treatment. Funding Partnership for a Healthy Mississippi. Amount \$4,000,550.00. Karen Crews, DMD, Cris Glick, MD, Thomas Payne, Ph.D., Patrick Smith, Ph.D., Susan Buttross, MD, Deborah Shure, MD, Geary Alford, Ph.D. Approved April 1999.  
Continuing Education Coordinator  
Co-Investigator
8. Maternal-child health information and education web site. March of Dimes/American Academy of Pediatrics. Beginning date May 1, 2001, ending date April 30, 2002. Amount \$6,150.00
9. Transcultural Training for Perinatal Health Care Providers. Johnson and Johnson Pediatric Institute. Beginning Spring 2003 through 2006. Amount \$95,000.
10. Hurricane Katrina Recovery: Mental Health Services for Children and Adolescents in Mississippi. McCormick Tribune Foundation, Chicago, IL. 2005. Amount \$170,000.

11. Hurricane Katrina Recovery: Mental Health Services for Children and Adolescents in Mississippi. Doris Duke Foundation, 2005. Amount \$171,000.

#### INVITED PRESENTATIONS:

1. "Newborn Emergencies." Family Practice Update. Ramada Renaissance, Jackson, MS, May 9, 1990.
2. "Fluid Electrolytes and Nutrition in the Neonate." Neonatal Intensive Care Nursing Review and Certification Preparation. School of Nursing, Jackson, MS, October 3, 1990.
3. "Cardiovascular Problems in the Neonate." Neonatal Intensive Care Nursing Review and Certification Preparation. School of Nursing, Jackson, MS, October 3, 1990.
4. "Perinatal Substance Abuse." Caring for Medically Fragile Children. Sheraton North, Jackson, MS, January 15, 1991.
5. "Drugs in Babies." A New Age in Pediatrics. American Academy of Pediatrics Meeting. Ramada Renaissance, Jackson, MS, October 10, 1991.
6. "Women's Issues." Residents' Career Day. Ramada Renaissance, Jackson, MS, October 16, 1991.
7. Neonatal Intensive Care Nursing Review. Area-wide (MS, AL, LA, TN). School of Nursing, Jackson, MS, February 18-19, 1993.
8. "Infant Mortality/Birth Defects and Hearing Registry. Legislative Breakfast, Senate Chamber MS State Capitol, February 25, 1997.
9. Where No One Has Gone Before: The Ethics of Modern Medical Advances. Physicians meeting, Hilton, Jackson, MS. November 15, 1999.
10. Mission-Building: "Defining the purpose and value of perinatal associations". National Perinatal Association Multi State Conference: Crossing Boundaries and Disciplines to Improve Perinatal Care. Marriott Hotel Conference Center, Albany, NY, June 8, 2000.
11. "Transcultural Aspects of Perinatal Care." National Perinatal Association Multi State Conference: Crossing Boundaries and Disciplines to Improve Perinatal Care. Marriott Hotel Conference Center, Albany, NY, June 9, 2000.
12. Cardiac Dysfunction. Nurses from Mississippi & Surrounding States. UMC Conference Center, Jackson Medical Mall, Jackson, MS, July 14, 2000.

13. "Born to Die? Partnering with Parents of Imperiled Newborns". Second Annual Medical Ethics Symposium. A 2001 Ethics Odyssey: Across the Life Span. Health Related Professions Building, University of MS Medical Center, Jackson, MS, March 24, 2001.
14. "Ethics of Pain Management: Physical, Emotional, Social, and Spiritual: From Birth to End-of-Life". Second Annual Medical Ethics Symposium. A 2001 Ethics Odyssey: Across the Life Span. Health Related Professions Building, University of MS Medical Center, Jackson, MS, March 24, 2001.
15. Using Culturally Appropriate Care to Improve Birth Outcome. National Perinatal Spring 2001 Conference. Radisson Old Town, Alexandria, VA, April 6, 2001.  
Keynote Speaker  
Moderator for Panel Discussion
16. Long Term Outcome for Individuals with Complex Congenital Heart Disease; Fetal Risk with Maternal Congenital Heart Disease: Pathology and Statistics. Newborn Intensive Care Unit Course. Norman C. Nelson Student Union Convention Center, University Medical Center, Jackson, MS, May 1-2, 2001.
17. "Feeding Strategies: Do They Make A Difference?" The Mississippi Neonatal Lecture Series. University of MS Medical Center Winfred L. Wiser Hospital for Women and Infants, Room W-019, Jackson, MS, June 20, 2001.
18. Grand Rounds, "Transcultural Competence in Perinatal Health Care". University of MS Medical Center, Jackson, MS, September 6, 2001.
23. Academic Medicine and Managed Care Forum, National Perinatal Association. "Providing Culturally Competent Health Care Services". Arlington, VA, November 12, 2001.
24. Neonatology 2002: Care of the Newborn, Thirteenth Annual Neonatology Update. "Using Culturally Appropriate Care to Improve Birth Outcomes". Wichita, Kansas, February 8, 2002.
25. American Psychological Association - Women's Health. "Building Excellence in Practice: Transcultural Aspects of Health Care". Washington, DC, February 21, 2002.
26. Louisiana Perinatal/MCH Foundation Annual Educational Meeting, Health in the Delta Region: Improving Maternal-Child Outcomes. "Transcultural Aspects of Care". Baton Rouge, LA, March 21-22, 2002.
27. 32<sup>nd</sup> Annual Regional GPO Conference. "Transcultural Aspects of Perinatal Health Care: A Resource Guide". Des Moines, Iowa, April 8-9, 2002.
28. 47<sup>th</sup> Annual Meeting of the American College of Nurse-Midwives. "Transcultural Aspects of Perinatal Health Care". Atlanta, GA, May 26, 2002.

29. Association of Women's Health, Obstetric and Neonatal Nurses Convention. "Transcultural Aspects of Perinatal Health Care". Boston, MA, June 24, 2002.
30. National Health Mothers Healthy Babies Coalition's Biennial Partnership Conference 2002. "Transcultural Aspects of Perinatal Health Care". Clearwater Beach, Florida, July 22-24, 2002.
31. Patterns of Transcultural Health Care: A Maternal and Child Health Quilt Conference. "Transcultural Aspects of Perinatal Health Care". Omaha, Nebraska, August 21-24, 2002.
30. Perinatal Systems and Women's Health "Healthy Start" Program Grantee Meeting: "Transcultural Aspects of Perinatal Care", Baltimore, MD, Oct 6-9, 2002.
31. Advancing the Practice of Family-Centered Maternity and Newborn Intensive Care: Innovative Partnerships with Women, Infants and Families. Faculty for small group. "Transcultural Aspects of Perinatal Care." "Discharge Planning for the High Risk Infant", Greenville, SC. October 17 -21, 2002
32. Utah Perinatal Association, Association of Women's Health, Obstetric and Neonatal Nurses. "Transcultural Aspects of Perinatal Care", and "Feeding Strategies for Premature Infants." Salt Lake City, UT, October 24 and 25, 2002.
33. National Perinatal Association Annual Clinical Conference: "Bridges to Perinatal Health: Linking Providers, Families and CommunitiesWorkshop: "Transcultural Education: A Journey to Competence" ." Dec 5-7, 2002.
34. The Physical and Developmental Environment of the High-Risk Infant: Based Science for Establishing an Appropriate NICU Environment. Evidence "Cultural Competence: A Lifelong Journey." Jan 29-Feb 1, 2003.
35. Obstetrical Grand Rounds, Albert Einstein University, Philadelphia, PA, March 12, 2003. "Transcultural Aspects of Perinatal Care."
36. Southern New Jersey Perinatal Cooperative Training Seminar. March 13, 2003. "Transcultural Training: Building Successful Relationships."
37. 23<sup>rd</sup> Annual Pediatric and Neonatal Conference, April 3, 2003, Knoxville, TN. "Child and Family Centered Care" and "Cultural Competence".
38. American Academy of Pediatrics: Advances in Perinatal Practice, Scottsdale, AZ. "Transcultural Education and Competency: A Description Training for Perinatal Health Care Professionals". April 4-6, 2003.
39. NAPSW Annual Conference, Orlando FL: Keynote Address "Collaboration: Smoothing the Waters for Compassionate Care." April 30, 2003.

40. Partners Sharing Solutions, Kissimmee, FL. "Transcultural Proficiency in Perinatal Health." May 14, 15, 2003.
41. California Diabetes and Pregnancy Program, "Sweet Success", Fresno, CA. "Transcultural Education: Journey to Cultural Proficiency." June 19 and 20, 2003.
42. NPA Annual Conference, Bethesda, MD, "The ABC's of Improving Maternal Child Health, October 23-25, 2003.
  - A. Pre-Conference Workshop: "Building Blocks for Transcultural Education: NPA's Journey to Cultural Competence".
  - B. Plenary Presentation: "Perinatal Health in the United States- Supporting Providers and Ensuring System Capacity".
  - C. Plenary Presentation: "Life in and After the NICU - A Panel Discussion".
43. National Organization on Adolescent Pregnancy, Parenting and Prevention, Inc Annual Clinical Conference; "Blueprint for Success: Emerging Programs, Themes and Policies", November 10-13, 2003. "Transcultural Training for Perinatal Providers"
44. Department of Human Resources, Family Health Branch, Office of Women's Health Services in coordination with Emory University and Mercer College: Transcultural Education: A Journey to Cultural Proficiency. Atlanta, Georgia. January 20, 2004 and Macon, GA, January 21, 2004.
45. National Perinatal Association and Tennessee Perinatal Association Joint Spring Conference: Transcultural Education: A Journey to Cultural Proficiency. Memphis, Tennessee. April 14, 2004.
46. 10<sup>th</sup> Annual Rural Minority and Multicultural Health Conference: "Transcultural Proficiency for Perinatal Health Care Providers". San Diego, CA. May 26, 2004.
47. Grossmont Health Care Center Grand Rounds: Transcultural Proficiency for Perinatal Health Care Providers. San Diego, CA, May 27, 2004.
48. Sharp Mary Birch Hospital for Women Grand Rounds: Transcultural Proficiency for Perinatal Health Care Providers. May 27, 2004.
49. Le Bonheur Pediatric Grand Rounds: Transcultural Proficiency for Perinatal Health Care Providers. Memphis, TN, July 14, 2004.
50. High Risk Neonatal Update: Developmental Care: The NICU Geriatric Patient. Jackson, MS, July 16, 2004.

51. Newborn Associates Journal Club: Transcultural Proficiency for the Perinatal Health Care Provider. Jackson, MS, July 20, 2004.
52. NPA Annual Conference: Humanity, Technology, and Perinatology: Good Ethics Based on Good Information. October 15-17, 2004.  
  
Pre-conference Workshop, "Building Blocks for transcultural Education: NPA's Journey to Cultural Proficiency"  
  
Plenary Panel: Medical Liability - Mock Trial of Case of Mark Miller vs. Columbia HCA.
53. Mississippi Society for Social Work Leadership in Health Care 33rd Annual Conference: Learning More to Give More. Plenary Session: Transcultural Education: A Journey to Proficiency. Jackson, MS. November 4, 2004.
54. March of Dimes Mississippi Prematurity Prevention Conference 1<sup>st</sup> Annual Conference. "Transcultural Aspects of Perinatal Care." Gulfport, MS. November 19, 2004.
55. Mississippi Chapter of the AAP and University of Mississippi Medical Center, Department of Pediatrics Annual Spring Meeting. "Transcultural Proficiency for Perinatal Health Care Providers." Hattiesburg, MS. March 18, 2005.
56. National Perinatal Association Annual Conference: Preconference Workshop "Transcultural Proficiency Training". Chicago, IL. October 27, 2005.
57. March of Dimes Prevention of Prematurity Conference: Keynote Speaker "Prematurity; the Mississippi Story." January 27, 2006.
58. Northeast New York Regional Perinatal Forum: "Transcultural Aspects of Perinatal Care", Albany New York, March 14, 2006.
59. Life Inside and Out: Perinatal and Neonatal Care Symposium, University of TN. "Family Centered Care" and "Transcultural Aspects of Perinatal Care". Asheville, NC, May 26, 2006.
60. Building Partnerships for Perinatal Care, 10<sup>th</sup> Annual Perinatal Outreach Education Conference. Plenary: "Resolving the Health Disparity Dilemma", Chicago, IL, August 4, 2006.
61. National Perinatal Association Annual Conference: Preconference Workshop "Transcultural Proficiency Training". Washington DC September 28, 2006.
62. 46<sup>th</sup> Annual Maternal & Perinatal Health Conference: "Interpregnancy Intervals and Prematurity Prevention". Plymouth, MI, March 15, 2007.

63. LeBonheur Pediatric Grand Rounds: "Breastfeeding: Lessons Learned from Katrina". Memphis, TN, March 21, 2007.
64. Leap for Memphis: "Preserving Breastfeeding During a Disaster". Memphis, TN, March 21, 2007.
65. Bronx Breastfeeding Committee 3rd Annual Breastfeeding Conference: "Breastfeeding and Disaster: Lessons from Katrina". Bronx, NY. September 11, 2007.
66. Academy of Pediatrics Section on Breastfeeding National Conference and Exhibition: "Breast feeding and Disaster Preparedness". San Francisco, CA. October 29, 2007
67. Infant Feeding During Disasters: Second National Conference of State Breastfeeding Coalitions (NCSBC) "Strength Through Diversity: Advancing Breastfeeding Advocacy. Arlington, VA. January 27, 2008.
68. Breastfeeding: The Gold Standard: "Mother's Milk and Medications". Jackson, MS. April 16, 2008.
69. Breastfeeding Update for Pediatricians: Mississippi Chapter of the American Academy of Pediatrics and UMC Department of Pediatrics Joint Spring Meeting, Hilton Hotel, Jackson, MS. May 1, 2008.
70. "Transcultural Proficiency: Process to Reduce Health Outcome Disparities". Ethical Issues in Health Care: *The Nancy O'Neal Tatum Series*. UMC, Jackson, MS. May 13, 2008.
71. "Transcultural Education: A Journey to Cultural Proficiency" Presented by the Regional Perinatal Center at Albany Medical Center. Schenectady, NY. June 17 and 18, 2008.
72. "Breast Feeding in Emergencies". International Lactation Consultant Association Annual Conference, Las Vegas, Nevada, July 27, 2008.
73. "Infant Nutrition During Disasters". American Academy of Pediatrics National Conference and Exhibition, Boston, MA, October 13, 2008.

January 2009