

# Women's Reproduction: Issues and Inequalities in the 21<sup>st</sup> century

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While technological advances have enhanced some U.S. women's reproductive experiences, low-income and poor women as well as women of color experience significant disadvantages in an array of reproductive issues including access to services, prenatal care, and childbirth outcomes.<sup>i</sup> In addition to exploring some of these inequalities, this fact sheet highlights trends in birth and death and associated issues of access to reproductive services and insurance coverage, infertility, and midwifery. Policy implications and further information for activists are included.

## Overall Trends in Pregnancy and Childbirth in the United States

- ***Women continue to have unintended pregnancies.***

About half of the 103 million women in the U.S. are of reproductive age.<sup>ii</sup> Annually, about 6 million of these will become pregnant, half with pregnancies unplanned.<sup>iii</sup> About 1 in 5 of all pregnancies end in abortion.<sup>iv</sup> Poor women have an unintended pregnancy rate 2X the national average.<sup>v</sup>

- ***Women are postponing childbearing. Births to older women increasing.***

In 2001, the median age for a woman's first birth was 24.8 years.<sup>vi</sup> Women ages 20's-early 30's are most likely to give birth. Teen births declined in the 1990's while births to women >35 rose.<sup>vii</sup> Poor women are more likely to give birth at an earlier age than more affluent women.<sup>viii</sup>

- ***Although teen births are decreasing, U.S. teens have far more pregnancies than teens in other industrialized countries. Out of 45 industrialized countries, a 2000 study illustrates that the U.S. ranks at the very bottom (#44) for its very high adolescent pregnancy rate.***<sup>ix</sup>

- ***Assisted Reproductive Technology (ART) has made childbearing increasingly possible for women experiencing infertility who can afford the treatment.***

An estimated 8-12 % of all women are infertile.<sup>x</sup> While since 1985, 170,000 babies have been conceived with the aid of ART,<sup>xi</sup> for most women, fertility "treatments" often tend to be a lower tech. mix of help-seeking advice on how to get pregnant, avoid miscarriage, and diagnostic testing.<sup>xii</sup>

- ***Most women now receive some prenatal care and have a physician-attended hospital birth.***

Approximately 4 million live births occur annually in the U.S.<sup>xiii</sup> 10,000 women give birth daily.<sup>xiv</sup> 99 % of these births occur in the hospital,<sup>xv</sup> a marked contrast to a century ago when nearly every birth occurred at home.<sup>xvi</sup> However, these numbers fail to reveal disparities between groups of women. For instance, minority women receive less prenatal care. While 83.4% of all women received first trimester prenatal care, only 69.3% of Native American women received this care.

- ***Medical monitoring and technology increasingly accompany labor and delivery.***

In 2001, 84.8% of all live births were monitored by electronic fetal monitoring (EFM), 67% by ultrasound; 20% of labors were induced.<sup>xvii</sup> Black women are less likely to receive technologies such as amniocentesis, ultrasound, and drug intervention to stop premature labor.<sup>xviii</sup>

- ***Cesarean rates continue to increase. Nearly a quarter of births are delivered c-section.***<sup>xix</sup>

The U.S. has the world's highest c-section rate, at 24.4% of all births.<sup>xx</sup> Due to risks to mother/infant and healthcare costs, the World Health Organization indicates rates should instead be 5-15%.<sup>xxi</sup>

- ***Multiple births have become increasingly common in the past twenty years.***

Since 1980, triplet + births increased 400%. In 2001, 30.1 twins were born for every 1,000 births.<sup>xxii</sup>

- ***Women continue to die preventable deaths from complications of pregnancy.***

While women experience similar birthing complications as women in the early 1900's they are less likely to die from them. In 1900, 900 women died for every 100,000 live births<sup>xxiii</sup>; today that number, (with significant variation between racial groups) is 8.2.<sup>xxiv</sup> However, the risk of dying has remained the same for the past 2 decades<sup>xxv</sup> -each day 2-3 women die from pregnancy complications.<sup>xxvi</sup>

- ***The U. S. ranks poorly internationally for its infant and maternal mortality ranking # 16 among industrialized nations for maternal mortality, #28 for infant mortality.***<sup>xxvii</sup>

- ***Women of color and poor women are disproportionately disadvantaged in childbirth outcomes.***

Because the U.S. does not keep detailed information about income of mothers, it is difficult to illustrate class inequalities.<sup>xxviii</sup> Racial inequalities are illustrated in the table below.

**Table 1: Comparison of U.S. Childbirth Outcomes By Race**

	White	Black	Hispanic	American Indian/ Alaska native	Asian/Pacific Islander
Fertility rates ( <i>per 1,000 women aged 15-44</i> )	57.6	71.6	107.6	70.8	69.4
Abortion rate ( <i>per 1,000 women aged 15-44</i> )	13	49	33	+	31
Teen birth rates ( <i>per 1,000 women aged 15-19</i> )	30	75.6	92.5	66.0	20.4
Maternal Mortality rate ( <i>per 100,000 live births</i> )	6.2	20.1	9.0	*	*
Infant Mortality rate ( <i>per 1,000 live births annual average 1998-2000</i> )	5.8	13.9	5.7	9.0	5.1
Rate of Preterm-births ( <i>&lt; 37 weeks</i> )	8.98	16.01	10.49	+	+
Percentage of births to unmarried mothers	22.5%	68.4%	42.5%	+	+
Percentage women with late or no prenatal care	3.3%	6.7%	6.3%	8.6%	3.3%
Infants with very low birthrate ( <i>annual average 1998-2000</i> )	1.15%	3.13%	1.14%	1.22%	1.07%

Sources: Martin, et al. 2002 National Vital Statistics Report V. 51; CDC Health United States 2002 ; Jones, et.al 2002."Patterns in the Socioeconomic Characteristics of Women Obtaining Abortions in 2000-2001." *Perspectives on Sexual and Reproductive Health*. 34(5): 226-235.

+Data not available in these reports.

\*Data not available in these reports. In raw numbers in 2002, maternal mortality was: White (240), Black (137), American Indian/Alaska Native (6), Asian/Pacific Islander (13), Hispanic (81), White non-Hispanic (160).

Note: Childbirth outcomes can vary widely within Hispanic and Asian/Pacific Islander groups. I.e., Puerto Rican infants have an 8.2 mortality rate compared to a 5.6 for the overall Hispanic group; Asian/Pacific Islander Hawaiian women have a 9.2 infant mortality rate compared to a 3.5 rate for Chinese infants.

### **Insurance Coverage and Access to Reproductive Care**

- ***Almost 1 in 5 women ages 18-44 has no health insurance.***

Women of color are more likely to be uninsured. In 2000, almost 80% of White women were covered by private insurance; less than half of African American and Hispanic women were covered.<sup>xxxix</sup> Hispanic women, the group with the highest fertility rate, are least likely to have health insurance.<sup>xxx</sup> African American and Hispanic women are more likely to be covered by Medicaid; White women are more likely to be covered by private insurance.

- ***Having insurance does not ensure adequate reproductive care nor protection from financial burden resulting from this care.***

In 1994, nearly 50 % of insurance plans did not cover any contraceptive method.<sup>xxxi</sup> The annual costs of contraceptives are prohibitive for poor women (annual estimates: \$180 for Depo-Provera; Pill \$360; Norplant \$450).<sup>xxxii</sup> Medicaid funds often fail to cover many procedures including abortions,<sup>xxxiii</sup> infertility treatments,<sup>xxxiv</sup> and some prenatal tests.<sup>xxxv</sup> And, women with private insurance plans may have difficulty affording co-pays. For instance, pregnant women are faced with increasingly expensive delivery costs. (One study found the following averages: birth center vaginal deliveries \$3,241, hospital deliveries \$6,378, hospital c-sections \$10,638<sup>xxxvi</sup>).

- ***Women continue to lack information about and access to all forms of reproductive care.***

Many teens lack information about and access to birth control.<sup>xxxvii</sup> While Medicaid coverage has declined in recent years, funding for free or low cost birth control has not increased.<sup>xxxviii</sup> 87% of all counties in the U.S. have no abortion provider.<sup>xxxix</sup> While most states have fertility clinics, women of color, poor and uninsured women, lesbians, and women with disabilities are less likely to have access to fertility services.<sup>xl</sup> At least 50% of women who die from pregnancy complications die preventable deaths due to lack of access to care.<sup>xli</sup>

### **Access to Infertility Services**

- ***Infertility services are not equally available to all women.***

The expense of high tech infertility services is prohibitive for many women. The average cost of *one* In-vitro cycle (IVF), which may need to be repeated to be successful, is \$7,800.<sup>xliii</sup> Medicaid and most private insurance companies do not cover ART. In fact, only 3 states require private insurance companies to completely cover IVF; 37 states require no coverage.<sup>xliiii</sup> To contain costs, uninsured women are likely to have multiple embryo transfers, often resulting in higher rates of multiple births, and carrying health and financial costs for both mother and fetus.<sup>xliiv</sup>

## **Midwifery and Alternative Birthing Methods**

- ***Midwife-attended births are less expensive and have positive outcomes. Though frequently utilized in Europe, Australia, New Zealand, and Japan, in the U.S. a small, but growing percentage of women, utilize these services.***<sup>xlv</sup>

A joint report by Pew /UCSF called the midwifery model an “essential element of comprehensive care for women.” However, in 2000, midwives (almost all certified nurse midwives) attended only 8% of all U.S. births.<sup>xlvi</sup> Hispanic women were more likely to have midwife attended hospital births (9.3%) than White (6.8%) or African American women (7.3%).<sup>xlvii</sup> A 1998 NCHS study indicates midwife-attended births have lower risks of infant death and lower chance of low birthweight births.<sup>xlviii</sup>

## **Activist Information and Policy Implications**

- ***Raise awareness of inequality: the current U.S. system unequally distributes reproductive medical advances, allowing some access to advanced technological care while others lack basic care. All women must receive quality care for a range of services.***

Federal policies such as abstinence-only education<sup>xlix</sup>, shifting federal funds, and lack of universal health care directly impact women’s knowledge of alternatives, access, and outcomes. Reproductive health requires access to a wide range of quality, affordable care including contraceptive and emergency contraception, abortion services, and care before, during, and after pregnancy. Realize poor women are more likely to have access to contraceptives but less likely to have access to infertility treatments. Middle class women are less likely to have contraception coverage and more likely to have infertility coverage.<sup>l</sup> Advocate for insurance coverage/equal access to all forms of reproductive care for all women.

- ***Address racism in health care delivery: providers must provide culturally competent care and women of color must be represented in the profession.***

While women of color are more likely to be economically disadvantaged, putting them at higher risk for poorer reproductive outcomes, they also experience racism in the health care system regardless of their socioeconomic level. For instance, compared to White women, the risk of maternal death has remained, for the past four decades, almost 4X higher for African American women regardless of insurance or class status.<sup>li</sup> Medical providers must offer culturally competent services to diverse populations. Importantly, women of color remain underrepresented in health professions, for instance Hispanic women represent less than 2% of *all* health professions acquiring advanced degrees.<sup>lii</sup> Institutional barriers must be removed to allow women of color to enter and remain in health care professions.

- ***Recognize that medical technology saves lives, but it can also disempower women, endanger their health, and bring them under institutional scrutiny.***

U.S. health care medicalizes the natural process of pregnancy<sup>liii</sup> and medical procedures can put women at risk. Unnecessary technological procedures occur in all groups.<sup>liv</sup> Procedures such as electronic and internal fetal monitoring and ultrasound are associated with increased cesarean rates, and internal monitoring with risk of infection.<sup>lv</sup> ART, with its multiple embryo transfer, is associated with significantly increased rates of multiple births (35% of ART births are multiples compared with 3% in the general population). Multiple births carry serious risks for women and children including increases in pre-term delivery and low birth weight.<sup>lvi</sup> Be aware that medicalized care brings poor and minority populations under institutional scrutiny in a system that has historically mistreated them.

- ***Support and supply alternatives to the medical model.***

Women must be able to opt for medicalized solutions, to refuse them, or to integrate approaches. Midwives can provide individualized, safe, effective, and less costly care with improved outcomes and should be recognized as independent practitioners capable of such.<sup>lvii</sup> Urge your health care system to integrate midwifery, to equitably reimburse midwife services, and to encourage collaboration between physician and midwife to provide continuous care to women.

## **Resources For Further Information**

### **Books/articles/web-based articles**

Boston Women’s Health Book Collective. 1998. *Our Bodies, Ourselves for the New Century*. New York: Simon and Schuster.

Devries, Raymond, Cecilia Benoit, Edwin R. Van Teijlingen and Sirpa Wrede, eds. 2001. *Birth By Design. Pregnancy, Maternity Care, and Midwifery in North America and Europe*. New York: Routledge.

Finger, Anne. 1990. *Past Due: A Story of Disability Pregnancy and Birth*. USA: Seal Press.

Gordon, Linda. 1990. *Women's Body, Women's Rights*. New York: Penguin.

Medline articles. <http://www.nlm.nih.gov/medlineplus/reproductivehealthgeneral.html>

Rich, Adrienne. 1995. *Of Woman Born: Motherhood as Experience and Institution*. New York: Norton.

Roberts, Dorothy. 1999. *Killing the Black Body: Race, Reproduction, and the Meaning of Liberty*. New York: Pantheon.

Rothman, Barbara Katz. 2000. *Recreating Motherhood: Ideology and Technology in a Patriarchal Society*. New York: Norton.

Weisman, Carol. 1998. *Women's Health Care: Activist Traditions and Institutional Change*. Baltimore: Johns Hopkins's University Press.

Women of Color Web. <http://www.hsph.harvard.edu/grhf/WoC/reproductive/reproductive.html>

## Videos

*Taking Our Bodies Back: The Women's Health Movement*. (Documentary includes reproductive health).

*The Fragile Promise of Choice: Abortion in the United States Today*. (Abortion documentary).

*On the Eighth Day*. (Critical examination of reproductive technology).

*Healthcaring*. (Women's relationship to gynecology/healthcare, by Women Make Movies).

*Born in the USA*. [http://www.itvs.org/born\\_in\\_theusa/](http://www.itvs.org/born_in_theusa/) (Hospital, birth clinic, and hope birth)

## Websites

### Research and policy organizations

The Alan Guttmacher Institute

<http://www.agi-usa.org>

CDC (Centers for Disease Control)

[http://www.cdc.gov/nccdphp/drh/wh\\_women.htm](http://www.cdc.gov/nccdphp/drh/wh_women.htm)

Center for Policy Alternatives

<http://www.kaisernetwork.org>

Women's Research and Education Institute

<http://www.wrei.org>

National Center Education in Maternal/Child Health

<http://www.ncemch.org>

### Advocacy organizations

Feminist Majority Foundation

<http://www.feminist.org/rrights/reprodhealthlinks.html>

International Cesarean Awareness Network

<http://www.ican-online.org>

National Women's Health Alliance

<http://nwhalliance.org>

National Black Women's Health Project

<http://www.blackwomenshealth.org>

National Asian Woman's Health Organization

<http://www.nawho.org>

National Latina Health Organization

<http://www.latinahealth.org>

### National Medical Associations/Non-profit medical organizations

American College of Obstetricians and Gynecologists

<http://www.acog.org>

American College of Nurse Midwives

<http://www.midwife.org>

American Society for Reproductive Medicine

<http://www.asrm.org>

Midwives' Alliance of North America

<http://www.mana.org>

National Association of Childbearing Centers

<http://www.birthcenters.org>

### For those without Internet Access

National Women's Health Information Center <http://www.4woman.gov>. 1-800-994WOMAN [Culturally appropriate information about specific health issues].

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<sup>i</sup>Nelson, Margaret K. and Rebecca Popenoe. 2001. "Looking Within: Race, Class, and Birth." In Devries, Raymond, Cecilia Benoit, Edwin R. Van Teijlingen and Sirpa Wrede, eds. *Birth By Design. Pregnancy, Maternity Care, and Midwifery in North America and Europe*. New York: Routledge.

<sup>ii</sup> Henry J. Kaiser Family Foundation. 2002. "A Profile of Women's Health in the United States."

<sup>iii</sup> CDC. 1999. "Achievements in Public Health, 1900-1999. Healthier Mothers and Babies." *MMWR*. 48(38): Pp. 849-858.

- <sup>iv</sup> Finer, Lawrence B. and Stanley K. Henshaw. 2003. "Abortion Incidence and Services in the United States in 2000." *Perspectives on Sexual and Reproductive Health*. January/February. 35 (1): Pp. 6-15.
- <sup>v</sup> National Institute of Child Health and Development (NICHD) 2000. "Health Disparities: Bridging the Gap." <http://www.nichd.nih.gov>.
- <sup>vi</sup> Martin Joyce, Hamilton Brady, Ventura, Stephanie, et al. 2002. Births: Final Data for 2001. National Vital Statistics Reports; V. 51(2). National Center for Health Statistics. [http://www.cdc.gov/nchs/data/nvsr/nvsr50/nvsr50\\_12.pdf](http://www.cdc.gov/nchs/data/nvsr/nvsr50/nvsr50_12.pdf).
- <sup>vii</sup> U.S. Department of Health and Human Services, Health Resources and Services Administration, Maternal and Child Health Bureau. "Women's Health USA 2002." Rockville, Maryland: U.S. Department of Health and Human Services.
- <sup>viii</sup> Nelson, 2001, op. cit. (See reference i).
- <sup>ix</sup> Singh, Susheela and Jacqueline E. Darroch. 2000. "Adolescent Pregnancy and Childbearing: Levels and Trends in Developed Countries." *Family Planning Perspectives*. 32(1): Pp. 14-23.
- <sup>x</sup> "Fertility, Family Planning, and Women's Health: New Data From the 1995 National Survey of Family Growth." U.S. Dept. of Health and Human Services.
- <sup>xi</sup> "Highlights from ASRM 2002." <http://www.asrm.org/Media/Press/170000babies.html>.
- <sup>xii</sup> Stephen, Elizabeth Hervy and Chandra Anjani. "Use of Infertility Services in the United States." *Family Planning Perspectives*. 32(3): Pp. 132-136.
- <sup>xiii</sup> Stephen, Elizabeth Hervy, et al. 2002 op.cit. (See reference xii).
- <sup>xiv</sup> CDC 2002. "Safe Motherhood: Promoting Health for Women Before, During, and After Pregnancy." <http://www.cdc.gov>
- <sup>xv</sup> Martin Joyce, et. al. 2002. op. cit. (See reference vi).
- <sup>xvi</sup> Devries, Raymond, Cecilia Benoit, Edwin R. Van Teijlingen and Sirpa Wrede, eds. 2001. *Birth By Design. Pregnancy, Maternity Care, and Midwifery in North America and Europe*. New York: Routledge.
- <sup>xvii</sup> Martin Joyce, et. al. 2002. op. cit. (See reference xvii).
- <sup>xviii</sup> Brett, K.M, Schoendorf, K.S. and J.L Kiely. 1994. "Differences Between Black and White Women in the Use of Prenatal Care Technologies." *American Journal of Obstetrics and Gynecology*. 170: Pp. 41-46.
- <sup>xix</sup> Martin Joyce, et al 2002. op. cit. (See reference xvii).
- <sup>xx</sup> Benderly, Beryl Lief. 1997. *In Her Own Right: The Institute of Medicine's Guide to Women's Health Issues*. Washington Academy Press.
- <sup>xxi</sup> Maine, Deborah. 2001. "How Do Socioeconomic Factors Affect Disparities in Maternal Mortality?" *JAMWA* Fall. V 56 (4): Pp. 189-191.
- <sup>xxii</sup> Martin Joyce, et al 2002. op. cit. (See reference xvii).
- <sup>xxiii</sup> Callaghan, William and Cynthia J. Berg. 2002. Maternal Mortality Surveillance in the United States: Moving Into the Twenty-First Century." *JAMWA* 57 (2): Pp. 131-134.
- <sup>xxiv</sup> CDC "Safe Motherhood: Promoting Health for Women Before, During, and After Pregnancy." 2002.
- <sup>xxv</sup> Berg, Cynthia J. Bruce, F. Carol, Callaghan, William M. 2002. "From Mortality to Morbidity: The Challenge of the Twenty-First Century" *JAMWA*. Summer V. 57 (3). Pp. 173-174.
- <sup>xxvi</sup> Berg, et.al. Op cit. (See reference xxv).
- <sup>xxvii</sup> Pastor, PN, Makuc DM, Reuben C, Xia H. 2002. *Chartbook on Trends in the Health of Americans. Health, United States*. Hyattsville, Maryland. National Center for Health Statistics.
- <sup>xxviii</sup> Nelson, 2001, op. cit. (See reference i).
- <sup>xxix</sup> Pastor, et al. 2002 op. cit. (See reference xxvii).
- <sup>xxx</sup> Boonstra, Heather and Rachel Benson Gold. 2002. "Overhauling Welfare: Implications for Reproductive Health Policy in the United States." *JAMWA*. 57: Pp. 41-46.
- <sup>xxxi</sup> The Alan Guttmacher Institute. 1994. "Unequal and Uneven: Insurance Coverage and Reproductive Health Services."
- <sup>xxxii</sup> "Get the Facts." Cover my Pills Fair Access to Contraception. <http://www.covermypills.org/facts/factsheet.asp>.
- <sup>xxxiii</sup> The Alan Guttmacher Institute. 2003. "Induced Abortion." [http://www.guttmacher.org/pubs/fb\\_induced\\_abortion.html](http://www.guttmacher.org/pubs/fb_induced_abortion.html).
- <sup>xxxiv</sup> Jain Tarun, Harlow Bernard L., Horenstein, Mark D. 2002 "Insurance Coverage and outcomes of in Vitro Fertilization. *New England Journal of Medicine*. August 29. 347: Pp. 661-666.
- <sup>xxxv</sup> Laurie Nsiah-Jefferson, Elaine J.Hall. 1989. "Reproductive Technology: Perspectives and Implications for Low-Income Women and Women of Color. In *Healing Technology: Feminist Perspectives*. Kathering Strother Ratcliff, ed. U. of Michigan Press.
- <sup>xxxvi</sup> Mushinski, M. 1998. "Average Charges for Uncomplicated Vaginal, Cesarean, and VBAC Deliveries: Regional Variations. United States 1996. *Statistical Bulletin*. 79(3): Pp. 17-28.
- <sup>xxxvii</sup> The Alan Guttmacher Institute. 2003. "Facts in Brief: Sexuality Education."
- <sup>xxxviii</sup> Jones, Rachel K. Jacqueline E. Darroch, and Stanley K Krenshaw. 2002. "Patterns in the Socioeconomic Characteristics of Women Obtaining Abortions in 2000-2001." *Perspectives on Sexual and Reproductive Health*. 34(5): Pp. 226-235.
- <sup>xxxix</sup> Finer, Lawrence B. et al. 2003. op. cit. (See reference iv).
- <sup>xl</sup> Gerrity, D.A. 2001. Five Medical Treatment Stages of Infertility: Implications for Counselors. *The Family Journal: Counseling and Therapy for Couples and Families* 9: Pp. 140-150.
- <sup>xli</sup> Maine, Deborah. 2001 op.cit. (See reference xxi).
- <sup>xlii</sup> "Frequently Asked Questions about Infertility" <http://www.asrm.org/Patients/faqs.html#Q6>.
- <sup>xliii</sup> Jain Tarun, et al. 2002. op.cit. (See reference xxxiv).
- <sup>xliv</sup> Jain Tarun, et al. 2002. op.cit. (See reference xxxiv).
- <sup>xlv</sup> Dower, CM; Miler JE; O'Neill Eh; and the Taskforce on Midwifery. 1999. "Charting a Course for the 21<sup>st</sup> Century: The Future of Midwifery." San Francisco, CA. Pew Health Professions Commission and the UCSF Center for Health Professionals.
- <sup>xlvi</sup> Martin Joyce, et al 2002. op. cit. (See reference xvii).
- <sup>xlvii</sup> Martin Joyce, et al 2002. op. cit. (See reference xvii).
- <sup>xlviii</sup> <http://www.cdc.gov/nchs/releases/98news/midwife.htm>.
- <sup>xlix</sup> Dailard, Cynthia. 2002. "Abstinence Promotion and Teen Family Planning: The Misguided Drive for Equal Funding." *The Guttmacher Report on Public Policy*. February. Pp. 1-3.
- <sup>l</sup> King, Leslie and Madonna Harington Meyer. 1997. "The Politics of Reproductive Benefits. U.S. Insurance Coverage of Contraceptive and Infertility Treatments." In *Gender and Society*. 11: Pp. 8-30.
- <sup>li</sup> 1999. "State Specific Maternal Morality among Black Women-United States, 1987-1996." *Morbidity and Mortality Weekly Report*. 48: Pp. 492-496.
- <sup>lii</sup> Zambrana, Ruth E. 1996. "The Underrepresentation of Hispanic Women in the Health Professions." *JAMWA*. August October 51 (4): Pp. 147- 153.
- <sup>liii</sup> Dower, et al. 1999, op.cit. (See reference xlv).

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<sup>liv</sup> Nelson, 2001, op. cit. (See reference i).

<sup>lv</sup> Nelson, 2001, op.cit. (See reference i).

<sup>lvi</sup> CDC 1999, op. cit. (See reference iii).

<sup>lvii</sup> Dower, et. al. op.cit. (See reference xlv).

***Note: all websites accessed January 2003***