Differential Adverse Impact on Teenagers Who Undergo Induced Abortion

Approximately 20% of the induced abortions in the U.S. each year are teenage abortions. Approximately 30 states have a parental notification or consent law before the pregnant teenager can obtain an abortion. Frequently these laws contain a judicial bypass provision for the pregnant teenager if she does not want to disclose her pregnancy to her parents. The teenager need not notify her parents of the pregnancy and desire to obtain an abortion if she can demonstrate to the court that she is "mature" enough to make a decision to obtain an abortion, and the court determines that the abortion is in her "best interests". The Alan Guttmacher Institute estimates that approximately 61% of pregnant U.S. teenagers notify one or both parents of their pregnancy prior to seeking an abortion or carrying the child to term.

Therefore, judges, counselors, other adults, as well as the pregnant teenager will be involved in the decision-making process approximately 40% of the time in situations where there is no parental involvement. It is important that all who may be involved are aware of the adverse effects of induced abortion on teenagers.

The following article describes some of the ways in which abortion has a greater and more substantial harmful impact on adolescents compared with older women. This includes adverse psychosocial aspects, physical injury, postabortion infections and reproductive impairment. Adolescent abortion may also increase the risk of breast cancer because of the loss of the protective effect of an early full term pregnancy. Adolescents also are more likely to have abortions in the second or third trimester. To the extent that the effects of these late term abortions are known, they will be more likely to have more harmful physical and psychological effects compared to first trimester abortions.

Differential Adverse Impact / Psychosocial Aspects

Compared to older women, the adolescent decision to have an abortion is more likely to be pressured by parents, peer group, or sexual partner and is therefore more difficult and hazardous. Some of the difficulties were confirmed in a study of members of Women Exploited by Abortion who had abortions as teenagers compared to women who aborted at 20 years of age or older. This long term retrospective study found that those who had abortions as teenagers were significantly less satisfied with services at the time of the abortion, were more likely to report being misinformed, more often reported severe psychological distress, and more often wanted to give birth and keep the baby. Researchers at the Medical College of Ohio also compared the long term reactions of women who had abortions as teenagers with women who had abortions after the age of 20. All of the women were members of a postabortion support group who had poorly assimilated their abortion experience. The researchers found that the adolescent group evidenced significantly higher antisocial traits, paranoia, drug abuse and psychotic delusions, and reported more postabortion suicide attempts and more nightmares compared to women who had abortions after age 20. Adolescent women also recalled their homes as having been more chaotic and their parents marriages more unhappy.
Other psychiatrists have concluded that developmental immaturity contributes to ambivalence about the decision of whether or not to have an abortion, to a distorted perception of the procedure, and to a variety of pathological reactions. Various pathological reactions have been found in subsequent studies of women who had abortions as adolescents. These include suicide attempts on the perceived due date of their aborted child, suicide, detachment from reality by dissociation and being at risk for later abuse as well as the other effects identified in the Medical College of Ohio study.

Replacement pregnancies as a reaction to an earlier loss from adolescent abortion have been documented in the literature. One study of pregnancy loss among adolescents who were attending prenatal, parenting, or health clinics sponsored by a large metropolitan medical center in the midwest found that 59% were again pregnant an average of 15 months following their earlier pregnancy loss. A majority of these earlier losses were due to abortion. A Canadian study found that 18% of adolescents who had abortions became pregnant again within two years.

Adolescent pregnancies following a first abortion frequently result in repeat abortions. A New York City study of adolescent abortion found that teenagers with one abortion were at least four times more likely to have another abortion compared to teenagers who were pregnant for the first time. In another study of teenage abortion at a Los Angeles Hospital, it was found that 38% of the teenagers had had a previous abortion and 18% had two abortions in the same year. A 1988 survey by the National Center for Health Statistics on abortion incidence in a 14 state area found that among white teenagers age 18-19, 22.5% were having a second abortion or more. Among black teenagers age 18-19, 35.5% were having a second abortion or more.

Repeat pregnancies and abortions frequently occur among teenagers despite contraceptive knowledge. One study reported that only one in three of U.S. teenagers age 15-19 who are sexually active always use contraceptives and only one in two of these young women rely on the most effective methods. According to the Minnesota Department of Health based on data provided by Minnesota abortion facilities, only 32.4% of Minnesota teenagers who obtained abortions in 1993 reported using contraceptives when they became pregnant. An additional 58.4% reported using contraceptives in the past but not now. Only 8% of teenagers reported they had never used contraception. A study of black, never married teenagers in New Orleans who obtained abortions reported that 88% of these teenagers knew about birth control and 77% knew where to get birth control, but only 22.8% were using a birth control method at the time they became pregnant.

There is evidence that adolescent abortion can result in a loss of desire for self-preservation. A study of 75 female runaway adolescents in New York City found that suicide attempts and suicide ideation were found to be significantly related to having had an abortion. Another study found that among inner city adolescents, those who were HIV+ were more likely to have sexually transmitted diseases and a history of abortion. A study of women in West Africa found that having had an abortion was a risk factor for HIV-1 infection with women under age 20 having the highest risk.

Drug and alcohol abuse in teenage inner city women has been found to be significantly more likely where women had a prior elective abortion compared to non-users of drugs. In contrast, teenage women with two or more live born children had a much lower incidence of drug use compared to women with a history of elective abortion. (Table 1.) Illicit drug use has been found to be the strongest predictor of having experiencing an abortion in a national sample of young white women. The odds of an abortion were nearly five times greater among drug users compared to non-users.

<table>
<thead>
<tr>
<th>Table 1. Drug Use among Boston Inner City Pregnant Adolescents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reproductive Characteristics</td>
</tr>
<tr>
<td>-------------------------------</td>
</tr>
<tr>
<td>No Childbirth</td>
</tr>
<tr>
<td>1 Childbirth</td>
</tr>
<tr>
<td>2 or more Childbirths</td>
</tr>
<tr>
<td>Prior elective abortion</td>
</tr>
<tr>
<td>Prior Miscarriage/Stillbirth</td>
</tr>
</tbody>
</table>

Source: Amaro et al, Drug Use Among Adolescent Mothers: Profile of Risk, Pediatrics 84:144, 1989
times as large for prematurely pregnant white teens who used illicit drugs compared to those who did not use these drugs21.

Substance abuse by female adolescents, appears to be both a cause and effect of induced abortion. Frequently, female adolescent delinquency will initially express itself in substance abuse, followed by sexual promiscuity, pregnancy and abortion. Also, substance abuse may occur among adolescent females as an immature coping device following induced abortion6.

A disproportionately high percentage of women who have had abortions as teenagers have been found in postabortion support or recovery groups. In a religiously-based postabortion recovery group in Minnesota, 39% were age 19 or less at the time of their abortion22. In a postabortion support group at the Medical College of Ohio where women reported having poorly assimilated their abortion experience, 49% were between 15-20 years of age at the time of their abortion4. In a study of 252 Women Exploited by Abortion members, 45% reported having had abortions at age 19 or less teenagers23. In another study of women with long term chronic stress reactions, 31% were women who had abortions between the age of 14-184. At the time that most of these women had an abortion, approximately 30% of abortions among U.S. women were at age 19 or less.

**Differential Adverse Impact / Physical and Reproductive Effects**

**Acute Pain**

In a Canadian study of first trimester abortion under local anesthesia, severe acute pain similar to the pain of childbirth or pain from cancer occurred more often in adolescents aged 13-17 compared to older women. Severe acute pain was more likely to occur if women were anxious before or after the abortion, or if they reported depression, or had moral or social concerns about abortion23. A U.S. study found that preabortion fearfulness was related to increased pain during the abortion. Adolescents age 15 or less experienced the most pain, while the oldest women experienced the least pain26.

**Cervical Lacerations**

A study by researchers at Johns Hopkins University found that teenagers seeking abortion who were age 17 years or less were significantly more likely to have cervical lacerations (1.28% v. 0.5%) compared to women age 20-2927. A CDC study also found that, among women age 17 or younger, the rate of cervical injury was twice that of older women. Cervical injury was described in the CDC study as encompassing a wide range of trauma including superficial tears caused by a tenaculum to ascending lacerations of the uterine wall which necessitate hysterectomy to control bleeding. The increased risk for cervical injury for young teenagers was thought to be due to small immature cervices which are difficult to grasp with a tenaculum and to dilate78. Cervical injuries from teenage abortion also have been found to frequently occur among teenagers who seek medical care for postabortion complications39.

**Postabortion Infections**

Teenagers are more likely to have a chlamydia infection at the time they undergo an abortion compared to older women. This may be due to lack of protection from pathogens which is provided by cervical mucus in older women but not younger women because of incomplete development of their biological characteristics39. A study of primarily black, unmarried women seeking abortions at Johns Hopkins Hospital in Baltimore found that, among women age 19 or less, 29.2% were chlamydia positive compared to only 7.7% of women age 20 or more31. A Canadian study found that 16.9% of women under age 20 had chlamydia at the time of their abortion compared to 15.5% of women age 20-24, 6.2% of women age 25-34 and only 1.2% of women over age 3432. A Danish study found that 19% of women age 20 or less had chlamydia at the time of a first trimester abortion compared to 13% among women age 21-25, and only 2% of women who were age 26 or more33. A Swedish study found that 16.6% of women age 19 or under had chlamydia at the time of their abortion compared to 7.1% of women age 20-24 and 4.5% of women age 25-2934. A British study reported that 14.3% of adolescents under age 16 had chlamydia at the time of their abortion compared to 7.6% of women age 21-25 and only 0.7% of women age 26-3035. The incidence of chlamydia at the time of adolescent abortion may be declining, at least in certain areas. A Norwegian study found that 17% of teenagers age 15-19 had chlamydia infection at the time of abortion in 1985, but by 1995 the incidence had been reduced to 6.3%. During this time interval the incidence of chlamydia infection remained higher in teenagers compared to older women36. (Table 2.)

The presence of chlamydia at the time of abortion greatly increases the likelihood of postabortion endometritis (inflammation of the inner lining of the uterine wall) or postabortion pelvic inflammatory
Table 2.
Incidence of Chlamydia in Teenagers Undergoing Induced Abortion Compared to Older Women

<table>
<thead>
<tr>
<th>Location</th>
<th>Age 19 or Under</th>
<th>Age 20-24</th>
<th>Age 25-29</th>
<th>Age 30-34</th>
</tr>
</thead>
<tbody>
<tr>
<td>Liverpool-Chester, England, 1996</td>
<td>12.2%-14.3%</td>
<td>7.6%</td>
<td>0.7%</td>
<td></td>
</tr>
<tr>
<td>Laval University, Quebec, Canada 1985-1986</td>
<td>16.9</td>
<td>15.4</td>
<td>6.2</td>
<td></td>
</tr>
<tr>
<td>Primarily black, unmarried Baltimore women, mid 1980s</td>
<td>29.2</td>
<td>7.7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Horsholm, Denmark</td>
<td>19</td>
<td>13</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Malmo, Sweden 1982-1983</td>
<td>16.6</td>
<td>7.1</td>
<td>4.5</td>
<td>2.3</td>
</tr>
<tr>
<td>Trondheim, Norway 1995</td>
<td>17.0</td>
<td>11.9</td>
<td>7.5</td>
<td>5.1</td>
</tr>
<tr>
<td>Trondheim, Norway 1995</td>
<td>6.3</td>
<td>5.2</td>
<td>3.6</td>
<td>0.9</td>
</tr>
</tbody>
</table>

1) Age 21-25; 2) Age 26-30; 3) Age 25-34; 4) Age 20 or more

disease. A Johns Hopkins University study found that 10% of chlamydia positive women who underwent a first or second trimester abortion developed endometritis compared to 3.5% for chlamydia negative women\(^3\). An earlier Johns Hopkins University study had found that teenagers age 17 or younger were more likely to develop postabortion endometritis (7.0%) compared to women age 20-29 (2.7%)\(^7\). A Swedish study found that chlamydia positive women age 13-19 were more likely to develop postabortion endometritis (28%) compared to women age 20-24 (22.7%) or women age 25-29 (20%). The same study also found that chlamydia positive women age 13-19 were more likely to develop postabortion salpingitis or pelvic inflammatory disease (21.9%) following their abortion compared to women age 20-24 (13.6%) or women age 25-29 (0.7%)\(^4\). It is believed that the induced abortion itself is a factor in the spread of an unrecognized cervical infection into the uterine cavity during dilatation of the cervical canal and curettage of the uterine cavity\(^9\).

The increase in the incidence of postabortion infections is not limited to the presence of chlamydia at the time of abortion. Researchers have also found that other bacteria or viruses frequently are present at the time of abortion which also increase the likelihood of postabortion infections. These include gonorrhea\(^2\), trichomonas vaginalis\(^2\), bacterial vaginosis\(^9\), m. hominis and Group B streptococci\(^4\). A Pittsburgh, Pennsylvania study found that chlamydia was present in 9.3% of women undergoing abortion along with an incidence of 25.2% m. hominis organisms, 4.3% Group B streptococci and a 0.9% n. gonorrhoeae\(^4\). A Norwegian study found that 8.1% of women who were positive for m. hominis at the time of their abortion developed postabortion pelvic inflammatory disease compared to only 0.6% who had a negative cervical culture. This study also found that 6.1% of the women who were Group B streptococci positive at the time of their abortion developed postabortion pelvic inflammatory disease\(^4\). A Swedish study found that 11.8% of women with bacterial Vaginosis at the time of their abortion developed pelvic inflammatory disease compared to only 3.2% where their was no bacterial Vaginosis present\(^5\). (Table 3.)

Adolescents in general are known to comply with medical regimens more poorly than adults\(^4\). This can have potentially devastating results. In one reported instance, a teenager underwent an abortion but did not take her antibiotics as prescribed and developed a low grade fever. She went to an emergency room of a hospital four days after the abortion where she saw a doctor who refused to treat her. Instead, the doctor called the abortion facility and the teenagers mother, who, for personal reasons, the teenager had not told about her pregnancy and abortion. The teenager and her mother then came to the abortion facility where it was determined that the teenager had endometritis. Antibiotics were administered and the infection was cleared up. The author of the article stated that had the teenager not received the appropriate medication, the endometritis could have been quite severe requiring hospitalization, intravenous antibiotics and could result in possible infertility. The state where the abortion occurred did not have any parental notice or consent law\(^5\).

The delay of care following onset of infections can lead to serious consequences. A study by researchers at the Centers for Disease Control found that delaying care for chlamydia or gonorrhea associated pelvic inflammatory disease for even
as low as three days following the onset of symptoms resulted in a 2.6-fold increase in impaired fertility compared to those who sought care promptly. The CDC study also found that 19.2% of those with impaired fertility had a later ectopic pregnancy compared to only 8.3% of those who sought care promptly. Among those who were likely to delay care were women with a history of a recent induced abortion. The CDC has reported that ectopic pregnancy is estimated to occur 5-10 times more frequently among women with a prior history of salpingitis or pelvic inflammatory disease. A CDC study also found that ectopic pregnancy case-fatality rates are higher in women age 15-19 compared to older women.

Another study by Danish researchers found that if women with chlamydia infection at the time of abortion were not treated at the time of the abortion, that these women had a 72% cumulative risk for pelvic inflammatory disease, if observed for 24 months. Thus, even a few days delay in seeking treatment for postabortion infections can result in impaired fertility and have potentially serious life-threatening consequences.

However, abortion facilities do not routinely test women for chlamydia although there are diagnostic tests which have been developed and could be utilized. Further, there is no generally established protocol for administration of antibiotics at the time women undergo abortion. The administration of antibiotics at the time of the abortion would, in many instances, result in the reduction of postabortion infections.

There is also evidence that antibiotics following abortion may be less effective to prevent infections among teenagers compared to older women. This may occur, in part, because adolescents undergoing abortion are more likely to have had no previous births compared to women in general who have abortions. A large study of U.S. women who had abortions at five abortion facilities during 1975-1978 found that postabortion infections (temperature of 38 degrees centigrade or more for two or more days) were significantly lower among women with one or more previous births compared to women with no previous births. Other possible risk factors for teenagers may include numerous sexual partners, low levels of protective antibodies, or high levels of estrogen. A Danish study found that the administration of erythromycin did not significantly reduce the incidence of pelvic inflammatory disease in postabortion women if they had previous pelvic inflammatory disease, were age 20 or less, or had no previous term births.

Because there is no generally established protocol for the administration of antibiotics in the context of abortion, procedures, if any, would have to be established by individual abortion facilities. These procedures may involve a policy of administering no antibiotics unless infection is demonstrated to be present, administering antibiotics routinely to all women either before or after the abortion, or simply writing a prescription for antibiotics for subsequent treatment. Any of

<table>
<thead>
<tr>
<th>Sample</th>
<th>Age Range</th>
<th>Bacteria or Virus Present</th>
<th>Postabortion Endometritis</th>
<th>Postabortion PID</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baltimore women 1976-78</td>
<td>Under 17</td>
<td>Not Determined</td>
<td>7.0%</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>20-29</td>
<td>Not Determined</td>
<td>2.7%</td>
<td>-</td>
</tr>
<tr>
<td>Primarily black unmarried Baltimore women, mid 1980s</td>
<td>All</td>
<td>Chlamydia positive</td>
<td>10.0%</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>All</td>
<td>Chlamydia negative</td>
<td>3.5%</td>
<td>-</td>
</tr>
<tr>
<td>Malmo, Sweden 1982-83</td>
<td>13-19</td>
<td>Chlamydia positive</td>
<td>28%</td>
<td>21.9%</td>
</tr>
<tr>
<td></td>
<td>13-19</td>
<td>Chlamydia negative</td>
<td>9.3%</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>20-24</td>
<td>Chlamydia positive</td>
<td>22.7%</td>
<td>13.6%</td>
</tr>
<tr>
<td></td>
<td>20-24</td>
<td>Chlamydia negative</td>
<td>4.8%</td>
<td>0.7%</td>
</tr>
<tr>
<td></td>
<td>25-29</td>
<td>Chlamydia positive</td>
<td>20%</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>25-29</td>
<td>Chlamydia negative</td>
<td>4.7%</td>
<td>0.9%</td>
</tr>
<tr>
<td>Oslo, Norway</td>
<td>All</td>
<td>Chlamydia positive</td>
<td>-</td>
<td>22.7%</td>
</tr>
<tr>
<td></td>
<td>All</td>
<td>m. hominis positive</td>
<td>-</td>
<td>8.1%</td>
</tr>
<tr>
<td></td>
<td>All</td>
<td>Group B streptococci</td>
<td>-</td>
<td>6.1%</td>
</tr>
<tr>
<td></td>
<td>All</td>
<td>Negative Cervical Culture</td>
<td>-</td>
<td>0.6%</td>
</tr>
<tr>
<td>Gothenburg, Sweden</td>
<td>All</td>
<td>Bacterial Vaginosis</td>
<td>8.2%</td>
<td>-</td>
</tr>
<tr>
<td>Stockholm, Sweden</td>
<td>All</td>
<td>None</td>
<td>1.47%</td>
<td>-</td>
</tr>
<tr>
<td>Sweden</td>
<td>All</td>
<td>Bacterial Vaginosis</td>
<td>-</td>
<td>11.8%</td>
</tr>
<tr>
<td></td>
<td>All</td>
<td>None</td>
<td>3.2%</td>
<td>-</td>
</tr>
</tbody>
</table>
these procedures have significant disadvantages. But without adequate testing and necessary treatment, teenage women are at a particularly increased risk not for pelvic inflammatory disease. This is one of the reasons why teenage women have the highest rate of hospitalization for pelvic inflammatory disease compared with older women. The adverse effects are not limited to pelvic inflammatory disease, but also include a wide range of other potentially serious complications including ectopic pregnancy, cervicitis, perihepatitis, infertility, chronic pelvic pain, acute Reiter syndrome, pregnancy complications, neonatal infections and possible premalignant cervical changes.

**Differential Adverse Impact / Risk of Breast Cancer**

It is well established that an early full term birth is protective against breast cancer. However, among adolescents, more than 90% of those age 17 or younger will not have had a full term birth at the time of their abortion compared to 77.8% among teenagers age 18-19, and 49% for women of all ages. In a large international study it was found that women having their first birth under age 18 had only about one-third the risk of breast cancer compared to women whose first birth is delayed until age 35 or more. The study also stated that "data suggested an increased risk associated with abortion contrary to the reduction associated with full-term births." Another international study found that the risk for breast cancer increases about 3.5% for each year that a women does not have a full term birth.

A Centers for Disease Control study found that, in addition to early first term birth as a protective effect (Table 4.), an increasing number of live born children, and duration of breast feeding also had an independent protective effect on the risk of breast cancer. An increased protective effect from childbirth has been found among women with a family history of breast cancer.

In contrast to full term birth, induced abortion does not have a protective effect. A meta-analysis of 28 published reports on abortion and breast cancer concluded there was an independent 30%-50% increased risk for breast cancer as a result of induced abortion. Higher risks for breast cancer occurred among women with two or more induced abortions compared to women with one induced abortion in seven of ten studies. Although the evidence is inconsistent, the relative risk of breast cancer conferred by a family history of breast cancer has been found to further increase with the number of induced abortions.

**Differential Adverse or Unknown Impact / Increased Likelihood of Late Term Abortion**

Adolescents are also more likely to have a late term abortion i.e. 13 gestational weeks or later compared to older women. In 1996 the Centers for Disease Control reported that approximately 30% of U.S. teenage abortions are at 13 weeks or greater compared to only 11.7% of women generally.

The adverse physical, psychological and reproductive effects of late term abortions are not well known. One...
likely reason is due to the wide variety of abortion methods used in the second and third trimesters. These studies concentrate on the effectiveness of the method but provide little additional information and report on only a few immediate complications. Another likely reason is because abortions at 13 weeks or later constitute only 11.7% of all abortions in the U.S. each year. A third likely reason is that initial research found that the factors which related to delay in seeking abortion were personal and not easily changed through public health programs. A MEDLINE search from 1971-1994 concluded that very little has been published on the effect of induced mid-trimester abortion on future fertility. However, there are potentially serious complications. Among the potential complications from mid-trimester abortion identified are: intrauterine adhesions, pelvic inflammatory disease, cervical incompetence, spontaneous abortion, ectopic pregnancy, uterine rupture, and maternal mortality.

Postabortion endometritis has been found to be significantly more likely to occur after second trimester instillation abortion compared to first trimester abortion. Dilatation and extraction abortion, which is frequently used in the second trimester, has also been found to be associated with an increased low birthweight in subsequent pregnancies to a significantly greater degree than first trimester abortion. Although the risk of maternal mortality from abortion is very low, there is an increased risk of maternal death as the gestational age at which the abortion takes place increases.

A late term abortion is generally acknowledged to be a risk factor for adverse psychological sequelae compared to first trimester abortion.

Women who undergo second trimester abortions are known to be more likely to express ambivalence, lack satisfaction with the decision, express moral or religious objections, and have a more favorable attitude toward the unborn child compared to women who have first trimester abortions. These are all risk factors for adverse psychological effects following abortion. But information is very sparse on the psychological effects of second trimester abortion, particularly as it relates to adolescents.

Thomas W. Strahan, JD, Editor

Footnotes
1. Abortion Surveillance-United States, 1996, Centers for Disease Control, LM Koonin et al, MMWR 45 (No.SS4-1), July 30, 1999
3. Differential Impact of Abortion on Adolescents and Adults, W Franz and D Reardon, Adolescence 105:162, 1992

MARCH/APRIL 2000

22. Post Abortion Trauma. 9 Steps to Recovery, Jeanette Vought, 1991
24. Psycho-Social Stress Following Abortion, Anne Speckhard, 1987
32. Chlamydial infection among females attending an abortion clinic, P Levallois et al, Canadian Medical Association Journal 137:33, 1987


35. There is more to a test than technology—evaluation of testing for chlamydia infection in a charitable sector termination service, J Hopwood et al, Br J Obstet Gynaecol 98:116, 1991


40. Bacterial Vaginosis and Anaerobes in Obstetric-Gynecologic Infection, DA Eschenbach, Pediatric and Adolescent Gynecology 8(1):86, 1986

41. Induced Abortion: Microbiological Screening and Medical Complications, BSTay-Pedersen et al, Infection 19 (5):305, 1991


46. Delayed Care of Pelvic Inflammatory Disease as a Risk Factor for Impaired Fertility, SD Hillis et al, Am J Obstet Gynecol 168:1503, 1993


50. Pelvic Inflammatory Disease: A Review with Emphasis on Antimicrobial Therapy, TG Burnakis and NB Hildebrandt, Reviews of Infectious Diseases 8(1):36, 1986


55. The Independent Associations of Parity, Age at First FullTerm Pregnancy, and Duration of Breast Feeding with the Risk of Breast Cancer, PH Layde et al, J Clin Epidemiology 42(10):963, 1989


57. Induced abortion as an independent risk factor for breast cancer: a comprehensive review and analysis, J Brind et al, Journal of Epidemiology and Community Health 50:481, 1996


65. ASSOCIATION MEETING

The 2000 Annual Meeting of the Association for Interdisciplinary Research in Values and Social Change will be held at the Hyatt Regency Crystal City in Arlington, Virginia on Wednesday June 28, 2000 at 8:00 PM. The general public is invited and there is no charge to attend. Refreshments will be served following the presentations.

Presenters are:

Teresa Collett, J.D.

Parental Notification Litigaton in Texas

David Smolin, J.D.

The American Medical Association and Abortion

William Hunt, STD

The Influence of Propaganda in the Abortion Debate

Richard A. Stith, J.D.

Respect for Life as a First Priority