



Informed Abortion Choice: Best Practice

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Disclosure

There are no commercial products mentioned in this lecture nor is support being supplied by any vendor, agency, or governmental grant/agent.



Outline

I. Introduction

II. Objectives

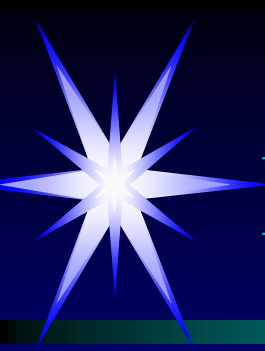
III. Mental Health/Psychological Effects

IV. Maternal Mortality

V. Preterm Birth

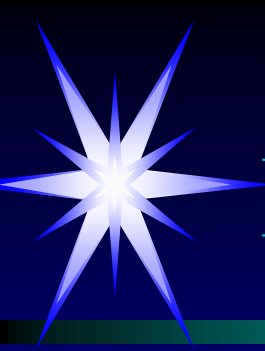
VI. Other Issues

VII. Conclusions




I. Introduction

- *Roe v Wade* in 1973 brought abortion on demand to the United States
- Abortion Act in 1968 in the United Kingdom brought abortion on demand to England, Wales, and Scotland in the United Kingdom



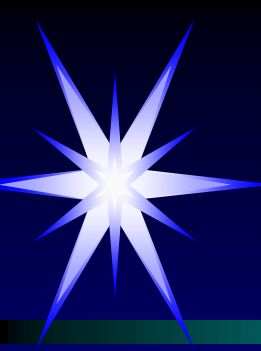
Impact on Women's Health

- Elective abortion began 1973 in US
- 50+ million fetal deaths in US
- 10+ million fetal deaths in E&W since 1968
- Devastating effects on women's health
- Damning silence in mainstream media
- Refusal to acknowledge in medical literature



II. Objectives

- Understand context of abortion argument
- Know impact of abortion on women's health
- Be able to discuss psychological complications
- Be able to discuss increased mortality
- Be able to discuss increased preterm birth risk
- Know why consent for abortion is critically important for women



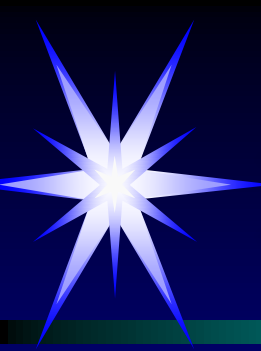
III. Psychological Effects

Psychological Effects

- 63% more mental health visits 90 days after pregnancy in abortion patients compared to delivery.¹
- 21% more mental health visits over 4 years after abortion compared to delivery.¹
- 154% increased risk for suicide compared to delivery.²

Selected Publications

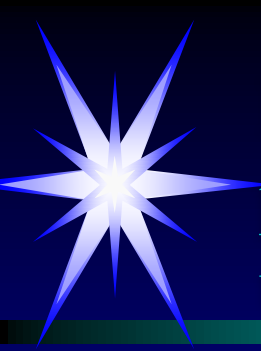
1. Coleman PK, Reardon DC, Rue V, and Cougle J. State-funded abortion versus deliveries: A comparison of outpatient mental health claims over four years. *Am J of Orthopsychiatry* 2002;72:141-152.
2. Reardon DC, Cougle J, Ney PG, Scheuren F, Coleman, PK, Strahan T. Deaths associated with delivery and abortion among California Medicaid patients: A record linkage study. *Southern Med J* 2002; 95:834-841.



III. Psychological Effects

- 460% increase in illicit drug and 122% increase in alcohol use in subsequent pregnancies with abortion.³
- 65% more likely to have “high risk” for clinical depression with abortion compared to delivery.⁴

3. Coleman PK, Reardon DC, Rue V, and Cougle J. History of induced abortion in relation to substance use during subsequent pregnancies carried to term. *Am J of Obstet Gynecol* 2002;187: 1673-1678.
4. Cougle J, Reardon DC, Coleman PK. Depression associated with abortion and childbirth: A long-term analysis of the NLSY cohort. *Medical Science Monitor* 2003;9: CR105-112.



III. Psychological Effects-Anxiety-with first pregnancy ending in abortion or live birth (all unintended)⁵

- 34% increase in Generalized Anxiety
- 86% higher in Hispanics
- 42% higher risk in unmarried women
- 46% higher risk if under age 20 years

5. Cougle J, Reardon DC, Coleman PK, Rue VM. Generalized anxiety associated with unintended pregnancy: A cohort study of the 1995 National Survey of Family Growth. *J of Anxiety Disorders* 2005;19: 137-142.



III. Psychological Effects-Sleep Disorders: comparison of abortion to birth at end of pregnancy⁶

- 85% higher risk of sleep disorders at 6 months after abortion compare to birth
- 68% higher at 1 year
- 40% higher at 2 years
- 41% higher at 3 years
- 29% higher across 4 years studied

6. Reardon DC & Coleman PK. Relative treatment of sleep disorders following abortion and childbirth: A prospective record-based study. *Sleep* 2006;29: 105-106.



III. Psychological Effects-Adolescents: abortion versus birth-counseling-sleep problems-marijuana (THC) use

- Comparison of 65-7-11th graders either aborting or giving birth:
 - Aborters 5 times more likely to seek counseling
 - Aborters 4 times more frequent sleep issues
 - Aborters 6 times more likely to use THC⁷

7. Coleman PK. Resolution of unwanted pregnancy during adolescence through abortion versus childbirth: individual and family predictors and consequences. J of Youth and Adolescence. (in press)



Results of the Largest Meta-analysis on Abortion and Mental Health



III. Psychological Effects-Meta-analysis

Coleman, P, published in British Journal of Psychiatry Meta-analysis in 2011:⁸

- 22 studies included
- 36 measures of effect
- 877,297 participants (163,880 with elective abortions)

8. Coleman P. Abortion and mental health: quantitative synthesis and analysis of research published 1995-2009. Br J Psychiatry 2011;199 (3):180-186.<http://doi.org/10.1192/bjp.bp.110.077230>



III. Psychological Effects-Meta-analysis

Coleman, P, published in British Journal of Psychiatry Meta-analysis in 2011 found the following in women with abortion:⁸

- 81% increased risk for mental health issues
- 55% increased risk mental health issues even when comparing to unintended pregnancies



III. Psychological Effects-Meta-analysis

Coleman, P, published in British Journal of Psychiatry Meta-analysis in 2011 found the following subtypes of increased mental health issues in women with abortion:⁸

- 34% increase in anxiety disorders
- 37% increase in depression
- 110% increase in EtOH abuse
- 220% increase in marijuana abuse
- 155% increase in suicide behaviors



III. Psychological Effects

Most disturbing is the calculation of composite Population Attributable Risk (PAR):⁸

- 10% of incidence of mental health problems was *directly attributable to abortion*



IV. Abortion Mortality: Mythology and Methodology

Publications continue to put forth the same unscientific and unsubstantiated claim of,

“The risk of death associated with childbirth is approximately 14 times higher than with abortion.”⁹

⁹Raymond EG, Grimes DA. The comparative safety of legal induced abortion and childbirth in the United States. *Obstet Gynecol* 2012;119:215-219.



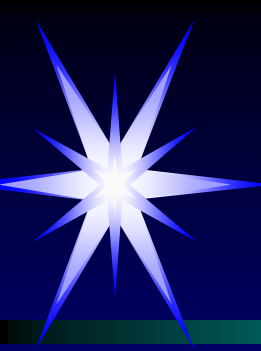
IV. Abortion Mortality: Mythology and Methodology

"There are three kinds of lies: lies, damned lies, and statistics." Attributed it to the 19th-century British Prime Minister Benjamin Disraeli (1804–1881).



IV. Abortion Mortality: Mythology and Methodology-Factors

- Incomplete reporting
- Definitional incompatibilities
- Voluntary data collection
- Research bias
- Reliance on Estimations
- Political correctness
- Inaccurate//incomplete death certificates
- Failing to include all causes of death such as suicide
- Incomparability with maternal mortality statistics



IV. Maternal Mortality (death)

- All causes death rates 370% higher within one year of an abortion compared to delivering women.¹⁰
- Death rates 50% higher in aborting women compared to non-pregnant women.¹¹
- 80% higher risk of dying in an “accident”.¹²

Selected Publications

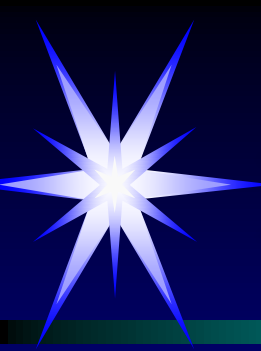
10. Gissler M, Kauppila R, Merilainen J, Toukomaa H, Elina Hemminki E. Pregnancy-associated deaths in Finland 1987-1994 - definition problems and benefits of record linkage. Acta Obstet Gyn Scand 1997;76:651-657 (All causes mortality)
11. Gissler, M., et.al., Pregnancy-associated mortality after birth, spontaneous abortion, or induced abortion in Finland, 1987-2000., American J. ObGyn (2004)190, 422-7
- 12 Reardon, et.al., Deaths Associated With Pregnancy Outcome. Southern Medical Journal, Vol 95, No 8, August 2002.



IV. Maternal Mortality: specifics (increased likelihood)¹³

- Violent causes: 81%
 - Suicide: 154%
 - Accidents: 82%
- All natural causes: 44%
- AIDS: 118%
- Circulatory disease: 187% (heart, etc)
- Strokes: 446%
- Other heart diseases: 159%

13. Reardon DC, Cogle J, Ney P, Scheuren F, Coleman PK, Strahan TW. Deaths associated with delivery and abortion among California Medicaid patients: A record linkage study. Southern Med J 2002;95: 834-841.



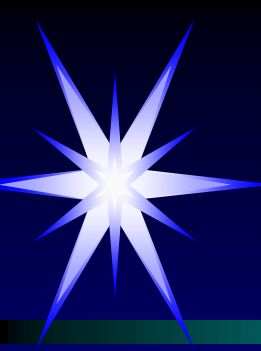
IV. Maternal Mortality

- Mortality related to abortion at 16-20 weeks gestation is 9.3/100,000.¹⁴

14. Lawson HW, Frye A, Atrash HK, et al. Abortion mortality, United States, 1972 through 1987. Am J Obstet Gynecol 1994;171:365-372.

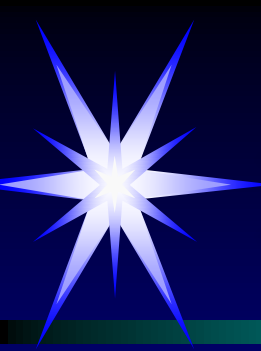
- Data from the same time period shows a maternal mortality of approximately 10/100,000.¹⁵

15. Maternal mortality--United States, 1982-1996. MMWR Morb Mortal Wkly Rep 1998;47:705-707.



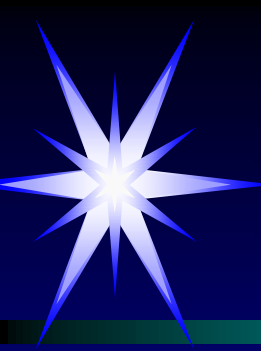
IV. Mortality Definition Issues

- *Maternal deaths* (by WHO)-death of woman while pregnant or within 42 days of termination of pregnancy, irrespective of duration/site of pregnancy
 - Does not include suicide, homicide, accidents



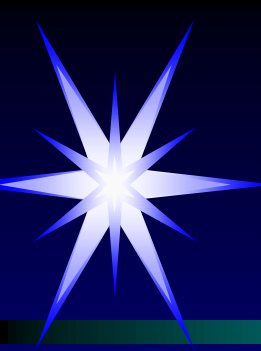
IV. Mortality Definition Issues

- *Late maternal deaths* are defined as “the deaths of a woman from direct or indirect obstetric causes more than 42 days but less than 1 year after termination of pregnancy.”



IV. Mortality Definition Issues

- *Pregnancy-related deaths*-includes those from direct and indirect causes defined as “Death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of the cause of death.”
 - *Direct obstetric deaths*-”those resulting from obstetric complications of the pregnant state (pregnancy, labor, puerperium)



IV. Mortality Definition Issues

- *Indirect obstetric deaths*- “. . .those resulting from previous existing disease or disease that developed during pregnancy and which was not due to direct obstetric causes, but which was aggravated by physiologic effects of pregnancy”.



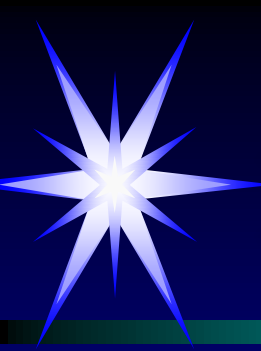
IV. Mortality Definition Issues

- *Pregnancy-associated deaths*-developed by Centers for Disease Control and Prevention and with Maternal Mortality Special Interest Group of ACOG
 - Death from any cause during pregnancy or within 1 calendar year of delivery or pregnancy termination, regardless of duration or anatomical site.



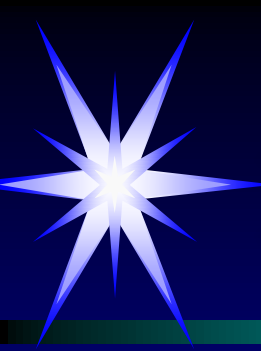
IV. Mortality Definition Issues

- Includes accidents, homicide and suicide related to pregnancy



IV. Mortality Definition Issues

- Another way to define mortality is using a national *case-fatality rate*
 - Number of known legal induced abortion-related deaths per 100,000 reported legal induced abortions.
 - Assumes all deaths are identified from all causes up to 1 year post-abortion
 - However the total number of abortions (denominator) is not known
 - Therefore, *unable to calculate*



IV. Mortality Definition Issues

- Uses only 2 criteria in identifying maternal death:
 - Medical causes of death
 - Timing of the pregnancy-related death



IV. Mortality Measurement Issues

`Cheshire Puss,' she began, rather timidly, as she did not at all know whether it would like the name: however, it only grinned a little wider. `Come, it's pleased so far,' thought Alice, and she went on. `Would you tell me, please, which way I ought to go from here?

`That depends a good deal on where you want to get to,' said the Cat.

`I don't much care where--' said Alice.

`Then it doesn't matter which way you go,' said the Cat.

`--so long as I get *somewhere*,' Alice added as an explanation.

`Oh, you're sure to do that,' said the Cat, `if you only walk long enough.'

Cheshire Cat and Alice-Alice in Wonderland



IV. Mortality Measurement Issues

- Maternal mortality is usually:
 - Number of maternal deaths during a given period per 100,000 live births during same period
 - Number of maternal deaths in give period per 100,000 women of reproductive age during the same time period.



IV. Mortality Measurement Issues

- Maternal mortality and abortion statistics are not analogous.
 - Abortion statistics are by *trimester*
 - Maternal mortality ought to do the same
 - Statistics done by trimester find that mortality in abortion:
 - 14.7/100,000 at 13-15 weeks
 - 29.5/100,000 at 16-20 weeks
 - 76.6/100,000 at ≥ 21 wweeks¹⁴



V. Preterm Birth-Frequency & Costs

- Incidence of preterm delivery is 6% year
- Births average 3-4 million/year in U.S.
- Therefore, 180-240,000 births/year
- The very preterm births (<28 weeks) include approximately 1% births or 30,000-40,000 births annually
- Induced abortion is associated with >\$1.2 *billion (US)* to health costs annually¹⁶



V. Preterm Birth-Epidemiology of Preterm Birth

- Abortion involves 1.3 million women/year
- Preterm birth involves about 6% births/year
- Low-birth weight (LBW) (<2500 gms) 6%¹⁷
- Very low-birth weight (VLBW) (<1500 gms) 1%.¹⁷

17. Alexander GR, Kogan M, Martin J, Papeirnik E. What are the fetal growth patterns of singletons, twins and triplets in the United States? Clin Obstet Gynecol. 1998;41(1):114-125.



V. Preterm Birth-Morbidity of Preterm Birth

- Very low-birth weight costs 28 times (RR) term
 - (\$280,146 versus \$9,803)¹⁸
- Low-birth weight costs 4 times (RR) term
 - (\$38,367 versus \$9,393)¹⁹
- Cerebral palsy increases by 38 times²⁰

18. Luke B, Bigger H, Leurgas S, Siesma D. The cost of prematurity: a case-control study of twins vs. singletons. AM J Publ Health. 1996;86(6):809-814.

19. Infant Health in America:Everybody's Business. Hartford, CT:CIGNA Corp 2000

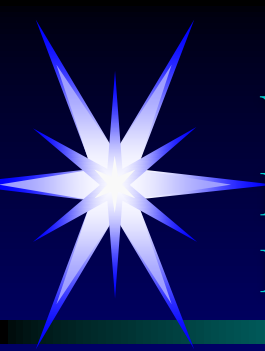
20. Escobar GJ, Littenberg B, Petitti DB. Outcome among surviving very low birthweight infants; a meta-analysis. Arch Dis Child 1991;66:204-211.



V. Preterm Birth-Etiology of Preterm Birth

- Cervical trauma with incompetent cervix
 - Damage with dilation/curettage
- Ascending infection
 - Low-grade infection
 - Leading to premature rupture of membranes²¹

21. Mueller-Heubach E, Rubinstein DN, Schwarz SS. Obstet Gynecol 1990;75(4): 622-626.



V. Preterm Birth-Influence of Abortion on Prematurity: Professor Bradford Hill, in his Presidential Address to the Royal Society of Medicine in 1965: Nine conditions

- **Strength of the association**-does the effect meet statistical and/or clinical significance-association is strong (over 160 studies with PB significance)
- **Consistency**-does the effect provide consistent results or outcomes (none show decrease and virtually all show increased risk PTB)
- **Specificity**-is the effect specific to the outcome or result (PTB specific)
- **Temporality**-does the effect occur prior or during the given item under study (abortion prior to PTB consistently)
- **Dose Response**-does the effect increase with increasing exposure (Increased abortions=increased risk PTB)
- **Plausibility**-does the effect meet criteria for biological reasonableness (biologically consistent with injury/infection as etiologies)



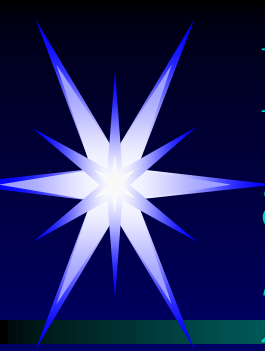
V. Preterm Birth-Influence of Abortion on Prematurity: Professor Bradford Hill, in his Presidential Address to the Royal Society of Medicine in 1965: Nine conditions

- **Coherence**-does the effect make sense with the outcome specified or found (Logical that surgery entering uterus with injury/infection related to PTB)
- **Experiment**-is the effect experimentally reproducible in multiple experiments with diverse authors and/or populations (over 160 papers across all populations/demographics)
- **Analogy**-is the effect similar (analogous) to other effects found experimentally or clinically. (similar to tobacco association findings)



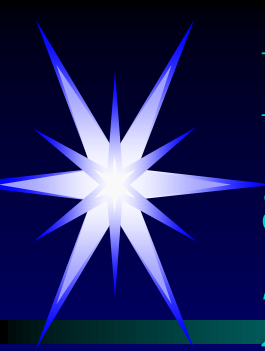
IV. Previous PTB Studies-meta-analysis/systemic reviews

- Swingle HM, Colaizy TT, Zimmerman MB, Morriss FH. Abortion and the risk of subsequent preterm birth: A systematic review with meta-analyses. J Repro Med 2009;54:95-108.²²
- Shah PS, Zao J. Induced termination of pregnancy and low birthweight and preterm birth: a systematic review and meta-analysis. BJOG 2009;116:1425-1442.²³



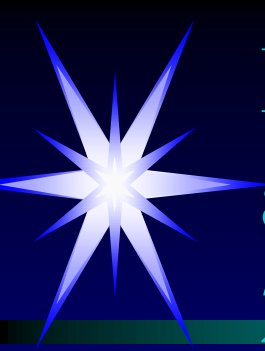
IV. Previous PTB Studies-meta-analysis/systemic reviews-Swingle et al 2009²²

- Performed a meta-analysis of literature from 1995-2007
- Authors included two pro-abortion and 2 pro-life authors per their admission.²² They believed this would reduce any bias.
- searched 7,891 titles, 349 abstracts, and 130 papers



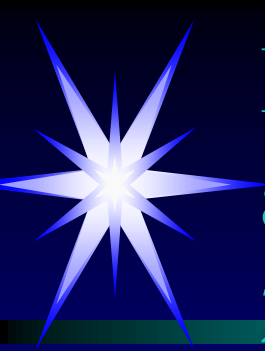
IV. Previous PTB Studies-meta-analysis/systemic reviews-Swingle et al 2009²²

- Authors found 30 induced abortion and 26 spontaneous abortion (SAB) papers
- Analyzed data from 12 induced abortion and 9 SAB papers
- Four of 12 studies on induced abortion had data available for common OR's for calculation for induced abortion < 32 weeks



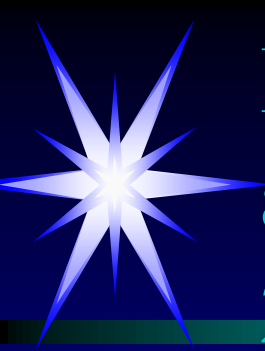
IV. Previous PTB Studies-meta-analysis/systemic reviews-Swingle et al 2009

- Out of the 9 studies available for common OR for PTB with SAB's, 7 had data for use in calculations.
- the SAB's OR for preterm delivery < 37 weeks with 1 SAB was an OR of 1.43 [95% CI 1.05-1.66]
- With ≥ 2 SAB's an OR of 2.27 [95% CI 1.98-2.81]
- These findings regarding SAB and PTB are not unexpected in any such meta-analysis of PTB
- The very medical reasons women miscarry spontaneously may also predispose them to PTB
- Further, SAB is not an avoidable epidemiological risk factor for preterm birth



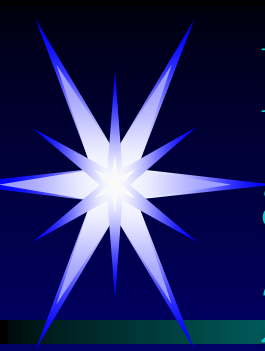
IV. Previous PTB Studies-meta-analysis/systemic reviews-Swingle et al 2009²²

- Common OR for these studies was 1.64 [95% CI 1.38-1.91]
- Therefore demonstrated a 64% increased risk of preterm birth < 32 weeks with just a single induced abortion
- also found an increased risk for PTB with SAB's



IV. Previous PTB Studies-meta-analysis/systemic reviews-Shah et al 2009²³

- 834 papers and excluded 765 for lack of data and objectives
- 69 citations and again excluded 32 for lack of data.
- 18 studies for low birth weight with 280,529 patients available to compare no induced abortions versus 1 abortion prior to first pregnancy



IV. Previous PTB Studies-meta-analysis/systemic reviews-Shah et al 2009²³

- Found an increased risk for PTB with an OR of 1.35 [95% CI 1.20-1.52] demonstrating a 35% increase in the PTB rate in patients with only 1 abortion.
- Only 5/18 studies had ≥ 2 induced abortions and included 49,347 patients
- OR for PTB for > 2 induced abortions was 1.72 [95% CI 1.45-2.04] demonstrating a 72% increase in the PTB rate
- OR for PTB for > 2 induced abortions was 1.72 [95% CI 1.45-2.04] demonstrating a 72% increase in the PTB rate
- Increase in the PTB rate which shows the important epidemiological principle of a dose related effect: the more abortions one has prior to first pregnancy, the higher the risk for PTB



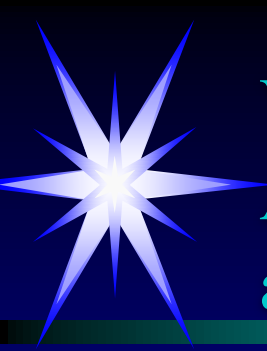
V. Preterm Birth-Criticism about Abortion Studies

- All abortions in these studies involved D&C's with excessive trauma with later abortions
- Minimally invasive abortions with a D&C are less morbid



V. Danish 1999 Study-Controlled for vacuum aspiration (non-D&C abortions) & SAB's²⁴

	#AB	#AB	#AB' s
	1	2	3 or more
Gestational Age <34 weeks (VLBW)	OR (95%)	OR (95%)	OR (95%)
Vacuum aspiration	1.82	2.45	2.0
D&C	2.27	12.55	N/A



VI. Other Issues-Subsequent Pregnancy and Abortion (comparison of previous live birth to abortion)³

- 929% more likely to use marijuana
- 460% more likely to use illicit drugs (heroin, cocaine, methamphetamines, etc)
- 122% more likely to use alcohol

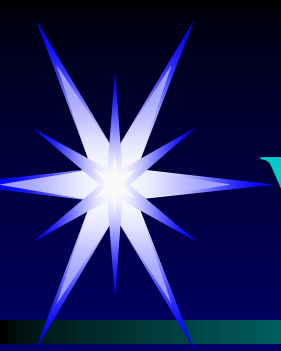
3. Coleman PK, Reardon DC, Rue V, Cogle J. History of induced abortion in relation to substance abuse during subsequent pregnancies carried to term. *Am J Obstet Gynecol* 2002;187: 1673-1678.



VI. Other Issues-Previous Loss and Substance Abuse²⁵

- Abortion 201% higher risk for marijuana
- Abortion 198% higher risk for crack cocaine
- Abortion 406% higher risk for other cocaine
- Abortion 180% higher risk for illicit drugs
- Abortion 100% higher risk for tobacco use
- **NO INCREASED RISK WITH MISCARRIAGE OR STILLBIRTH**

25. Coleman PK, Reardon DC, Coughle J. Substance use among pregnant women in the context of previous reproductive loss and desire for current pregnancy. *Brit J Health Psychology* 2005;10: 255-268.



VI. Other Issues-Child Abuse²⁶

- 1 abortion 144% higher risk of child physical abuse
- History of miscarriage or stillbirth NOT associated with increase in risk of child abuse

26. Coleman P, Maxey CD, Rue V, Coyle CT. Associations between voluntary and involuntary forms of perinatal loss and child maltreatment among low-income mothers. *Acta Paediatrica* 2005;94: 1476-83



VI. Other Issues-Societal Costs of Abortion²⁷

- Child born=\$1.4 million US benefit to society
- Child aborted-\$200,000 US cost to society
- Child born=\$200,000 US input into treasury
- Child aborted=\$32,000 US cost to treasury

27. Finger R, Harden H. Societal costs of abortion. Focus on Family, Focus on Social Issues, Worldview and Culture, September 22, 2005.

<http://family.org/cforum/fosi/worldview/essays/a0038002.cfm>



VII. Conclusions

- Women deserve to know the risks of elective abortion:
- Significant psychological effects
 - Increased depression (65%)
 - Increased suicide (150%)
 - Increased anxiety (34%)
 - Increased sleep disorders (85% at 6 months)




VII. Conclusions

- Increased Mortality (370% higher all causes)
- Increased Preterm Birth (35-64% increase with 1 abortion -64% increase < 32 week/72% increase \geq 2 abortions-dose effect)
- Increased use of illicit drugs (180-460% increase)
- Increased risk of child abuse (144%)
- Increased cost to society (\$200,000/child lost)




Questions

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1. Coleman PK, Reardon DC, Rue V, and Cougle J. State-funded abortion versus deliveries: A comparison of outpatient mental health claims over four years. *Am J of Orthopsychiatry* 2002;72:141-152.
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5. Cougle J, Reardon DC, Coleman PK, Rue VM. Generalized anxiety associated with unintended pregnancy: A cohort study of the 1995 National Survey of Family Growth. *J of Anxiety Disorders* 2005;19: 137-142.
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8. Coleman P. Abortion and mental health: quantitative synthesis and analysis of research published 1995-2009. *Br J Psychiatry* 2011;199 (3):180-186.<http://doi.org/10.1192/bjp.bp.110.077230>
- ⁹Raymond EG, Grimes DA. The comparative safety of legal induced abortion and childbirth in the United States. *Obstet Gynecol* 2012;119:215-219.
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11. Gissler, M., et.al., Pregnancy-associated mortality after birth, spontaneous abortion, or induced abortion in Finland, 1987-2000., American J. ObGyn (2004)190, 422-7
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15. Maternal mortality--United States, 1982-1996. MMWR Morb Mortal Wkly Rep 1998;47:705-707.




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Resources

Pregnancy and Abortion: Your Choice

(ISBN 978-1-910786-80-2)

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Editors/Authors: Dr Esther Luthy and Dr Mark Houghton

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