November 14, 2012

From: Dr. Martin McCaffrey
To: Perinatal Health Committee
Subject: Proposal to Inform Women of Child Bearing Age of the Association of TOP and Preterm Birth

Infant mortality in North Carolina is driven by high rates of premature birth. In 2011 premature birth (<37 weeks) was responsible for 195 deaths and 22% of North Carolina infant mortality.[1] In addition to mortality, preterm birth results in multiple medical morbidities for surviving infants, including cerebral palsy.

The association of termination of pregnancy with future preterm birth, especially very preterm birth (<32 weeks), has been reported in 125 publications.[2] Dr. Jay Iams, a world renowned OB expert on prematurity recently reported, "Contrary to common belief, population-based studies have found that elective pregnancy terminations in the first and second trimesters are associated with a very small but apparently real increase in the risk of subsequent spontaneous preterm birth."[3] Recent meta-analyses have reported not only an association of prematurity with one termination, but a dose-dependent relationship. Swingle et al. reviewed 21 studies and reported an increased risk of 64% for very preterm birth after one termination.[4] Shah et al. reviewed 37 studies and reported an increased risk for preterm birth of 36% after 1 termination. Two terminations increased the risk for preterm birth by 93%.[5]

In the 2006 IOM Prematurity Report, termination was clearly stated to be a risk factor for future preterm birth. The IOM described termination as an "immutable" (unchangeable) risk factor for future preterm birth.[6] If termination is associated with prematurity, as the IOM states, it is "immutable" only if women who might consider termination are not advised of its potential consequences. By definition, when a woman is informed of the association between prematurity and abortion, and it becomes a factor in her decision not to get pregnant, or terminate, abortion is a "mutable", preventable risk factor for preterm birth.

An analysis of the impact of termination in North Carolina was performed in 08 by the General Assembly.[7] The analysis estimated that annually in North Carolina termination is associated with 745 very preterm births, 119 preterm deaths and 32 cases of cerebral palsy. The annual induced abortion cost estimate in North Carolina, including hospital costs related to prematurity and cerebral palsy, is $98M.

Prematurity disproportionately affects the African-American community. In North Carolina African-Americans use a disproportionate amount of abortion services. Based on 2011 NC Vital Stats data, black women have a termination rate 2.5 times that of whites. Though not the only factor, this dramatically elevates the Africa-American risk for prematurity, especially very preterm births. Indeed the 2011 data also shows a black very preterm birth rate 2.5 times higher than whites.

If our mission is to reduce perinatal death and disparities, the Task Force has a responsibility to address the association of termination with prematurity. Our knowledge offers us the opportunity to inform the public regarding the association of preterm birth and termination *before* they might engage in risky sexual behavior or undergo a procedure that imposes risks for future preterm birth. It is requested the Task Force support development of legislation which supports education regarding risk for a future preterm birth after termination.

Such education should be incorporated into the North Carolina Essential Standards Health Education curriculum, and clinic practices in the North Carolina Higher Education system and Department of Public Health Clinics.

It has been stated in these meetings that one purpose of the Task Force is to put people like me, neonatologists who daily care for extremely premature infants, out of business. I welcome that day and I leave you with the comments of Shah et al:

"Women should know the risks associated with termination not only for their health but also for their future reproductive potential. Potential areas for knowledge transfer include education of girls and women enrolled at schools or colleges, during routine visits to family doctors or specialists and finally when counseling women seeking abortion."6

References

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Editorial comments of Phil Steer, Editor of Br J Ob Gyn, which Dr. McCaffrey mentioned at the meeting.

"Prakesh Shah and Jamie Zao, on behalf of the knowledge synthesis group at the University of Toronto, included 37 studies to look particularly at the risk of a single TOP on the outcome of subsequent pregnancies. A key finding is that compared to women with no history of termination, even allowing for the expected higher incidence of socio-economic disadvantage, women with just one TOP had an increased odds of subsequent preterm birth (13 studies, odds ratio 1.27, 95% confidence interval 1.12–1.44). We have known for a long time that repeated terminations, or traumatic procedures resulting in damage to the cervix, predispose to early delivery in a subsequent pregnancy. However the finding that even one termination can increase the risk of preterm birth means that we should continue to search for ways of making termination less traumatic, such as cervical preparation with agents such as prostaglandins or laminaria tents."

November 14, 2012

From: Watson A. Bowes Jr., M.D.
To: Perinatal Health Committee
Subject: Presentation regarding agenda item 9: Consideration of Proposal for Support for Mandating Dissemination of Information Regarding the Risk for a Future Preterm Birth Following a Termination of Pregnancy.

Thank you for the opportunity to speak in support the effort to disseminate information regarding the risk for a future preterm birth following the termination of a pregnancy in various educational situations.

Having partnered in the raising of 7 children and now having 8 grandchildren in various stages and levels of their respective educational experience, I am mindful of the importance of young people being made aware of the consequences of their sexuality, whether this is learned in their families, in their schools or in their places of worship or a combination of these. To this end I am impressed with the efforts of the Child Fatality Task Force to make available evidence-based information dealing with every aspect of infant mortality, including preconception, pregnancy, birth, and the first-year-of-life. One of the seven programs selected is the "You Quit Two Quit" initiative to bring to the attention of the public in general and women in prenatal care in particular the untoward consequences of smoking on the out come of pregnancy – especially the risk of preterm birth.

There is remarkable similarity in the level of risk for preterm birth associated with smoking and that associated with induced abortion in a previous pregnancy. This similarity of the risks is highlighted in a study from South Australia involving 42,269 women having their first single birth. They authors investigated both the risk of preterm birth associated with smoking and the risk of preterm birth associated with induced abortion. The parameter known as the, "adjusted odds ratio" (AOR) is commonly reported in studies of this type to assess the "risk" involved with the factor being studied. The authors of this study found the adjusted odds ratio for induced abortion was 1.28 and that for smoking during pregnancy was 1.25. They concluded their study with this statement: **"A previous induced abortion and smoking during pregnancy are preventable risk factors for preterm birth."** .

Interestingly, other studies case controlled studies of smoking associated with preterm birth show risk levels similar to those of studies about the association of induced abortion with preterm birth, i.e., similar odds ratios.

The point to be made is that if there is rationale for including in preconception education the effect of smoking on the outcome of pregnancy as it relates to preterm birth, then there is ample rationale for also including the effect of induced abortion.

<u>Reference</u>

Freak-Poli R, Chan A, Tucker G, Street J. Previous abortion and risk of pre-term birth: a population study. J Mat-Fetal Neonatal Med 2009;22:1-7

November 14, 2012

From: Dr. John Thorp
To: Perinatal Health Committee
Subject: Proposal to Inform Women of Child Bearing Age of the Association of TOP and Preterm Birth

For ethical and practical reasons, all research done with termination of pregnancy (TOP) to look at safety or effectiveness will be observational, as one cannot randomize exposure to TOP and conduct an experiment. Thus, any and all conclusions about harm or safety will be tentative at best. This is the case with most other exposures and health outcomes with cigarette exposure being a classic example where we have made much progress solely relying on observational data to draw conclusions.

With TOP and preterm birth (PTB) there is an ever-growing body of observational studies concluding that TOP is associated with PTB in a subsequent pregnancy. While the relative risk is modest at best (<2), the high uptake of TOP in reproductive aged women, and the fact that over 75% of women having TOP will have a subsequent pregnancy they elect to carry forward, makes the relative risk quite important. If the association described is actually causal then 10-30% of PTBs in NC could have TOP as a contributing factor. Moreover, a relationship is biologically plausible through the pathway of trauma to the cervix and there is a 'dose response' effect with increasing PTB risk as the number of TOPs a single woman has increases. Interestingly, and important from a child mortality and morbidity perspective, the association seems to be the strongest for very early PTBs. These tiny babies are the most likely to die or suffer a long-term harm of early delivery.

From a public health perspective, and unlike so many risk factors for PTB, such as race or prior PTB, TOP is a modifiable risk factor. Uptake of TOP is voluntary and in my experience women are keenly interested in the effect a TOP procedure might have on their subsequent reproductive success. Educating young North Carolinians as they begin their reproductive lives about this association is a reasonable strategy to provide them with needed information and if health education influences subsequent behavior the proposed legislation could have a positive influence on the rate of PTB and ultimately the health and well-being of NC children.