TRANSFORMING PRECONCEPTIONAL, PREGNATAL, AND INTERCONCEPTIONAL CARE INTO A COMPREHENSIVE COMMITMENT TO WOMEN’S HEALTH

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Preconception and interconception care respond to the growing body of evidence that many of the most important determinants of birth outcomes may exist before pregnancy occurs. In this sense, the strategy of extending prenatal care into the preconception and interconception periods marks a useful step in reforming the public health approach to improving birth outcomes. However, although helpful in underscoring the continuity of risk that can ultimately find expression in adverse birth outcomes, the concern is that without greater critical attention these relatively new care constructs have the potential to undermine rather than strengthen a comprehensive system of women’s health care.

Introduction

It is essential that preconception, prenatal, and interconception care not be viewed as distinct entities, but rather emphasize their inherent linkages as part of a comprehensive vision of care. The danger lies in that an uncritical, business-as-usual embrace of these separate care strategies will only serve to exacerbate the discontinuities of care in what is already one of the most highly fragmented arenas of health care in the United States. To be constructive, therefore, the definition and particularly the operationalization of preconception, prenatal, and interconception care must generate greater integration and not isolation of service delivery systems. This will require new clinical and administrative practices that respect the currents of risk and clinical capacity that flow uninterrupted through these distinct arenas of care. However, the effort to ensure that preconception, prenatal, and interconception care will ultimately support integrated, comprehensive strategies of service provision must not only attend to technical and organizational considerations, it must also speak to questions of justice. This is because programs designed to improve birth outcomes are not generated exclusively by clinical or administrative insights alone. Rather, they are also deeply rooted in the fractious political debate over the best ways to alleviate the suffering of children and a longstanding societal ambivalence over the social roles of women.

Background: The Marginalization and Fragmentation of Childbearing Risk

A major barrier to the adoption of a more comprehensive vision of preconception, prenatal, and interconception care is the way the science of poor birth outcomes is portrayed in the world of public policy. If nothing else, the science of poor birth outcomes has been characterized by a proliferation of studies designed to identify singular risk associations, or “risk factors,” such as teenage pregnancy, maternal illicit drug use, or the lack of prenatal care (Behrman & Butler, 2007). Although this extensive literature has clearly provided many important insights, it has also served to frame the causation of adverse birth outcomes as a series of elevated relative risks with little sense of how they interact or contribute to the overall problem of adverse birth outcomes in large populations. This

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preoccupation with identifying singular risk factors has, in turn, tended to deeply distort public perceptions of the causation of adverse birth outcomes in the United States and, consequently, public strategies to address it.

Teen pregnancy is worth examining in some detail because it is invariably identified as conveying a high risk for adverse birth outcomes and is often invoked in public discourse as an important cause of adverse birth outcomes in the United States. A large number of studies have documented that young maternal age is associated with a high relative risk for a variety of adverse birth outcomes, including neonatal mortality (Fraser, Brockert, & Ward, 1995). The association between low, and to a lesser extent high, maternal age and elevated neonatal mortality is clearly evident in Figure 1A. However, although the greatest relative risk resides at the extremes of the maternal age distribution, the maternal age groups that contribute most to the absolute numbers of neonatal deaths are not located at the margins of risk but in the middle of the maternal age distribution. This is clearly evident in Figure 1B, which overlays the actual number of neonatal deaths occurring to each maternal age grouping on the risk plot of Figure 1A. The overwhelming contribution from women in their 20s and early 30s is a direct reflection of the fact that most births in the United States occur to women in this age range. Although the risk of neonatal death is disproportionately high for young teens, the reality is that young teen childbearing is relatively rare. Indeed, eliminating the elevated risk of neonatal death associated with teenage childbearing would reduce the neonatal mortality rate in the United States as well as social disparities in neonatal mortality by <10%.

The confusion between relative risk and actual contribution, or attributable risk, is more than a technical concern; it has proven to be an important obstacle to the construction of a comprehensive approach to improving birth outcomes. This is because the higher the relative risk associated with a specific risk factor, the greater attention it receives in the public sphere. This, in turn, has pushed the public’s focus on improving birth outcomes to the extreme margins of risk, even though these margins actually contribute very little to the overall problem. Significantly, this “marginalization” of the public’s understanding of poor birth outcomes has had the effect of portraying our poor record of birth outcomes as the product of high-risk, low-risk conditions.

deviant maternal behaviors, such as teenage childbearing, heavy maternal drug use in pregnancy, and a failure to seek prenatal care. Although these are serious problems for many other reasons, the vast majority of neonatal deaths occur to women in their 20s and early 30s, who do not use illicit drugs and who receive some prenatal care. Rather than make the case for enhanced access to ameliorative services, this risk association literature has helped to deform more than inform the policy deliberations concerned with improving birth outcomes. In turn, this literature has helped to generate a tragically counterproductive public rage at childbearing women, often minority women, who fall into 1 of these high-risk behavioral groupings.

The marginalization of risk has also had a harmful effect programmatically because it has resulted in a proliferation of highly targeted programs directed at relatively small groups of women while the broader infrastructure of health care delivery in these very same communities has been allowed to deteriorate. At the very same time that many communities have attempted to reduce local infant mortality rates by focusing on the margins of risk, resources have been drained from more comprehensive health services, such as community health centers or women’s health initiatives.

The portrayal of adverse birth outcomes as the product of a series of relatively rare, largely behavioral, risk factors has created a deeply fragmented epidemiology. This, in turn, has generated a fragmented array of policies, programs, and constituencies all joined in the common goal of improving birth outcomes but all insulated from one another by artificially narrow domains of expertise and disciplinary self-interest. This is the context for assessing the utility of preconception, prenatal, and interconception care. Indeed, it presents the fundamental challenge to these public health constructs: How can they help to unify rather than fragment the growing array of preventive and therapeutic interventions capable of improving birth outcomes?

Addressing this challenge must begin with the recognition that prenatal care is of crucial importance in the health of the fetus and particularly the health of the mother. However, the evolving epidemiology of poor birth outcomes in the United States strongly suggests that one must look beyond the prenatal period alone if the tragic burden of poor birth outcomes is to be addressed. Of particular concern is the concentration of neonatal and infant mortality in extremely low birthweight and premature newborns. In 2002, more than half of all infant mortality and almost three quarters of all neonatal mortality in the United States occurred to infants born at a birthweight of \( \leq 1,500 \) g (corresponds generally to 31 weeks of gestation; Mathews, Menacker, & MacDorman, 2004). Figure 2 presents the contribution of each birthweight group to the total number of neonatal deaths in the United States. The steep slope of the graph reflects the importance of the lowest birthweight groups. In fact, more than half of all neonatal deaths were accounted for by infants born at \(<700 \) g, which corresponds to an expected gestational age of 25–26 weeks. Severe morbidity is also concentrated in these birthweight and gestational age groups, as are the racial disparities that have long plagued the neonatal mortality rate in the United States (Wise, Wampler, & Barfield, 1995). It should be remembered that, in most jurisdictions, the legal limit for uncomplicated induced abortions is 24 weeks of gestation. Programs designed to reduce neonatal mortality and morbidity, therefore, must address extremely low birthweight and prematurity, namely births occurring on the margins of viability.

Given the current epidemiology of adverse birth outcomes in the United States, the temporal window of opportunity for prevention during the prenatal period is functionally quite small. For most large prenatal care enhancement programs, it is very difficult to identify women who are pregnant, assess their risk status, make appropriate referrals for medical or social services, and implement the requisite interventions all in time to prevent the birth of the extremely premature and low birthweight infants. Not only does the temporal epidemiology of adverse birth outcomes challenge a constrained focus on prenatal care, but the nature of the prenatal conditions themselves largely preclude relatively simple and quick interventions. According to 2004 data from the Pregnancy Risk Assessment Monitoring System, approximately 20% of women delivering live-born infants had some form of chronic medical condition and 35% were either overweight or obese (D’Angelo et al., 2007). For that same year, 23% were using tobacco in the 3 months before conception with some 78% of these women reporting tobacco
use postpartum. Half of the childbearing women reported alcohol use during pregnancy. Virtually all of these risk-conveying conditions begin long before conception occurs and their resolution generally requires relatively long-term and sustained interventions. In addition, some of the more effective short-term interventions designed to improve birth outcomes, such as folic acid supplementation to prevent neural tube defects, must act so early in pregnancy that they have to be initiated before conception. Together, these requirements for reducing the main contributor to poor birth outcomes, extreme prematurity, place a heavy and largely inappropriate burden on prenatal services, an arena of care that is functionally confined to the period between when a woman knows she is pregnant and the 25th–26th week of gestation.

Discussion: Constructing a Comprehensive Commitment to Women’s Health

In theory, all fertile women between menarche and menopause are potentially preconceptional. Although preconception care has been a useful extension of prenatal care by recognizing that childbearing risk may predate conception, it is nevertheless an anticipatory health construct predicated on intentionality. Functionally, preconception care becomes useful only when a woman intends or at least anticipates a pregnancy. If a woman does not anticipate that she will conceive in the near term, it is difficult to see the utility, or indeed the meaning, of preconception care. Understanding the importance and limits of preconception care, therefore, relates directly to how the expectation of pregnancy maps onto the reality of childbearing patterns in the United States.

Perhaps the greatest challenge to the utility of preconception care is the observation that approximately half of all pregnancies are unplanned in the United States (Finer & Henshaw, 2006). Unplanned pregnancies are even more common among poor women. Although unplanned pregnancies are less likely to result in a live birth, the fact that such a large portion of pregnancies are not anticipated raises serious questions about the potential public health impact of even high-quality preconception care.

The utility of interconception care is also limited by similar concerns. Virtually by definition, interconception care can only be defined after the fact. Although it refers to conception, most service programs consider interconception care as beginning once a woman knows she has a child. However, it cannot be considered the “interconception” period until the woman once again becomes pregnant. When you meet a woman who has had a child, how can you know she is in the interconception period? In theory, any woman who has delivered a child is potentially “interconceptional” until menopause or surgical sterilization. As was the case for preconception care, interconception services only make sense if the woman intends or is likely to become pregnant again in a relatively short period of time. According to recent data from the National Survey of Family Growth, almost one third of women who give birth in the United States will not have a second child (Chandra, Martinez, Mosher, Abma, & Jones, 2005). It is not clear what portion of this group had intended to have another child. Another third will have a second child only after 3 years, with most of these after 4 years subsequent to the first birth. Whereas a short interval between pregnancies is associated with an elevated risk for adverse birth outcomes and should be addressed by both public health and clinical interventions, such births account for a minority of adverse birth outcomes (DeFranco, Stamilo, Boslaugh, Gross, & Muglia, 2007). The epidemiology suggests that a large portion of women who have delivered a child may not ever again become pregnant and, for those who do, may not anticipate the subsequent pregnancy and may go for a long period of time between pregnancies.

Preconception care, prenatal care, and interconception care seem diagrammatically to capture the entire childbearing experience. However, when examined under an operational lens, this framing captures only pieces of the childbearing experience, ignoring large groups of the neediest women and even larger arenas of childbearing risk. Preconception care requires that pregnancies are planned, which consequently disregards a large portion of pregnancies in the United States. Prenatal care cannot address the nature and severity of many risks that life before conception may convey to pregnancy. Interconception care requires that women successfully anticipate having >1 child in a relatively short period or time. The problem with these constructs is not that they do not involve the provision of important health services. Rather, the problem is the policy-based and programmatic impact of implying that these services can be confined to an identifiable group of women who can then be afforded special access to a identifiable set of effective services.

At some point, the public health approach to improving birth outcomes in the United States must recognize that the only way to reach this goal is by addressing the requirements of women’s health regardless of pregnancy status. The only way to provide preconception care for that large group of women not expecting to become pregnant but who do is by providing high-quality health care to all preconceptional women, namely, all those of reproductive age. This observation must be coupled with the understanding that prenatal care initiated only after a woman knows she is pregnant is not likely to be the most effective way to address processes occurring early in pregnancy or to reduce long-standing health-related risks. Interconception care is merely health care provided to women after they have had a pregnancy or birth; some will go
on to have another pregnancy whereas others will not. Once again, this functionally becomes providing comprehensive women’s health—including high-quality reproductive and obstetric care—to a population of reproductive-aged women, some of whom may go on to have another child. Moreover, it seems highly unreasonable to expect that a highly efficient and effective system of pregnancy-related care can be constructed amidst a highly fragmented and poorly resourced general women’s health care system. The best guarantee that a woman would receive high quality preconception, prenatal, and interconception care is the establishment of a strong, comprehensive, and exquisitely accessible health care system for all women regardless of their intention to bear children.

The need to recast preconception, prenatal, and interconception care as part of a larger commitment to women’s health is not only rooted in epidemiology, but also in the dynamics of policy development and advocacy. Preconception, prenatal, and interconception care are all public health constructs that are referent to a women’s reproductive capacity; they are all about “baby-making” and are directed explicitly at ensuring the health of the newborn. Among the most troubling expressions of a tight focus on the newborn has been the impulse to treat maternal health problems such as smoking, alcohol abuse, poor nutrition, and illicit drug use merely as threats to the fetus, as if they had no deleterious effect on the health of women (Chavkin, Breitbart, & Wise, 1998). This focus on fetal effects has drawn on the marginalizing epidemiology of intrauterine risk to transform a long-standing commitment to child protection into something that is perhaps best labeled “fetal protection.” Here, child abuse is transformed into “fetal abuse,” casting, virtually by definition, the pregnant women as assailant. Although this posture has proven attractive to some in the pediatric and law enforcement arenas, it has generally resulted in highly counterproductive programs and policies as well as deep antagonisms at times between the women’s health and the child health communities (Chavkin, Elman, & Wise, 1997).

An integrated approach must also confront how the plight of newborns is traditionally portrayed in public discourse and advocacy. It has been the long-standing advocacy position that it is more effective to advocate for young children than it is for their parents. It is not surprising, therefore, that many might want to define health services to women of reproductive age in terms of newborn health. The problem is that, for the most part, children are poor because their parents are poor, and focusing on the plight of children has not generated policy remedies that have addressed the more fundamental issues of diminishing parental earning capacity, harsh parental leave policies, or disastrous housing policies for young families. Adverse birth outcomes are clearly related to women’s health and focusing on the health of the newborn has not resulted in improvements in such important arenas as contraception, chronic disease management, abortion, or behavioral and mental health services. Both the epidemiology and recent history of this advocacy strategy argue against its practical utility. Advocacy stances that attempt to elevate the societal claims of newborns by ignoring the claims of women do not, in the end, serve the interests of either (Wise, 1995).

Conclusion

Preconception, prenatal, and interconception care will continue to provide useful frameworks for delivering many effective services to childbearing women. This discussion does not question the intentions or focused utility of extending a concern for newborn health to both the periods before and after pregnancy. Rather, the central premise of this discussion is that preconception, prenatal, and interconception care must be extended even further and ultimately transformed into components, albeit important components, of women’s health care over a lifetime. This transformation, however, will not be accomplished easily because it requires confronting long-held approaches to the identification of newborn risk, an array of highly fragmented programmatic strategies, and advocacy positions that sound more progressive than they are.

A tightly confined preoccupation with women’s reproductive capacity is not only likely to prove ineffective, it is also unjust. At some point, we must recognize that the tragedy of poor birth outcomes in the United States is largely a legacy of the poor general health status of women in the United States. Accordingly, programs and policies that are concerned for the health of the mother only to the extent that it affects that of the newborn are technically unsound and morally illegitimate. This discussion argues for a comprehensive approach to improving newborn health, one that respects the complex epidemiology of childbearing and the pragmatic requirements of constructing a strong, collective commitment to women’s health.

References


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